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2010 Election Results

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2011



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THE WORLD ALMANAC® AND BOOK OF FACTS 2011

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Top Ten News Topics of 2010

1. Republicans Take House, Win Big in State Races. Capitalizing on voter discontent with the economy, congressional Democrats, and Pres. Barack Obama, the Republican Party won control of the U.S. House of Representatives in midterm elections Nov. 2. The party picked up at least 60 seats—enough to make John Boehner (R, OH) the next speaker of the House, replacing Nancy Pelosi (D, CA). In the Senate, Republicans gained six seats but fell short of a majority and failed to defeat the highest-ranking Democrat, majority leader Harry Reid of Nevada, in a close race. Energized by the Tea Party movement and other conservative activists, the GOP made historic gains of at least nine state governorships and more than 675 seats in state legislatures. Analysts estimated that total campaign spending by candidates, political parties, and interest groups would reach nearly $4 bil, a new record for a nonpresidential election year.

2. Economic Recovery Stalls. The dominant election issue was the sputtering U.S. economy, with the housing market sluggish, job growth weak, unemployment at 9.6%, and federal budget deficits soaring above $1 tril annually. In the first quarter of 2010, 11.5% of homeowners were in default on mortgage loans, and foreclosures had reached record levels. Criticized for sloppy handling of mortgage defaults, leading lenders temporarily suspended foreclosures in Oct. The Federal Reserve Nov. 3 announced fresh steps to accelerate the recovery, which the Fed called "disappointingly slow." The major economic bright spots were on Wall Street, where stock indexes rebounded to their highest levels in two years.

3. U.S. Winds Down in Iraq, Surges in Afghanistan. Pres. Obama declared Aug. 31 that the U.S. combat mission in Iraq had ended. More than 4,400 U.S. service members had lost their lives during Operation Iraqi Freedom, and nearly 32,000 U.S. troops had been wounded in action. Operation New Dawn began Sept. 1 with some 50,000 remaining U.S. military personnel primarily responsible for training Iraqi forces. In Afghanistan, meanwhile, U.S. troop strength had nearly tripled since Obama took office, reaching 100,000 by summer 2010. More than 600 coalition forces were killed in Operation Enduring Freedom Jan.-Oct. 2010, the highest annual total since the war began. On June 23, Obama named Gen. David Petraeus commander of U.S. and allied troops in Afghanistan, replacing Gen. Stanley McChrystal, who was forced to resign after *Rolling Stone* magazine published disparaging comments McChrystal and his staff had made about the Obama administration. Both Iraq (Mar. 7) and Afghanistan (Sept. 18) held parliamentary elections, but as of Nov., Iraqi leaders still had not agreed on a new government, and Afghan balloting was marred by violence and vote buying.

4. Blowout in Gulf of Mexico Causes Huge Oil Spill. Nearly five years after Hurricane Katrina and subsequent New Orleans levee failures devastated the U.S. Gulf Coast, the region suffered another economic and environmental disaster beginning Apr. 20, when a gas explosion and fire killed 11 people on the *Deepwater Horizon*, an exploratory drilling platform in the Gulf of Mexico. When the rig sank, oil began gushing from ruptured pipes. British oil giant BP, which managed the project, was unable to stop the leak for nearly three months. By the time it was halted July 15, up to 5 mil barrels of oil had polluted the Gulf and coastal areas, threatening wildlife in wetland habitats, fouling fishing grounds, and depositing sticky tar balls on beaches from Florida to Texas. BP agreed to provide up to $20 bil to the independent Gulf Coast Claims Facility to compensate victims.

5. Earthquake Devastates Haiti. The poorest country in the Western Hemisphere experienced catastrophic damage Jan. 12 when a 7.0-magnitude earthquake struck near Port-au-Prince, Haiti. An official assessment in late Mar. put the death toll at more than 220,000, with at least 300,000 more people injured. Destruction was widespread, reconstruction was slow, and at least 1.3 mil people were still living in temporary shelters in the Port-au-Prince area in late Oct., when cholera broke out, killing hundreds and deepening Haiti's misery. The United Nations estimated that the disaster cost Haiti $7.8 bil—or 20% more than the country's gross domestic product in 2009.

6. Pakistan Floods Leave 8 Mil Homeless. Torrential monsoon rains beginning in late July and continuing into Aug. inundated nearly one-fifth of the country, leaving 8 mil people homeless and significantly affecting at least 12.5 mil more; by mid-Sept. the confirmed death toll had risen above 1,750. More than 1.8 mil houses were destroyed, and damage to transportation infrastructure and agricultural resources was widespread. Relief efforts were led by the Pakistani military, which diverted thousands of troops from anti-insurgent activities; at the same time, Islamic extremist groups, which provided food, shelter, and medical aid to flood victims, reportedly used the opportunity to gain recruits.

7. Congress Enacts Comprehensive Health Law. In late Mar., after many months of controversy and complex legislative maneuvering, Pres. Obama signed the Patient Protection and Affordable Care Act, the most ambitious effort to remake the U.S. health care financing system since the passage of Medicare and Medicaid in 1965. The legislation sought to curb insurance industry abuses and extend health insurance coverage to some 32 mil Americans over a 10-year period. Scheduled to become fully operational by 2014, the system would be financed through tax increases on upper-income individuals and would mandate that most U.S. citizens and legal residents purchase health insurance or pay a penalty. Opponents, who derided the plan as "Obamacare," pledged to seek its repeal, and challenged the constitutionality of the individual mandate provision in the courts.

8. Debt Crisis Forces European Budget Cutbacks. The European Union's common currency, or euro, weathered its worst crisis in more than a decade when the International Monetary Fund and the 16 European countries that comprise the eurozone agreed May 2 on a $146 bil loan package to prevent Greece from defaulting on its debts. In return, Greek leaders pledged to implement an austerity program that would slash the country's annual budget deficits. A week later, European finance ministers reached agreement on a $955 bil emergency stabilization program to keep the crisis from spreading to other countries with debt problems, notably Spain and Portugal. Elected in the UK in May, the government led by Conservative Prime Min. David Cameron dealt with Britain's rising debt Oct. 20 by announcing spending cuts of nearly $130 bil over a four-year period. In France, Pres. Nicolas Sarkozy pushed forward with a plan to cut pension costs by raising the retirement age; opponents staged mass demonstrations in Sept. and Oct., blocking fuel depots, disrupting road and rail traffic, and clashing with police.

9. Kagan Joins Supreme Court. Following the announcement Apr. 9 that Associate Justice John Paul Stevens was retiring from the U.S. Supreme Court, Pres. Obama on May 10 nominated Solicitor Gen. Elena Kagan to replace him. Confirmed by the Senate Aug. 5, she joined Associate Justices Ruth Bader Ginsburg and Sonia Sotomayor—the first time three women have served simultaneously on the court. Major decisions during the 2009-10 term included a Jan. 21 ruling in *Citizens United v. Federal Election Commission*, which eased restrictions on campaign contributions by companies, unions, and nonprofit advocacy groups; and a June 28 decision in *McDonald v. Chicago* affirming that state and local laws may not abrogate the 2nd Amendment right to keep and bear arms.

10. Winter Olympics, World Cup Showcase International Athletes. More than 2,600 registered athletes from 82 nations competed in the XXI Olympic Winter Games, held Feb. 12-28 in and around Vancouver, British Columbia. Canada, the host country, led in gold medals with 14, while the U.S. led in the overall medal count with 37 (9 gold, 15 silver, 13 bronze). On July 11 in Johannesburg, South Africa, Spain's national soccer team won its first FIFA World Cup title, defeating the Netherlands in overtime, 1-0. The month-long World Cup championship round—dominated by the deafening drone of plastic horns known as vuvuzelas—was the first played on African soil.

THE WORLD AT A GLANCE

Number Ones

Most-visited **social networking website** . . . . . Facebook.com, 141.6 million unique visitors in June 2010 *(p. 373)*
Most-used **search engine** . . . . . Google, 10.3 billion searches by 181.4 million unique visitors in June 2010 *(p. 373)*
Top U.S. state by domestic **traveler spending**. . . . . California, $99.4 billion in 2008 *(p. 97)*
Airline that carried the most passengers . . . . . .Delta, 108.6 million in 2009 *(p. 98)*
Busiest **U.S. airport** by passenger traffic . . . . . Hartsfield-Jackson Airport (Atlanta, GA), 88.0 million passengers in 2009 *(p. 98)*
Top-selling **light truck** in the U.S. . . . . .Ford F-Series, 392,112 sold in 2009 (84,357 fewer than in 2008) *(p. 92)*
Top-selling **passenger car** in the U.S. . . . . .Toyota Camry, 356,824 sold in 2009 (79,793 fewer than in 2008) *(p. 92)*
Most popular **compact/sports car color** in the U.S. . . . . Silver, 19% of 2009 model year compact/sports cars *(p. 92)*
Most popular **light truck color** in the U.S. . . . . White/white pearl, 26% of 2009 model year trucks *(p. 92)*
Most popular **luxury car color** in the U.S. . . . . Black/black effect, 35% of 2009 model year luxury cars *(p. 92)*
Largest U.S. **bank company** . . . . . .Bank of America, $2.4 trillion in assets in 2010 *(p. 70)*
Fastest **roller coaster** in the world. . . . . .Kingda Ka, 128 mph (Six Flags Great Adventure, Jackson, NJ) *(p. 99)*
Nation hosting the most **refugees**. . . . . Pakistan, 1.8 million, mostly from Afghanistan, in 2008 *(p. 736)*
Biggest U.S. **defense contractor** . . . . . Lockheed Martin Corp., $17.2 billion in contracts in 2009 *(p. 142)*
Nation with largest **crude oil reserves** . . . . . .Saudi Arabia, 266.7 billion barrels (U.S. reserves, 21.3 billion barrels) *(p. 123)*
U.S. state with highest **crude oil production**. . . . . Texas, 403.8 million barrels in 2009 *(p. 122)*
U.S. state with highest **energy consumption per capita**. . . . . .Wyoming, 1.0 billion Btu per capita in 2008 *(p. 122)*
Nation most dependent on **nuclear energy** . . . . . Lithuania, 76.2% of electricity was nuclear-generated in 2009 *(p. 125)*

Surprising Facts

In 2010, there were 98,985 **U.S. military personnel** stationed afloat around the world, more than were stationed in any one foreign country, including Iraq or Afghanistan. *(p. 138)*

Digital music sales increased from $183.4 million in 2004 to more than $2.0 billion in 2009. Sales of compact discs totaled $4.2 billion in 2009, **less than half of the value of CD sales in 2004**. *(p. 262)*

In 2008, **23.9% of Americans smoked cigarettes**, down significantly from 38.7% of Americans in 1985. Yet Americans spent $87.9 billion on tobacco products in 2009—twice the $41.0 billion they spent in 1990. *(pp. 59, 154)*

The U.S. spent **$7,285 per capita on health care** in 2007, far more than any other country. France was closest to the U.S., spending $4,627 per capita on health. *(p. 150)*

China surpassed the U.S. as the **country with the most Internet users** in 2008; by 2009, China had 310.9 million Internet users—more than the entire U.S. population—and the U.S. had 244.8 million. *(p. 372)*

The U.S. produces 15% of the world's **total energy**, but consumes around 21% of it. *(p. 121)*

Americans paid an average of **22.4% of their total income** in income tax and Social Security payments in 2009 (down from 24.7% in 2008); Belgians paid 41.5%. *(p. 735)*

If all circulating U.S. dollars and coins were equally distributed among the nation's population, in 2010 **every American would receive $3,051**. *(p. 65)*

The rate of **delivery by cesarean section** in the U.S. increased 54% between 1996 and 2007 (from 20.7% of live births to 31.8%). *(p. 173)*

America: By the Numbers

88.5%: high school graduation rate of Vermont, the highest in the U.S. *(p. 393)*
52.0%: high school graduation rate of Nevada, the lowest in the U.S. *(p. 393)*
28.1: median age at first marriage for U.S. men in 2009 (the highest it has ever been). *(p. 172)*
25.9: median age at first marriage for U.S. women in 2009 (the highest it has ever been). *(p. 172)*
47: average total hours of television viewed per week by U.S. women over age 55. *(p. 263)*
42: average total hours of television viewed per week by U.S. men over age 55. *(p. 263)*
25: average total hours of television viewed per week by young adults between the ages of 12 and 17. *(p. 263)*
19.0: average total hours U.S. Internet users spent online per week in 2009. *(p. 374)*
78%: percentage of U.S. Internet users who checked their e-mail at least once daily in 2009. *(p. 374)*
91%: percentage of U.S. households with at least one cell phone in 2010. *(p. 375)*
$32,184: median income for U.S. men in 2009. *(p. 56)*
$20,957: median income for U.S. women in 2009. *(p. 56)*
26.1%: percentage of the population of Texas without health insurance in 2009, higher than any other U.S. state. *(p. 150)*
25.4%: percentage of U.S. deaths in 2009 caused by heart disease, the leading cause of death. *(p. 178)*
67.4%: percentage of U.S. population that was overweight or obese between 2005 and 2008. *(p. 170)*
1,000%: change in U.S. annual per capita consumption of fresh broccoli since 1970. *(p. 104)*
–18%: change in U.S. annual per capita consumption of red meat since 1970. *(p. 105)*

Money in America *(pp. 52-83)*

Amount of money that Americans put in savings . . . . . in 2005: $127.7 bil . . . . . in 2009: $655.3 bil
Percent of disposable income that Americans put in savings . . . . . in 2005: 1.4% . . . . . in 2009: 5.9%
Revolving consumer credit outstanding from commercial banks . . . . . in 2008: $362.4 bil

Personal expenditures, 2000-09 *(p. 59)*

	2000	2009
Health	$1,109.6 bil	$1,973.1 bil
Housing	$1,010.5 bil	$1,581.6 bil
Food and beverages	$537.5 bil	$777.9 bil
Clothing and shoes	$297.3 bil	$339.5 bil
Gasoline and oil	$188.8 bil	$303.7 bil
New automobiles	$210.7 bil	$165.3 bil
Casino gambling	$67.6 bil	$109.3 bil
Tobacco products	$68.5 bil	$87.9 bil
Books	$24.4 bil	$33.8 bil

Spending on selected food products, 2009-10 *(p. 81)*

	Sales	% change
Beer	$9.5 bil	1.3%
Soft drinks	$8.2 bil	–3.4%
Cereal	$6.5 bil	–2.4%
Cookies	$4.1 bil	0.7%
Ice cream	$4.0 bil	–4.1%
Bottled water	$3.8 bil	–0.7%
Ground coffee	$2.4 bil	1.9%
Dog food (dry)	$2.1 bil	1.1%
Chocolate candy	$2.1 bil	4.7%
Cat food (dry)	$1.2 bil	–1.1%

Wealthiest American, 2010 *(p. 57)*
Bill Gates, $54 billion net worth

Corporation with largest revenues, 2010 *(p. 62)*
Wal-Mart Stores, $408.2 billion

Top of the World, 2009

Top tourist destinations
(millions of visitors, *p. 96*)

France	74.2
United States	54.9
Spain	52.2
China	50.9
Italy	43.2

Top cell phone usage
(subscriptions per 100 pop., *p. 375*)

Saudi Arabia	174.43
Russia	163.62
Italy	151.35
Portugal	141.76
Czech Republic	137.51

Top computer usage
(millions in use, *p. 369*)

United States	276.3
China	117.6
Japan	90.2
Germany	65.2
UK	49.5

Top U.S. trade partners
(millions, *p. 84*)

Canada	$430,906.4
China	$365,870.6
Mexico	$305,546.5
Japan	$146,937.9
Germany	$114,804.5

Top U.S. exports
(millions, *p. 85*)

Agricultural commodities	$98,423
Airplanes, engines, and parts	$78,273
Vehicles	$65,288
Electrical machinery	$63,964
Mineral fuels	$54,536

Top U.S. imports
(millions, *p. 85*)

Mineral fuels	$271,739
Crude oil	$194,603
Vehicles	$127,863
TVs, VCRs, etc.	$119,392
Electrical machinery	$91,683

Top motor vehicle producers
(thousands of vehicles, *p. 90*)

China	12,234
Japan	7,648
United States	5,591
Germany	5,029
South Korea	3,425

Top countries for U.S. foreign adoptions *(p. 174)*

China	2,990
Ethiopia	2,221
Russia	1,580
South Korea	1,106
Guatemala	773

Top world airports
(millions of passengers, *p. 98*)

London Heathrow	66.0
Beijing Capital	65.4
Tokyo Haneda	61.9
Paris Charles de Gaulle	57.9
Frankfurt, Germany	50.9

Entertainment Award Winners, Then and Now *(pp. 265-85)*

	1960	2010
Highest-rated TV show	*Gunsmoke* (1958-59); 40.3% of TVs tuned in	*American Idol* (2010); 13.7% of TVs tuned in
Best Picture Oscar[1]	*Ben-Hur*, directed by William Wyler	*The Hurt Locker*, directed by Kathryn Bigelow
Emmy Awards		
Comedy	*Art Carney Special*	*Modern Family*
Drama	*Playhouse 90*	*Mad Men*
Album of the Year Grammy[1]	*Come Dance With Me*, Frank Sinatra	*Fearless*, Taylor Swift
Record of the Year Grammy[1]	"Mack the Knife," Bobby Darin	"Use Somebody," Kings Of Leon
Tony Awards		
Play	*The Miracle Worker*	*Red*
Musical	*Fiorello!* and *The Sound of Music*	*Memphis*
Pulitzer Prizes		
Fiction	*Advise and Consent*, Allen Drury	*Tinkers*, Paul Harding
Drama	*Fiorello!* George Abbott, Jerome Weidman, Sheldon Harnick, and Jerry Bock	*Next to Normal*, Tom Kitt and Brian Yorkey

(1) Awarded for works released in 1959 (Then) or 2009 (Now).

Thespians of the Year, 2010 *(pp. 279-83)*

	Best Actor	Best Actress
Academy Awards[1]	Jeff Bridges, *Crazy Heart*	Sandra Bullock, *The Blind Side*
Golden Globes[1]		
Dramatic Film	Jeff Bridges, *Crazy Heart*	Sandra Bullock, *The Blind Side*
Comedy/Musical Film	Robert Downey Jr., *Sherlock Holmes*	Meryl Streep, *Julie & Julia*
TV Drama	Michael C. Hall, *Dexter*	Julianna Margulies, *The Good Wife*
TV Comedy	Alec Baldwin, *30 Rock*	Toni Collette, *United States of Tara*
Emmy Awards		
Drama	Bryan Cranston, *Breaking Bad*	Kyra Sedgwick, *The Closer*
Comedy	Jim Parsons, *The Big Bang Theory*	Edie Falco, *Nurse Jackie*
Tony Awards		
Play	Denzel Washington, *Fences*	Viola Davis, *Fences*
Musical	Douglas Hodge, *La Cage aux Folles*	Catherine Zeta-Jones, *A Little Night Music*

Best Sellers, 2009 *(pp. 253-58, 370)*

DVD	*Twilight*
Video game	*Call of Duty: Modern Warfare 2*
Computer game[2]	*The Sims 3*
Newspaper	*Wall Street Journal*
Magazine	*AARP The Magazine*
Fiction book	*The Lost Symbol: A Novel*, Dan Brown
Nonfiction book	*Going Rogue: An American Life*, Sarah Palin

Moviegoing in the U.S. *(p. 252)*

	1975	2009	% change
Total box office	$2.1 bil	$10.5 bil	398.6%
Admissions	1.03 bil	1.42 bil	37.0%
Theater screens	15,030	39,717	164.3%
Avg. ticket price	$2.05	$7.50	265.9%
Films produced	258	677	162.4%
Films released	233	558	139.5%

More Entertainment Number Ones *(pp. 251-64)*

#1 top-grossing U.S. movie, 2009	*Transformers: Revenge of the Fallen*, $402.1 mil[3]
#1 top-grossing U.S. movie, all-time	*Avatar* (2009), $749.8 mil[3]
#1 syndicated TV program, 2009-10	*ESPN NFL Regular Season*, 9.6% of TV households
#1 most-watched TV program, all-time	Super Bowl XLIV, Feb. 7, 2010, 51.9 million households
#1 commercial radio format in U.S., 2010	Country, 1,992 U.S. stations
#1 top-grossing North American concert tour, all-time	Rolling Stones (2005), $162.0 million
#1 top-selling U.S. albums, all-time	*Thriller*, Michael Jackson, 29 million copies *Eagles/Their Greatest Hits 1971-75*, Eagles, 29 million copies
#1 longest-running Broadway show	*The Phantom of the Opera* (1988-), 9,395 performances[4]

Milestone Birthdays in 2010 *(pp. 181-242)*

90
Carol Channing, Jan. 31
Nancy Reagan, July 6

80
Robert Duvall, Jan. 5
James Earl Jones, Jan. 17
Ernie Banks, Jan. 31
Toni Morrison, Feb. 18
Mikhail Gorbachev, Mar. 2
William Shatner, Mar. 22
Willie Mays, May 6
Regis Philbin, Aug. 25
Barbara Walters, Sept. 25
Desmond Tutu, Oct. 7

70
Faye Dunaway, Jan. 14
Neil Diamond, Jan. 24
Dick Cheney, Jan. 30
Bob Dylan, May 24
Martha Stewart, Aug. 3
Jesse Jackson, Oct. 8
Paul Simon, Oct. 13
Art Garfunkel, Nov. 5

60
Rush Limbaugh, Jan. 12
Anjelica Huston, July 8
Robin Williams, July 21
Sting, Oct. 2

50
Julia Louis-Dreyfus, Jan. 13
Wayne Gretzky, Jan. 26
George Clooney, May 6
Barack Obama, Aug. 4
Dan Marino, Sept. 15
James Gandolfini, Sept. 18
Meg Ryan, Nov. 19
Ann Coulter, Dec. 8

40
Johnny Knoxville, Mar. 11
Ewan McGregor, Mar. 31
Jeff Gordon, Aug. 4
Amy Poehler, Sept. 16

30
Justin Timberlake, Jan. 31
Paris Hilton, Feb. 17
Natalie Portman, June 9
Roger Federer, Aug. 8
Beyoncé Knowles, Sept. 4
Jennifer Hudson, Sept. 12
Britney Spears, Dec. 2

21
Kristen Stewart, Apr. 9
Emma Watson, Apr. 15
Chris Colfer, May 27
David Archuleta, Dec. 28

(1) Awarded in 2010 for works released in 2009. (2) July 2009-June 2010. (3) *Avatar* was released Dec. 18, 2009, and grossed $283.6 million by the end of the calendar year, making it the fifth highest grossing film of 2009. (4) Through Aug. 29, 2010; show was still playing.

New Era in Space

The year 2011 marks the 30th anniversary of the space shuttle's role as the heavy lifter of the U.S. civilian space program. It will also, according to plans, see the spacecraft's retirement. U.S. access to space will continue, but will rely on commercial as well as government-run operations. Meanwhile, other countries will continue with their own manned and unmanned ventures.

Bush's Vision for Space Exploration

Since Americans last set foot on the moon in 1972, U.S.-manned space missions had been limited to low Earth orbit. Pres. George W. Bush called for a new space strategy in 2004 involving manned missions into deep space—something far beyond the capabilities of the aging shuttle fleet.

Bush envisioned a return to the moon by 2020 followed by visits to more remote destinations. The National Aeronautics and Space Administration (NASA) accordingly began development on a project dubbed Constellation, involving powerful rocket boosters and a crew-carrying spacecraft called *Orion* for deep-space missions. The space shuttle program was slated to end in 2010. Thereafter, transportation to the International Space Station (ISS) would be handled by spacecraft launched by other countries and by private transportation services.

Obama's Policy Shift

In early 2010, with the Constellation project running behind schedule and costs mounting, Pres. Barack Obama proposed replacing it with a new space agenda whereby private industry, aided by NASA, would play an increased role in providing access to low Earth orbit. NASA would focus its development efforts upon deep-space exploration, including design of a "heavy-lift" launch vehicle (HLV) by 2015 capable of lifting into orbit the equipment needed to mount a deep-space expedition.

According to this plan, spacecraft for deep-space missions would be available by 2025. Bypassing the moon, Obama proposed that an asteroid be the destination of the first manned deep-space mission, with a mission to Mars to follow. Meanwhile, he called for the ISS, slated for shutdown in 2015, to remain in operation until at least 2020.

Congress approved the new plan, which Obama signed into law Oct. 11, in an amended form. The legislation mandated that work on the *Orion* continue and that work done on the Constellation project be used to begin development of the new HLV. The legislation also added a second mission to the space shuttle's remaining schedule. The launch date of *Endeavour*, which had been assigned to make the shuttle program's final flight, had already been pushed into early 2011, largely because of problems with a key piece of equipment it was to deliver to the ISS. This added mission would be carried out by *Atlantis*, which would fly to the ISS around midyear.

After the Shuttles Retire

As part of a budget authorization bill, NASA was allotted a total of $58 bil for fiscal years 2011-13, but how much it actually receives will depend on annual allocation bills. Whatever the pace of NASA's efforts, the year 2011 almost definitely marks the end of the shuttle program. When NASA spacecraft go out of service, they ordinarily become the property of the Smithsonian Institution's Air and Space Museum. The Air and Space Museum already has the first shuttle on display at its Steven F. Udvar-Hazy Center in Chantilly, VA. This craft, the *Enterprise*, was used for testing the orbiter within Earth's atmosphere.

Russia's *Soyuz* spacecraft and *Progress* freighters will continue to carry people and supplies to and from the ISS. The European Space Agency (ESA) and Japan have been developing larger unmanned nonreusable craft. The ESA sent its first "space truck," or Automated Transfer Vehicle, to the station in 2008, and planned a second mission in 2011. Once the space station no longer needs to accommodate NASA shuttles' altitude limitations, an ESA space truck is expected to be used to push the ISS into a higher orbit. Japan's H-II Transfer Vehicle made its first flight to the station in 2009 and was expected to make a second in 2011.

Private Space Ventures

Expectations are that private companies, under contract with NASA, will eventually fly to the ISS. The well-established Orbital Sciences has already built and launched a large number of satellites. The first test flight for the company's *Cygnus* unmanned cargo craft, to be carried aloft by the company's new Taurus II rocket, is slated for 2011. Elon Musk, a cofounder of PayPal and Tesla Motors, set up Space Exploration Technologies (SpaceX) in 2002. SpaceX's Falcon 9 rocket made its maiden flight in June 2010, successfully placing an object in orbit. The Falcon 9 will be the launch vehicle for the company's unmanned cargo carrier *Dragon* spacecraft. SpaceX envisions *Dragon* will eventually transport people as well. Other companies working on "space taxis" capable of reaching the ISS or other low-Earth orbit include aerospace giant Boeing, which aims for its *Crew Space Transportation-100* spacecraft to be operational by 2015, and Sierra Nevada Corporation, with its competing *Dream Chaser* space plane.

Some private companies are working on projects that don't involve the ISS at all. Bigelow Aerospace, founded by hotel magnate Robert Bigelow in 1999, is developing inflatable space stations called Sundancer and BA-330. Bigelow launched small prototypes, Genesis I and Genesis II, into orbit in 2006 and 2007. The company has proposed using inflatable technology to build a moon base.

Some companies want to offer suborbital flights to tourists who would like to get a taste of space. Virgin Galactic, which hopes to be first, is charging $200,000 a ride. Its craft are based on Scaled Composite's *SpaceShipOne*, which in 2004 became the first privately built vehicle to reach space (an altitude 62 mi or 100 km above Earth's surface, as commonly defined). The craft accommodates six passengers and two crew members and launches from a carrier plane in flight. *Enterprise*, Virgin Galactic's first spaceship of this type, successfully completed its initial solo test, gliding to Earth from the carrier plane in Oct. 2010.

Elsewhere in the World

Progress and *Soyuz* spacecraft and the ESA and Japanese transporters are not the only non-U.S. craft likely to be used to keep the ISS in operation. Russia is working on a manned replacement for the *Soyuz*. If all goes well, this craft, usually referred to as the Prospective Piloted Transport System (PPTS), might receive its first manned launch by 2018. It would be carried aloft by a launch vehicle, known as the Rus-M, which is also under development.

So far, China is the only country besides Russia and the U.S. to use its own spacecraft to carry people into space. It plans to start putting together a space station in 2011 when the first module, called *Tiangong-1* (Chinese for "Heavenly Palace") is scheduled to be placed in orbit. Two more modules are to follow between 2013 and 2016, with construction on the station expected to be finished by 2022. China is also planning a manned mission to the Moon.

In June 2010, six men (three from Russia, two from Europe, and one from China) began simulating a round-trip mission to Mars. They were to spend 18 months in a sealed facility at a Russian medical institute. The experiment aims to gain insight into humans' ability to cope with interplanetary flight. The facility lacks windows, and the simulators' only contact with the outside world is via e-mail.

Unmanned Space Exploration

Even as the era of crewed space missions dominated by the space shuttle came to an end, space agencies around the world continued programs of unmanned interplanetary exploration. In 2011, for example, the U.S. planned to send GRAIL (Gravity Recovery and Interior Laboratory) to the Moon, Juno to the planet Jupiter, and the Mars Science Laboratory rover, also known as Curiosity, to Mars. Missions on the docket include another Moon mission, LADEE (Lunar Atmosphere and Dust Environment Explorer) in 2012, and MAVEN (Mars Atmosphere and Volatile EvolutioN) in 2013.

Notable Russian launches expected in 2011 and 2012 include Phobos-Grunt and Luna-Glob. Phobos-Grunt will study the Martian moon Phobos and bring soil samples back to Earth. Slated to piggyback on the mission are China's Mars orbiter *Yinghuo-1* ("Firefly-1") and the first lander in Finland's MetNet system for studying the Martian atmosphere. The mission Luna-Glob, to Earth's moon, will include a lander and orbiter. China's *Chang'e-3*, scheduled for 2013, will aim to place a rover on the Moon's surface. Bepi-Colombo, a joint ESA-Japan project to put two spacecraft into orbit around the planet Mercury, is expected to launch by 2014.

Health Care Reform, 2010

On Mar. 23, 2010, Pres. Barack Obama signed a sweeping health-care reform measure into law that would extend medical insurance to an estimated 32 mil uninsured people. The legislation—the Patient Protection and Affordable Care Act (PPACA)—had been in the works for over a year, amid heated debate and controversy. Enactment of the components of PPACA will provide health insurance for almost all Americans. Most of its major provisions—including implementation of the individual mandate and the opening of the health care exchanges—will not be applied until 2014. But several provisions took effect on Sept. 23, 2010: insurers are banned from dropping sick and costly customers based on technical mistakes on applications; they are also required to offer coverage to children under 26 on their parents' policies.

The Congressional Budget Office (CBO) Mar. 18 released a report, which projected that the final reform package would cost $940 bil over 10 years and reduce the budget deficit by $138 bil during the same period. The CBO said the bill would reduce the deficit a further $1.2 tril in the decade following the first 10-year period.

The reform bill was passed without a single Republican vote, though many liberal Democrats assailed the reform effort, arguing that it included too much conciliation to the health insurance industry and needed a public option to be effective. The law was projected to still leave some 23 mil people in the U.S., one-third of whom were undocumented immigrants, without insurance in 2019. Several state attorneys general have announced that they are mounting legal challenges to the reform plan on the grounds that the individual mandate is unconstitutional.

Key Provisions of Health Care Reform

Cost-control measures. The PPACA contains several provisions designed to bring national medical costs down. Insurers will be required to spend at least 80% of customers' premiums on providing health care or on improving overall health care quality. The legislation also creates a panel to study Medicare spending and attempt to find ways to reduce waste and fraud in the system.

Employer mandates. The law fines companies with more than 50 employees $3,000 a year for each full-time employee requiring a government subsidy to purchase health insurance. Companies with fewer than 50 employees will be exempt from such penalties.

Excise insurance tax. The PPACA includes a tax on health care plans whose cost exceeds $8,500 for individuals and $23,000 for families. More commonly known as the "Cadillac tax," the tax is intended to motivate people to opt for cheaper health care plans. Implementation of the tax has been delayed until 2018.

Federal subsidies. The PPACA includes federal subsidies to help individuals lacking health insurance from their employers to purchase it on their own. The new law provides subsidies covering at least 90% of the costs of insurance for individuals and families with incomes between 100% and 150% of the federal poverty level. Subsidies decrease as incomes increase; families earning more than 400% of the poverty level would get no subsidy.

Health insurance exchanges. One of the PPACA's key components is the creation of health care insurance exchanges, which would allow people to compare various health care plans from private insurers and choose the one that is most affordable and convenient for them.

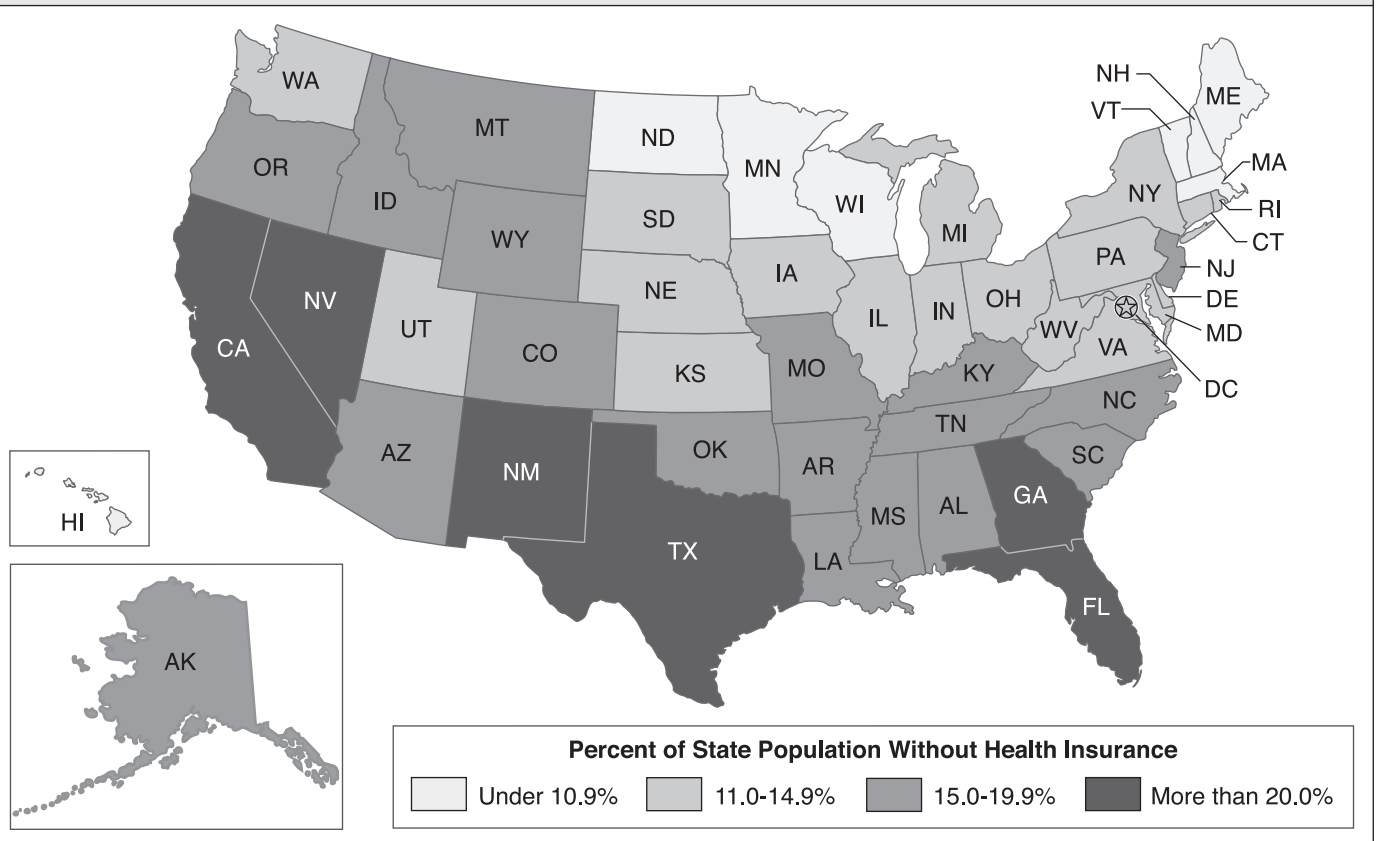
Individual mandates. The PPACA requires almost all U.S. citizens and legal residents to carry health insurance coverage, the rationale being that overall health care costs go down when everyone, regardless of health, pays into the insurance system. Annual fines for not having insurance would start in 2014 with a ceiling of $95 or 1% of taxable annual income, whichever was greater, and peak in 2016 at $695 or 2.5% of income. Individuals are exempt from the fine if the lowest-cost health care plan exceeds 8% of their income.

Medicaid expansion. The PPACA expands Medicaid coverage to all individuals under the age of 65 whose annual income is up to 133% of the federal poverty level, which would add about 16 mil people to its rolls. The federal poverty level for a family of four is currently $22,050 per year, making a family of four earning less than $29,326 eligible for Medicaid under the new health care reform law.

Private insurance regulations. The PPACA will install a series of new regulations that private insurers must follow if they wish to be listed on the health care exchanges, which would give them access to millions of potential customers. Insurers will be barred from denying individuals coverage due to preexisting conditions and from dropping covered individuals once they get sick, or for any reason other than fraud.

Americans Without Health Insurance, 2009

Source: Annual Social and Economic Supplement, Current Population Survey, U.S. Census Bureau, U.S. Dept. of Commerce



ELECTION 2010

Republicans Take Control of House and Gain in Senate

In midterm elections Nov. 2, 2010, Republicans picked up at least 60 seats in the House of Representatives, the most gained by either party since 1948, and well beyond the 39 the party needed for a majority. The turnover dealt a strong blow to the administration of Democratic Pres. Barack Obama and put committee chairmanships and leadership positions in Republican hands. House minority leader John Boehner (R, OH) became the presumed Speaker of the House. A number of veteran and moderate Democrats were voted out of office.

In the Senate, Republicans fell short of the 10-seat gain needed for a majority, with Majority Leader Harry Reid (D, NV) fending off a challenge from Tea Party-backed candidate Sharron Angle (R). The GOP picked up six Democratic seats, including Pres. Obama's former seat in Illinois, as well as those at stake in Arkansas, Indiana, North Dakota, Pennsylvania, and Wisconsin, with one state, Alaska, left to be decided in the weeks following the election.

The division of power between a Republican House and Democratic Senate and White House created challenges for both parties and increased chances for gridlock. Congress appeared more polarized, with fewer moderate Blue Dog Democrats and more Tea Party-allied Republicans who had campaigned against Democratic policies, notably the health care reform legislation passed in Mar. 2010. In a press conference on Nov. 3, Pres. Obama admitted he had received a "shellacking" and said he did not want to relitigate past disputes but would "work harder at building consensus."

Republicans also gained in state governorships, especially in the Midwest, where they won in Iowa, Kansas, Michigan, Ohio, and Wisconsin. In addition, the GOP claimed control of at least 55 of the nation's 99 state legislative chambers, up from 36. Most state legislatures will be authorized to redraw congressional districts in accordance with 2010 census results, and most governors have veto power over these plans.

The Political Climate

The weak economy left Democrats particularly vulnerable in 2010. Obama had come to office in Jan. 2009 amid high hopes. However, despite a $787 bil stimulus measure, passed by Congress in Feb. 2009, job recovery was anemic. The unemployment rate rose above 10% in Oct-Dec. 2009 and remained static at just under 10% through most of 2010. Home foreclosures continued at a rapid rate, especially in Sunbelt states.

A Gallup poll, among others, showed that the economy was the public's number-one concern overall in Oct. It ranked consistently above health care and far above the war in Afghanistan, a topic seldom brought up by candidates of either party. Democrats blamed the continued economic downturn on Bush administration policies and claimed that the stimulus and other measures—criticized by Republicans as costly and counterproductive (and by progressives as too unambitious)—kept the economy from sinking into depression.

Obama's approval ratings had already fallen below 50% in Jan. 2010 when Democrats received a big jolt: a little known Republican state senator, Scott Brown, won a special election for the seat long held by the late Sen. Ted Kennedy (D) in heavily Democratic Massachusetts. A lackluster campaign by state Atty. Gen. Martha Coakley (D) was partly to blame, while Brown's campaign emphasized the candidate's populism and independence rather than his party label. His message of fiscal responsibility and promise to vote against the health care bill then pending in Congress also seemed to resonate. Brown gave the Republican Senate minority their 41st vote, which could prevent Democrats from overriding Republican filibusters.

Big Money

The nonpartisan Center for Responsive Politics (CRP) estimated that total spending on the 2010 congressional elections would approach $4 bil, more than $1 bil more than was spent on the 2006 midterms. Most of the money flowed from three sources: individual House and Senate campaigns, national political parties, and outside interest groups. Out of an estimated $3.2 bil raised by mid-Oct., about $1.7 bil came from the campaigns, $1.1 bil from the parties, and over $400 mil from outside groups. The CRP estimated that Democrats and Republicans were raising similar amounts of money from the campaigns and parties combined, but that Republicans were getting more money from special interest groups, such as the U.S. Chamber of Commerce, with pro-Republican groups heavily outspending Democratic special interests.

Special interest groups were reaping benefits from a Jan. 2010 Supreme Court ruling in *Citizens United v. Federal Election Commission*. On free speech grounds, the controversial 5-4 decision overturned some key campaign finance restrictions and allowed corporations, labor unions, and other interest groups to use their own funds to finance campaign ads (though not to contribute directly to individual campaigns).

The Tea Party

Brown received support from the Tea Party movement, as would many other candidates in the 2010 general election. The loosely organized populist coalition emerged in early 2009 as an outlet for anger over the government bailouts of financial institutions and the economic stimulus package, and gathered strength through social networking, rallies, and protests. The Tea Party tended to unite around fiscal issues and belief in the overreach of the federal government, but many of its activists were also social conservatives. A CBS/*NY Times* poll found in Apr. that around 18% of Americans supported the Tea Party movement; of these, 50-60% were Republicans, with most of the rest calling themselves independents. More than six months later, 21% of voters said they had "strong support" for the Tea Party, and another 19% had "some support," according to AP exit polls on election day.

Tea Party-backed candidates saw mixed results in the 2010 general election. In Florida, Marco Rubio (R), a 39-year-old former speaker of the state House, won the day for the Tea Party with 49% of the vote in a three-way race. Rubio defeated Rep. Kendrick Meek (D) and sitting Gov. Charlie Crist, a moderate Republican who had supported the economic stimulus bill and ran as an independent after dropping in Republican polls. The son of Cuban exiles, Rubio enjoyed Tea Party support thanks to his emphasis on fiscal restraint and limited government in a state that was still troubled by the economic downturn and foreclosure crisis.

In Kentucky, ophthalmologist Rand Paul (R), a Tea Party favorite, easily outpolled state Atty. Gen. Jack Conway (D) in Nov. Like his father, U.S. Rep. Ron Paul (R, TX), Rand Paul campaigned as a libertarian who believes in radically reduced government. He came under fire briefly for expressing reservations about the 1964 Civil Rights Act, which he said should not apply to private businesses. Conway's controversial attack ad in Oct., bringing up a Rand Paul college incident supposedly implying worship of "Aqua Buddha," may have backfired with voters, the majority of whom called the negative ad inappropriate in a late Oct. poll.

But while the Tea Party movement served to fire up the GOP base in some states, in others the Tea Party seemed to drag Republicans too far away from the center to attract independent voters. Some moderate candidates fell in Republican primaries to candidates with less experience who enjoyed Tea Party support. In Delaware's Senate GOP primary in Sept., Tea Party favorite Christine O'Donnell, a political neophyte endorsed by former Vice Pres. nominee Sarah Palin, eliminated Rep. and former Gov. Mike Castle, who had been widely favored to win the seat. O'Donnell's candidacy quickly boosted the lagging poll numbers for county executive Chris Coons (D). Lacking political experience and with rhetoric well to the right of blue-state Delaware, O'Donnell lost in Nov. by a wide margin.

A Tea Party-backed outsider also saw narrow defeat in the Nevada race between Sen. Harry Reid (D) and former state Assemblywoman Sharron Angle (R). The state had the highest unemployment and foreclosure rates in the nation, and Reid, always a lackluster campaigner, had become unpopular. He was saved with the help of strong Hispanic and union support—and

a belief by many voters that Angle's views were too extreme, particularly her stance on immigration and past comments that indicated her desire to phase out Social Security entitlements. In Alaska, Joe Miller, a little-known attorney also endorsed by Sarah Palin, won the Aug. GOP primary defeating incumbent Sen. Lisa Murkowski. But Murkowski launched a write-in bid and, based on preliminary returns, was running ahead of both Miller and Scott McAdams, the Democratic candidate.

Senate Results

In other key Senate races, conservative former Rep. Pat Toomey (R), in Pennsylvania, edged out Rep. Joe Sestak (D), who had beaten the Republican-turned-Democrat incumbent, Arlen Specter, in a May primary. In Ohio, Rep. Rob Portman (R), a Bush administration budget director and trade ambassador, easily defeated Lt. Gov. Lee Fisher (D) in a contest where they traded blame for Ohio's heavy job losses. In an acrimonious Illinois race, U.S. Rep. Mark Kirk (R) narrowly outpolled state treasurer Alexi Giannoulias (D) to win the U.S. Senate seat formerly held by Obama. In Arkansas, incumbent Sen. Blanche Lincoln, a moderate Democrat, lost to conservative U.S. Rep. John Boozman (R). In Louisiana, incumbent Sen. David Vitter (R) won despite a 2007 scandal involving prostitution.

Democrats claimed a big victory in California, where veteran Sen. Barbara Boxer (D) defeated former Hewlett-Packard CEO Carly Fiorina (R). Connecticut state Atty. Gen. Richard Blumenthal (D) held his ground against former World Wrestling Entertainment CEO Linda McMahon (R). In West Virginia, popular Gov. Joe Manchin (D) defeated industrialist John Raese (R) to gain the seat long held by the late Sen. Robert Byrd (D). Manchin, who had distanced himself from the Obama administration, had the endorsement of the National Rifle Association. A widely noted campaign ad showed him shooting a rifle at the cap-and-trade bill.

Governors' Races

In Ohio, incumbent Gov. Ted Strickland (D), weighed down by the loss of nearly 400,000 jobs during his term, was defeated by former Rep. John Kasich (R), despite intensive rallying efforts by Pres. Obama and other top Democrats. Among other GOP winners, Nikki Haley was elected the first woman governor of South Carolina and first Indian-American woman governor in the U.S.; District Attorney Susana Martinez was elected the first woman governor of New Mexico and first female Hispanic governor in the U.S. In Florida, health care executive Rick Scott (R) narrowly defeated state CFO Alex Sink (D) to win the governorship.

In California, however, Meg Whitman (R), a billionaire former CEO of eBay, lost to former Gov. Jerry Brown, a longtime veteran of public office in the state, despite having poured at least $140 mil of her own money into the race. The CEO label did not help Whitman, nor did controversy over her treatment of a former housekeeper who was an illegal immigrant. In Rhode Island, former Sen. Lincoln Chafee, a liberal Republican who had endorsed Pres. Obama in 2008, ran as an independent and won; Obama had pointedly declined to endorse Chafee's Democratic opponent.

Ballot Issues

There were some 160 statewide ballot measures in Nov. 2010. California's Proposition 19 probably got the widest attention. It would have made California the first state to legalize (and tax) the sale of marijuana for recreational use. But voters turned it down. They also rejected a proposal to suspend curbs on greenhouse gas emissions provided under California's 2006 climate change law.

Most ballot measures had to do with budgets and taxes. Washington voters vetoed a proposed state income tax that would apply only to high-income earners. Indiana, Louisiana, and Montana voters approved measures to reduce or limit property taxes.

Among other initiatives, Colorado voters rejected a proposed state constitutional amendment classifying a fetus as a person. Arizona, South Carolina, South Dakota, and Utah voters approved measures safeguarding the secret ballot in union organizing elections. Illinois voters approved a mechanism for recall of governors. Missouri passed an initiative requiring more humane treatment of dogs by breeders. Oklahoma approved measures to make English the state's "common language" and to prohibit judges from considering international or Islamic law, called sharia, when making decisions.

Balance of Power, 2010

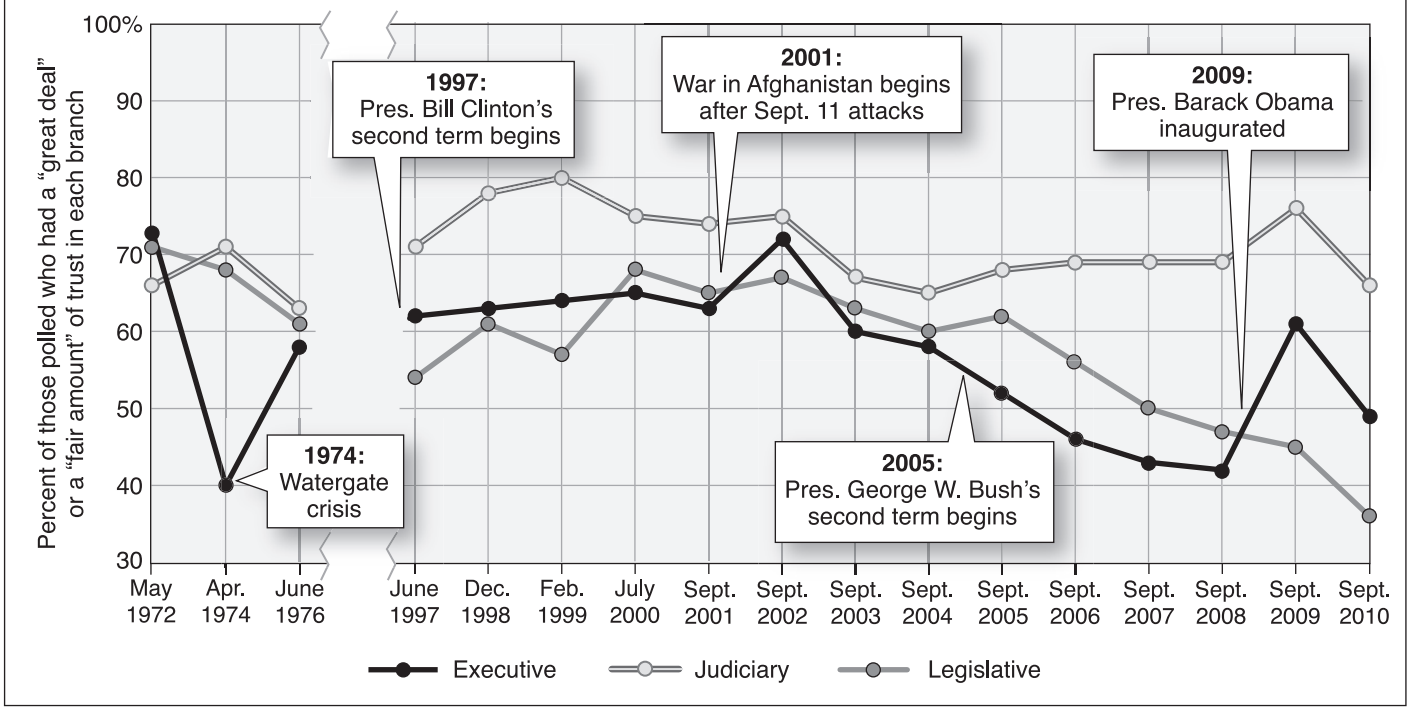
	Senate		House		Governors	
	Before	After	Before	After	Before	After
Dem.	57	51	255	187	26	17
Rep.	41	46	178	239	24	29
Ind.	2	2	0	0	0	1

Note: Before the election, the House had two vacant seats, one previously held by a Democrat and one by a Republican. As of Nov. 5, 2010, there was one seat undecided in the Senate; nine seats undecided in the House, and three gubernatorial races undecided.

Public Trust in Government, 1972-2010

Source: Copyright © 2010 Gallup, Inc. All rights reserved.

Public trust in Congress, as measured by Gallup polls over time, has declined dramatically since 2005 and reached a record low in 2010. Trust in the executive and judicial branches went up in 2009 but fell in 2010.



Election Results, 2010

Preliminary results as of Nov. 3, 2010.

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Members of the 112th Congress: The Senate

Dem., 51; Rep., 46; Ind., 1; Ind. Dem., 1; Undecided, 1. Total 100. Boldface denotes the 2010 election winner.
* = Incumbent. Third-party or independent candidates receiving fewer than 10,000 votes are not listed.

Results were pending in Alaska; they are listed in *italic* as of Nov. 5, 2010. The winning tally went to the "Total write-in" category, necessitating a close count of the ballots. Incumbent Sen. Lisa Murkowski began a write-in campaign after losing the Republican primary in 2010.

Terms are for 6 years and end Jan. 3 of the year preceding the senator's name in the following table. Annual salary, $174,000; President Pro Tempore, Majority Leader, and Minority Leader, $193,400. To be eligible for the Senate, one must be at least 30 years old, a U.S. citizen for at least 9 years, and a resident of the state from which chosen. The address is U.S. Senate, Washington DC 20510; telephone, (202) 224-3121; www.senate.gov

D = Democrat; **R** = Republican; **Amer. Ind.** = American Independent Party; **CFL** = Connecticut for Lieberman; **CP** = Constitution Party; **DFL** = Dem.-Farmer-Labor; **DNL** = North Dakota Democratic Non-Partisan League; **I** = Independent; **Ind. Ref.** = Independent Reform; **LB** = Libertarian; **Prog.** = Progressive; **Unaff.** = Unaffiliated.

Term ends	Senator/candidate (party); service from[1]	2010 election
Alabama		
2015	Jeff Sessions (R); 1/7/97	
2017	**Richard Shelby* (R); 1/6/87**	**963,997**
	William Barnes (D)	513,284
Alaska		
2015	Mark Begich (D); 1/6/09	
2017	*Total write-in*	*83,201*
	Joe Miller (R)	*69,762*
	Scott McAdams (D)	*48,034*
Arizona		
2013	Jon Kyl (R); 1/4/95	
2017	**John McCain* (R); 1/6/87**	**792,794**
	Rodney Glassman (D)	464,509
	David Nolan (LB)	63,049
	Jerry Joslyn (Green)	19,126
Arkansas		
2015	Mark Pryor (D); 1/7/03	
2017	**John Boozman (R)**	**435,891**
	Blanche L. Lincoln* (D)	280,987
	Trevor Drown (I)	24,781
	John Gray (Green)	14,119
California		
2013	Dianne Feinstein (D); 11/10/92	
2017	**Barbara Boxer* (D); 1993**	**3,830,313**
	Carly Fiorina (R)	3,131,453
	Gail Lightfoot (LB)	126,164
	Marsha Feinland (Peace/Freedom)	95,589
	Edward Noonan (Amer. Ind.)	92,486
	Duane Roberts (Green)	91,090
Colorado		
2015	Mark Udall (D); 1/6/09	
2017	**Michael F. Bennet* (D); 1/22/09**	**794,724**
	Ken Buck (R)	779,280
	Bob Kinsey (Green)	36,168
	Maclyn Stringer (LB)	20,844
	Jason Napolitano (Ind. Ref.)	18,077
	Charley Miller (Unaff.)	10,575
Connecticut		
2013	Joseph Lieberman (CFL); 1989	
2017	**Richard Blumenthal (D)**	**584,357**
	Linda McMahon (R)	479,470
	Warren Mosler (I)	10,749
Delaware		
2013	Thomas R. Carper (D); 2001	
2015	**Christopher Coons (D)[2]**	**173,900**
	Christine O'Donnell (R)	123,025
Florida		
2013	Bill Nelson (D); 2001	
2017	**Marco Rubio (R)**	**2,583,335**
	Charlie Crist (I)	1,574,261
	Kendrick Meek (D)	1,069,156
	Alexander Snitker (LB)	24,291
	Sue Askeland (Unaff.)	14,930
Georgia		
2015	Saxby Chambliss (R); 1/7/03	
2017	**Johnny Isakson* (R); 2005**	**1,462,823**
	Michael Thurmond (D)	986,338
	Chuck Donovan (LB)	67,739
Hawaii		
2013	Daniel K. Akaka (D); 4/28/90	
2017	**Daniel K. Inouye* (D); 1963**	**276,867**
	Cam Cavasso (D)	79,815
Idaho		
2015	Jim Risch (R); 1/6/09	
2017	**Mike Crapo* (R); 1/6/99**	**318,704**
	Tom Sullivan (D)	111,924
	Randy Bergquist (CP)	17,374
Illinois		
2015	Richard J. Durbin (D); 1/7/97	
2017	**Mark Kirk (R)**	**1,752,362**
	Alexi Giannoulias (D)	1,671,266
	LeAlan M. Jones (Green)	115,773
	Mike Labno (LB)	85,681
Indiana		
2013	Richard G. Lugar (R); 1977	
2017	**Dan Coats (R)**	**950,234**
	Brad Ellsworth (D)	695,852
	Rebecca Sink-Burris (LB)	94,562
Iowa		
2015	Tom Harkin (D); 1985	
2017	**Chuck Grassley* (R); 1981**	**714,667**
	Roxanne Conlin (D)	368,202
	John Heiderscheit (LB)	25,035
Kansas		
2015	Pat Roberts (R); 1/7/97	
2017	**Jerry Moran (R)**	**578,768**
	Lisa Johnston (D)	215,268
	Michael Dann (LB)	17,436
	Joe Bellis (Reform)	11,356
Kentucky		
2015	Mitch McConnell (R); 1985	
2017	**Rand Paul (R)**	**755,210**
	Jack Conway (D)	599,147
Louisiana		
2015	Mary L. Landrieu (D); 1/7/97	
2017	**David Vitter* (R); 2005**	**715,304**
	Charlie Melancon (D)	476,423
	Randall Hayes (LB)	13,952
Maine		
2013	Olympia J. Snowe (R); 1/4/95	
2015	Susan M. Collins (R); 1/7/97	
Maryland		
2013	Benjamin L. Cardin (D); 2007	
2017	**Barbara Ann Mikulski* (D); 1/6/87**	**1,053,017**
	Eric Wargotz (R)	616,626
	Kenniss Henry (Green)	19,238
	Richard Shawver (CP)	13,723
Massachusetts		
2013	Scott P. Brown (R); 2/4/10[3]	
2015	John F. Kerry (D); 1/2/85	
Michigan		
2013	Debbie Stabenow (D); 2001	
2015	Carl Levin (D); 1979	
Minnesota		
2013	Amy Klobuchar (DFL); 2007	
2015	Al Franken (DFL); 7/7/09	
Mississippi		
2013	Roger Wicker (R); 12/31/07[4]	
2015	Thad Cochran (R); 12/27/78	
Missouri		
2013	Claire McCaskill (D); 2007	
2017	**Roy Blunt (R)**	**1,051,495**
	Robin Carnahan (D)	785,719
	Jonathan Dine (LB)	58,515
	Jerry Beck (CP)	41,183
Montana		
2013	Jon Tester (D); 2007	
2015	Max Baucus (D); 12/15/78	
Nebraska		
2013	Ben Nelson (D); 2001	
2015	Mike Johanns (R); 1/6/09	

Term ends	Senator/candidate (party); service from[1]	2010 election
Nevada		
2013	John Ensign (R); 2001	
2017	**Harry Reid* (D); 1/6/87**	**361,655**
	Sharron Angle (R)	320,996
	None of these candidates	16,174
New Hampshire		
2015	Jeanne Shaheen (D); 1/6/09	
2017	**Kelly Ayotte (R)**	**267,132**
	Paul Hodes (D)	163,546
New Jersey		
2013	Robert Menendez (D); 1/18/06	
2015	Frank Lautenberg (D); 1/7/03	
New Mexico		
2013	Jeff Bingaman (D); 1983	
2015	Tom Udall (D); 1/6/09	
New York		
2013	**Kirsten E. Gillibrand* (D); 1/27/09[5]**	**2,458,728**
	Joseph DioGuardi (R)	1,463,752
	Cecile Lawrence (Green)	33,403
	Joseph Huff (Other)	19,440
	John Clifton (LB)	17,473
	Vivia Morgan (Other)	12,840
2017	**Charles E. Schumer* (D); 1/6/99**	**2,643,361**
	Jay Townsend (R)	1,327,845
	Colia Clark (Green)	39,132
	Randy Credico (LB)	25,455
North Carolina		
2015	Kay Hagan (D); 1/6/09	
2017	**Richard Burr* (R); 2005**	**1,447,911**
	Elaine Marshall (D)	1,131,235
	Mike Beitler (LB)	55,124
North Dakota		
2013	Kent Conrad (DNL); 1/6/87	
2017	**John Hoeven (R)**	**181,409**
	Tracy Potter (D)	52,854
Ohio		
2013	Sherrod Brown (D); 2007	
2017	**Rob Portman (R)**	**2,123,851**
	Lee Fisher (D)	1,446,262
	Eric Deaton (CP)	63,920
	Michael Pryce (Unaff.)	48,610
	Daniel LaBotz (Socialist)	25,311
Oklahoma		
2015	James M. Inhofe (R); 11/21/94	
2017	**Tom Coburn* (R); 2005**	**716,347**
	Jim Rogers (D)	265,519
	Stephen Wallace (I)	25,047
Oregon		
2015	Jeff Merkley (D); 1/6/09	
2017	**Ron Wyden* (D); 2/6/96**	**725,694**
	Jim Huffman (R)	520,867
	Bruce Cronk (Working Families)	16,549
	Marc Delphine (LB)	13,790
	Rick Staggenborg (Prog.)	12,122
Pennsylvania		
2013	Bob Casey Jr. (D); 2007	
2017	**Pat Toomey (R)**	**1,995,024**
	Joe Sestak (D)	1,916,569
Rhode Island		
2013	Sheldon Whitehouse (D); 2007	
2015	John F. Reed (D); 1/7/97	
South Carolina		
2015	Lindsey Graham (R); 1/7/03	
2017	**Jim DeMint* (R); 2005**	**791,627**
	Alvin Greene (D)	358,069
	Tom Clements (Green)	118,891
South Dakota		
2015	Tim Johnson (D); 1/7/97	
2017	**John Thune* (R); 2005**	**Unopposed**
Tennessee		
2013	Bob Corker (R); 2007	
2015	Lamar Alexander (R); 1/7/03	
Texas		
2013	Kay Bailey Hutchison (R); 6/5/93	
2015	John Cornyn (R); 12/2/02	
Utah		
2013	Orrin G. Hatch (R); 1977	
2017	**Mike Lee (R)**	**360,053**
	Sam Granato (D)	191,644
	Scott Bradley (CP)	33,048
Vermont		
2013	Bernard Sanders (I); 2007	
2017	**Patrick Leahy* (D); 1975**	**145,486**
	Len Britton (R)	69,710
Virginia		
2013	James H. "Jim" Webb Jr. (D); 2007	
2015	Mark Warner (D); 1/6/09	
Washington		
2013	Maria Cantwell (D); 2001	
2017	**Patty Murray* (D); 1993**	**1,060,795**
	Dino Rossi (R)	996,609
West Virginia		
2013	**Joe Manchin (D)[6]**	**281,661**
	John Raese (R)	227,960
	Jesse Johnson (Mountain)	10,048
2015	John D. "Jay" Rockefeller IV (D); 1/15/85	
Wisconsin		
2013	Herb Kohl (D); 1989	
2017	**Ron Johnson (R)**	**1,125,287**
	Russ Feingold* (D)	1,020,650
	Rob Taylor (CP)	23,330
Wyoming		
2013	John Barrasso (R); 6/22/07[7]	
2015	Michael B. Enzi (R); 1/7/97	

(1) Jan. 3, unless otherwise noted. (2) Special election to fill seat vacated by Vice-Pres. Joseph Biden Jr. (D), Jan. 20, 2009. (3) Special election held Jan. 19, 2010, to fill seat vacated by death of Edward M. Kennedy, Aug. 25, 2009. (4) Appointed to fill seat vacated by Trent Lott (R), Dec. 31, 2007; he won a special election to keep the seat Nov. 4, 2008. (5) Special election to fill seat vacated by Hillary Rodham Clinton (D), who was appointed Sec. of State, Jan. 21, 2009. (6) Special election to fill seat vacated by death of Robert Byrd, June 28, 2010. (7) Appointed to fill seat vacated by death of Craig Thomas, June 4, 2007; he won a special election to keep the seat Nov. 4, 2008.

Members of the 112th Congress: The House of Representatives

Dem., 187; Rep., 239; Undecided, 9. Total 435. Boldface denotes the 2010 election winner. * = Incumbent. Third-party or independent candidates receiving fewer than 10,000 votes are not listed. Results in pending races listed in *italic*.

The Republican Party, which held a minority going into biennial elections Nov. 2, 2010, won 239 seats (as of Nov. 5) for a net gain of 60 seats. 218 seats were needed to hold a majority in the 435-seat House.

Terms are for 2 years ending Jan. 3, 2013. Annual salary, $174,000; Majority Leader and Minority Leader, $196,400; Speaker of the House, $223,500. To be eligible for membership, a person must be at least 25 years of age, a U.S. citizen for at least 7 years, and a resident of the state from which chosen.

The address is U.S. House of Representatives, Washington, DC 20515; telephone, (202) 224-3121; www.house.gov

D = Democrat; **R** = Republican; **Amer. Const.** = American Constitution; **Amer. Ind.** = American Independent Party; **CP** = Constitution Party; **DFL** = Dem.-Farmer-Labor; **I** = Independent; **IP** = Independence Party; **LB** = Libertarian; **Prog.** = Progressive; **Unaff.** = Unaffiliated.

Dist.	Representative (party)	2010 election
Alabama		
1	**Jo Bonner* (R)**	**128,802**
	David Walter (CP)	26,294
2	**Martha Roby (R)**	**111,322**
	Bobby Bright* (D)	106,455
3	**Mike Rogers* (R)**	**117,106**
	Steve Segrest (D)	79,761
4	**Robert B. Aderholt* (R)**	**Unopposed**
5	**Mo Brooks (R)**	**130,927**
	Steve Raby (D)	95,078
6	**Spencer Bachus* (R)**	**Unopposed**
7	**Terri Sewell (D)**	**135,957**
	Don Chamberlain (R)	51,672
Alaska		
	Don E. Young* (R)	**136,400**
	Harry Crawford (D)	61,071

Dist.	Representative (party)	2010 election
Arizona		
1	**Paul Gosar (R)**	**98,544**
	Ann Kirkpatrick* (D)	86,511
	Nicole Patti (LB)	12,763
2	**Trent Franks* (R)**	**137,268**
	John Thrasher (D)	64,306
3	**Ben Quayle (R)**	**79,687**
	Jon Hulburd (D)	62,120
4	**Ed Pastor* (D)**	**42,070**
	Janet Contreras (R)	18,587
5	**David Schweikert (R)**	**82,391**
	Harry Mitchell* (D)	66,063
6	**Jeff Flake* (R)**	**122,707**
	Rebecca Schneider (D)	54,473
7	**Raúl Grijalva* (D)**	**61,598**
	Ruth McClung (R)	58,012
8	**Gabrielle Giffords* (D)**	**119,616**
	Jesse Kelly (R)	117,169
Arkansas		
1	**Rick Crawford (R)**	**92,202**
	Chad Causey (D)	77,249
2	**Tim Griffin (R)**	**119,962**
	Joyce Elliott (D)	79,183
3	**Steve Womack (R)**	**136,608**
	David Whitaker (D)	52,267
4	**Mike Ross* (D)**	**102,222**
	Beth Anne Rankin (R)	71,385
California		
1	**Mike Thompson* (D)**	**108,118**
	Loren Hanks (R)	54,556
2	**Wally Herger* (R)**	**97,775**
	Jim Reed (D)	74,593
3	**Dan Lungren* (R)**	**96,596**
	Ami Bera (D)	81,532
4	**Tom McClintock* (R)**	**139,299**
	Clint Curtis (D)	71,912
	Ben Emery (Green)	15,846
5	**Doris O. Matsui* (D)**	**89,152**
	Paul Smith (R)	31,956
6	**Lynn Woolsey* (D)**	**125,454**
	Jim Judd (R)	58,509
7	**George Miller* (D)**	**87,473**
	Rick Tubbs (R)	42,546
8	**Nancy Pelosi* (D)**	**104,474**
	John Dennis (R)	19,204
9	**Barbara Lee* (D)**	**122,687**
	Gerald Hashimoto (R)	17,128
10	**John Garamendi* (D)**	**92,094**
	Gary Clift (R)	60,949
11	*Jerry McNerney* (D)*	*81,739*
	David Harmer (R)	*81,762*
12	**Jackie Speier* (D)**	**105,893**
	Mike Moloney (R)	32,358
13	**Fortney Pete Stark* (D)**	**86,660**
	Forest Baker (R)	34,469
14	**Anna G. Eshoo* (D)**	**101,187**
	Dave Chapman (R)	42,449
15	**Mike Honda* (D)**	**79,814**
	Scott Kirkland (R)	40,176
16	**Zoe Lofgren* (D)**	**65,376**
	Daniel Sahagun (R)	24,820
17	**Sam Farr* (D)**	**79,771**
	Jeff Taylor (R)	36,573
18	**Dennis A. Cardoza* (D)**	**53,490**
	Michael Berryhill (R)	39,370
19	**Jeff Denham (R)**	**90,194**
	Loraine Goodwin (D)	49,308
20	*Andy Vidak (R)*	*32,531*
	Jim Costa (D)*	*30,708*
21	**Devin G. Nunes* (R)**	**Unopposed**
22	**Kevin McCarthy* (R)**	**Unopposed**
23	**Lois Capps* (D)**	**85,555**
	Tom Watson (R)	57,500
24	**Elton Gallegly* (R)**	**115,448**
	Timothy Allison (D)	76,722
25	**Howard P. "Buck" McKeon* (R)**	**94,622**
	Jackie Conaway (D)	58,754
26	**David Dreier* (R)**	**90,297**
	Russ Warner (D)	61,593
	David Miller (Amer. Ind.)	10,157
27	**Brad Sherman* (D)**	**84,688**
	Mark Reed (R)	45,255
28	**Howard L. Berman* (D)**	**72,501**
	Merlin Froyd (R)	23,116
29	**Adam Schiff* (D)**	**85,335**
	John Colbert (R)	41,435
30	**Henry A. Waxman* (D)**	**122,107**
	Charles Wilkerson (R)	61,089
31	**Xavier Becerra* (D)**	**62,561**
	Stephen Smith (R)	11,855
32	**Judy Chu* (D)**	**65,106**
	Edward Schmerling (R)	26,295
33	**Karen Bass (D)**	**106,432**
	James Andion (R)	16,844
34	**Lucille Roybal-Allard* (D)**	**58,502**
	Wayne Miller (R)	17,077
35	**Maxine Waters* (D)**	**80,723**
	K. Bruce Brown (R)	20,995
36	**Jane Harman* (D)**	**92,214**
	Mattie Fein (R)	54,061
37	**Laura Richardson* (D)**	**69,411**
	Star Parker (R)	22,841
38	**Grace F. Napolitano* (D)**	**71,932**
	Robert Vaughn (R)	25,225
39	**Linda T. Sanchez* (D)**	**69,025**
	Larry Andre (R)	34,502
40	**Ed Royce* (R)**	**86,710**
	Christina Avalos (D)	42,403
41	**Jerry Lewis* (R)**	**99,526**
	Pat Meagher (D)	57,423
42	**Gary G. Miller* (R)**	**94,216**
	Michael Williamson (D)	49,278
43	**Joe Baca* (D)**	**53,825**
	Scott Folkens (R)	28,388
44	**Ken Calvert* (R)**	**75,782**
	Bill Hedrick (D)	58,753
45	**Mary Bono Mack* (R)**	**79,679**
	Steve Pougnet (D)	64,047
46	**Dana Rohrabacher* (R)**	**101,704**
	Ken Arnold (D)	62,528
47	**Loretta Sanchez* (D)**	**31,558**
	Van Tran (R)	26,042
48	**John Campbell* (R)**	**105,952**
	Beth Krom (D)	63,480
49	**Darrell Issa* (R)**	**83,599**
	Howard Katz (D)	41,703
50	**Brian Bilbray* (R)**	**104,407**
	Francine Busby (D)	71,109
51	**Bob Filner* (D)**	**61,625**
	Nick Popaditch (R)	41,631
52	**Duncan D. Hunter Jr.* (R)**	**102,158**
	Ray Lutz (D)	51,339
53	**Susan A. Davis* (D)**	**74,196**
	Michael Crimmins (R)	41,238
Colorado		
1	**Diana L. DeGette* (D)**	**126,674**
	Mike Fallon (R)	53,925
2	**Jared Polis* (D)**	**140,997**
	Stephen Bailey (R)	93,520
3	**Scott Tipton (R)**	**126,227**
	John Salazar* (D)	114,763
4	**Cory Gardner (R)**	**129,919**
	Betsy Markey* (D)	99,907
	Doug Aden (Amer. Const.)	11,240
5	**Doug Lamborn* (R)**	**149,187**
	Kevin Bradley (D)	66,243
6	**Mike Coffman* (R)**	**200,310**
	John Flerlage (D)	94,490
7	**Ed Perlmutter* (D)**	**104,035**
	Ryan Frazier (R)	82,592

Dist.	Representative (party)	2010 election
Connecticut		
1	**John B. Larson* (D)**	**132,002**
	Ann Brickley (R)	79,820
2	**Joe Courtney* (D)**	**146,554**
	Janet Peckinpaugh (R)	94,698
3	**Rosa L. DeLauro* (D)**	**124,611**
	Jerry Labriola (R)	71,894
4	**Jim Himes* (D)**	**113,485**
	Dan Debicella (R)	100,376
5	**Chris Murphy* (D)**	**120,339**
	Sam Caligiuri (R)	101,097
Delaware		
	John Carney (D)	**173,443**
	Glen Urquhart (R)	125,408
Florida		
1	**Jeff Miller* (R)**	**168,899**
	Joe Cantrell (Unaff.)	22,763
	John Krause (Unaff.)	17,869
2	**Steve Southerland (R)**	**134,912**
	Allen Boyd Jr.* (D)	104,415
3	**Corrine Brown* (D)**	**92,057**
	Michael Yost (R)	50,107
4	**Ander Crenshaw* (R)**	**173,244**
	Troy Stanley (Unaff.)	51,136
5	**Richard Nugent (R)**	**207,695**
	Jim Piccillo (D)	101,347
6	**Clifford "Cliff" Stearns* (R)**	**178,478**
	Steve E. Schonberg (Unaff.)	71,291
7	**John L. Mica* (R)**	**184,869**
	Heather Beaven (D)	83,001
8	**Daniel Webster (R)**	**123,464**
	Alan Grayson* (D)	84,036
9	**Gus Bilirakis* (R)**	**162,887**
	Anita de Palma (D)	65,295
10	**C.W. Bill Young* (R)**	**137,822**
	Charlie Justice (D)	71,218
11	**Kathy Castor* (D)**	**89,211**
	Mike Prendergast (R)	60,033
12	**Dennis Ross (R)**	**101,245**
	Lori Edwards (D)	86,515
	Randy Wilkinson (Tea Party)	22,668
13	**Vern Buchanan* (R)**	**183,615**
	James Golden (D)	82,992
14	**Connie Mack* (R)**	**156,356**
	James Roach (D)	63,496
15	**Bill Posey* (R)**	**156,865**
	Shannon Roberts (D)	85,440
16	**Tom Rooney* (R)**	**157,405**
	Jim Horn (D)	77,767
17	**Frederica Wilson (D)**	**103,887**
	Roderick Vereen (Unaff.)	16,501
18	**Ileana Ros-Lehtinen* (R)**	**100,068**
	Rolando Banciella (D)	45,392
19	**Ted Deutch* (D)**	**128,451**
	Joe Budd (R)	76,318
20	**Debbie Wasserman Schultz* (D)**	**97,685**
	Karen Harrington (R)	61,678
21	**Mario Diaz-Balart (R)**	**Unopposed**
22	**Allen West (R)**	**114,664**
	Ron Klein* (D)	96,566
23	**Alcee Hastings* (D)**	**96,454**
	Bernard Sansaricq (R)	25,507
24	**Sandra Adams (R)**	**145,932**
	Suzanne Kosmas* (D)	98,612
25	**David Rivera (R)**	**74,386**
	Joe Garcia (D)	60,123
Georgia		
1	**Jack Kingston* (R)**	**117,121**
	Oscar L. Harris II (D)	46,330
2	**Sanford Bishop* (D)**	**86,370**
	Mike Keown (R)	81,594
3	**Lynn Westmoreland* (R)**	**158,966**
	Frank Saunders (D)	71,036
4	**Henry "Hank" Johnson* (D)**	**130,865**
	Lisbeth "Liz" Carter (R)	44,563
5	**John Lewis* (D)**	**129,795**
	Fenn Little (R)	46,318
6	**Tom Price* (R)**	**Unopposed**
7	**Rob Woodall (R)**	**160,771**
	Doug Heckman (D)	78,823
8	**Austin Scott (R)**	**102,025**
	Jim Marshall* (D)	91,799
9	**Tom Graves* (R)**	**Unopposed**
10	**Paul Broun* (R)**	**137,263**
	Russell Edwards (D)	66,574
11	**Phil Gingrey* (R)**	**Unopposed**
12	**John Barrow* (D)**	**91,636**
	Ray McKinney (R)	69,954
13	**David Scott* (D)**	**138,993**
	Mike Crane (R)	58,266
Hawaii		
1	**Colleen Hanabusa (D)**	**93,930**
	Charles Djou* (R)	82,499
2	**Mazie Hirono* (D)**	**132,267**
	John W. Willoughby (R)	46,394
Idaho		
1	**Raul Labrador (R)**	**126,055**
	Walt Minnick* (D)	101,870
	Dave Olson (I)	14,436
2	**Mike Simpson* (R)**	**136,864**
	Mike Crawford (D)	48,594
	Brian Schad (I)	13,435
Illinois		
1	**Bobby L. Rush* (D)**	**142,840**
	Ray Wardingley (R)	28,839
2	**Jesse Jackson Jr.* (D)**	**145,055**
	Isaac Hayes (R)	24,982
	Anthony Williams (Green)	10,130
3	**Daniel Lipinski* (D)**	**112,484**
	Michael Bendas (R)	39,401
4	**Luis Gutierrez* (D)**	**61,210**
	Israel Vasquez (R)	11,380
5	**Mike Quigley* (D)**	**105,009**
	David Ratowitz (R)	37,757
6	**Peter J. Roskam* (R)**	**113,416**
	Benjamin Lowe (D)	64,669
7	**Danny Davis* (D)**	**143,298**
	Mark Weiman (R)	28,452
8	*Joe Walsh (R)*	*96,636*
	Melissa Bean (D)*	*95,839*
9	**Janice D. Schakowsky* (D)**	**112,019**
	Joel Pollak (R)	53,582
10	**Robert Dold (R)**	**108,104**
	Daniel Seals (D)	103,212
11	**Adam Kinzinger (R)**	**128,250**
	Debbie Halvorson* (D)	94,939
12	**Jerry Costello* (D)**	**115,347**
	Teri Newman (R)	71,060
13	**Judy Biggert* (R)**	**148,907**
	Scott Harper (D)	83,851
14	**Randy Hultgren (R)**	**111,808**
	Bill Foster* (D)	97,792
15	**Timothy V. Johnson* (R)**	**136,499**
	David Gill (D)	75,688
16	**Donald Manzullo* (R)**	**138,100**
	George Gaulrapp (D)	65,935
17	**Bobby Schilling (R)**	**99,490**
	Phil Hare* (D)	79,873
18	**Aaron Schock* (R)**	**152,701**
	Deirdre Hirner (D)	56,958
	Sheldon Schafer (Green)	11,244
19	**John M. Shimkus* (R)**	**166,041**
	Tim Bagwell (D)	67,068
Indiana		
1	**Peter J. Visclosky* (D)**	**99,151**
	Mark Leyva (R)	65,475
2	**Joe Donnelly* (D)**	**91,330**
	Jackie Walorski (R)	88,787
3	**Marlin Stutzman (R)**	**116,019**
	Thomas Hayhurst (D)	61,142
4	**Todd Rokita (R)**	**137,989**
	David Sanders (D)	52,543
	John Duncan (LB)	10,486
5	**Dan Burton* (R)**	**146,862**
	Tim Crawford (D)	60,011
	Chard Reid (LB)	18,258
	Jesse Trueblood (I)	11,216
6	**Mike Pence* (R)**	**126,015**
	Barry Welsh (D)	56,639
7	**Andre Carson* (D)**	**85,938**
	Marvin Scott (R)	55,168
8	**Larry D. Bucshon (R)**	**115,778**
	William Trent Van Haaften (D)	75,480
	John Cunningham (LB)	10,130
9	**Todd Young (R)**	**118,055**
	Baron Hill* (D)	95,301
	Gregg Knott (LB)	12,364

Dist.	Representative (party)	2010 election
Iowa		
1	**Bruce Braley* (D)**	**103,931**
	Benjamin Lange (R)	99,976
2	**David Loebsack* (D)**	**115,332**
	Mariannette Miller-Meeks (R)	104,046
3	**Leonard Boswell* (D)**	**120,061**
	Brad Zaun (R)	110,506
4	**Tom Latham* (R)**	**152,124**
	Bill Maske (D)	73,952
5	**Steve King* (R)**	**127,974**
	Matthew Campbell (D)	62,856
Kansas		
1	**Tim Huelskamp (R)**	**140,444**
	Alan Jilka (D)	43,385
2	**Lynn Jenkins* (R)**	**128,083**
	Cheryl Hudspeth (D)	65,448
3	**Kevin Yoder (R)**	**134,692**
	Stephene Moore (D)	87,920
4	**Mike Pompeo (R)**	**117,171**
	Raj Goyle (D)	71,866
Kentucky		
1	**Ed Whitfield* (R)**	**153,111**
	Charles Hatchett (D)	62,053
2	**Brett Guthrie* (R)**	**155,970**
	Ed Marksberry (D)	73,795
3	**John Yarmuth* (D)**	**138,992**
	Todd Lally (R)	112,469
4	**Geoff Davis* (R)**	**151,749**
	John Waltz (D)	66,711
5	**Harold "Hal" Rogers* (R)**	**150,985**
	Jim Holbert (D)	44,047
6	*Ben Chandler* (D)*	*119,845*
	Andy Barr (R)	*119,245*
Louisiana		
1	**Steve Scalise* (R)**	**157,150**
	Myron Katz (D)	38,400
2	**Cedric Richmond (D)**	**83,653**
	Joseph Cao* (R)	43,364
3	**Jeff Landry (R)**	**108,957**
	Ravi Sangisetty (D)	61,909
4	**John Fleming* (R)**	**105,206**
	David Melville (D)	54,598
5	**Rodney Alexander* (R)**	**122,030**
	Tom Gibbs (I)	33,279
6	**Bill Cassidy* (R)**	**138,552**
	Merritt McDonald (D)	72,537
7	**Charles Boustany* (R)**	**Unopposed**
Maine		
1	**Chellie Pingree* (D)**	**166,198**
	Dean Scontras (R)	126,216
2	**Mike Michaud* (D)**	**142,559**
	Jason Levesque (R)	117,484
Maryland		
1	**Andy Harris (R)**	**146,251**
	Frank Kratovil* (D)	111,227
	Richard Davis (LB)	10,209
2	**C. A. Dutch Ruppersberger* (D)**	**126,180**
	Marcelo Cardarelli (R)	65,612
3	**John P. Sarbanes* (D)**	**136,083**
	Jim Wilhelm (R)	81,504
4	**Donna Edwards* (D)**	**148,857**
	Robert Broadus (R)	29,211
5	**Steny Hoyer* (D)**	**143,620**
	Charles Lollar (R)	79,122
6	**Roscoe Bartlett* (R)**	**142,584**
	Andrew Duck (D)	75,807
7	**Elijah Cummings* (D)**	**142,395**
	Frank Mirabile (R)	43,930
8	**Chris Van Hollen* (D)**	**137,842**
	Michael Philips (R)	47,759
Massachusetts		
1	**John W. Olver* (D)**	**127,474**
	Bill Gunn (R)	73,952
	Michael Engel (I)	10,841
2	**Richard E. Neal* (D)**	**122,547**
	Tom Wesley (R)	91,181
3	**James P. McGovern* (D)**	**122,357**
	Marty Lamb (R)	84,972
4	**Barney Frank* (D)**	**125,823**
	Sean Bielat (R)	101,315
5	**Niki Tsongas* (D)**	**122,676**
	Jon Golnik (R)	94,501
6	**John Tierney* (D)**	**142,456**
	Bill Hudak (R)	107,739
7	**Edward Markey* (D)**	**141,364**
	Gerry Dembrowski (R)	73,006
8	**Michael Capuano* (D)**	**Unopposed**
9	**Stephen Lynch* (D)**	**156,079**
	Vernon Harrison (R)	60,120
	Phil Dunkelbarger (I)	12,833
10	**Bill Keating (D)**	**132,582**
	Jeff Perry (R)	119,820
	Maryanne Lewis (I)	16,673
	Jim Sheets (I)	10,438
Michigan		
1	**Dan Benishek (R)**	**120,077**
	Gary McDowell (D)	94,805
2	**Bill Huizenga (R)**	**149,235**
	Fred Johnson (D)	72,745
3	**Justin Amash (R)**	**136,051**
	Pat Miles (D)	85,463
4	**Dave Camp* (R)**	**147,622**
	Jerry Campbell (D)	68,123
5	**Dale E. Kildee* (D)**	**107,212**
	John Kupiec (R)	89,671
6	**Fred Upton* (R)**	**123,133**
	Don Cooney (D)	66,725
7	**Tim Walberg (R)**	**114,384**
	Mark Schauer* (D)	103,650
8	**Mike Rogers* (R)**	**157,412**
	Lance Enderle (D)	84,392
9	**Gary Peters* (D)**	**126,155**
	Rocky Raczkowski (R)	119,673
10	**Candice Miller* (R)**	**168,120**
	Henry Yanez (D)	58,335
11	**Thaddeus McCotter* (R)**	**142,268**
	Natalie Mosher (D)	92,221
12	**Sander Levin* (D)**	**124,667**
	Don Volaric (R)	71,371
13	**Hansen Clarke (D)**	**100,507**
	John Hauler (R)	23,452
14	**John Conyers* (D)**	**115,250**
	Don Ukrainec (R)	29,894
15	**John Dingell* (D)**	**118,117**
	Rob Steele (R)	83,305
Minnesota		
1	**Tim Walz* (DFL)**	**122,286**
	Randy Demmer (R)	109,088
	Steven Wilson (IP)	13,235
2	**John Kline* (R)**	**181,340**
	Shelley Madore (DFL)	104,809
3	**Erik Paulsen* (R)**	**161,172**
	Jim Meffert (DFL)	100,240
	Jon Oleson (IP)	12,508
4	**Betty McCollum* (DFL)**	**136,744**
	Teresa Collett (R)	80,132
	Steve Carlson (IP)	14,205
5	**Keith Ellison* (DFL)**	**154,830**
	Joel Demos (R)	55,224
6	**Michele Bachmann* (R)**	**159,029**
	Tarryl Clark (DFL)	120,640
	Bob Anderson (IP)	17,673
7	**Collin C. Peterson* (DFL)**	**132,969**
	Lee Byberg (R)	90,547
8	**Chip Cravaack (R)**	**133,307**
	James L. Oberstar* (DFL)	128,775
	Timothy Olson (IP)	11,860
Mississippi		
1	**Alan Nunnelee (R)**	**115,742**
	Travis Childers* (D)	84,984
2	**Bennie Thompson* (D)**	**96,405**
	Bill Marcy (R)	58,672
3	**Gregg Harper* (R)**	**126,414**
	Joel Gill (D)	56,855
4	**Steven Palazzo (R)**	**101,318**
	Gene Taylor* (D)	91,838
Missouri		
1	**Wm. Lacy Clay* (D)**	**134,295**
	Robyn Hamlin (R)	43,260
2	**Todd Akin* (R)**	**179,731**
	Arthur Lieber (D)	77,249
3	**Russ Carnahan* (D)**	**99,011**
	Ed Martin (R)	94,593
4	**Vicky Hartzler (R)**	**113,500**
	Ike Skelton* (D)	101,507
5	**Emanuel Cleaver* (D)**	**101,076**
	Jacob Turk (R)	84,415
6	**Sam Graves* (R)**	**153,973**
	Clint Hylton (D)	67,717
7	**Billy Long (R)**	**140,260**
	Scott Eckersley (D)	67,073
	Kevin Craig (LB)	13,761
8	**Jo Ann Emerson* (R)**	**128,515**
	Tommy Sowers (D)	56,362
9	**Blaine Luetkemeyer* (R)**	**162,512**
	Christopher Dwyer (LB)	46,778

Dist.	Representative (party)	2010 election
Montana		
	Denny Rehberg* (R)	**217,223**
	Dennis McDonald (D)	121,297
	Mike Fellows (LB)	20,540
Nebraska		
1	**Jeff Fortenberry* (R)**	**115,623**
	Ivy Harper (D)	46,339
2	**Lee Terry* (R)**	**88,293**
	Tom White (D)	55,409
3	**Adrian Smith* (R)**	**116,166**
	Rebekah Davis (D)	29,642
	Dan Hill (Other)	19,868
Nevada		
1	**Shelley Berkley* (D)**	**102,870**
	Kenneth Wegner (R)	58,920
2	**Dean Heller* (R)**	**169,286**
	Nancy Price (D)	87,226
	Russell Best (Independent American)	10,809
3	**Joe Heck (R)**	**128,703**
	Dina Titus* (D)	126,781
New Hampshire		
1	**Frank Guinta (R)**	**116,081**
	Carol Shea-Porter* (D)	91,775
2	**Charlie Bass (R)**	**108,496**
	Ann Kuster (D)	104,841
New Jersey		
1	**Robert Andrews* (D)**	**99,792**
	Dale Glading (R)	56,304
2	**Frank A. LoBiondo* (R)**	**106,117**
	Gary Stein (D)	49,689
3	**Jon Runyan (R)**	**106,175**
	John Adler* (D)	100,069
4	**Chris Smith* (R)**	**128,743**
	Howard Kleinhendler (D)	51,503
5	**Scott Garrett* (R)**	**119,478**
	Tod Theise (D)	60,045
6	**Frank Pallone* (D)**	**81,053**
	Anna Little (R)	65,065
7	**Leonard Lance* (R)**	**102,840**
	Ed Potosnak (D)	70,066
8	**Bill Pascrell* (D)**	**87,156**
	Roland Straten (R)	50,547
9	**Steve Rothman* (D)**	**77,993**
	Michael Agosta (R)	48,965
10	**Donald M. Payne* (D)**	**91,605**
	Michael Alonso (R)	13,500
11	**Rodney Frelinghuysen* (R)**	**122,076**
	Douglas Herbert (D)	55,441
12	**Rush Holt* (D)**	**107,147**
	Scott Sipprelle (R)	93,311
13	**Albio Sires* (D)**	**60,243**
	Henrietta Dwyer (R)	18,827
New Mexico		
1	**Martin Heinrich* (D)**	**110,046**
	Jonathan Barela (R)	103,207
2	**Steve Pearce (R)**	**91,954**
	Harry Teague* (D)	73,995
3	**Ben R. Lujan* (D)**	**118,419**
	Tom Mullins (R)	90,039
New York		
1	**Timothy Bishop* (D)**	**91,616**
	Randy Altschuler (R)	88,284
2	**Steve Israel* (D)**	**86,049**
	John Gomez (R)	64,694
3	**Peter King* (R)**	**124,980**
	Howard Kudler (D)	48,606
4	**Carolyn McCarthy* (D)**	**85,694**
	Francis Becker (R)	75,339
5	**Gary Ackerman* (D)**	**64,568**
	James Milano (R)	38,186
6	**Gregory W. Meeks* (D)**	**48,968**
	Asher Taub (R)	8,710
7	**Joseph Crowley* (D)**	**63,364**
	Ken Reynolds (R)	15,076
8	**Jerrold Nadler* (D)**	**85,371**
	Susan Kone (R)	28,514
9	**Anthony Weiner* (D)**	**47,004**
	Bob Turner (R)	33,330
10	**Edolphus Towns* (D)**	**82,354**
	Diana Muniz (R)	6,537
11	**Yvette D. Clarke* (D)**	**88,645**
	Hugh Carr (R)	9,545
12	**Nydia M. Velazquez* (D)**	**57,039**
13	**Mike Grimm (R)**	**59,346**
	Michael McMahon* (D)	55,056
14	**Carolyn Maloney* (D)**	**72,566**
	Ryan Brumberg (R)	20,983
15	**Charles Rangel* (D)**	**74,193**
	Michel Faulkner (R)	9,235
16	**Jose E. Serrano* (D)**	**51,731**
	Frank Della Valle (R)	2,488
17	**Eliot Engel* (D)**	**75,070**
	Anthony Mele (R)	26,131
18	**Nita Lowey* (D)**	**86,849**
	Jim Russell (R)	53,601
19	**Nan Hayworth (R)**	**99,137**
	John Hall* (D)	88,259
20	**Christopher Gibson (R)**	**122,314**
	Scott Murphy* (D)	98,489
21	**Paul Tonko* (D)**	**116,953**
	Theodore Danz (R)	80,343
22	**Maurice Hinchey* (D)**	**89,724**
	George Phillips (R)	81,382
23	**Bill Owens* (D)**	**76,328**
	Matthew Doheny (R)	72,612
24	**Richard Hanna (R)**	**94,939**
	Michael Arcuri* (D)	83,214
25	*Daniel Maffei* (D)*	*95,286*
	Ann Marie Buerkle (R)	*93,090*
26	**Christopher Lee* (R)**	**134,632**
	Philip Fedele (D)	47,385
27	**Brian Higgins* (D)**	**106,485**
	Leonard Roberto (R)	68,108
28	**Louise M. Slaughter* (D)**	**92,987**
	Jill Rowland (R)	48,445
29	**Thomas Reed (R)**	**100,620**
	Matthew Zeller (D)	78,084
North Carolina		
1	**G. K. Butterfield* (D)**	**102,025**
	Ashley Woolard (R)	70,434
2	**Renee Ellmers (R)**	**91,924**
	Bob Etheridge* (D)	89,829
3	**Walter Jones* (R)**	**141,978**
	Johnny Rouse (D)	50,600
4	**David Price* (D)**	**152,501**
	William Lawson (R)	115,715
5	**Virginia Foxx* (R)**	**139,544**
	Billy Kennedy (D)	72,205
6	**Howard Coble* (R)**	**157,696**
	Sam Turner (D)	51,636
7	**Mike McIntyre* (D)**	**112,397**
	Ilario Pantano (R)	96,582
8	**Larry Kissell* (D)**	**87,394**
	Harold Johnson (R)	72,626
9	**Sue Myrick* (R)**	**158,162**
	Jeff Doctor (D)	71,065
10	**Patrick McHenry* (R)**	**130,393**
	Jeff Gregory (D)	52,546
11	**Heath Shuler* (D)**	**129,620**
	Jeff Miller (R)	109,003
12	**Mel Watt* (D)**	**102,783**
	Greg Dority (R)	55,066
13	**Brad Miller* (D)**	**115,116**
	William Randall (R)	92,586
North Dakota		
	Rick Berg (R)	**129,586**
	Earl Pomeroy* (D)	106,371
Ohio		
1	**Steve Chabot (R)**	**101,691**
	Steve Driehaus* (D)	87,394
2	**Jean Schmidt* (R)**	**136,120**
	Surya Yalamanchili (D)	80,139
	Marc Johnston (LB)	15,867
3	**Mike Turner* (R)**	**148,063**
	Joe Roberts (D)	67,543
4	**Jim Jordan* (R)**	**143,495**
	Doug Litt (D)	49,369
5	**Bob Latta* (R)**	**138,291**
	Caleb Finkenbiner (D)	53,526
	Brian Smith (LB)	11,571
6	**Bill Johnson (R)**	**101,558**
	Charlie Wilson Jr.* (D)	91,018
7	**Steve Austria* (R)**	**132,613**
	Bill Conner (D)	67,393
8	**John Boehner* (R)**	**139,118**
	Justin Coussoule (D)	63,503
9	**Marcy Kaptur* (D)**	**117,890**
	Rich Iott (R)	81,876
10	**Dennis Kucinich* (D)**	**97,589**
	Peter Corrigan (R)	81,452
11	**Marcia Fudge* (D)**	**130,962**
	Thomas Pekarek (R)	27,872
12	**Pat Tiberi* (R)**	**145,567**
	Paula Brooks (D)	104,588
13	**Betty Sutton* (D)**	**115,310**
	Tom Ganley (R)	92,581

Dist.	Representative (party)	2010 election
14	**Steven LaTourette* (R)**	**147,150**
	Bill O'Neill (D)	70,738
15	**Steve Stivers (R)**	**115,879**
	Mary Jo Kilroy* (D)	86,410
16	**Jim Renacci (R)**	**112,902**
	John Boccieri* (D)	89,008
	Jeffrey Blevins (LB)	14,342
17	**Timothy Ryan* (D)**	**100,295**
	Jim Graham (R)	56,441
	James Traficant (I)	29,969
18	**Bob Gibbs (R)**	**105,727**
	Zack Space* (D)	79,257
	Lindsey Sutton (CP)	11,019
Oklahoma		
1	**John Sullivan* (R)**	**151,155**
	Angelia O'Dell (I)	45,646
2	**Dan Boren* (D)**	**108,184**
	Charles Thompson (R)	83,198
3	**Frank D. Lucas* (R)**	**161,915**
	Frankie Robbins (D)	45,684
4	**Tom Cole* (R)**	**Unopposed**
5	**James Lankford (R)**	**122,009**
	Billy Coyle (D)	68,947
Oregon		
1	**David Wu* (D)**	**146,324**
	Rob Cornilles (R)	115,163
2	**Greg Walden* (R)**	**197,416**
	Joyce Segers (D)	66,971
3	**Earl Blumenauer* (D)**	**151,165**
	Jeff Lawrence (LB)	35,717
	Delia Lopez (R)	27,210
4	**Peter DeFazio* (D)**	**136,743**
	Art Robinson (R)	114,123
5	**Kurt Schrader* (D)**	**137,508**
	Scott Bruun (R)	123,811
Pennsylvania		
1	**Robert A. Brady* (D)**	**Unopposed**
2	**Chaka Fattah* (D)**	**179,152**
	Rick Hellberg (R)	21,388
3	**Mike Kelly (R)**	**108,398**
	Kathy Dahlkemper* (D)	86,674
4	**Jason Altmire* (D)**	**118,554**
	Keith Rothfus (R)	113,434
5	**Glenn Thompson* (R)**	**124,100**
	Michael Pipe (D)	51,107
6	**Jim Gerlach* (R)**	**132,330**
	Manan Trivedi (D)	99,766
7	**Patrick Meehan (R)**	**133,146**
	Bryan Lentz (D)	106,214
8	**Michael G. Fitzpatrick (R)**	**126,404**
	Patrick Murphy* (D)	109,157
9	**Bill Shuster* (R)**	**140,097**
	Tom Conners (D)	51,706
10	**Thomas A. Marino (R)**	**109,603**
	Christopher Carney* (D)	89,170
11	**Lou Barletta (R)**	**99,837**
	Paul Kanjorski* (D)	83,250
12	**Mark Critz* (D)**	**91,776**
	Tim Burns (R)	88,799
13	**Allyson Schwartz* (D)**	**117,798**
	Dee Adcock (R)	91,195
14	**Mike Doyle* (D)**	**121,081**
	Melissa Haluszczak (R)	49,692
15	**Charles Dent* (R)**	**109,500**
	John B. Callahan (D)	79,857
	Jake Towne (I)	15,251
16	**Joseph Pitts* (R)**	**133,408**
	Lois Herr (D)	70,506
17	**Tim Holden* (D)**	**117,228**
	Dave Argall (R)	93,544
18	**Tim Murphy* (R)**	**158,224**
	Dan Connolly (D)	77,212
19	**Todd Platts* (R)**	**162,786**
	Ryan Sanders (D)	52,737
	Joshua Monighan (I)	10,876
Rhode Island		
1	**David Cicilline (D)**	**81,098**
	John Loughlin (R)	71,443
2	**Jim Langevin* (D)**	**104,227**
	Mark Zaccaria (R)	55,326
	John Matson (I)	14,547
South Carolina		
1	**Tim Scott (R)**	**144,951**
	Ben Frasier (D)	64,351
2	**Joe Wilson* (R)**	**138,755**
	Rob Miller (D)	113,354
3	**Jeff Duncan (R)**	**125,513**
	Jane Dyer (D)	72,436
4	**Trey Gowdy (R)**	**137,167**
	Paul Corden (D)	62,173
	Dave Edwards (CP)	11,005
5	**Mick Mulvaney (R)**	**119,776**
	John Spratt* (D)	99,034
6	**Jim Clyburn* (D)**	**122,709**
	Jim Pratt (R)	69,390
South Dakota		
	Kristi Noem (R)	**153,773**
	Stephanie Herseth Sandlin* (D)	146,551
	Thomas Marking (I)	19,130
Tennessee		
1	**Phil Roe* (R)**	**122,985**
	Michael Clark (D)	26,038
2	**John Duncan* (R)**	**142,572**
	David Hancock (D)	25,713
3	**Chuck Fleischmann (R)**	**91,891**
	John Wolfe (D)	45,345
	Savas Kyriakidis (I)	17,074
4	**Scott DesJarlais (R)**	**104,025**
	Lincoln Davis* (D)	70,329
5	**Jim Cooper* (D)**	**99,012**
	David Hall (R)	74,104
6	**Diane Black (R)**	**128,340**
	Brett Carter (D)	56,057
7	**Marsha Blackburn* (R)**	**158,892**
	Greg Rabidoux (D)	54,341
8	**Stephen Fincher (R)**	**98,483**
	Roy Herron (D)	64,701
9	**Steve Cohen* (D)**	**99,801**
	Charlotte Bergmann (R)	33,872
Texas		
1	**Louie Gohmert* (R)**	**124,398**
	Charles Parkes (LB)	13,839
2	**Ted Poe* (R)**	**129,899**
	David Smith (LB)	16,695
3	**Sam Johnson* (R)**	**100,894**
	John Lingenfelder (D)	47,670
4	**Ralph Hall* (R)**	**136,231**
	VaLinda Hathcox (D)	40,919
5	**Jeb Hensarling* (R)**	**106,611**
	Tom Berry (D)	41,577
6	**Joe Barton* (R)**	**107,104**
	David Cozad (D)	50,683
7	**John Culberson* (R)**	**143,389**
	Bob Townsend (LB)	31,633
8	**Kevin Brady* (R)**	**161,257**
	Kent Hargett (D)	36,566
9	**Al Green* (D)**	**79,957**
	Steve Mueller (R)	24,157
10	**Michael McCaul* (R)**	**144,774**
	Ted Ankrum (D)	73,934
11	**Mike Conaway* (R)**	**125,354**
	James Quillian (D)	23,939
12	**Kay Granger* (R)**	**109,766**
	Tracey Smith (D)	38,403
13	**Mac Thornberry* (R)**	**113,153**
	Keith Dyer (I)	11,190
14	**Ron Paul* (R)**	**140,441**
	Robert Pruett (D)	44,345
15	**Rubén Hinojosa* (D)**	**53,373**
	Eddie Zamora (R)	39,893
16	**Silvestre Reyes* (D)**	**49,242**
	Tim Besco (R)	30,983
17	**Bill Flores (R)**	**106,275**
	Chet Edwards* (D)	62,926
18	**Sheila Jackson Lee* (D)**	**84,972**
	John Faulk (R)	33,024

Dist.	Representative (party)	2010 election
19	**Randy Neugebauer* (R)**	**105,818**
	Andy Wilson (D)	26,082
20	**Charlie Gonzalez* (D)**	**58,551**
	Clayton Trotter (R)	31,725
21	**Lamar Smith* (R)**	**162,763**
	Lainey Melnick (D)	65,834
22	**Pete Olson* (R)**	**140,391**
	Kesha Rogers (D)	62,011
23	**Quico Canseco (R)**	**74,671**
	Ciro Rodriguez* (D)	67,212
24	**Kenny Marchant* (R)**	**99,891**
	David Sparks (LB)	22,504
25	**Lloyd Doggett* (D)**	**99,853**
	Donna Campbell (R)	84,780
26	**Michael C. Burgess* (R)**	**120,683**
	Neil Durrance (D)	55,182
27	*Blake Farenthold (R)*	*50,954*
	Solomon Ortiz (D)*	*50,155*
28	**Henry Cuellar* (D)**	**62,055**
	Bryan Underwood (R)	46,417
29	**Gene Green* (D)**	**43,185**
	Roy Morales (R)	22,786
30	**Eddie Bernice Johnson* (D)**	**86,195**
	Stephen Broden (R)	24,599
31	**John Carter* (R)**	**126,290**
	Bill Oliver (LB)	26,710
32	**Pete Sessions* (R)**	**79,181**
	Grier Raggio (D)	44,134
Utah		
1	**Rob Bishop* (R)**	**129,451**
	Morgan Bowen (D)	44,265
2	**Jim Matheson* (D)**	**116,375**
	Morgan Philpot (R)	105,441
3	**Jason Chaffetz* (R)**	**126,915**
	Karen Hyer (D)	40,049
Vermont		
	Peter Welch* (D)	**147,094**
	Paul Beaudry (R)	72,261
Virginia		
1	**Robert Wittman* (R)**	**135,432**
	Krystal Ball (D)	73,668
2	**Scott Rigell (R)**	**88,007**
	Glenn Nye* (D)	70,306
3	**Bobby Scott* (D)**	**114,656**
	Chuck Smith (R)	44,488
4	**Randy Forbes* (R)**	**122,667**
	Wynne LeGrow (D)	74,209
5	**Robert Hurt (R)**	**119,241**
	Tom Perriello* (D)	110,564
6	**Bob Goodlatte* (R)**	**125,303**
	Jeffrey Vanke (I)	22,190
	Stuart Bain (LB)	15,321
7	**Eric Cantor* (R)**	**138,093**
	Rick Waugh (D)	79,289
	Floyd Bayne (Independent Green)	15,154
8	**Jim Moran* (D)**	**116,269**
	Patrick Murray (R)	71,100
9	**H. Morgan Griffith (R)**	**95,593**
	Rick Boucher* (D)	86,677
10	**Frank Wolf* (R)**	**136,703**
	Jeff Barnett (D)	72,272
11	*Gerry Connolly* (D)*	*111,513*
	Keith Fimian (R)	*110,695*
Washington		
1	**Jay Inslee* (D)**	**84,243**
	James Watkins (R)	66,804
2	*Rick Larsen* (D)*	*124,111*
	John Koster (R)	*120,239*
3	**Jaime Herrera (R)**	**108,847**
	Denny Heck (D)	96,828
4	**Doc Hastings* (R)**	**98,533**
	Jay Clough (D)	45,721
5	**Cathy McMorris Rodgers* (R)**	**88,161**
	Daryl Romeyn (D)	48,506
6	**Norm Dicks* (D)**	**96,890**
	Doug Cloud (R)	72,728
7	**Jim McDermott* (D)**	**104,451**
	Bob Jeffers-Schroder (Unaff.)	24,591
8	**Dave Reichert* (R)**	**91,797**
	Suzan DelBene (D)	76,319
9	**Adam Smith* (D)**	**74,266**
	Dick Muri (R)	64,756
West Virginia		
1	**David McKinley (R)**	**89,915**
	Mike Oliverio (D)	88,558
2	**Shelley Moore Capito* (R)**	**126,102**
	Virginia Lynch Graf (D)	54,671
3	**Nick Rahall* (D)**	**82,422**
	Elliott Maynard (R)	64,669
Wisconsin		
1	**Paul Ryan* (R)**	**179,702**
	John Heckenlively (D)	79,350
2	**Tammy Baldwin* (D)**	**190,433**
	Chad Lee (R)	118,037
3	**Ron Kind* (D)**	**126,281**
	Dan Kapanke (R)	117,151
4	**Gwen Moore* (D)**	**143,531**
	Dan Sebring (R)	61,531
5	**Jim Sensenbrenner* (R)**	**229,007**
	Todd Kolosso (D)	90,544
	Robert Raymond (I)	10,789
6	**Tom Petri* (R)**	**183,167**
	Joseph Kallas (D)	75,889
7	**Sean Duffy (R)**	**131,920**
	Julie Lassa (D)	112,881
8	**Reid Ribble (R)**	**144,050**
	Steven Kagen* (D)	118,617
Wyoming		
	Cynthia Lummis* (R)	**131,632**
	David Wendt (D)	45,766

Nonvoting Members of Congress

Representative (party)	2010 election
American Samoa	
Eni F.H. Faleomavaega* (D)	**6,176**
Aumua Amata Coleman (R)	4,438
Tuika Tuika (Unaff.)	357
District of Columbia	
Eleanor Holmes Norton* (D)	**109,390**
Missy Reilly Smith (R)	7,385
Guam	
Madeleine Z. Bordallo* (D)	**Unopposed**

Representative (party)	2010 election
Puerto Rico—Resident Commissioner (2008 results)[1]	
Pedro Pierluisi (New Progressive Party)	**1,010,304**
Alfredo Salazar (Popular Dem. Party)	810,111
Carlos A. Velazquez Lopez (Puerto Ricans for Puerto Rico Party)	46,126
Jessica Martinez Birriel (Puerto Rican Independence Party)	37,865
Virgin Islands	
Donna M. Christensen* (D)	**18,584**
Jeffrey Moorhead (Unaff.)	4,880
Vincent Emile Danet (R)	2,223

(1) The resident commissioner of Puerto Rico is the only member of the House of Representatives who serves a four-year term.

State Governors

Of the 50 state governors, 29 are Republicans, 17 are Democrats, and 1 is Independent, with results pending in three states (Connecticut, Minnesota, and Vermont); pending results are listed in *italic*. Terms are for 4 years, with the exception of 2-year terms for governors of New Hampshire and Vermont. Governors for states not holding elections in Nov. 2010 are shown for reference; month and year in parentheses is end of current term. * = Incumbent. Third-party or independent candidates receiving fewer than 10,000 votes are not listed.

D = Democrat; **R** = Republican; **Amer. Const.** = American Constitution; **Amer. Ind.** = American Independent Party; **CP** = Constitution Party; **DFL** = Dem.-Farmer-Labor; **I** = Independent; **IP** = Independence Party; **LB** = Libertarian; **Unaff.** = Unaffiliated.

State	Candidate (party)	2010 election
Alabama	**Robert Bentley (R)**	**856,831**
	Ron Sparks (D)	623,202
Alaska	**Sean Parnell* (R)**	**117,178**
	Ethan Berkowitz (D)	76,369
Arizona	**Jan Brewer* (R)**	**748,627**
	Terry Goddard (D)	568,953
	Barry Hess (LB)	29,465
	Larry Gist (Green)	12,053
Arkansas	**Mike Beebe* (D)**	**489,718**
	Jim Keet (R)	253,890
	Jim Lendall (Green)	14,223
California	**Jerry Brown (D)**	**3,988,409**
	Meg Whitman (R)	3,064,982
	Chelene Nightingale (Amer. Ind.)	117,861
	Dale Ogden (LB)	108,514
	Laura Wells (Green)	90,513
	Carlos Alvarez (Peace/ Freedom)	65,095
Colorado	**John Hickenlooper (D)**	**850,196**
	Tom Tancredo (Amer. Const.)	615,724
	Dan Maes (R)	187,036
	Jaimes Brown (LB)	12,253
Connecticut	*Dan Malloy (D)*	*564,885*
	Tom Foley (R)	*557,123*
	Thomas Marsh (I)	*17,524*
Delaware	Jack A. Markell (D)	NA (Jan. 2013)
Florida	**Rick Scott (R)**	**2,556,591**
	Alex Sink (D)	2,504,619
	Peter Allen (IP)	120,647
	CC Reed (Unaff.)	18,448
	Michael Arth (Unaff.)	18,179
	Daniel Imperato (Unaff.)	13,374
Georgia	**Nathan Deal (R)**	**1,341,589**
	Roy Barnes (D)	1,094,621
	John Monds (LB)	101,720
Hawaii	**Neil Abercrombie (D)**	**222,510**
	Duke Aiona (R)	157,098
Idaho	**C. L. "Butch" Otter* (R)**	**266,717**
	Keith Allred (D)	148,223
	Jana Kemp (I)	26,561
Illinois	**Pat Quinn* (D)**	**1,721,812**
	Bill Brady (R)	1,702,399
	Scott Lee Cohen (I)	134,219
	Rich Whitney (Green)	99,625
	Lex Green (LB)	34,293
Indiana	Mitch E. Daniels Jr. (R)	NA (Jan. 2013)
Iowa	**Terry Branstad (R)**	**589,565**
	Chet Culver* (D)	481,297
	Jonathan Narcisse (Other)	20,486
	Eric Cooper (LB)	14,194
Kansas	**Sam Brownback (R)**	**522,540**
	Tom Holland (D)	264,214
	Andrew Gray (LB)	21,932
	Ken Cannon (Reform)	15,050
Kentucky	Steven L. Beshear (D)	NA (Dec. 2011)
Louisiana	Bobby Jindal (R)	NA (Jan. 2012)
Maine	**Paul LePage (R)**	**212,939**
	Eliot Cutler (I)	203,939
	Libby Mitchell (D)	106,085
	Shawn Moody (I)	28,424
Maryland	**Martin O'Malley* (D)**	**964,576**
	Robert Ehrlich (R)	730,318
	Susan Gaztanaga (LB)	13,227
	Maria Allwine (Green)	10,981
Massachusetts	**Deval Patrick* (D)**	**1,108,026**
	Charlie Baker (R)	962,671
	Tim Cahill (I)	183,892
	Jill Stein (Green)	32,816
Michigan	**Rick Snyder (R)**	**1,880,438**
	Virg Bernero (D)	1,289,928
	Ken Proctor (LB)	22,491
	Harley Mikkelson (Green)	21,312
	Stacey Mathia (U.S. Taxpayers)	21,033
Minnesota	*Mark Dayton (D)*	*918,351*
	Tom Emmer (R)	*909,294*
	Tom Horner (IP)	*251,300*
Mississippi	Haley Barbour (R)	NA (Jan. 2012)
Missouri	Jay Nixon (D)	NA (Jan. 2013)
Montana	Brian Schweitzer (D)	NA (Jan. 2013)
Nebraska	**David Heineman* (R)**	**351,893**
	Mike Meister (D)	121,919
Nevada	**Brian Sandoval (R)**	**382,350**
	Rory Reid (D)	298,170
	None of these candidates	12,231
New Hampshire	**John H. Lynch* (D)**	**234,478**
	John Stephen (R)	201,610
	John Babiarz (LB)	10,106
New Jersey	Chris Christie (R)	NA (Jan. 2014)
New Mexico	**Susana Martinez (R)**	**317,421**
	Diane Denish (D)	274,892
New York	**Andrew Cuomo (D)**	**2,535,660**
	Carl Paladino (R)	1,403,849
	Howie Hawkins (Green)	57,014
	Warren Redlich (LB)	44,762
	Jimmy McMillan (Other)	39,894
	Kristin Davis (Other)	22,810
	Charles Barron (Freedom)	20,766
North Carolina	Beverly Purdue (D)	NA (Jan. 2013)
North Dakota	John Hoeven (R)	NA (Dec. 2012)
Ohio	**John Kasich (R)**	**1,848,132**
	Ted Strickland* (D)	1,750,708
	Ken Matesz (LB)	89,388
	Dennis Spisak (Green)	56,734
Oklahoma	**Mary Fallin (R)**	**624,285**
	Jari Askins (D)	415,150
Oregon	**Chris Dudley (R)**	**637,508**
	John Kitzhaber (D)	622,952
	Greg Kord (CP)	18,326
	Wes Wagner (LB)	16,779
Pennsylvania	**Tom Corbett (R)**	**2,137,980**
	Dan Onorato (D)	1,783,863
Rhode Island	**Lincoln Chafee (I)**	**123,398**
	John Robitaille (R)	114,761
	Frank Caprio (D)	78,776
	Ken Block (Moderate)	22,116
South Carolina	**Nikki Haley (R)**	**674,103**
	Vincent Sheheen (D)	617,427
	Morgan Reeves (Green)	19,791
South Dakota	**Dennis Daugaard (R)**	**195,015**
	Scott Heidepriem (D)	122,002
Tennessee	**Bill Haslam (R)**	**1,040,688**
	Mike McWherter (D)	529,834
Texas	**Rick Perry* (R)**	**2,733,784**
	Bill White (D)	2,102,606
	Kathie Glass (LB)	109,057
	Deb Shafto (Green)	19,475
Utah	**Gary R. Herbert* (R)**	**381,152**
	Peter Corroon (D)	188,817
	Farley Anderson (Unaff.)	11,828
	Andrew McCullough (LB)	11,714
Vermont	*Peter Shumlin (D)*	*113,844*
	Brian Dubie (R)	*109,410*
Virginia	Bob McDonnell (R)	NA (Jan. 2014)
Washington	Christine Gregoire (D)	NA (Jan. 2013)
West Virginia	Joe Manchin III (D)	NA (Jan. 2013)
Wisconsin	**Scott Walker (R)**	**1,127,798**
	Tom Barrett (D)	1,004,802
	Jim Langer (I)	10,528
Wyoming	**Matt Mead (R)**	**123,764**
	Leslie Petersen (D)	43,336
Puerto Rico	Luis Fortuño (PNP)	NA (Jan. 2013)

CHRONOLOGY OF EVENTS

Reported Month by Month, Nov. 1, 2009, to Oct. 31, 2010

November 2009

National

Republicans Win Governorships in New Jersey, Virginia; Other Election Results—In a slim slate of off-year elections, Republicans picked up governorships Nov. 3 in two states that had voted for Pres. Barack Obama (D) a year earlier. In New Jersey, former federal prosecutor Chris Christie (R) unseated incumbent Gov. Jon Corzine (D), a wealthy former Goldman Sachs executive who had used more than $25 mil of his own money to outspend Christie by a margin of about 2-to-1 during the campaign. In Virginia, veteran state legislator Creigh Deeds (D) lost in a landslide to former state Atty. Gen. Bob McDonnell (R), a social conservative who wooed moderates and independents by pledging to focus on "jobs, jobs, jobs" to boost the state economy.

In special elections for two vacant House seats, California Lt. Gov. John Garamendi (D) won in a heavily Democratic district near San Francisco, and Bill Owens (D), a lawyer, prevailed in a Republican-leaning district in upstate New York. The New York contest had drawn nationwide attention when Dede Scozzafava (R), whose liberal views on homosexuality and abortion had been criticized by conservatives, withdrew from the race Oct. 31 and endorsed Owens, who went on to defeat Conservative Party candidate Doug Hoffman by fewer than 3,600 votes.

Billionaire Michael Bloomberg (Ind.) spent about $102 mil of his own money—approximately $183 per vote—to win a 3rd term as mayor of New York City. In other municipal races, Mayor Thomas Menino (D) was reelected to a 5th term in Boston, MA; former pro basketball star Dave Bing (D), who had won a special mayoralty election in May 2009, earned his first full term in Detroit, MI; and the nation's youngest big-city mayor, Luke Ravenstahl (D), 29, was elected to his first full term in Pittsburgh, PA. In state referendums, voters in Maine repealed a same-sex marriage law, while Washington voters upheld an expansion of domestic partnership rights exercised by same-sex couples. After a Nov. 3 mayoral vote in Houston, TX, produced no clear winner, city controller Annise Parker (D), an advocate for homosexual rights, won a runoff election Dec. 12, becoming the first lesbian mayor of a major U.S. city.

Unemployment Rate Hits 10.2% as Nation Struggles to Emerge from Recession—The federal Bureau of Labor Statistics reported Nov. 6 that the U.S. unemployment rate had risen to 10.2% in Oct. 2009, the first time the jobless rate crossed the 10% mark since 1983. The combined rate of unemployment and underemployment—a broader measure of economic hardship that includes part-time workers seeking full-time jobs—climbed to 17.5%, or more than one of every 6 workers. Also on Nov. 6, Pres. Obama signed into law a measure providing for a 20-week extension of unemployment benefits in hard-pressed states and renewing for 6 months an $8,000 tax credit for first-time home buyers. The measure had sailed through Congress, gaining final passage by a 98-0 vote in the Senate Nov. 4, and clearing the House of Representatives, 403-12, the following day.

After a two-day meeting, Federal Reserve policymakers indicated Nov. 4 that economic conditions were improving but "likely to remain weak for a time," and that the Fed was prepared to continue its policy of keeping interest rates very low. Surveys released late in the month concluded that state tax revenues had declined sharply during Jan.-Sept. 2009, and that 23% of all U.S. homeowners were "underwater" during the 3rd quarter of 2009, owing more on their mortgages than their properties were worth. As the U.S. dollar sagged, gold traded at historic highs approaching $1,200 an ounce.

Wall Street's recovery continued to outpace Main Street's. The Dow Jones Industrial Average enjoyed its 5th straight monthly gain, rising 6.5% to close Nov. 30 at 10,344.84. The S&P 500 was up 5.7% to 1,095.63, and the Nasdaq Composite Index gained 4.9% to close at 2,144.60.

13 Killed in Fort Hood Shooting Rampage—U.S. military authorities filed charges Nov. 12 against Army psychiatrist, Maj. Nidal Malik Hasan, accusing him of premeditated murder in the shooting deaths of 13 people Nov. 5 at Fort Hood, TX. The victims included 4 commissioned officers, 8 enlisted soldiers, and 1 civilian, a physician's assistant. At least 30 other people were wounded in the attack, which took place at a crowded facility where soldiers preparing for or returning from overseas deployment were waiting to see doctors. Hasan sustained 4 gunshot wounds before he was taken into custody, leaving him paralyzed from the waist down.

Born in Arlington, VA, to Palestinian immigrant parents, Hasan was a devout Muslim who opposed the U.S.-led wars in Afghanistan and Iraq; he had been scheduled to deploy to Afghanistan Nov. 28, along with several other units of mental health professionals. Investigators initially declined to identify a possible motive for the killings, but increasingly focused on contacts between Hasan and Anwar al-Awlaki, a radical, U.S.-born Muslim cleric based in Yemen. A Pentagon report released Jan. 15, 2010, recommended that the military improve its methods for identifying and dealing with members who "may commit violent acts or become radicalized." A hearing to determine whether there was enough evidence to court-martial Hasan began Oct. 12, 2010.

Guantánamo Prison to Remain Open Beyond Deadline—In an interview Nov. 18 with Fox News, Pres. Obama confirmed that he would be unable to fulfill his pledge to shut down the U.S. military prison at Guantánamo Bay, Cuba, within a year of taking office. White House Counsel Greg Craig, who was responsible for the Jan. 2009 executive orders calling for a ban on torture and the closure of the Guantánamo detention facility, had announced his resignation Nov. 13; 11 days later, the Defense Dept. stated that Phillip Carter, a deputy assistant secretary in charge of shutting down the prison, had also resigned.

Controversy continued to rage, meanwhile, over the handling of some 215 remaining Guantánamo detainees, of whom about 90 had already been cleared for release as soon as countries could be found to accept them. On Nov. 13, Atty. Gen. Eric Holder announced that Khalid Sheikh Mohammed, the alleged mastermind of the attacks of Sept. 11, 2001, would be tried along with 4 accused co-conspirators at a federal civilian courthouse in lower Manhattan. Opposition to the location mounted, and in Jan. 2010 the White House told the Justice Dept. to look for alternative venues after New York City Mayor Michael Bloomberg rescinded his support for the plan.

Party Crashers Breach White House Security—The Obama administration's first formal state dinner, held Nov. 24 to honor Indian Prime Min. Manmohan Singh, turned into a major embarrassment when it became known that a Virginia couple, Tareq and Michaele Salahi, who were not invited to the event, had entered the White House grounds and posed for pictures with top White House officials, including the president. The Salahis publicized the exploit on their Facebook page that night by posting pictures of themselves with Vice Pres. Joe Biden and Chief of Staff Rahm Emanuel; three days later, the White House released a photo of them that had been taken at the event with Pres. Obama. On Dec. 3, Secret Service Director Mark Sullivan told a congressional panel that the Salahis had gotten past three security checkpoints because agents had failed to follow proper procedures.

International

Belgian Chosen as European Union President—Meeting in Brussels Nov. 19, leaders of the 27 European Union member nations selected Prime Min. Herman Van Rompuy of Belgium as the first full-time president of the European Council, the EU's principal policymaking body. The conferees also elevated Baroness Catherine Ashton of the UK from EU trade commissioner to high representative for foreign affairs and security policy. Both the presidential and foreign policy posts were established under the Lisbon Treaty, a new framework for EU governance that went into effect Dec. 1.

Gunmen Massacre 57 in the Philippines—On Nov. 23 a militia controlled by the powerful Ampatuan clan intercepted a convoy of supporters of a rival clan leader, Esmael (Toto) Mangudadatu, as they sought to file papers registering his candidacy for governor of the southern Philippine province of Maguindanao. The gunmen (among whom were local police officials) slaughtered 21 women, including Mangudadatu's wife and two sisters, and 36 men. Many of the female victims were sexually assaulted and mutilated; at least 30 of those killed were journalists accompanying the convoy. Mangudadatu, who was not part of the convoy, said he had asked his wife and female relatives to file the election papers for him because he believed the Ampatuans would adhere to tradition and not harm the women.

The violence shocked the nation and shook the government of Pres. Gloria Macapagal Arroyo, which had long cultivated the Ampatuans as allies. A state of emergency was declared in Maguindanao Nov. 24, and martial law was imposed Dec. 4-12; by Dec. 18 the Ampatuan clan leaders had been arrested, and ultimately some 200 suspects were charged. Mangudadatu remained a candidate in the provincial election, which was scheduled for May 10, 2010.

Dubai Debt Crisis Rattles International Markets—European and Asian financial exchanges plummeted after Dubai—one of 7 city-states comprising the United Arab Emirates—announced Nov. 25 that Dubai World, a state-controlled investment company, would seek a 6-month moratorium on repayment of its $59 bil debt. Renowned for its high-flying economy and ambitious construction projects, Dubai had been battered in 2008-09 by a steep drop in real-estate prices. Fears that Dubai's financial problems might spread to other Persian Gulf countries and imperil major debt holders were abated with the announcement Dec. 1 that Dubai World was moving to restructure $26 bil in obligations, and the disclosure Dec. 14 that another UAE city-state, Abu Dhabi, would bail out Dubai with a $10 bil loan. On Jan. 4, 2010, Dubai went ahead with ceremonies formally opening the world's tallest building, the Burj Khalifa. The 2,717-ft (828-m) skyscraper had been known during construction as the Burj Dubai, but had been renamed to honor Sheikh Khalifa ibn Zaid an-Nahayan, who was both the president of the UAE and the emir of Abu Dhabi.

New Presidents Elected in Honduras, Uruguay—Voters in two Latin American countries chose new presidents Nov. 29. In Honduras, National Party candidate Porfirio (Pepe) Lobo, a conservative landowner, defeated his Liberal Party rival Elvin Santos 57% to 38%. The election marked a turning point in the constitutional crisis that had begun in June 2009 when the Honduran military ousted leftist Pres. Manuel Zelaya, the victor over Lobo in the Nov. 2005 presidential election. After the Honduran Congress passed an amnesty law Jan. 26, 2010, covering both Zelaya and those who had deposed him, Lobo was sworn in as president Jan. 27, and Zelaya was granted safe passage to exile in the Dominican Republic.

In a presidential runoff election in Uruguay, José (Pepe) Mujica, a former guerrilla running as the candidate of the ruling center-left Broad Front coalition, defeated former Pres. Luis Lacalle, the center-right National Party nominee, by a margin of 53% to 43% of valid votes cast. Mujica, who had fallen short of a majority in the first round of balloting Oct. 2009, reassured voters by emphasizing his centrist credentials and distancing himself from Venezuelan Pres. Hugo Chávez.

General

Yankees Win World Series—Playing their first season in a new Yankee Stadium, the New York Yankees captured their 27th baseball championship Nov. 4, dethroning the defending champion Philadelphia Phillies by 4 games to 2. World Series MVP Hideki Matsui, the Yankees' designated hitter, batted in a record-tying 6 runs to seal New York's 7-3 home victory in Game 6.

Zenyatta Takes Breeders' Cup Classic—With a thrilling stretch run, Zenyatta became the first female horse to win the Breeders' Cup Classic, held Nov. 7 at Santa Anita Park in Arcadia, CA. Ridden by Mike Smith, the undefeated Zenyatta outdistanced a field of 11 males, including 2009 Kentucky Derby winner Mine That Bird and Belmont Stakes victor Summer Bird, to score her 14th consecutive first-place finish.

"Significant Amount" of Water Found on the Moon—Researchers at the National Aeronautics and Space Administration (NASA) confirmed Nov. 13 that analysis of data collected by the Lunar CRater Observation and Sensing Satellite mission, known as LCROSS, had revealed a "significant amount" of frozen water on the lunar surface. The water was detected in a plume of debris raised in Oct. 2009 when NASA deliberately crashed a spacecraft and its booster rocket into a permanently shadowed region of Cabeus crater, near the Moon's south pole. Scientists hope that the lunar ice, which may be billions of years old, can provide clues to the Moon's history and might be mined on future missions as a source of drinkable water, breathable oxygen, and hydrogen- and oxygen-based rocket fuel.

Pacquiao Captures 7th World Boxing Title—Filipino fighter Manny Pacquiao became the first boxer to win 7 world boxing titles in 7 different weight classes when he defeated Miguel Cotto of Puerto Rico, Nov. 14, at the MGM Grand Garden Arena in Las Vegas, NV. The 30-year-old Pacquiao, who won his first world title as a flyweight in 1998, scored a technical knockout over Cotto in the 12th round of their World Boxing Organization welterweight championship bout.

December 2009

National

Big Banks Repay TARP Funds; Bernanke to Remain Fed Chairman—Treasury Dept. officials estimated Dec. 6 that the long-term cost of bailouts to ailing firms under the Troubled Asset Relief Program (TARP) would be smaller than expected. Of more than $370 bil in loans made to ailing companies through TARP, the Treasury expected to recover all but $42 bil. The revised figure was nearly $300 bil less than the $341 bil cost projection made by the White House in Aug. 2009. A year-end assessment issued Dec. 9 by the independent Congressional Oversight Panel concluded that TARP, which had been enacted in Oct. 2008 to stabilize the tottering financial system, could "be credited with stopping an economic panic." Among the largest bank recipients of TARP lifelines, JPMorgan Chase paid back $25 bil in June 2009, and Bank of America ($45 bil), Wells Fargo ($25 bil), and Citigroup ($20 bil) followed suit in Dec. The repayments freed the banks from heightened government oversight—including some restrictions on executive pay—that had accompanied the federal bailouts.

Federal Reserve Chairman Ben Bernanke, an architect of TARP, was named Person of the Year by *Time* magazine Dec. 16. One day later the Senate Banking Committee voted, 16-7, to approve Pres. Barack Obama's nomination of Bernanke to serve a 2nd 4-year term atop the Fed. The full Senate gave its assent Jan. 28, 2010, by a vote of 70-30, a tepid endorsement that reflected the continued unpopularity of the bank bailouts at a time of high unemployment.

Health Measure Clears Senate Hurdle—In a rare Christmas Eve session, the U.S. Senate Dec. 24 approved a landmark health care bill on a party-line vote of 60-39. No Republicans voted for the measure, which differed in significant respects from the bill that passed the House of Representatives Nov. 7, 220-215, with only one Republican voting in favor. Over a 10-year period, the Senate version would extend health insurance coverage to 31 mil uninsured persons, expand the Medicaid rolls (for low-income people) by 15 mil, and subsidize private health-insurance coverage for low- and middle-income Americans. Insurance companies would be barred from excluding people with preexisting medical conditions, rescinding coverage for those who become sick or disabled, or imposing annual or lifetime caps on benefit payments.

Both the Senate and House bills required most U.S. citizens and legal residents to purchase health insurance. The bills diverged in their estimated 10-year cost ($1.1 tril for the House version, $871 bil for the Senate) and funding mechanisms. The House bill provided for the establishment of a new government-run insurance plan (the "public option")

to compete with private insurers, while the Senate instead embraced a system of state-managed insurance exchanges. Both measures barred federal funding for abortions, although the language in the House version was more restrictive.

Republicans in both chambers vowed continued opposition to the legislation, which was a high priority for Pres. Obama and which would greatly expand the federal role in overseeing the nation's health insurers and providers.

Stock Indexes End Year on Upswing—While the housing market continued to slump and the nationwide unemployment rate hovered at 10%, U.S. stock exchanges completed their best year since 2003. The Dow Jones Industrial Average closed Dec. 31 at 10,428.05, up 18.8% since the end of 2008 and a 59.3% rebound from the Dow's 2009 low point in early Mar. The Nasdaq Composite Index finished at 2,269.15, for a one-year increase of 43.9%, and the S&P 500 reached 1,115.10, a 23.4% gain for the 12-month period.

International

U.S. Revises Afghanistan Plan; Other War Developments—In a nationally televised speech Dec. 1 at the U.S. Military Academy in West Point, NY, Pres. Obama announced a temporary surge of 30,000 additional troops to Afghanistan, with a drawdown of U.S. forces to begin within 18 months. "Afghanistan is not lost, but for several years it has moved backwards," said Obama, who pledged to bring the 8-year-old war to a "successful conclusion." When fully deployed, the reinforcements would raise total U.S. troop strength in Afghanistan to about 100,000. On Dec. 2, NATO Sec. Gen. Anders Fogh Rasmussen said he expected U.S. coalition partners to provide at least 5,000 troops to augment the 38,000 they had already committed. A report issued Dec. 14 by the Congressional Research Service forecast that the number of U.S. Dept. of Defense contract workers providing support services in Afghanistan, which stood at 104,100 in Sept. 2009, would rise to between 130,000 and 160,000 as the troop surge took effect.

Forward Operating Base Chapman, a U.S. Central Intelligence Agency outpost in Khost, near Afghanistan's eastern border with Pakistan, was the scene Dec. 30 of the deadliest attack against the CIA in more than two decades. Humam Khalil Abu Mulal al-Balawi, a Jordanian physician and jihadist who was recruited as a CIA informant but was actually a double agent, blew himself up while meeting with high-level intelligence personnel, killing 7 Americans and a Jordanian officer. The Afghan Taliban, the Pakistani Taliban, and al-Qaeda all claimed responsibility for the attack, which Balawi—posthumously shown in a video on Al-Jazeera satellite television—said was in retaliation for the U.S. missile strike in Aug. 2009 that killed Pakistani Taliban leader Baitullah Mehsud. CIA officers stationed at the Chapman base reportedly had been involved in targeting drone attacks against Islamic militants operating in Pakistan.

Speaking Dec. 10 in Oslo, Norway, where he accepted the Nobel Peace Prize, Pres. Obama noted that he was "Commander-in-Chief of a nation in the midst of two wars." He defended the U.S.-led military action in Afghanistan as a just war and described the U.S.-led war in Iraq as "winding down." On Dec. 21, Obama signed a $636 bil defense appropriations measure that included $128 bil for U.S. military operations in Afghanistan and Iraq during the 2010 fiscal year.

According to year-end statistics compiled by the website iCasualties.org, U.S. military fatalities in Iraq in 2009 declined to a low of 149, with a cumulative total of 4,370 U.S. troop deaths since the start of Operation Iraqi Freedom (2003-09); about 112,000 U.S. troops were stationed in Iraq at the end of the year. U.S. casualties in Afghanistan reached an annual high of 317 in 2009, with a cumulative total of 947 since the war began; 108 British service members and 96 other coalition troops lost their lives on the Afghan battlefront in Operation Enduring Freedom in 2009.

Mogadishu Blast Kills 4 Somali Government Ministers—A suicide bomber disguised as a veiled Muslim woman blew himself up at a medical school graduation ceremony Dec. 3 in Mogadishu, Somalia, killing at least 22 people and striking a blow at a transitional government backed by the U.S., UN, and African Union. The victims included Health Min. Qamar Aden Ali, Education Min. Ahmed Abdulahi Waayeel, and Higher Education Min. Ibrahim Hassan Addow, along with journalists, teachers, and medical students; a 4th cabinet member, Sports Min. Saleban Olad Roble, died of his wounds in a hospital. Somali officials blamed the attack on al-Shabaab, an insurgent Islamist group aligned with al-Qaeda, and identified the suicide bomber as Abdulrahman Ahmed Haji, a 26-year-old Danish citizen of Somali ancestry.

The lack of an effective central government in Somalia contributed to the growth of piracy in the region. Data released Jan. 14, 2010, by the International Maritime Bureau indicated that of 406 instances of piracy reported worldwide in 2009, 217 were carried out by Somali pirates, who hijacked 47 vessels and took 867 crew members hostage.

156 Die in Russian Nightclub Fire—Previously cited for fire safety violations, the Lame Horse nightclub in Perm, Russia, went up in flames in the early morning hours of Dec. 5 as indoor pyrotechnics ignited a ceiling decorated with dry twigs. Fire, thick smoke, and a stampede of patrons rushing for the lone exit killed more than 100 that night; the death toll mounted to 156 during the next 3 months, as hospitalized burn victims succumbed to their injuries.

Climate Change Conference Fails to Set Binding Goals—Meeting Dec. 7-18 in Copenhagen, Denmark, representatives of 193 countries were unable to reach agreement on a treaty that would mandate cuts in emissions of the greenhouse gases that climate scientists have identified as the prime cause of global warming. Instead, the conferees approved a Copenhagen Accord that endorsed an agreement reached a day earlier by 5 major countries—Brazil, China, India, South Africa, and the U.S.—establishing a system under which nations would monitor and report their own progress toward nonbinding emissions reduction targets. Under the accord, conferees pledged to hold the rise in global average temperatures to less than 2º C (3.6º F) above preindustrial levels, and to establish a fund under which industrialized countries would collectively contribute $10 bil annually during 2010-12 to help developing countries deal with the consequences of climate change. Analyses released Jan. 2010 by the National Aeronautics and Space Administration (NASA) showed that the 2000-09 decade was the warmest since modern temperature measurements began.

Italian Leader Assaulted in Milan—A 42-year-old man with a history of mental illness assaulted Italian Prime Min. Silvio Berlusconi Dec. 13 with a heavy statuette, sending him to the hospital with a fractured nose, broken teeth, and other facial injuries. The assailant, Massimo Tartaglia, attacked the billionaire media mogul and political leader with a miniature model of Milan Cathedral, after Berlusconi had finished addressing a rally of his supporters in Milan. Long a controversial figure, the prime minister had recently been accused of having Mafia ties, which he denied. On June 29, 2010, after a psychiatric evaluation, Tartaglia was declared unfit to stand trial.

Christmas Day Airplane Bomb Plot Foiled Over Detroit—Alarmed by popping sounds, smoke, and fire as their Airbus A330 began its final descent just before noon Dec. 25 into Detroit, MI, passengers and crew on board Northwest Airlines Flight 253 thwarted an apparent attempt by a 23-year-old Nigerian man to blow up the aircraft by igniting explosives hidden in his underwear. The would-be bomber, Umar Farouk Abdulmutallab, had purchased his $2,831 plane ticket for cash in Accra, Ghana, and had flown from Lagos, Nigeria, to Amsterdam's Schiphol Airport; there he transferred to the Detroit-bound transatlantic flight, which carried 279 passengers and 11 crew members. The explosive device failed to detonate but instead caught fire, burning Abdulmutallab, who was taken into custody after the aircraft landed safely. A 6-count indictment issued by a federal grand jury Jan. 6, 2010, charged him with attempted use of a weapon of mass destruction and attempted murder. Abdulmutallab, who was reportedly cooperating with U.S. authorities, acknowledged having received terror training and explosive materials from al-Qaeda in Yemen.

After the arrest, investigators focused on why the alleged "underwear bomber" had not received greater scrutiny. Abdulmutallab's father, wealthy Nigerian banker Alhaji Umaru Mutallab, had met with Nigerian and U.S. officials in Oct. and Nov. and warned them that his son had become a radical Islamist and might be preparing to carry out a suicide mission. Abdulmutallab's name was added to a U.S. database of persons with possible terrorist connections, but his multiple-year tourist visa was not revoked nor was he added to the no-fly list.

General

NFL Shifts Policy on Concussions—As evidence mounted linking chronic head trauma with much higher than normal rates of early-onset dementia and other brain disorders among pro football players, the National Football League announced Dec. 2 that it would toughen its guidelines on how teams must deal with head-related injuries. The revamped NFL rules required that players who display signs of concussion such as memory loss, poor balance, or neurological impairment during a game or practice must be removed from play, held out of action for at least one day, and evaluated both by a team physician and by an independent expert. Before they can return to competition, such players must be "fully asymptomatic, both at rest and after exertion." The NFL, which had long denied any link between players' on-field head injuries and long-term mental problems, subsequently agreed to make an unrestricted gift of $1 mil to the Boston Univ. School of Medicine to support research into sports-related brain trauma.

Ingram Wins Heisman Trophy—Sophomore tailback Mark Ingram, who rushed for 1,542 yards in leading top-ranked Alabama to a 13-0 regular-season record, on Dec. 12 became the first member of the Crimson Tide to receive the Heisman Trophy, which honors the nation's most outstanding college football player. Ingram defeated Stanford running back Toby Gerhart by just 28 points (1,304-1,276) in the Heisman balloting, the closest finish in the award's 75-year history.

Woods Admits Marital Infidelity, Puts Golf Career on Hold—Battered by tabloid stories portraying him as a serial adulterer, Tiger Woods acknowledged his "infidelity" on his website Dec. 11 and declared that he would take "an indefinite break from professional golf." The international celebrity's carefully crafted public image had rapidly unraveled after the *National Enquirer* alleged Nov. 25 that the golfer had carried on an affair with a nightclub hostess. Two days later, in an unexplained accident at about 2:25 AM, Woods crashed his Cadillac Escalade SUV into a fire hydrant and tree close to his home in Windermere, FL. Summoned by a 911 emergency call, police found Woods on the ground, with his wife, Swedish-born Elin Nordegren Woods, nearby. She told police she had smashed in the SUV's back windows with a golf club to free him from the wreck. Woods, lightly injured, was charged with reckless driving, but the notoriety surrounding the crash triggered multiple press reports in which other women claimed to have had affairs with him.

A transformative presence on the pro golf tour since the late 1990s, Woods won more than $11.2 mil in prize money in 2009 and reportedly earned about $90 mil annually in major sponsorship deals. The scandal led several high-profile sponsors to cut their ties with him, including Gatorade, AT&T, and the consulting firm Accenture, while other major companies took steps to limit his role in their marketing. On Feb. 19, 2010, after a 45-day stay in a rehabilitation center where he apparently received treatment for sex addiction, he made his first public appearance since the accident, admitting: "I was unfaithful. I had affairs. I cheated."

January 2010

National

Loss of U.S. Senate Seat from Massachusetts Jolts Democrats—In a special election Jan. 19 to fill the U.S. Senate seat vacated by the death of Sen. Edward M. (Ted) Kennedy in Aug. 2009, little-known state senator Scott Brown (R) defeated Massachusetts Atty. Gen. Martha Coakley, 52% to 47%. Massachusetts had given Barack Obama one of his biggest majorities in the 2008 presidential election, and the loss of the so-called "Kennedy seat"—held first by John F. Kennedy, from 1953 to 1960, and then by his brother Edward, from 1962 to 2009—stunned state and national Democratic leaders. Brown, who had campaigned as a populist in a pickup truck, benefited from the support of the conservative Tea Party movement as well as the GOP organization; he scored heavily among independents, who make up more than half of all registered voters in the state. He was sworn in Feb. 4, becoming the Senate's 41st Republican member—enough votes, if Republicans were united, to sustain a filibuster and block parts of the Democrats' legislative agenda.

The Brown victory underlined the president's sagging job approval rating, which had fallen below 50% in Gallup polling. The Massachusetts setback also raised Democrats' fears that rising anti-incumbent sentiment might erase their Senate and House majorities in the upcoming midterm elections. Two Democratic incumbents, 5-term Sen. Chris Dodd (CT) and 3-term Sen. Byron Dorgan (ND), announced Jan. 5-6 that they would not seek reelection in Nov. 2010.

Supreme Court Overturns Limits on Corporate Campaign Spending—A far-reaching ruling by the U.S. Supreme Court Jan. 21 held that corporations had a First Amendment right to spend their own general treasury funds to influence the outcome of candidate elections. Writing for a 5-4 majority in *Citizens United v. Federal Election Commission*, Associate Justice Anthony Kennedy declared, "The Government may regulate corporate political speech through disclaimer and disclosure requirements, but it may not suppress that speech altogether." The decision applied to so-called independent expenditures by corporations, and did not overturn the ban on direct corporate contributions to political candidates.

The case upended several Supreme Court precedents and voided a major portion of the Bipartisan Campaign Reform Act (2002), commonly known as McCain-Feingold for its principal Senate sponsors, John McCain (R, AZ) and Russ Feingold (D, WI). The ruling, which covered election spending by labor unions and nonprofit advocacy groups as well as by for-profit companies, was expected to lead to challenges against similar campaign finance laws in some two dozen states. Pres. Obama criticized the decision, calling it "a green light to a new stampede of special interest money in our politics."

Obama Delivers State of the Union Address, Pledges to End "Don't Ask, Don't Tell"—Speaking to a joint session of Congress Jan. 27, Pres. Obama defended his administration's handling of the economy during his first year in office, promised to appoint a bipartisan panel to recommend ways to cut the annual budget deficit and national debt, and said that starting in 2011, he was prepared to impose a 3-year spending freeze on many discretionary government programs (but not on programs affecting national security, Medicare, Medicaid, and Social Security). He urged Congress to press ahead on a jobs bill, health care, financial reform, and energy policy, and he reminded Democrats that, despite recent electoral setbacks, "we still have the largest majority in decades, and the people expect us to solve some problems, not run for the hills."

In his State of the Union speech, Obama also vowed to end the "Don't Ask, Don't Tell" policy that forbids homosexuals from serving openly in the U.S. armed forces. In testimony to the Senate Armed Services Committee Feb. 2, Navy Adm. Mike Mullen became the first sitting chairman of the Joint Chiefs of Staff to endorse repealing the policy, and Defense Sec. Robert Gates said the Pentagon would develop a plan for complying with Obama's directive. Three weeks later, however, in separate appearances before the House Armed Services Committee, Gen. George W. Casey Jr. and Gen. Norton A. Schwartz—the chiefs of staff, respectively, of the Army and Air Force—urged a slow approach, noting that the armed forces had already been stressed by prolonged wars in Afghanistan and Iraq.

Economic Rebound Continues, but Jobs Picture Remains Bleak—Preliminary data released Jan. 29 by the Commerce Dept. indicated that the U.S. gross domestic product (GDP) increased by 5.7% during Oct.-Dec. 2009.

The quarterly GDP growth rate was the fastest in 6 years. Positive corporate news included a return to profitability by the Ford Motor Co. after three years of losses; the company reported Jan. 28 that it had earned $2.7 bil in 2009.

News on the employment front was less encouraging. The Obama administration announced Jan. 12 that the $787 bil economic stimulus measure enacted in Feb. 2009 had saved or created 1.5 mil-2 mil jobs. Nevertheless, the economy lost a net total of nearly 4 mil jobs during the year. The Bureau of Labor Statistics reported Feb. 5 that although the nationwide unemployment rate in Jan. dipped from 10.0% to 9.7%, the U.S. lost another 20,000 jobs.

Stocks pulled back from their 2009 joyride. The Dow Jones Industrial Average closed Jan. 29 at 10,067.33, a one-month decline of 3.5%. The S&P 500 was down 3.7% to 1,073.87, and the Nasdaq Composite Index dropped 5.4% to 2,147.35.

International

Haiti Earthquake Kills More Than 220,000—Haiti, the poorest country in the Western Hemisphere, suffered catastrophic damage Jan. 12 when an earthquake measuring 7.0 on the open-ended Richter scale struck at 4:53 PM local time, about 15 mi WSW of Port-au-Prince, the national capital. An official assessment issued in late Mar. by the Haitian government and international aid agencies estimated the nationwide death toll at more than 220,000, with at least 300,000 more people injured. The UN headquarters in Port-au-Prince collapsed, killing nearly 100 peacekeepers, including the head of the mission, Tunisian diplomat Hédi Annabi. Monsignor Joseph Serge Miot, archbishop of Port-au-Prince, was killed when the city's Roman Catholic cathedral collapsed.

About 100,000 homes were completely destroyed, and nearly 200,000 were damaged; as of late Mar., about 1.3 mil people were still living in temporary shelters in the Port-au-Prince area, and another 500,000 had fled the capital region to find refuge elsewhere. The initial quake, which lasted 35 seconds and was followed by dozens of powerful aftershocks, left more than 1,300 schools and at least 50 hospitals and health centers unusable. The disaster worsened the plight of Haiti's "orphans," estimated at 380,000 even before the quake; vulnerable to trafficking and other forms of abuse, many of these children had been sent to orphanages by parents who were too poor to raise them.

With the Presidential Palace, Parliament, and other administrative centers in ruins, Haiti lacked a functioning government for weeks after the quake. As supplies of food and fresh water ran short, rescue and relief attempts were hampered by blocked roads, a damaged port, and crippled electrical and telecommunications systems. Many nations and international aid groups offered assistance, including the U.S., which deployed some 22,000 troops in Haiti at the peak of the emergency aid operation.

The United Nations estimated that the disaster cost Haiti $7.8 bil—or 20% more than the country's entire gross domestic product in 2009. An international donor conference Mar. 31 produced pledges of $5.3 bil in aid over an 18-month period, of which the U.S. would provide $1.15 bil. Sec. of State Hillary Clinton had a major role in the proceedings, as did her husband, former Pres. Bill Clinton, who had been serving since May 2009 as UN special envoy to Haiti and who was named by the UN Feb. 3 to coordinate international relief efforts there.

Chinese Hackers Said to Target Google, Other U.S. Firms—Internet search giant Google Jan. 12 accused hackers based in China of launching sophisticated cyberattacks aimed at stealing some of the firm's computer code and gaining access to Gmail accounts used by Chinese human rights activists. The attacks, which apparently exploited a vulnerability in Microsoft's Internet Explorer browser, also targeted at least 30 other firms, many of them based in California's high-tech Silicon Valley. On Feb. 3 the *Washington Post* reported that Google had sought help from the U.S. National Security Agency in pinpointing the source of the attacks and shoring up Google's electronic defenses. According to a Feb. 18 account in the *New York Times*, the attacks were traced to computers at 2 Chinese educational institutions, Shanghai Jiao Tong Univ. and the Lanxiang Vocational School.

Hamas Leader Assassinated in Dubai—Senior Hamas commander Mahmoud al-Mabhouh was found dead in his Dubai hotel room Jan. 20, a day after the Syrian-based militant entered the United Arab Emirates (UAE). Suspicion immediately fell on Israel's Mossad spy agency, which blamed Mabhouh, a founder of Hamas's military wing, for the kidnapping and killing of 2 Israeli soldiers in 1989; the Israelis also accused him more recently of smuggling arms from Iran to Hamas fighters in Gaza. Dubai police reported that an assassination squad as large as 32 people, many wearing wigs and fake beards, drugged and suffocated Mabhouh before fleeing Dubai under forged European and Australian passports. Israel did not admit any involvement in the assassination, but some in the international community denounced Israel for participating in the forging of passports from their countries. Britain expelled an Israeli diplomat in Mar., and Australia did likewise in May.

French Court Clears Villepin of Smearing Sarkozy—A criminal trial in which former French Prime Min. Dominique de Villepin was accused of conspiring to tarnish the reputation of a political rival, Pres. Nicolas Sarkozy, ended Jan. 28 with Villepin's acquittal. A Paris court absolved Villepin of any wrongdoing, but 3 other men—former aerospace executive Jean-Louis Gergorin, computer expert Imad Lahoud, and accountant Florian Bourges—were found guilty of forging and circulating false documents purporting to show that Sarkozy and others had received kickbacks from international arms sales. The scandal, known as Clearstream (after the name of the Luxembourg financial institution on whose accounts list Sarkozy's forged name appeared), had arisen in 2004, when Villepin and Sarkozy were vying to succeed Pres. Jacques Chirac. Prosecutors said Jan. 29 they would seek to retry Villepin, who accused Sarkozy of pursuing a personal vendetta against him.

"Chemical Ali" Hanged; Other Iraq, Pakistan, Afghanistan War Developments—Iraqi authorities Jan. 25 executed former Def. Min. Ali Hassan al-Majid, also known as "Chemical Ali," 8 days after he received a death sentence for ordering the 1988 poison gas attack that killed more than 5,000 Kurds in the town of Halabja. Captured by coalition forces in Aug. 2003, Majid had also received death sentences in 2007, 2008, and 2009 for atrocities committed against Kurds and Shiites during the 1980s and '90s, while his cousin Saddam Hussein ruled Iraq, but those sentences had not been carried out. On the day of Majid's hanging, suicide bombers struck three Baghdad hotels popular with foreigners, killing 36 people and injuring more than 70 others. U.S. troop casualties in Iraq numbered 5 during the month.

In Pakistan, nearly 100 people were killed and 40 injured Jan. 1 when a suicide bomber drove a truck carrying 550 lb of explosives into a crowd watching a volleyball game at Shah Hassan Khel, a village in NW Frontier Province. The bombing was viewed as an act of retaliation against the villagers, who in 2009 had formed a militia to fight the Pakistani Taliban.

A UN report released Jan. 13 concluded that 2,412 civilians had been killed in Afghanistan in 2009, a 14% increase over the previous year. The report blamed attacks by the Afghan Taliban and other insurgents for about two-thirds of the deaths, and operations by U.S. and NATO forces for about one-fourth. (The remaining civilian casualties could not be attributed to either side.) Coalition military casualties in Jan. totaled 43, of whom 30 were U.S. service members, according to iCasualties.org.

General

Alabama Captures Collegiate Football Title—Propelled by a punishing defense and a relentless ground attack, Alabama outlasted Texas, 37-21, in the Bowl Championship Series (BCS) title game played Jan. 7 at the Rose Bowl in Pasadena, CA. Heisman Trophy winner Mark Ingram, who ran for 116 yards and 2 touchdowns on 22 carries, was named offensive MVP for the Crimson Tide, which finished the season with a 14-0 record. The BCS title was the 2nd for Alabama head coach Nick Saban, who had won with Louisiana State Univ. (LSU) in 2003.

Leno Moves Back to Late-Night TV Slot—NBC triggered an embarrassing spat involving two of its best-known comedians when it confirmed Jan. 10 that it would shift Jay Leno from his weeknight 10 PM (Eastern) time slot to the late-night spot occupied by Conan O'Brien, who had succeeded Leno as *Tonight Show* host in June 2009. NBC had launched the prime-time *Jay Leno Show* with great fanfare in Sept. 2009, substituting Leno's hour-long variety program for the pricier network dramas that usually aired in the 10 PM time period. Critics savaged the new Leno show, and ratings sagged for Leno, O'Brien, and the nightly news programs that local NBC affiliates sandwiched between the two comics.

To make room for Leno at 11:35 PM, NBC proposed pushing O'Brien's nightly start time back to 12:05 AM, but O'Brien refused, charging NBC with breach of contract. The dispute dragged on for nearly 2 weeks until NBC agreed to pay $32.5 mil to O'Brien and about $12 mil to his staff. O'Brien hosted his final *Tonight Show* Jan. 22, earning his highest ratings since he took over the program, and signed a deal Apr. 9 with the TBS cable network to host a new late-night program starting Nov. 2010.

***Avatar* Sets Box-Office Records**—After winning Best Director and Best Drama honors at the Golden Globe Awards Jan. 17, James Cameron's science-fiction epic *Avatar* crossed the $2 bil mark in worldwide gross box-office revenues Jan. 31. The technically innovative film, which was released in mid-Dec. 2009 and cost well over $300 mil to make and promote, earned more than $2.2 bil by Feb. 7, surpassing the all-time U.S. and worldwide box-office marks established by Cameron's previous blockbuster, *Titanic* (1997). Revenues for *Avatar* were boosted by the premium prices charged by theater owners when showing the film in 3-D and IMAX formats.

Top Grammy Honors Go to Beyoncé, Swift—R&B superstar Beyoncé Knowles took home 6 statuettes and country-pop sensation Taylor Swift won 4 at Grammy Award ceremonies in Los Angeles Jan. 31. Beyoncé's "Single Ladies (Put a Ring on It)" won as Song of the Year, and Swift's best-selling *Fearless* won for Album of the Year. The award for Record of the Year went to Kings of Leon for their arena-rock hit "Use Somebody."

Williams, Federer Win at Australian Open—American Serena Williams captured her 5th Australian Open singles crown and 12th Grand Slam singles title at Melbourne Jan. 30, defeating Justine Henin of Belgium, 6-4, 3-6, 6-2. Henin, unranked and unseeded, was playing in her 2nd tournament since emerging from a 20-month retirement. In the men's championship Jan. 31, Swiss master Roger Federer dominated Andy Murray of Scotland, 6-3, 6-4, 7-6 (11), to take his 4th Australian Open and 16th Grand Slam singles title.

February 2010

National

White House Unveils $3.8 Tril Budget; Debt Ceiling Raised—On Feb. 1 the Obama administration released a 10-year spending plan calling for outlays of $3.834 tril, revenues of $2.567 tril, and a deficit of $1.267 tril during the 2011 fiscal year (beginning Oct. 1, 2010). Major spending categories in the fiscal 2011 budget included national security, $895 bil; Social Security, $730 bil; Medicare, $491 bil; Medicaid, $297 bil; and net interest, $251 bil. Although annual deficits were projected to decrease to $706 bil by 2014, they were expected to begin rising again in 2015 and to reach $1 tril in 2020, when net interest on the accumulated debt would exceed $840 bil annually.

On Feb. 12, Obama signed legislation raising the statutory public debt ceiling from $12.394 tril to $14.294 tril. The White House Budget projected that by fiscal year 2020, the public debt would reach $18.573 tril, or 77% of the nation's annual gross domestic product, a higher percentage than at any time since 1950. Acknowledging that the current debt trend would "saddle every child in America with an intolerable burden," Obama Feb. 18 signed an executive order creating the bipartisan National Commission on Fiscal Responsibility and Reform, headed by Erskine Bowles (D), who had served as chief of staff in the Clinton White House, and former Sen. Alan Simpson (R, WY).

Pentagon Tests Airborne Laser Missile-Defense System—The Missile Defense Agency of the U.S. Dept. of Defense announced that, in a Feb. 11 test over the Pacific Ocean, an airborne jumbo jet equipped with a high-powered laser gun had succeeded for the first time in shooting down a liquid-fueled, short-range ballistic missile traveling at 4,000 mph. The agency disclosed that in another test an hour later the Airborne Laser Test Bed (ALTB) engaged but failed to destroy its missile target, reportedly because of a "beam misalignment." Agency officials subsequently told *Aviation Week* that the ALTB system had also been successfully tested Feb. 3 against a less sophisticated solid-fueled rocket.

Zazi Pleads Guilty in Terror Case—Arrested Sept. 2009 for plotting to make homemade bombs from chemicals purchased at beauty salons, Najibullah Zazi pleaded guilty to terrorism charges Feb. 22. Zazi, a legal U.S. resident who was born in Afghanistan and raised in Pakistan, admitted that he had returned to Pakistan in 2008 intending to join the Taliban but had been recruited there by al-Qaeda operatives, who wanted him to carry out a "martyrdom operation" on American soil. The former shuttle bus driver told a federal judge in Brooklyn, NY, that he had planned to use the bombs in a suicide attack against the New York City subway system.

Toyota Executives Apologize for Auto Defects—Testifying before Congress Feb. 23-24, executives of Japan-based Toyota Motor Corp. and its U.S. subsidiary, Toyota Motor Sales U.S.A., apologized for manufacturing and design defects that had led to the recall of more than 8 mil vehicles, of which 6 mil had been purchased in the U.S. In prepared remarks before the House Committee on Oversight and Government Reform, Akio Toyoda—grandson of company founder Kiichiro Toyoda and the firm's president since June 2009—admitted that in recent years Toyota's priorities had become "confused" and that the auto manufacturer had pursued sales growth at the expense of quality and safety.

The recent recalls stemmed from an Aug. 2009 accident in which off-duty California Highway Patrol Officer Mark Saylor and 3 members of his family were killed near San Diego when their 2009 Lexus ES 350 sedan, manufactured by Toyota, began accelerating uncontrollably and crashed after reaching speeds of more than 100 mph. Toyota initially blamed faulty floor mats for interfering with gas pedals, but as further reports of uncontrolled acceleration accumulated, the company recalled millions of vehicles to have their gas pedals replaced with redesigned units. The product defects, and Toyota's clumsy handling of them, subjected the firm to a torrent of unfavorable publicity and to dozens of class-action lawsuits. Toyota's share of the U.S. market dipped in Feb., but sales rebounded in Mar., boosted by incentives averaging $2,242 on each vehicle sold. The following month the company agreed to pay a $16.4 mil civil penalty for failing to notify federal safety officials promptly about its vehicles' gas pedal problems. Meanwhile, the company and federal regulators continued to investigate whether other defects might be responsible for the runaway vehicles.

Toyota was not the only auto firm to face product safety issues. On Feb. 10, Honda, Japan's 2nd-largest automaker, recalled 438,000 vehicles because of defective airbags. On Mar. 2, General Motors said it would recall 1.3 mil small cars to fix a power-steering problem linked to 14 crashes.

Top New York Democrats Hit by Ethics Charges—New York Gov. David Paterson (D) abandoned his bid for a full term Feb. 26 after the *New York Times* published allegations that he had improperly intervened in a domestic violence case involving a senior aide and close friend, David W. Johnson. The *Times* report alleged that Paterson and state police had pressured Johnson's longtime female companion to drop an assault charge against him. Paterson, who had become governor in Mar. 2008 after Eliot Spitzer (D) was ensnared in a prostitution scandal, pledged to remain in office through the end of 2010. On Mar. 11, New York Atty. Gen. Andrew Cuomo (D) appointed an independent coun-

sel to investigate the charges against Paterson. Cuomo, the son of former 3-term Gov. Mario Cuomo (D), was already preparing to challenge Paterson when the scandal broke, and he formally declared his own candidacy for governor May 22.

Another well-known Democrat, Rep. Charles Rangel, chairman of the House Ways and Means Committee—and, like Paterson, one of New York's most prominent African American politicians—was cited Feb. 25 by the House Committee on Standards of Official Conduct (generally known as the Ethics Committee) for violating congressional travel restrictions by participating in corporate-financed trips to the Caribbean. Rangel, who was also under investigation for fundraising, income tax, and real-estate investment irregularities, gave up his gavel Mar. 3 and was succeeded by Rep. Sander Levin (D, MI). On July 29 the Ethics Committee charged Rangel with 13 specific violations of House rules and federal statutes. In an emotional speech Aug. 10 from the well of the House, Rangel insisted he was innocent and refused to resign.

Consumer Confidence Sags, as Recovery Remains Weak—The Conference Board reported Feb. 23 that its Consumer Confidence Index (based on a survey of 5,000 U.S. households) showed a one-month drop from 56.5 to 46.0, its lowest level since Apr. 2009. The nationwide unemployment rate in Feb. held steady at 9.7%, but the economy continued to lose jobs, and a Gallup survey released Feb. 23 found that 19.9% of the U.S. workforce was jobless or underemployed. New home sales remained sluggish, and an audit of Federal Housing Administration-backed mortgages showed that by Dec. 2009 more than 9% of borrowers had missed at least 3 monthly payments.

The picture was brighter on Wall Street, where stocks had their best month since Nov. 2009. The Dow Jones Industrial Average closed Feb. 26 at 10,325.26 for a one-month gain of 2.6%. The Nasdaq Composite Index was up 4.2%, finishing at 2,238.26, and the S&P 500 rose 2.9% to 1,104.49.

International

Pro-Russian Candidate Wins Ukraine Presidency—Viktor Yanukovich, the pro-Russian politician whose tainted victory in a Nov. 2004 presidential vote triggered Ukraine's "orange revolution," regained the presidency Feb. 7, defeating Prime Min. Yulia Tymoshenko in a runoff election by a margin of about 49% to 45% (most of the remaining votes were cast "against all"). Yanukovich had led Tymoshenko by 35% to 25% after the first round of presidential voting Jan. 17, as incumbent Pres. Viktor Yushchenko finished 5th with only about 5% of the total vote. Tymoshenko initially disputed the runoff result but dropped her challenge Feb. 20, and Yanukovich was inaugurated 5 days later. Tymoshenko's parliamentary coalition collapsed, and after the legislature passed a vote of no-confidence Mar. 3 she stepped down as prime min. and became opposition leader. Pres. Yanukovich's Party of Regions then put together a new coalition government Mar. 11 with the Russian-born Mykola Azarov as prime min.

The political developments sparked a rapid improvement in Ukraine's relations with Russia. Meeting Apr. 21 in the Ukrainian city of Kharkiv, Pres. Yanukovich and Russian Pres. Dmitri Medvedev announced an agreement under which Russia would retain a Crimean base for its Black Sea fleet for another 25 years, and Ukraine would receive a 30% discount on the price of Russian natural gas. In June a Russian state-controlled bank extended a $2 bil loan to bolster Ukraine's stumbling economy.

Coup Ousts Tandja in Niger—A military junta led by squadron chief Salou Djibo and calling itself the Supreme Council for the Restoration of Democracy took power in Niger Feb. 18, after a 4-hour gun battle in Niamey, the national capital, in which 10 people were killed and Pres. Mamadou Tandja was captured. The coup ended a political standoff that had begun in 2009 when Tandja, in office since 1999, dissolved parliament and Niger's constitutional court after they sought to block his efforts to run for a 3rd 5-year term. On Feb. 22 the junta designated former Communications Min. Mahamadou Danda, a civilian, to become prime min.; a 20-member transitional government, including 5 soldiers and 5 women, was installed Mar. 1, but no date for elections was set. Although landlocked Niger remains one of the poorest countries in Africa, the nation's uranium and oil deposits have made it a prime target for foreign influence and investment, especially from China.

Earthquake Rocks Central Chile—One of the most powerful earthquakes ever recorded struck Feb. 27 at 3:34 AM local time off the coast of central Chile, about 70 mi NE of Concepción, Chile's second-largest city. Measuring 8.8 on the Richter scale, the quake was centered beneath the Pacific Ocean, some 21.7 mi underground, and triggered tsunamis that washed over coastal Chilean villages and were observed throughout the Pacific region. Precise measurements taken before and after the disaster confirmed that the quake had shifted the entire city of Concepción about 10 ft westward and the national capital, Santiago, about 11 in. in the same direction.

Considerable confusion surrounded initial estimates of the quake damage. On Mar. 2, outgoing Pres. Michelle Bachelet stated that the death toll had risen to 795; two days later, however, the official estimate was lowered to 279. A Chilean government report in mid-May put the number of confirmed dead at 521, with another 56 people still missing. Property damage was estimated at up to $30 bil, with some 400,000 homes destroyed or badly damaged.

During the two months following the quake, more than 300 aftershocks measuring 5.0 or greater were recorded. A strong aftershock was felt in the port city of Valparaíso Mar. 11 as dignitaries gathered there for the inauguration of Bachelet's presidential successor, Sebastián Piñera, a billionaire businessman. The conservative Piñera had defeated former Pres. Eduardo Frei, the candidate of Chile's ruling center-left coalition, 51.6% to 48.4% in a presidential runoff election Jan. 17.

Coalition Launches Offensive in Afghanistan's Helmand Province; Other War News—About 15,000 coalition troops, including forces from the U.S, other NATO countries, and the Afghan government, launched a major offensive Feb. 13 targeting the town of Marja and other Taliban strongholds in Helmand Province, S Afghanistan. The operation, called Moshtarak (the Dari word for "together"), was the largest such offensive since the Afghan war began in 2001. U.S. commanders viewed Marja as a key test of the "government-in-a-box" strategy, under which a previously assembled team of Afghan police and civilian officials would replace a Taliban-controlled local administration almost overnight.

A coalition government in the Netherlands collapsed Feb. 20 when the principal parties failed to reach agreement on the continued deployment of some 2,000 Dutch troops with NATO forces in Afghanistan; new Dutch elections were scheduled for June with the complete withdrawal of Dutch troops from Afghanistan a central issue. A NATO missile strike Feb. 21 in the S Afghan province of Uruzgan killed at least 27 civilians. In Pakistan, meanwhile, American and Pakistani intelligence agents captured several high-ranking Afghan Taliban leaders, including military commander Mullah Abdul Ghani Baradar.

In Iraq, 54 people were killed and 109 injured Feb. 1 when a female suicide bomber hiding an explosive vest beneath her black *abaya* (cloak) blew herself up among a crowd of Shiite Muslim pilgrims in NE Baghdad. U.S. troop fatalities during the month totaled 5 in Iraq and 32 in and around Afghanistan.

General

Saints Beat Colts in Super Bowl—The New Orleans Saints Feb. 7 won the first Super Bowl in their 43-year franchise history, defeating the Indianapolis Colts, 31-17, at the recently renamed Sun Life Stadium in Miami Gardens, FL. (The stadium, home of the pro football Miami Dolphins, has had 7 names since 1987.) The Super Bowl XLIV matchup, which featured two of the league's elite quarterbacks, the Colts' Peyton Manning and the Saints' Drew Brees (the game MVP), attracted an average U.S. TV audience of 106.5 mil people, eclipsing the previous record set by the *M*A*S*H* finale in 1983.

Shuttle *Endeavour* Delivers Space Station's Last Major Sections—Touching down Feb. 21 at the Kennedy Space Center in Florida, the space shuttle *Endeavour* completed a successful 14-day mission to the International Space Station (ISS). The shuttle's 6-member crew, led by Comm. George Zamka, delivered and installed the Tranquility life-support module and a seven-windowed cupola for use in controlling the station's exterior robotics. Installation of the components, both supplied by the European Space Agency, made the ISS more than 98% complete.

XXI Winter Olympics Held in Vancouver, Canada—More than 2,600 athletes from more than 80 countries competed in the XXI Olympic Winter Games hosted Feb. 12-28 by Vancouver, British Columbia. Canada, the host country, led in gold medals with 14, including final-round victories in ice hockey over the U.S. women's team, 2-0, and the U.S. men's squad, 3-2. The U.S. led in the overall medal count with 37 (9 gold, 15 silver, 13 bronze), followed by Germany with 30 (10-13-7), and Canada with 26 (14-7-5). Norway, which finished 4th in the total medal count with 23 (9-8-6), had 2 of the leading individual medalists, cross-country skiers Marit Bjørgen (3-1-1) and Petter Northug (2-1-1). Other standout performers included South Korea's Kim Yu Na, the gold medalist in women's figure skating, and short-track speed skater Apolo Ohno, whose 8 career medals (including a silver and 2 bronzes in 2010) were the most ever for a U.S. athlete at the Winter Olympics.

The Vancouver competition was clouded by the death of a 21-year-old Georgian luger, Nodar Kumaritashvili, who crashed in an opening-day training run when he lost control of his sled as he entered the final bend of the Whistler Sliding Centre track at nearly 90 mph. Although designers had anticipated speeds of 87.5 mph when the track was opened in 2007, lugers in test events and training runs had gone as fast as 96 mph. International luge officials denied that the track was unsafe but nevertheless reconfigured the Olympic course after Kumaritashvili's death to reduce speeds and lessen the risk of further injuries.

Vancouver also hosted the Paralympic Games, Mar. 12-21, in which 44 countries were represented by more than 500 athletes with disabilities. The Russian team finished first with 38 medals (12 gold, 16 silver, 10 bronze), followed by Germany with 24 (13-5-6), Canada with 19 (10-5-4), Ukraine with 19 (5-8-6), and the U.S. with 13 (4-5-4).

March 2010

National

Landmark Health Care Measure Becomes Law—Pres. Barack Obama on Mar. 23 signed the Patient Protection and Affordable Care Act, the most ambitious effort to remake the U.S. health care system since the passage of Medicare and Medicaid in 1965. The bill Obama signed closely resembled the measure that passed the U.S. Senate Dec. 24, 2009, by a vote of 60-39, against united Republican opposition. The legislation would extend health insurance to some 32 mil Americans over a 10-year period, at a cost estimated at $938 bil; because of tax increases and Medicare savings, however, the Congressional Budget Office estimated Mar. 20 that the law would reduce projected federal budget deficits by $143 bil over the same period.

In its first year, the new law would bar insurance companies from rescinding coverage when people get sick, imposing lifetime limits on coverage, and denying coverage to children with preexisting conditions; individual and group policies would be required to extend coverage to dependent children up to age 26, and Medicare recipients who had reached the "doughnut hole" in prescription drug coverage would receive a $250 rebate. Starting in 2013, individuals earning more than $200,000 (or families earning over $250,000) annually would pay an additional 0.9% in Medicare payroll tax, and individuals and families at similar income levels would be subject to a new 3.8% levy on dividends, interest, and other forms of unearned income. By 2014 most of the new system would become operational, with most U.S. citizens and legal residents required to obtain health insurance, and state-based insurance exchanges established to provide qualified plans at competitive rates to individuals and small businesses.

The president's year-long effort to restructure the nation's health-care financing was nearly derailed in Jan. 2010, when the election of Scott Brown (R, MA) as the Senate's 41st Republican cost the Democrats their filibuster-proof voting majority. But Obama decided to push forward, promoting his agenda at a public question-and-answer session with House Republican lawmakers Jan. 29 in Baltimore, MD, and at a health-care summit with congressional leaders Feb. 25 at Blair House in Washington, DC. Because the Senate could no longer be counted on to pass a substantially revised health-reform bill through regular procedures, Democratic leaders devised a complex legislative strategy to guide the legislation to final passage. On Mar. 21 the House voted, 219-212, to approve the Senate bill, with no Republicans voting in favor; later that same day, again without GOP support, the House passed, 220-211, a so-called reconciliation bill. The reconciliation bill headed to the Senate, where rules required only a simple majority vote to pass the legislation and did not allow a Republican filibuster. By a 56-43 vote on Mar. 25 the Senate then approved an amended version of the reconciliation measure, and the House promptly followed suit by a 220-207 margin. The reconciliation bill, signed by Obama Mar. 30, included provisions that revamped aid to higher education by expanding the Pell Grant program and phasing out the role of banks and other private lending institutions in providing federally guaranteed student loans.

Both inside and outside the halls of Congress, debate over the health legislation was fierce. A last-minute stumbling block to House passage was concern expressed by a group of anti-abortion Democrats, led by Rep. Bart Stupak (MI), that language in the Senate version did not go far enough in barring indirect federal subsidies for abortion. (Under the Hyde Amendment, Congress since 1976 has regularly banned federal money for abortion except in cases of rape or incest, or when the pregnant woman's life is in danger.) When Obama agreed to sign an executive order reiterating the barriers to federal abortion funding, Stupak and his allies provided the winning margin for health reform in the House. After the measure became law, House Majority Leader Steny Hoyer (D, MD) said about 10 Democrats had received death threats or had their homes or offices vandalized; the following day, House Republican Whip Eric Cantor (VA), a prominent opponent of the bill, said he also had received threats. Facing rising opposition in his home district, Stupak announced Apr. 9 that he would not run for a 10th House term in Nov. 2010.

Same-Sex Marriage Legal in Nation's Capital—The Religious Freedom and Civil Marriage Equality Amendment Act came into force Mar. 3, legalizing same-sex marriage in Washington, DC. The City Council passed the measure Dec. 15, 2009, by an 11-2 vote, and Mayor Adrian Fenty signed it 3 days later. Opponents of same-sex marriage failed in efforts to block the legislation in Congress, and U.S. Supreme Court Chief Justice John Roberts refused Mar. 2 to grant a temporary stay to prevent the law from coming into force. The District of Columbia joined 5 states—Connecticut, Iowa, Massachusetts, New Hampshire, and Vermont—in extending full marriage equality to same-sex couples.

New York Congressman Quits in Harassment Scandal—Freshman Rep. Eric Massa (D, NY) announced Mar. 5 that he would quit Congress effective Mar. 8 after he was accused of sexually harassing a male aide. Massa had first said Mar. 3 that he would not run for reelection, citing a "cancer recurrence scare" as the main reason for his decision. Four days later, in a radio interview, he accused Democratic Party leaders, including White House Chief of Staff Rahm Emanuel (whom Massa called the "son of the devil's spawn") of forcing him out because of his opposition to the health care bill. On Mar. 10 the *Washington Post* reported that Massa had been under investigation for allegedly groping at least 2 aides and harassing young male staffers in other ways.

Terror Cases Focus Attention on Homegrown Threat—David Coleman Headley, a U.S. citizen known until 2006 as Daood Gilani, pleaded guilty in Chicago Mar. 18 to 12 terrorism-related charges. The American-born Headley, whose father was a Pakistani diplomat, acknowledged in his

plea agreement that he had assisted in planning the Nov. 2008 attacks that killed more than 160 people in Mumbai, India, and that he had helped plot an attack on a Danish newspaper that in 2005 had published cartoon images of the prophet Muhammad. Arrested in Chicago on Oct. 3, 2009, Headley agreed to cooperate with U.S. authorities in exchange for promises by prosecutors not to seek the death penalty or extradite him overseas.

Also on Mar. 18, Colleen R. LaRose, known on the Internet as "JihadJane," appeared in federal court in Philadelphia to plead not guilty to charges that she had sought to raise funds for terrorist groups and recruit others to carry out jihadist strikes in Europe and Asia. Her targets allegedly included a Swedish artist, Lars Vilks, who had depicted Muhammad with the body of a dog. Federal officials alleged that LaRose, a white Pennsylvania woman with blue eyes and blond hair, had boasted to other jihadists that because of her appearance she could travel anywhere without attracting suspicion. LaRose had been in federal custody since her arrest in Philadelphia on Oct. 16, 2009.

On Mar. 17, authorities in Pakistan filed terrorism charges against five young American Muslims from Northern Virginia: Waqar Khan and Umar Farooq, both of Pakistani ancestry; Aman Hassan Yemer and Ahmed Minni, both of Ethiopian descent; and Ramy Zamzam, of Egyptian heritage. The men were convicted June 24 in Sargodha, Pakistan, and sentenced to 10 years in prison.

These and other cases—including the Nov. 2009 shootings that left 13 people dead in Fort Hood, TX—were specifically cited by Obama administration officials as they introduced a revamped national security strategy on May 27. The revised strategy for the first time explicitly recognized the threat posed by homegrown terrorists influenced by al-Qaeda and other extremist organizations and ideologies.

Community Organizing Group ACORN Disbands—The nonprofit Association of Community Organizations for Reform Now (ACORN) announced Mar. 22 that it would disband because of declining revenues. The Census Bureau and Internal Revenue Service had terminated their partnerships with ACORN, and Congress had barred federal funding for the group after conservative activists released videos in Sept. 2009 that purportedly showed ACORN employees offering advice on how to operate a prostitution business involving underage, illegal immigrants. Early in 2010, several large ACORN affiliates, including those in New York and California, broke off from the national group and reorganized under different names.

The nation's largest community organizing body, with some 400,000 members in 105 U.S. cities, ACORN had long been targeted by conservatives, who accused it of voter registration fraud and other illicit practices. A preliminary report released June 14 by the Government Accountability Office found no evidence that ACORN had mishandled $40 mil in grants provided by nine federal agencies during the fiscal years 2005-09.

Stocks, Jobs Make Gains—Major stock indexes increased for the 4th consecutive quarter, with the Dow Jones Industrial Average closing Mar. 31 at 10,856.63, up 5.1% for the month and 4.1% since the end of Dec. 2009. The Nasdaq Composite Index (2.397.96) rose 7.1% for the month and 5.7% for the quarter, and the S&P 500 (1,169.43) registered a monthly gain of 5.9% and a quarterly increase of 4.9%.

Pres. Obama signed Mar. 18 the Hiring Incentives to Restore Employment (HIRE) Act. The job-stimulus measure provided $17.5 bil in tax cuts and other employer incentives and shifted $20 bil to the Highway Trust Fund to boost spending on transit programs. The federal Bureau of Labor Statistics reported Apr. 2 that the economy had added 162,000 jobs in Mar., the largest monthly increase in 3 years; about 48,000 of the new hires were temporary workers for the 2010 Census. The nationwide jobless rate remained stuck at 9.7%, and the average duration of unemployment was more than 30 weeks.

International

Iraq Holds Parliamentary Elections; Obama Travels to Afghanistan—An estimated 62% of eligible voters participated in Iraqi parliamentary balloting Mar. 7, with some 6,200 candidates from 86 political groups competing for 325 seats. Turnout was over 75% in three predominantly Kurdish provinces but only 53% in Baghdad, where insurgent attacks left at least 38 people dead. The national elections (Iraq's second since the ouster of Saddam Hussein) were notable for the participation of Sunni Muslims, many of whom had boycotted the Dec. 2005 vote. According to final results released Mar. 26 by Iraq's Independent High Electoral Commission, the leading group with 91 seats was the Iraqiya coalition headed by former Prime Min. Iyad Allawi, a Shiite who had campaigned as a secularist to win widespread Sunni support. Prime Min. Nouri al-Maliki's Shiite-oriented State of Law coalition came in second with 89 seats, followed by the Iraqi National Alliance (a Shiite group that included the radical cleric Moqtada al-Sadr) with 70 seats, and the Kurdistan Alliance with 43. On the day the results were announced, two bombings at a crowded market in Khalis, Diyala Province, about 50 mi north of Baghdad, killed at least 59 people and injured more than 70. U.S. military fatalities in Iraq numbered 7 during the month.

Pres. Obama made a trip to Afghanistan Mar. 28, his first since he took office in Jan. 2009. During the 6-hour visit, which was not announced in advance, he addressed U.S. troops at Bagram Air Base and met in Kabul with Afghan Pres. Hamid Karzai, reportedly pressing him to crack down on corruption. Complicating U.S. relations with the Kabul government was the role of Pres. Karzai's brother, Ahmed Wali Karzai, a powerful figure in the strategic Kandahar region, whom many Western and Afghan officials suspected of electoral fraud, drug trafficking, money laundering, and shadowy dealings with both the Taliban and the U.S. Central Intelligence Agency. Growing pressure from the West has led Pres. Karzai to turn elsewhere for support; in Mar., he traveled to Beijing to strengthen economic ties with China, and he met in Kabul and Tehran with Pres. Mahmoud Ahmadinejad, at a time when the U.S. was seeking to intensify the Iranian leader's diplomatic isolation. According to the website iCasualties.org, 85 U.S. service members died in Afghanistan during the first three months of 2010, more than double the number during the comparable period of 2009.

Israel Approves Settlement Expansion During Biden Visit—Only hours after U.S. Vice Pres. Joe Biden arrived in Jerusalem to confer with Prime Min. Benjamin Netanyahu and help launch Israeli-Palestinian "proximity talks," the Israeli government announced plans Mar. 9 to move ahead with construction of 1,600 homes in Ramat Shlomo, a Jewish settlement in mostly Arab East Jerusalem. The timing of the announcement, by Israel's Interior Ministry (controlled by the right-wing Shas party), reportedly came as a surprise to Netanyahu; at U.S. insistence, he had previously agreed to suspend settlement construction in much of the West Bank, although not in East Jerusalem. Biden condemned the planned construction as a hindrance to peace, as did UN and European leaders and Palestinian negotiators. Israeli officials apologized for the ill-timed disclosure and denied that it had been meant as an affront to Biden, but they defended the substance of the Ramat Shlomo decision, which was strongly supported by the right-wing parties essential to Netanyahu's governing coalition. Two weeks later, Netanyahu visited Washington, DC, and received an unusually frosty reception during a Mar. 23 meeting with Pres. Obama at the White House.

Blast Sinks South Korean Warship—A mysterious explosion on the evening of Mar. 26 split and sank the South Korean Navy warship *Cheonan*, killing 46 of the 104 sailors on board. At the time of the blast, the 1,200-ton corvette was on patrol in the Yellow Sea near South Korea's Baengnyeong Island, in a maritime border region that had been the site of hostile encounters between North and South Korea. On May 20 a team of military and civilian probers from South Korea, the U.S., the UK, Australia, and Sweden formally concluded that the *Cheonan* had been torpedoed by a North Korean submarine; at a nationally televised news conference, investigators displayed what they described as North Korean torpedo fragments recovered from the disaster site. Five days later, South Korean Pres. Lee Myung Bak designated North

Korea as an "archenemy," curtailed trade and investment ties with the Pyongyang regime, and referred the dispute to the UN Security Council. North Korea, which denied any role in the *Cheonan* sinking and called the investigators' report a "fabrication," retaliated by suspending nearly all communications with the South.

Suicide Bombings in Moscow Subway Kill 40—Female suicide bombers struck 2 Moscow subway stations during the morning rush hour of Mar. 29, killing 40 people and injuring dozens more. Russian authorities later identified the bombers as Dzhanet Abdullayeva, the 17-year-old widow of Umalat Magomedov, a militant Islamist from Dagestan who had been killed by Russian security officers in Dec. 2009; and Maryam Sharipova, a 28-year-old computer teacher from Dagestan. The first blast, carried out by Sharipova, took place just before 8 AM at the Lubyanka metro station, beneath the headquarters of the Russia's Federal Security Service, which had recently conducted counterinsurgency operations against Islamic separatists in Dagestan and other N Caucasus republics; the second attack, executed by Abdullayeva, came 40 minutes later, at the Park Kultury metro stop, also in the heart of Moscow. In a video released Mar. 31, jihadist leader Doku Umarov claimed responsibility for orchestrating the attacks. Suicide bombings in Kizlyar, Dagestan, claimed 12 lives that same day.

General

***Hurt Locker* Takes Best Picture Oscar**—Kathryn Bigelow became the first woman ever to win the Academy Award as Best Director Mar. 7, as her Iraq war drama, *The Hurt Locker*, took home 6 Oscars, including Best Picture. The sci-fi blockbuster *Avatar*, directed by Bigelow's former husband James Cameron, won 3 awards, for cinematography, art direction, and visual effects. Top acting honors went to Sandra Bullock, for her leading role in *The Blind Side*, and Jeff Bridges for his portrayal of a down-and-out country singer in *Crazy Heart*. Pixar's *Up* won the Oscar for animated feature, and *The Secret in Their Eyes* (*El Secreto de Sus Ojos*), an Argentinian murder mystery, earned the prize for foreign-language film.

American Rower Is Youngest to Make Solo Atlantic Crossing—Katie Spotz, 22, became the youngest person and first American to complete a solo journey across the Atlantic Ocean Mar. 14, when her specially designed 19-ft wooden rowboat landed at Georgetown, Guyana, on the N coast of South America. The endurance athlete from Mentor, OH, rowed 8-10 hours per day during her 2,817-mi voyage, which began Jan. 3 at Dakar, Senegal, on the W coast of Africa. The trip, which took about 2 years to plan and equip, was intended to support Blue Planet Run, a San Francisco-based nonprofit foundation that funds safe drinking water projects worldwide.

Large Hadron Collider Experiments Shatter Energy Records—The world's most powerful subatomic particle accelerator, the Large Hadron Collider (LHC), operated by the European Center for Nuclear Research (CERN), reached a milestone Mar. 30, sending two proton beams crashing into each other with a combined energy of 7 tril electron volts (TeV). The LHC, a 17-mi loop located beneath the Swiss-French border, had failed shortly after launch in Sept. 2008, but after 14 months of repairs, it had been restarted in Nov. 2009 and had quickly eclipsed particle acceleration records previously held by Fermilab's Tevatron in Batavia, IL. The 7-TeV collision marked the start of an advanced physics research program of 18-24 months, after which the atom smasher would be raised to its maximum operating energy of 14 TeV.

April 2010

National

Blowout in Gulf of Mexico Kills 11, Unleashes Catastrophic Oil Spill—One of the worst environmental disasters in U.S. history began on the night of Apr. 20 when a gas explosion and fire engulfed the *Deepwater Horizon*, an exploratory drilling platform about 50 mi off the coast of Venice, LA, in the Gulf of Mexico. As oil rig workers were engaged in sealing off the exploratory Macondo well, which had been drilling in water a mile deep, a sudden rush of oil, natural gas, and seawater surged upward through the drill pipes. Eleven of the 126 people on board the rig were killed; the remaining 115 escaped the fiery wreckage, which burned for 2 days before sinking into the Gulf. Four firms were principally involved in the drilling: British oil giant BP, based in London, which managed the project and was the major owner of the Macondo well, containing about 50 mil barrels of oil; its U.S. partner, Texas-based Anadarko Petroleum, which owned 25% of the Macondo project; a Swiss-U.S. firm, Transocean, the world's largest offshore drilling operator, which owned the *Deepwater Horizon* platform; and the oilfield services company Halliburton, the contractor tasked with cementing the well shut. With billions of dollars in potential liabilities at stake, executives of each firm blamed the others for the failures of multiple safety procedures designed to prevent such a disaster.

When the rig sank, oil began gushing from the ruptured pipes. Initial calculations put the leak at 1,000 barrels a day, but by Apr. 28 the U.S. Coast Guard had increased its estimate to 5,000 barrels a day. On June 10, a federal panel raised its estimate of the daily flow rate to 25,000-30,000 barrels, equivalent to nearly 1.3 mil gallons per day. With BP unable to plug the leak—and thousands of skimming and boom-deploying vessels unable to stem the oily tide—a toxic mix of petroleum and chemical dispersants spread toward shore, threatening wildlife in sensitive wetland habitats, fouling fishing grounds, and depositing sticky tar balls on beaches of Gulf Coast tourist towns from Texas to Florida.

The Gulf disaster posed a test of leadership for Pres. Barack Obama (D), who on Mar. 31 had proposed opening large areas of the Atlantic, eastern Gulf, and Alaska coastlines to new oil and gas drilling, and who had defended his proposal Apr. 2 in Charlotte, NC, by saying "oil rigs today generally don't cause spills." In late May, after oil from the Macondo well had been spewing into the Gulf for more than a month, the Obama administration replaced the head of the Minerals Management Service (MMS), the agency that oversees offshore drilling. On May 28 the Interior Dept. and MMS imposed a 6-month moratorium on deepwater exploratory drilling in the Gulf, but the drilling ban was overturned June 22 by U.S. District Judge Martin L.C. Feldman. Meanwhile, the administration stepped up pressure on BP to stop the leak, clean up the spill, and pay for damages to the Gulf Coast economy.

29 Die in West Virginia Mine Blast—In the worst U.S. coal-mining disaster in 40 years, a huge explosion Apr. 5 killed 29 miners working about 1,000 ft underground in the Upper Big Branch mine at Montcoal, Raleigh Co., WV. The mine, owned by a subsidiary of Massey Energy Co., based in Richmond, VA, had been repeatedly cited for safety violations, including high levels of explosive methane gas, which federal investigators targeted as the likely cause of the blast. Pres. Obama delivered the eulogy at a memorial service Apr. 25 at the Beckley-Raleigh County Convention Center.

Testifying May 24 before members of the House Education and Labor Committee, Stanley "Goose" Stewart, a miner who was working at Upper Big Branch on the day of the explosion, described the mine as a "ticking time bomb" because of ventilation problems in the two months prior to the accident. Analysts also focused on lax oversight by the federal Mine Safety and Health Administration.

Stevens Announces Supreme Court Retirement—Eleven days before celebrating his 90th birthday, U.S. Supreme Court Associate Justice John Paul Stevens announced Apr. 9 that he would leave when the current term ended in June. Stevens, the current court's oldest and longest-serving justice, was a Chicago native and a World War II veteran who earned his legal reputation as an antitrust specialist and a foe of judicial corruption. He owed his career as a judge to two Republican presidents—Richard Nixon, who appointed him to the appellate bench in 1970, and Gerald Ford, who elevated him to the Supreme Court in 1975—and he entered the court as a moderate replacement for liberal icon William O. Douglas. Over time, however, as the Court's political center gravitated rightward, Stevens emerged as a leader of the liberal bloc, casting key votes on abortion, affirmative action, executive power, criminal rights, and the death penalty. His retirement, which had been anticipated for months, offered Pres. Obama the opportunity to name a second Supreme Court justice.

Obama Lays Out Goals for U.S. Space Program—Speaking Apr. 15 at the Kennedy Space Center in Florida, Pres. Obama redefined the nation's long-term goals for human spaceflight, outlining plans for the National Aeronautics and

Space Administration (NASA) to send crewed missions to an asteroid by 2025 and to Mars by the mid-2030s. The president pledged to increase NASA's budget by $6 bil over the next 5 years, with much of the new funding allocated for development of a heavy-lift rocket for deep-space missions. With NASA's space shuttle program expected to end in 2011, Obama said the U.S. would encourage private companies to develop vehicles to ferry crews and supplies to the International Space Station. He defended his decision to terminate a Bush administration program to return astronauts to the Moon by 2020. In another departure from the policies of the preceding administration, the White House declared June 28 that the U.S. would "consider proposals and concepts for arms control measures" that would limit the development and deployment of space weapons.

Arizona Enacts Tough Immigration Law—The Arizona state legislature passed Apr. 19 and Gov. Jan Brewer (R) signed Apr. 23 the Support Our Law Enforcement and Safe Neighborhoods Act, a measure requiring local governments and police to crack down on illegal immigration. The law made it a state crime to be in the U.S. illegally; authorized police to arrest without warrant anyone whom they reasonably suspect of being an illegal immigrant; required police to verify with federal authorities the immigration status of persons whom they arrest; and empowered Arizona residents to sue local officials or agencies suspected of failing to enforce federal immigration laws to the fullest extent. Answering critics who complained that the measures would encourage racial profiling against Hispanics, Brewer Apr. 30 signed House Bill 2162 modifying the conditions under which police were permitted to detain and question suspects whose immigrant status was in doubt.

Controversy over the state's tough immigration stance reflected the sensitivity of the issue in Arizona, which borders Mexico, has a large Hispanic population, and was estimated by the federal Dept. of Homeland Security to harbor 460,000 illegal immigrants as of Jan. 2009. Pres. Obama on Apr. 23 called the Arizona law "misguided" and said it would "undermine basic notions of fairness that we cherish as Americans." Three days later, Mexican Pres. Felipe Calderón said the law opened the door to "intolerance, hate, discrimination, and abuse in law enforcement." Claiming that the state had improperly preempted federal authority in immigration matters, the Justice Dept. filed suit July 6 to prevent the legislation from taking effect as scheduled on July 29. Other opposition groups, representing law-enforcement officers, municipalities, clergy, nonprofit organizations, civil rights and immigrants' rights activists, launched their own suits and called for an economic boycott of the state.

Growth Indicators Push Dow Above 11,000—In its *World Economic Outlook* issued Apr. 21, the International Monetary Fund (IMF) concluded that the global recovery from recession was "proceeding better than expected" and forecast U.S. economic growth of 3.1% for 2010. Echoing the IMF analysis, the Federal Reserve reported Apr. 28 that U.S. economic activity "has continued to strengthen and . . . the labor market is beginning to improve." Data released Apr. 30 by the U.S. Commerce Dept. showed that the U.S. economy had expanded by 3.2% during the first quarter of 2010, with consumer spending increasing at an annual rate of 3.6%. The positive news helped push the Dow Jones Industrial average above 11,000 for the first time since Sept. 2008. The Dow closed Apr. 30 at 11,008.61, for a one-month gain of 1.4%. The Nasdaq Composite Index finished at 2,461.19 (a one-month increase of 2.6%), and the S&P 500 closed at 1,186.69 (up 1.5%).

International

Political, Ethnic Clashes Accompany Kyrgyzstan Coup—Opposition parties ousted Kyrgyzstan Pres. Kurmanbek Bakiyev Apr. 7 after clashes between protesters and government security forces in the Central Asian nation left at least 85 people dead. Bakiyev had come to power in 2005 at the head of the pro-democracy "tulip revolution," but his regime had grown increasingly autocratic, and Kyrgyzstan's ailing economy had fueled popular discontent. Angered by rising utility prices, protesters Apr. 6 seized government buildings in the western city of Talas. Bakiyev retaliated by having opposition leaders arrested, but police using rubber bullets, tear gas, and live ammunition were unable to suppress mass protests in the capital city of Bishkek the following day. In the ensuing chaos, the opposition leaders were freed, and Bakiyev was forced to flee to southern Kyrgyzstan, from where he subsequently received safe passage to Kazakhstan and asylum in Belarus. The violence led the U.S. temporarily to cut back operations at the Manas air base in northern Kyrgyzstan, an important transit center for the movement of U.S. and NATO forces to and from Afghanistan.

Following Bakiyev's ouster, an interim government led by former Foreign Min. Roza Otunbayeva was unable to consolidate control over the south and accused Bakiyev of inciting unrest there. Clashes in mid-June between majority Kyrgyz and minority Uzbeks in the southern cities of Osh and Jalalabad claimed up to 2,000 lives and led at least 75,000 ethnic Uzbeks to seek temporary safety in neighboring Uzbekistan. Despite the violence, the Otunbayeva government pressed forward with a June 27 referendum on a new constitution, which received overwhelming approval. Otunbayeva was sworn in July 3 as transitional president, with national elections scheduled for Oct. 2011.

Russia, U.S. Sign Nuclear Arms Reduction Pact—Meeting Apr. 8 in Prague, capital of the Czech Republic, Pres. Obama and Russian Pres. Dmitri Medvedev signed an arms control accord known as the New Strategic Arms Reduction Treaty (New START). Under the agreement—a successor to START I, which expired Dec. 5, 2009, and to the Strategic Offensive Reductions Treaty (SORT) of 2002, which was still in force—the U.S. and Russia each pledged to reduce their deployed nuclear warheads to 1,550 over a 7-year period, down from the 2,200 agreed to under SORT. Each side also agreed to cut to 700 the number of deployed delivery vehicles, including intercontinental ballistic missiles, submarine-launched ballistic missiles, and heavy bombers. Before it could take effect, New START would need to be ratified by the Duma (the lower house of the Russian parliament) and the U.S. Senate, which received the treaty May 13. That same day, to assuage concerns that the agreement might weaken U.S. defenses, Obama outlined a program under which the U.S. would spend $180 bil over a 10-year period to modernize its existing nuclear arsenal and develop new bombers and missiles.

In another arms-related initiative, the Obama administration issued a revamped nuclear strategy Apr. 6, strengthening U.S. efforts against nuclear terrorism and global nuclear proliferation. Under the revised strategy, the U.S. promised not to use (or threaten to use) nuclear weapons against nonnuclear nations that complied with the Nuclear Non-Proliferation Treaty, even if they used biological or chemical weapons against the U.S. The strategy would continue to allow the U.S. to use nuclear weapons against Iran or North Korea, which Pres. Obama called "outliers." On Apr. 12-13 in Washington, DC, Obama hosted an international summit conference on nuclear security, at which participants made a nonbinding pledge to secure all vulnerable nuclear materials within 4 years.

Plane Crash Kills Polish President—Pres. Lech Kaczynski, his wife Maria, and 94 other passengers and crew died Apr. 10 when their plane crashed while attempting to land at a fog-bound military airport near Smolensk, in W Russia. Among many senior officials killed in the crash were Slawomir Skrzypek, the president of Poland's national bank; Aleksander Szczyglo, head of the National Security Bureau; the chiefs of the army, navy, and air force; and more than a dozen members of parliament. The top-level delegation had departed from Warsaw to participate in ceremonies marking the 70th anniversary of the Katyn massacre, in which some 22,000 Polish prisoners were slaughtered in Apr. 1940 on orders from Soviet dictator Joseph Stalin. Russian Pres. Dmitri Medvedev traveled to Kraków to attend the Apr. 18 funeral for Kaczynski and his wife, but several Western leaders—including U.S. Pres. Barack Obama—canceled plans to journey to Kraków because ash from an Iceland volcano had made European flying conditions unsafe.

Under Poland's constitution, the position of acting president was filled by Parliament Speaker Bronislaw Komorowski, a member of the Civic Platform party and an ally of Prime Min. Donald Tusk. In the first round of presidential elections June 20, Komorowski led former Prime Min. Jaroslaw Kaczynski, the twin brother of the late president, by a margin of 42% to 37%. The moderate Komorowski beat his right-wing nationalist opponent 53% to 47% in a July 4 runoff vote.

Iceland Volcano Eruption Cripples European Air Traffic—A major eruption Apr. 14 of the Eyjafjallajökull volcano, located about 75 mi west of Iceland's capital city of Reykjavík, spewed vast quantities of ash into the atmosphere above much of Europe, disrupting air traffic for nearly a week. The thick ash cloud drastically reduced visibility, and because aviation officials feared that silicate particles in the ash might cause jet engines to fail, airports throughout N and W Europe were shut down and many westbound transatlantic flights were canceled. According to the International Air Transport Association (IATA), an industry trade group, closures and cancellations Apr. 15-20 affected about 10 mil passengers and 100,000 flights. The IATA estimated that airline companies lost $1.8 bil during this period and other sporadic Eyjafjallajökull eruptions.

Earthquake Hits Northwest China—An earthquake Apr. 14 killed at least 2,200 people in Yushu County, Qinghai Province, in NW China. Chinese authorities measured the quake at 7.1 on the open-ended Richter scale, while the U.S. Geological Survey recorded a magnitude of 6.9. More than 100,000 people were left homeless by the quake, which had its epicenter in the town of Gyegu, where ethnic Tibetans predominate.

Bashir Retains Power in Sudan Election—Sudan's National Electoral Commission announced Apr. 26 that incumbent Pres. Omar Hassan Ahmad al-Bashir had won reelection Apr. 11-15 with 68% of the vote. The runner-up, with 22%, was Yassir Arman, candidate of southern Sudan's leading party, the Sudan People's Liberation Movement (SPLM). The SPLM had withdrawn Arman's candidacy Mar. 31, accusing Bashir of rigging the vote, but his name had remained on the ballot. Western governments regarded Bashir as a war criminal, and in Mar. 2009 the International Criminal Court (ICC) in The Hague, Netherlands, had issued a warrant for his arrest, holding him responsible for crimes against humanity in the Darfur region of western Sudan. Observers from the African Union and the Arab League—which have refused to cooperate with ICC extradition requests—declared the 2010 vote free and fair, but a report by the U.S.-based Carter Center, headed by former Pres. Jimmy Carter, described the voting as "highly chaotic, non-transparent, and vulnerable to electoral manipulation." On July 12, 2010, the ICC issued another warrant for Bashir's arrest on genocide charges, marking the first time the ICC had ever formally accused a sitting head of state of genocide. In voting for president of the semi-autonomous region of southern Sudan, SPLM leader Salva Kiir Mayardit was reelected with 93% of the vote; under a 2005 peace agreement between the government and SPLM rebels that ended a civil war between north and south, Kiir also serves as first vice-president in Sudan's national government. A referendum on independence for south Sudan (which holds most of the country's oil resources) is scheduled for Jan. 2011.

Top Insurgent Leaders Killed in Iraq; Other War News—U.S. and Iraqi officials reported Apr. 19 that a joint operation in Tikrit the previous day had killed two powerful jihadists: the Egyptian-born Abu Ayyub al-Masri, the leader of the insurgent group al-Qaeda in Iraq, and Abu Omar al-Baghdadi, who headed the Islamic State of Iraq, an umbrella group that includes al-Qaeda in Iraq. Other insurgents were also killed or arrested, and the operation reportedly resulted in the seizure of computers and documents showing contacts between al-Qaeda in Iraq and Osama bin Laden, leader of the international al-Qaeda terror network.

In other Iraq war developments, a wave of insurgent attacks Apr. 3-6 in and around Baghdad, including several suicide bombings at foreign diplomatic missions, left at least 90 people dead and hundreds injured. Another series of bomb blasts in Baghdad Apr. 23 killed at least 58 people. U.S. military fatalities in Iraq numbered 8 during the month.

In Afghanistan, 20 U.S. service members and 14 other coalition troops lost their lives during the month in Operation Enduring Freedom. Afghanistan's Interior Ministry reported May 2 that 173 civilians had been killed and 380 injured between Mar. 21 and Apr. 21; the death toll was 33% higher than the same period a year earlier. Most of the casualties were attributed to suicide bombings and improvised explosive devices, or roadside bombs.

General

Duke Wins Men's College Basketball Crown; UConn Repeats as Women's Champion—Duke beat Butler, 61-59, in a thrilling title game Apr. 5 that earned Blue Devils' coach Mike Krzyzewski his 4th NCAA men's basketball championship in 20 years. Butler's loss disappointed a hometown crowd at Lucas Oil Stadium in Indianapolis, IN, and ended the Bulldogs' 25-game winning streak, which included NCAA tournament upsets over Syracuse, Kansas State, and Michigan State. In the women's bracket Apr. 6, the Univ. of Connecticut, coached by Geno Auriemma, came from behind to defeat Stanford, 53-47, at the Alamodome in San Antonio, TX. Star forward Maya Moore led UConn with 23 points, as the Huskies won their 78th straight game and completed their second consecutive undefeated season.

Mickelson Wins Masters Golf Tournament—Shooting a sizzling final-round 67, Phil Mickelson captured his third Masters championship Apr. 11 at Augusta (GA) National Golf Club. Mickelson, a previous winner in 2004 and 2006, finished with a 16-under-par total of 272, beating England's Lee Westwood by 3 strokes. Returning to competition after a sex scandal sidelined his career, Tiger Woods, a four-time Masters winner, finished in a tie for 4th, 5 strokes behind Mickelson.

May 2010

National

Attempted Car Bombing Targets New York's Times Square—Tipped off by street vendors about smoke coming from a Nissan Pathfinder SUV, New York City police evacuated crowds of tourists and theatergoers in Times Square on a busy Saturday evening, May 1, before dismantling a crude car bomb. The vehicle, which had been rigged with explosive materials and a triggering device, was traced to Faisal Shahzad, a 30-year-old Pakistani-American. Shahzad, a naturalized U.S. citizen, was arrested May 3 after he had boarded a jet that was scheduled to fly to Dubai, United Arab Emirates.

Questioned by police, Shahzad said he had received bomb training in Pakistan and about $15,000 by the Pakistani Taliban to carry out the attack. He drew inspiration from Anwar al-Awlaki, a radical Yemeni-American cleric who has been linked to several other attacks against the U.S. (According to reports Apr. 6-7 in the *New York Times* and *Washington Post*, the Obama administration had specifically approved targeted efforts to assassinate Awlaki.) Indicted June 17 on 10 felony counts of terrorism and related crimes, Shahzad pleaded guilty to all charges in a Manhattan federal courtroom 4 days later; he was sentenced to life in prison Oct. 5.

Record Rains Flood Nashville—Storms and floods from a violent weather system in early May killed at least 21 people in Tennessee, 6 in Mississippi, and 4 in Kentucky. The Middle Tennessee region was especially hard hit, with Nashville receiving record rainfall of 13.57 in. during May 1-2; the Cumberland River, which flows through downtown Nashville, crested May 3 at 11.9 ft above flood stage. Flooding in the city damaged more than 11,000 structures, including such musical landmarks as the Grand Ole Opry House and the Country Music Hall of Fame and Museum. Property damage to the city was estimated in mid-May at more than $1.9 bil.

Kagan Nominated to Supreme Court—Pres. Barack Obama on May 10 nominated Elena Kagan to replace retiring John Paul Stevens as associate justice of the U.S. Supreme Court. Kagan, who had an extensive academic and policy résumé but no prior judicial experience, had been serving in the Justice Dept. since Mar. 2009 as U.S. solicitor general, overseeing federal litigation before the nation's highest court.

Born in New York City in 1960, Kagan grew up on Manhattan's Upper West Side. After completing her studies at Princeton Univ. (AB, 1981), Worcester Coll., Oxford Univ. (MPhil, 1983), and Harvard Law School (JD, 1986), she clerked for Supreme Court Justice Thurgood Marshall (1987-88); held a professorship (1991-97) at the Univ. of Chicago Law School, where Obama was one of her faculty colleagues; and worked in the Clinton White House as associate counsel (1995-96) and domestic policy adviser (1997-99). She

resumed her teaching career at Harvard in 1999 and became the first female dean of the law school in 2003. The following year, because the U.S. military's "Don't Ask, Don't Tell" policy prevented homosexuals from serving openly in the U.S. armed forces, she acted to limit military recruiting on the law school campus.

Insurgents Upset Establishment Candidates in Party Primaries—In a closely watched Democratic primary election in Pennsylvania May 18, Rep. Joe Sestak defeated 5-term Sen. Arlen Specter, a longtime Republican who had switched parties in 2009 and had the support of Pres. Obama and the state Democratic establishment. That same night, Rand Paul, an ophthalmologist and political novice, swamped Kentucky Sec. of State Trey Grayson in a Republican primary for the U.S. Senate seat being vacated by retiring Sen. Jim Bunning (R, KY). Paul, the son of Rep. Ron Paul (R, TX), had embraced the Tea Party protest movement, while Grayson had the endorsement of Senate leader Mitch McConnell (R, KY). In a Democratic primary in Arkansas, Lt. Gov. Bill Halter, an insurgent backed by organized labor and liberal groups, held 2-term incumbent Sen. Blanche Lincoln below 50% in the first round of balloting, but she outpolled Halter in a June 8 runoff.

Indiana Congressman Confesses Affair, Quits House—Rep. Mark Souder (R, IN), an 8-term congressman who had recently survived a tough primary challenge, disclosed May 18 that he would resign from the House within 3 days. Souder, married since 1974, admitted that he had carried on a long-term affair with a married female staffer.

Stocks Have Worst May in 60 Years—Worries about European debt problems and the uncertain pace of the U.S. economic recovery sent the Dow Jones Industrial Average plummeting 7.9% for the month, the worst May stock performance since 1940. The Dow closed May 28 at 10,136.63, the S&P 500 finished the month at 1,089.41 (down 8.2%), and the Nasdaq Composite Index ended at 2,257.04 (a drop of 8.3%). Investors endured a harrowing afternoon May 6 when a computerized selloff order by a Kansas-based investment firm propelled the markets into a precipitous "flash crash," with a 5-minute drop of about 1,000 points followed by a 20-minute gain of about 500.

International

Greece Gets $146 Bil Bailout from Eurozone Countries, IMF—The European common currency, or euro, weathered its worst crisis in more than a decade when the International Monetary Fund (IMF) and the 16 European countries that comprise the eurozone agreed May 2 on a 110 bil euro ($146 bil) loan package to prevent Greece from defaulting on its debts. Eurozone member nations promised to lend Greece 80 bil euros over a 3-year period, and the IMF agreed to provide the remaining 30 bil euros. In return, Greek leaders pledged to implement an austerity program that would slash the annual budget deficit from 13.6% of the country's gross domestic product in 2009 to 8.1% of GDP in 2010 and to less than 3% by the end of 2014; large labor unions vehemently opposed the plan, which gained approval from the Greek parliament May 6. Four days later, European finance ministers reached agreement on a 750 bil euro ($955 bil) emergency stabilization program that would provide funds from EU member countries and the IMF to prevent the crisis from spreading to other countries with debt problems, notably Spain and Portugal.

Nigerian Pres. Yar'Adua Dies; Goodluck Jonathan Sworn In—After prolonged illness, Nigerian Pres. Umaru Yar'Adua died May 5 in Abuja, the capital of Africa's most populous country. Vice-Pres. Goodluck Jonathan, a southern Christian who had served as acting president while Yar'Adua, a northern Muslim, was treated for heart and kidney problems, was sworn in as head of state May 6. Jonathan's succession to the presidency ended a period of instability that had been marked by political infighting and ethnic violence, including clashes Mar. 7 in which hundreds of people, mainly Christians, were killed in villages near the central Nigerian city of Jos.

Cameron Becomes Prime Minister After British Elections—In parliamentary elections May 6, British voters rejected the Labour Party, which had governed the UK for the previous 13 years. Final results tabulated May 27 (after a delayed election in one constituency) showed that the Conservatives, led by David Cameron, had won 307 of 650 seats in the House of Commons, for a net gain of 97 seats; Labour, under Prime Min. Gordon Brown, had taken 258 seats, for a net loss of 91; and the Liberal Democrats, led by Nick Clegg, had finished third with 57 seats, for a net loss of 5.

With Parliament "hung"—that is, with no party holding a majority—the Conservatives and Liberal Democrats agreed to form Britain's first coalition government since World War II. Brown resigned on May 11, as the 43-year-old Cameron became the nation's youngest prime minister in almost 200 years. Clegg, also 43, entered the government as deputy prime minister, having secured a Tory pledge to allow a parliamentary vote and popular referendum on changes to Britain's political system. Electoral reform was a key issue for Liberal Democrats, who had won a 23% share of the popular vote but only 9% of the seats in the House of Commons, while both the Conservative and Labour parties had parliamentary representation that far exceeded their vote shares.

Conservatives and Liberal Democrats agreed on the need to deal with public sector deficits, which had grown under Labour and surged during the recent recession. The Cameron-Clegg government June 22 introduced an emergency budget calling for tax increases, spending cuts of 25% over a 4-year period for most government departments, and a 2-year wage freeze for all but the lowest-paid public employees.

Aquino Wins Presidency in Philippines—Campaigning on his famous family name and a vow to clean up corruption, Benigno (NoyNoy) Aquino III defeated former Pres. Joseph Estrada to win a presidential election May 10 in the Philippines. Aquino is the son of former Pres. Corazon Aquino, who died in 2009, and pro-democracy leader Benigno Aquino Jr., who was assassinated in 1983. According to the final tally issued June 8, he won 42% of the vote, followed by Estrada with 26%. Aquino was sworn in June 30 as the Philippines' 15th president.

Wave of School Killings Hits China—In the village of Lincheng, SW Shaanxi Province, in central China, a middle-aged landlord wielding a meat cleaver entered Shengshui Temple Kindergarten May 12 and slaughtered 7 children, a teacher, and the teacher's mother before killing himself. The attacker, Wu Huanming, reportedly had quarreled with the teacher over whether the kindergarten could continue to occupy his property after the school's lease ran out in Apr. The crime was the latest of 5 school attacks, all involving middle-aged men, that had left at least 17 people dead and nearly 100 others wounded since late Mar., prompting schools throughout China to beef up security.

Violent Clashes Shake Thailand; Emergency Rule Enforced—A crackdown May 14-19 by Thai security forces in Bangkok against "Red Shirt" protesters loyal to former Prime Min. Thaksin Shinawatra left at least 54 people dead and some 470 injured. The crisis began Feb. 26 when Thailand's Supreme Court ordered the seizure of about $1.4 bil of Thaksin's family fortune, ruling that Thaksin, who was ousted by a military coup in 2006, had abused his powers as prime minister to enrich his telecommunications business. The Red Shirts staged mass rallies in Bangkok, and on Apr. 7 a group of Red Shirt demonstrators stormed the parliament building, leading the government to impose emergency rule in the capital.

After the Red Shirts began to build a fortified compound spreading outward from Rajaprasong, an intersection in the heart of Bangkok's business district, Prime Min. Abhisit Vejjajiva on May 3 made a nationally televised address in which he proposed early elections and other steps toward national reconciliation, but Red Shirt hard-liners balked at the deal. On May 13, Maj. Gen. Khattiya Sawasdipol, a renegade officer popularly known as Seh Daeng ("Commander Red"), was fatally shot while giving an interview to a Western reporter. The government declared a state of emergency in 15 provinces on May 13, and the following day launched a 6-day assault that resulted in the takeover of Rajaprasong. Thailand's parliament June 2 rejected an opposition-sponsored vote of no-confidence against Prime Min. Abhisit. Legislators July 6 passed a 3-month extension of emergency rule, which by then included Bangkok and 18 of the nation's 76 provinces.

U.S. Deaths in Afghanistan Pass 1,000 Mark; Other War News—The cumulative U.S. death toll in Afghanistan passed 1,000 in May. Coalition fatalities in Operation Enduring Freedom numbered 51 during the month, of whom 34 were U.S. service members. In neighboring Pakistan, Taliban insurgents staged coordinated attacks May 28 at two mosques in Lahore, killing 93 members of the minority Ahmadi sect and injuring more than 100 others. A statement posted on the Internet by al-Qaeda May 31 acknowledged the death of Mustafa Abu al-Yazid, a senior member of the international terror network. Pakistani intelligence officials said Yazid (also known as Saeed al-Masri) had been killed more than a week earlier by a U.S. missile strike in the North Waziristan region.

U.S. military activities in Iraq continued to wind down, with only 6 service members killed. On May 27, Vice-Pres. Joe Biden said that scheduled withdrawals would cut the U.S. troop presence in Iraq to 50,000 by summer, when the number of U.S. troops in Afghanistan would approach 100,000.

Israeli Commandos Attack Gaza Aid Flotilla—Enforcing a blockade imposed by Israel after Hamas militants took control of the Gaza Strip in 2007, Israeli commandos on May 31 intercepted a flotilla of 6 vessels carrying about 10,000 tons of humanitarian aid and some 700 pro-Palestinian activists from more than 30 countries. Israeli forces boarded 5 of the vessels in international waters without bloodshed, but on one boat—the *Mavi Marmara*, a former passenger ferry owned by the Turkish-based Foundation for Human Rights and Freedoms and Humanitarian Relief (IHH)—the commandos met resistance, and the Israelis killed 9 activists, including 8 Turks and 1 Turkish-American. The vessels and their passengers were taken to the Israeli port of Ashdod; all the detained passengers were deported by June 3, and the UN agreed in mid-June to deliver the confiscated cargo to Gaza. International reaction to the raid was negative, especially in Turkey, a longtime Israeli ally whose Islamic government had supported the aid flotilla. Israel intercepted another aid vessel, the *Rachel Corrie*, on June 5, but eased some restrictions on the flow of goods to Gaza 2 weeks later.

General

Super Saver Wins Kentucky Derby; Lookin at Lucky Takes Preakness Stakes—On a sloppy track May 1 at Churchill Downs in Louisville, KY, jockey Calvin Borel won his 3rd Kentucky Derby in 4 years, riding Super Saver to a 2 1/2-length victory. Lookin at Lucky, the Derby favorite who finished a disappointing 6th in that race, came back May 15 to capture the Preakness Stakes at Pimlico in Baltimore, MD. The Preakness win was the first Triple Crown victory for the 25-year-old Mexican-born jockey Martin Garcia.

Ochoa Retires from Women's Pro Golf Tour—After 158 consecutive weeks as the world's top-ranked female pro golfer, Lorena Ochoa retired from the Ladies Professional Golf Association (LPGA) tour May 2, finishing 6th at the Tres Marias Championship at Tres Marias Golf Club in Morelia, Mexico. The Mexican-born Ochoa, a regular on the tour since 2003, had amassed 27 LPGA tournament victories and career winnings of nearly $15 mil. Ochoa, 28, had announced her planned retirement Apr. 23.

Braden, Halladay Hurl Perfect Games—Oakland Athletics left-hander Dallas Braden pitched the 19th perfect game in major-league baseball history May 9, leading the A's to a 4-0 victory over the visiting Tampa Bay Rays. The 20th perfect game came on May 29, as Philadelphia Phillies ace Roy Halladay blanked the Florida Marlins 1-0 at Sun Life Stadium in Miami Gardens, FL. Only 4 days later, in Detroit, MI, the Tigers' Armando Galarraga retired the first 26 Cleveland Indians he faced, but had to settle for a 3-0 complete-game shutout when a blown call by first-base umpire Jim Joyce allowed the 27th batter, Jason Donald, to reach base safely. Joyce graciously apologized to Galarraga, saying "I just cost that kid a perfect game."

Artworks Stolen from Paris Museum—Paintings by Picasso, Matisse, Braque, Léger, and Modigliani were reported missing on the morning of May 20 from the permanent collection of the Museum of Modern Art in Paris. The stolen works were valued at about $124 mil by museum authorities. Surveillance cameras had spotted a black-clad, hooded intruder breaking into the museum overnight, but no alarm had sounded, and night guards said they had no inkling of the theft until they noticed a broken window that morning. A "technical malfunction" in the museum's alarm system had been reported 7 weeks earlier but had not been properly repaired.

First "Synthetic Cell" Created—A team of researchers led by genomics pioneer and entrepreneur J. Craig Venter announced May 20 that it had created a "synthetic cell" capable of replicating itself. Scientists began by producing a computerized map of genetic instructions for the simple bacterium *Mycoplasma mycoides*. They then reprogrammed the genetic sequence (in part by inserting distinctive "watermark" patterns that included the researchers' names), partitioned the code into some 1,100 sections, turned each piece of code into a chemically synthesized DNA fragment, assembled the chemical fragments into a complete genome, and then transplanted the synthesized genome into specially prepared recipient cells. Venter's firm Synthetic Genomics has signed a $600 mil contract with Exxon Mobil to make biofuels from algae. Researchers also hope to develop new sources of edible oils, flu vaccines, chemicals, plastics, and other commercial products.

DeWyze Tops "American Idol"—Lee DeWyze, a former paint store employee turned pop singer, outpolled Crystal Bowersox May 26 to win the 9th season of TV's *American Idol*. The season marked the final year as talent judge for Simon Cowell, the British music industry executive whose caustic comments and prickly personality had been an ingredient in the show's success since its 2002 debut. In late July, TV talk-show host Ellen DeGeneres revealed on her website that, after only one season, she too had decided to leave the show.

Franchitti Captures Indianapolis 500—Dario Franchitti won his second career Indianapolis 500 auto race May 30 at Indianapolis Motor Speedway. The Scottish driver (also an Indy 500 winner in 2007) led for 155 of the first 199 laps; he then held on for the final lap, as a crash between two other cars produced a caution flag that enabled him to ease across the finish line with only 1.6 gal of fuel left. Franchitti's victory allowed Chip Ganassi Racing to become the first car owner ever to win the Indy 500 and Daytona 500 in the same year. On Feb. 14, Jamie McMurray had been behind the wheel of a Ganassi-owned Chevrolet when he won NASCAR's premier stock-car race at Daytona Beach, FL.

June 2010

National

Tea Party Candidates Gain in Republican Primaries—Sharron Angle and Nikki Haley, favorites of the conservative Tea Party protest movement, defeated their establishment rivals in Republican primaries. In Nevada on June 8, Angle outpolled better-financed opponents to win the right to face Senate Majority Leader Harry Reid (D) in the Nov. 2 general election. In South Carolina, Haley, the daughter of Sikh immigrants, benefited from endorsements by former South Carolina first lady Jenny Sanford (R) and former Alaska Gov. Sarah Palin (R), as she overcame allegations of sexual impropriety to lead the first round of primary voting June 8 and dominate a runoff election two weeks later. Establishment candidates fared better in the GOP primary June 8 in California, where former Hewlett-Packard chief executive Carly Fiorina won the party's designation to face 3-term incumbent Sen. Barbara Boxer (D), and former eBay CEO Meg Whitman won the Republican nomination in the governor's race against Jerry Brown, a 2-term former governor who had served since 2007 as California's attorney general.

Supreme Court Affirms Gun Rights; Other Major Actions—In the final public session of its 2009-10 term, the U.S. Supreme Court June 28 held that the constitutional right to keep and bear arms is a fundamental liberty that may be not be abrogated by state or local law. Extending the Court's ruling in *District of Columbia v. Heller* (2008), which applied only to federal laws and federal jurisdictions, a 5-4 majority in *McDonald v. Chicago* ordered lower courts to determine whether local ordinances banning the possession of handguns in Chicago and Oak Park, IL, violated the Constitution's 2nd Amendment. Wayne LaPierre, executive vice president of the National Rifle Association, hailed the decision as "a great moment in American history." But Associate Justice John Paul Stevens warned that the decision could

mire the federal courts in "an avalanche of litigation," as gun-rights advocates sought to overturn local gun-control laws throughout the U.S. That same day, the U.S. Senate began confirmation hearings on Pres. Barack Obama's nomination of Elena Kagan to replace the retiring Stevens.

Also on June 28, the Court unanimously upheld the constitutionality of the Sarbanes-Oxley Act (2002), which tightened auditing standards for publicly traded companies, although a 5-4 majority found fault with restrictions Congress had imposed on the executive branch's authority to remove members of an accounting oversight board created by the law. In another 5-4 ruling on June 28, the Court held that a campus religious group that receives financial support from a public university may not discriminate against homosexuals or others who do not fully comply with its "statement of faith."

Other important rulings had been announced earlier in the month. On June 1, a 5-4 majority in *Berghuis v. Thompkins* eased restrictions on police that had been imposed under the landmark *Miranda* case (1966), holding that police interrogations may lawfully proceed when suspects do not clearly and unambiguously claim their "Miranda rights" to remain silent and consult a lawyer. On June 17 the Court ruled 9-0 in *City of Ontario (CA) v. Quon* that supervisors had the right to examine text messages sent by public employees while on the job and using their employer's paging system. In a test of the nation's antiterrorism statutes, a 6-3 majority on June 21 upheld the constitutionality of a law making it a crime to provide "material support" to a foreign terrorist organization, even when such support was directed at a purpose (such as conflict resolution) that might otherwise be considered benign. The decision, which displeased civil liberties advocates, represented a victory for the Obama administration, whose case before the Court had been argued by Kagan as U.S. solicitor general.

Sen. Byrd Dies—Sen. Robert Byrd (D, WV), 92, the longest-serving senator in U.S. history, died June 28 at Inova Fairfax Hospital in Falls Church, VA. Byrd was elected to the U.S. House of Representatives in 1952, despite revelations that he had been an active member of the Ku Klux Klan a decade earlier; in 1958, after 6 years in the House, he won the first of 9 consecutive Senate terms, setting records both for Senate tenure (more than 51 years) and for combined House and Senate service. A formidable legislative tactician, an expert on Senate lore, and a fierce defender of congressional prerogatives, he served as majority leader (1977-81, 1987-89) and minority leader (1981-87). As head of the Appropriations Committee (1989-2009), he used his position to pump billions of dollars in federal contracts to his home state, earning him the nickname the "prince of pork." A conservative for much of his congressional career, he became a hero to liberals in the early 2000s when he forcefully opposed the war in Iraq. On July 16, West Virginia Gov. Joe Manchin III (D) appointed his former general counsel Carte Goodwin (D) to fill Byrd's Senate seat; 4 days later, Manchin said he would run for the seat in the special election scheduled for Nov. 2.

Weak Employment Fuels Doubts About Recovery—Reversing a 3-month upswing, the Conference Board reported June 29 that its Consumer Confidence Index, based on a survey of 5,000 U.S. households, had plunged from 62.7 in May to 52.9 in June. Labor Dept. data released June 4 showed that U.S. payrolls had increased by 431,000 in May, but that total was less than many economists had predicted. Employment figures for June, issued on July 2, showed a net loss of 125,000 jobs as weak hiring in the private sector failed to offset terminations of temporary government jobs related to the 2010 Census; the overall unemployment rate in June was 9.5%.

Weighing heavily on Wall Street were international and domestic uncertainties, including European governments' mounting debt problems and the continuing impact of the *Deepwater Horizon* disaster, which since Apr. had gushed millions of gallons of oil into the Gulf of Mexico. On June 16, after a meeting at the White House, BP executives agreed to set aside $20 bil to compensate victims of the oil spill, with the cost being offset by a suspension of dividends to BP shareholders. By June 25, shares of BP stock fell to a 14-year low, with the loss in share value exceeding $100 bil. On July 5, BP announced that the firm had already paid more than $3 bil to cover cleanup costs and other claims, in addition to the $20 bil compensation fund. The Dow Jones Industrial Average closed June 30 at 9,774.02, a drop of 10% during the 2nd quarter of 2010. The S&P 500 ended the quarter at 1,030.71, down 11.9%, and the Nasdaq Composite Index finished at 2,109.24, for a quarterly decline of 12%.

International

Kan Replaces Hatoyama as Prime Minister of Japan—After polls showed his public support had fallen below 20%, Yukio Hatoyama announced his resignation June 2, becoming the 4th Japanese prime minister in under 4 years to step down after serving a year or less in office. Hatoyama, who had swept into power when the Democratic Party of Japan (DPJ) won parliamentary elections in Aug. 2009, failed to fulfill campaign pledges to reform the nation's political system, revitalize the economy, and remove U.S. Marine Corps Air Station Futenma from Okinawa; instead, while visiting the island May 23 he said he had reluctantly accepted a U.S. plan to relocate the airbase within the Okinawa region, a decision that infuriated local leaders. On June 4 former Finance Min. Naoto Kan was elected to succeed Hatoyama as DPJ leader and head of government; he took office 4 days later. The DPJ fared poorly in midterm elections July 11 for the upper house of Japan's parliament, winning only 44 of the 121 contested seats. It retained a commanding majority in the lower house, which determines Japan's party in power.

Drug Violence Intensifies in Mexico—Gun battles and massacres claimed hundreds of lives in Mexico June 10-15, as drug-related violence continued to escalate. The mass killings included the slaughter June 10 of 19 people by some two dozen gunmen at a drug and alcohol rehabilitation center in the city of Chihuahua; the ambush and murder June 14 of at least 12 federal police officers in the western state of Michoacán; and a gang fight June 14 in a Mazatlán jail that left at least 28 inmates dead. In an article published June 14, Mexican Pres. Felipe Calderón blamed Mexico's drug crime problems on U.S. demand for drugs: "It is as if our neighbor were the biggest drug addict in the world." From Dec. 2006 (when Calderón launched a military crackdown on Mexico's powerful drug cartels) to Aug. 2010, more than 28,000 people died in drug-related violence.

Concerned about the spread of drug crime from Mexico into the U.S., the Obama administration said May 25 that it would deploy 1,200 National Guard troops and request an additional $500 mil to beef up border security. U.S. government officials revealed June 10 that over a 22-month period U.S. law enforcement agents in 19 states had arrested more than 2,200 people suspected of having ties to Mexican drug cartels.

Santos Wins Colombian Presidency—Former Defense Min. Juan Manuel Santos, nominee of the ruling Social Party of National Unity (also known as the U Party), defeated Green Party candidate Antanas Mockus, the former mayor of Bogotá, 69% to 28% in a presidential runoff election June 20. The conservative Santos, a close ally of incumbent Pres. Álvaro Uribe Vélez and a supporter of Uribe's crackdown on Marxist rebels, had led Mockus 47% to 22% in the first round of presidential balloting May 30. Santos took office Aug. 7, pledging to create jobs, boost foreign investment, and repair relations with leftist governments in neighboring Venezuela and Ecuador.

Alleged Drug Kingpin Arrested in Jamaica—Accused by the U.S. of drug and firearms trafficking, Christopher Coke, the alleged leader of Jamaica's Shower Posse gang, surrendered peacefully to Jamaican authorities in Kingston June 22. Coke was closely allied with the ruling Jamaica Labour Party, and U.S. demands for his extradition had initially been rebuffed by Prime Min. Bruce Golding, whose Kingston constituency included the Shower Posse's home base in Tivoli Gardens. Pressured by the U.S. and by his parliamentary critics, Golding reversed himself in mid-May and called for Coke's arrest. Government security forces stormed Tivoli Gardens later that month, triggering violent clashes with gang members that left 76 people dead. After eluding police for five weeks, Coke—also known as Dudus—agreed to give himself up, waived an extradition trial, was flown to the U.S., and on June 25 entered a plea of not guilty in federal court in New York City.

McChrystal Forced Out as U.S. Commander in Afghanistan—Pres. Obama June 23 named Gen. David Petraeus as commander of U.S. and allied troops in Afghanistan, replacing Gen. Stanley McChrystal, who was forced to resign shortly after the publication by *Rolling Stone* magazine of disparaging comments about the Obama administration by McChrystal and his staff. The article, written by Michael Hastings, quoted an unnamed aide to McChrystal describing an early meeting on war strategy between the president and the general as "a 10-minute photo op." "Obama clearly didn't know anything about him, who he was … He didn't seem very engaged. The Boss was pretty disappointed." Hastings also quoted McChrystal's aides as calling National Security Advisor James L. Jones a "clown" and jokingly pronouncing Vice Pres. Biden's name as "Bite Me."

Gen. Petraeus—the architect of the 2007 surge strategy in Iraq—won unanimous Senate confirmation for the Afghan mission June 30 and formally took command in Kabul July 4. McChrystal retired from the military July 23. U.S. Marine Corps Gen. James Mattis, Obama's choice to replace Petraeus as head of the U.S. Central Command (which oversees all U.S. military operations in the Middle East and Central Asia), was unanimously approved by the Senate Aug. 6.

In battlefield developments, 60 U.S. troops were killed in Afghanistan in June; fatalities for the U.S. and its coalition partners totaled a record high 103, double the number in May. Eight American service members were killed in Iraq in June, as U.S. troop strength there dropped from 92,000 in May to 85,000 in June and 65,000 in July.

Canada Hosts G-8, G-20 Summits—Leaders of the world's major economies gathered June 25-27 in Ontario, Canada, for back-to-back conferences of the Group of 8 (G-8) and Group of 20 (G-20). Meeting in the town of Huntsville, about 135 mi north of Toronto, conferees of the G-8 (comprising Canada, France, Germany, Italy, Japan, Russia, UK, and the U.S.) agreed to spend $5 bil over a 5-year period to improve maternal and child health in poor countries. The conference venue shifted to Toronto June 26 for the summit of the G-20 (which includes the G-8 plus other major economic powers such as Brazil, China, and India). The concluding agreement—a nonbinding pledge by G-20 member countries to halve their government budget deficits by 2013—represented an effort to bridge the gap between those leaders, chiefly in Europe and Canada, who saw an immediate need to slash government debt, and others, led by Pres. Obama, who believed that drastic budget cutting would threaten the world's recovery from recession. Hundreds of protesters were arrested at the G-8 and G-20 meetings, which had aroused controversy within Canada because of security costs estimated at $900 mil, or nearly 10 times what Pittsburgh, PA, spent on the 2009 G-20 summit.

General

Drosselmeyer Takes Belmont Stakes—The unheralded Drosselmeyer, a 13-1 long shot, captured the Belmont Stakes June 5 at Belmont Park in Elmont, NY. Winless in 12 previous Belmont Stakes races, jockey Mike Smith rode the 3-year-old chestnut colt to a 3/4-length victory over Fly Down in the third jewel of Thoroughbred racing's Triple Crown.

Nadal, Schiavone Capture French Open Singles Titles—Returning to form after an injury-plagued 2009, Spanish clay-court master Rafael Nadal won his 5th French Open (Roland Garros) singles championship June 6, dominating Sweden's Robin Soderling in straight sets, 6-4, 6-2, 6-4. The previous day, 17th-seeded Francesca Schiavone outfought Samantha Stosur of Australia, 6-4, 7-6 (2). Schiavone, 29, became the first Italian woman ever to win a Grand Slam singles event.

Chicago Blackhawks Win Stanley Cup—Patrick Kane's overtime goal June 9 earned the Chicago Blackhawks their first National Hockey League championship since 1961. Playing on the Flyers' home ice, Chicago beat Philadelphia, 4-3, in the 6th and deciding game of their best-of-7 Stanley Cup series. The Blackhawks' 22-year-old Jonathan Toews, the youngest team captain in the NHL, won the Conn Smythe Trophy as playoff MVP.

Tony Awards Honor *Red*, *Memphis*, Hollywood Stars—The Broadway production of *Red*, a drama based on the life of artist Mark Rothko, won 6 Tony Awards June 13, including Best Play, while *Memphis* took home top honors as Best Musical. In a nod to Hollywood, several performers more renowned for their film work took home Broadway acting awards, including Denzel Washington and Viola Davis (for their leading roles in the revival of August Wilson's *Fences*), Scarlett Johansson (for her featured role in Arthur Miller's *A View from the Bridge*), and Catherine Zeta-Jones (best actress in a musical for *A Little Night Music*).

Lakers Repeat as NBA Champions—For the second consecutive year, playoff MVP Kobe Bryant led the Los Angeles Lakers to an NBA championship, the 16th in franchise history. Trailing the Boston Celtics in the 3rd quarter of the 7-game-series finale, played June 17 at the Staples Center in Los Angeles, the Lakers erased a 13-point deficit and held on in the closing minutes to beat Boston, 83-79. The championship was Phil Jackson's 11th as head coach and his 5th with the Lakers.

McDowell Is U.S. Open Golf Champion—Graeme McDowell shot a 3-over-par 74 in the 4th and final round to win the U.S. Open tournament June 20 at Pebble Beach Golf Links (CA). McDowell—the first golfer from Northern Ireland to win the championship and the first European to take the crown in 40 years—finished with an even-par 284, a stroke ahead of Gregory Havret of France. Dustin Johnson, a South Carolinian who led by 3 strokes after 54 holes, saw his hopes evaporate when he triple-bogeyed the 2nd hole and double-bogeyed the 3rd in the closing 18.

July 2010

National

BP Caps Runaway Oil Well in Gulf of Mexico—The London-based energy company BP announced July 15 that it had halted the flow of oil into the Gulf of Mexico from its runaway Macondo well. The catastrophic spill, which had begun Apr. 20 with a gas explosion and fire on the exploratory drilling platform *Deepwater Horizon*, had polluted the Gulf and coastal areas with up to 5 mil barrels of oil. Successful placement of a temporary cap on the well followed a series of failed containment strategies with colorful names such as "top kill" (pumping massive amounts of mud and cement into the well) and "junk shot" (attempting to clog the leak with pieces of debris). A more permanent seal known as "static kill" was completed Aug. 5 when BP used a relief well to pump cement into the Macondo well. On Sept. 19, Coast Guard Adm. Thad Allen declared that a "bottom kill" had left the well "effectively dead," and no longer a danger to the Gulf.

After its earlier suspension of deepwater drilling in the Gulf of Mexico was overturned by the courts, the Obama administration imposed a revised moratorium July 12. The moratorium, which found favor with environmentalists but was unpopular with industry and political leaders and Gulf Coast residents, was lifted three months later. On Aug. 23 the independent Gulf Coast Claims Facility, funded with $20 bil from BP and administered by Kenneth R. Feinberg, took over responsibility for settling damage claims filed by individuals and businesses harmed by the *Deepwater Horizon* disaster.

Obama Administration Apologizes for Ousting Sherrod—The U.S. Dept. of Agriculture wasted little time demanding the resignation July 19 of USDA employee Shirley Sherrod, only hours after a heavily edited video clip surfaced in which the Georgia-based rural development officer, an African-American, appeared to admit that in 1986 she had given short shrift to a white farmer. The statement was excerpted out of context from a speech Sherrod had given at a Mar. 27 banquet of the NAACP, which had recently condemned allegedly racist statements by Tea Party activists.

The controversy turned upside-down July 20 when publication of the full video revealed that despite her initial hesitation, Sherrod had decided to help the white farmer, Roger Spooner, who appeared on national television to thank her for saving his farm. With Sherrod exonerated, the NAACP (which had hastily criticized her, based on the initial incorrect reports), Agriculture Sec. Tom Vilsack, and Pres. Barack Obama all offered their apologies. On July 29 she said she planned to sue Andrew Breitbart, the right-wing blogger who

first posted the edited video on his website. Sherrod met with Vilsack Aug. 24 but declined to return to the USDA.

Financial Reform Law Enacted; Other Economic Developments—Pres. Obama signed into law July 21 a measure aimed at strengthening federal regulation of financial markets, curbing mortgage and investment abuses, and preventing a recurrence of the crisis that had convulsed the nation's financial system in 2008. The legislation was officially known as the Dodd-Frank Wall Street Reform and Consumer Protection Act in honor of Democrats Sen. Chris Dodd (CT) and Rep. Barney Frank (MA), who had shepherded the measure through Congress. The law had cleared the House June 30, by a vote of 237-192, and the Senate July 15, by a 60-39 margin. Also on July 15, investment giant Goldman Sachs agreed to pay $550 mil to settle a civil fraud lawsuit brought by the Securities and Exchange Commission alleging the firm had duped investors into buying risky subprime mortgage-backed securities that Goldman's own traders were betting against.

The Dodd-Frank measure established the Consumer Financial Protection Bureau to shield borrowers against misleading marketing of mortgages, credit cards, and other loan products; empowered the government to take over large financial firms whose impending failure threatened the broader financial system; expanded government oversight of the complex securities known as derivatives; and imposed the so-called Volcker rule (named for Obama adviser Paul A. Volcker, a former chairman of the Federal Reserve) to limit speculative trading by banks.

On July 23 the White House forecast that annual federal budget deficits would top $1.4 tril in both 2010 and 2011. A week later, the Commerce Dept. reported that the U.S. gross domestic product grew at an annual rate of 2.4% during the 2nd quarter of 2010, down from 3.7% in the 1st quarter; revised figures issued Aug. 27 estimated 2nd-quarter GDP growth at an even more anemic 1.6%. The unemployment rate held steady at 9.5%, but private-sector job creation was weaker than expected. Reports of robust 2nd-quarter profits by blue-chip companies helped boost the Dow Jones Industrial Average to a July 30 close of 10,465.94, up 7.1% for the month. The S&P 500 (1,101.60) and Nasdaq Composite Index (2,254.70) each gained 6.9% in July.

International

French Court Finds Noriega Guilty of Money Laundering—Convicted July 7 of funneling about $3 mil of Colombian drug money into French bank accounts while he ruled Panama from 1983 to 1989, Manuel Antonio Noriega was sentenced by a Paris court to 7 years in prison. The decision culminated a long legal battle that had begun after the U.S. indicted its former ally in Feb. 1988. U.S. forces invaded Panama in Dec. 1989, and took the former dictator into custody in Jan. 1990. Declared a prisoner of war, Noriega was found guilty of drug trafficking and racketeering charges in Miami, FL, in 1992 and was sentenced to 40 years in prison (later reduced to 17 for good behavior). A French court convicted him in absentia in 1999, while Noriega was serving his Florida prison sentence, and when that sentence was about to expire, French authorities sought his extradition for retrial in France. Confined to a U.S. prison while the case proceeded, Noriega appealed all the way to the U.S. Supreme Court, which refused to intervene, and the former dictator was transferred to French custody Apr. 26.

Russia, U.S. Swap Spies—On July 9, in a scene reminiscent of the Cold War, 10 people recently arrested in the U.S. as Russian agents were allowed to return to Russia, in exchange for 4 Russian prisoners who had been convicted of having contact with Western intelligence agencies. The spy swap, which took place in Vienna, Austria, followed the exposure of a Russian espionage ring that had allegedly been operating in the U.S. for more than a decade. Working under deep cover as ordinary Americans, the Russian agents (many of whom had taken non-Russian-sounding names) had been instructed to gather information and recruit more spies. They had communicated using invisible ink, special computer software, coded data embedded in Internet photos, and other forms of spy craft, but U.S. investigators did not believe the agents had ever transmitted classified information to their handlers. One day before their expulsion from the U.S., the 10 had pleaded guilty in federal court to conspiring to serve as unlawful foreign agents. An 11th alleged agent, arrested in Cyprus June 29 as he sought to board a flight to Budapest, Hungary, disappeared a day later, after he was released on bail.

Vatican Toughens Church Laws Against Sexual Abuse—Seeking to quell the ongoing scandal over pedophile priests, Vatican officials announced July 15 that Pope Benedict XVI had approved revisions in the way the Catholic Church deals with sexual abuses by church officials. Under the revamped rules, the Congregation for the Doctrine of the Faith—the church office that oversees the handling of sex-abuse cases—was authorized to defrock abusive priests without a lengthy ecclesiastical trial. Non-clergy were allowed to serve as judges and lawyers on church tribunals dealing with abuse cases; the statute of limitations was doubled from 10 years to 20; possession and distribution of child pornography were defined as "grave crimes" under church law; and penalties for abusive treatment of developmentally disabled adults were made equal to those for abuse of minors. In a move that drew protests from women's rights advocates, the Vatican also added to the list of grave crimes the attempted ordination of women.

The church had been battered since late 2009 by revelations of abusive behavior by Catholic clergy in Ireland, Belgium, Brazil, Germany, Austria, the Netherlands, and other countries. While serving as the archbishop of Munich and Freising (1977-81), then-Cardinal Joseph Ratzinger, approved the transfer of a German priest who had sexually abused boys. Ratzinger was named prefect of the Congregation for the Doctrine of the Faith in 1981, which did not take over responsibility for investigating sexual abuse cases until 2001.

Secret Afghan War Documents Published by WikiLeaks—More than 75,000 previously unreleased Afghan war documents, many of them classified, appeared July 25 on a website run by WikiLeaks, an international organization that promises whistleblowers the opportunity to "post documents anonymously and untraceably." The organization had shared the documents with the *New York Times*, the German magazine *Der Spiegel*, and London's *Guardian* newspaper, all of which published articles on the WikiLeaks disclosures that same day. The leaked documents, covering the 2004-09 period, contained evidence of aid provided by Pakistan's ISI security agency to the Taliban and other Afghan insurgent groups. Other documents cast light on Afghan government corruption, reliability problems with the Predator and Reaper drone aircraft used by coalition forces, and violence against Afghan civilians by coalition troops.

Although WikiLeaks refused to name the source of the documents, U.S. probers reportedly focused on Pfc. Bradley Manning, an Army intelligence analyst who had been arrested May 26 in connection with earlier WikiLeaks disclosures. An investigation of WikiLeaks founder Julian Assange took an unexpected turn when Swedish prosecutors filed a rape charge against him Aug. 20, then rescinded it a day later, only to reopen the rape case Sept. 1.

Developments on the ground in Afghanistan were not encouraging. Operation Enduring Freedom claimed the lives of 65 U.S. service members in July, the highest single monthly toll since the war began. The U.S. suffered 4 military casualties in Iraq during the same month.

Khmer Rouge War Criminal Convicted in Cambodia—The UN-sponsored war crimes tribunal in Cambodia reached its 1st major verdict July 26, convicting a former prison warden who oversaw the torture and killing in 1975-79 of more than 14,000 inmates at the Tuol Sleng detention camp in Phnom Penh. The warden, Kaing Guek Eav, commonly known as Duch, received a prison sentence of 35 years, minus 16 years for time served. Four top officials of the Khmer Rouge regime that ruled Cambodia during the late 1970s were indicted Sept. 16, including former Pres. Khieu Samphan and former Foreign Min. and Deputy Prime Min. Ieng Sary. An estimated 1.7 mil people died under Khmer Rouge rule.

Floods in Pakistan Leave 8 Mil Homeless—Torrential monsoon rains beginning in late July and continuing into Aug. struck Pakistan with devastating force. An initial UN assessment Aug. 1 in the worst-hit region, Khyber Pakhtunkhwa

(formerly known as the North-West Frontier Province), estimated that nearly 800 people had died and more than 1 mil were in need of emergency assistance; by mid-Sept. the confirmed death toll nationwide had risen to 1,752, with 1,086 of the victims in Khyber Pakhtunkhwa. At peak, floods covered nearly a fifth of the country, leaving 8 mil people homeless and significantly affecting at least 12.5 mil more. Over 1.8 mil houses were destroyed, and damage to transportation infrastructure and agricultural resources was extensive.

General

Williams, Nadal Take Wimbledon Titles; Isner Wins Marathon Match—Serena Williams crushed Vera Zvonareva of Russia, 6-3, 6-2, in the Wimbledon women's singles championship July 3 at the All England Lawn Tennis Club. The victory (her 2nd consecutive Wimbledon singles crown and her 4th since 2002) earned Williams her 13th Grand Slam singles title. The following day, Rafael Nadal of Spain overwhelmed Czech challenger Tomas Berdych in straight sets, 6-3, 7-5, 6-4, to win his 2nd Wimbledon and 8th Grand Slam championship.

The tournament's most extraordinary match was a 3-day thriller, concluded June 24 after two postponements because of darkness, in which John Isner outlasted Nicolas Mahut of France, 6-4, 3-6, 6-7(9), 7-6(3), 70-68. The marathon 1st-round contest shattered multiple pro tennis records, including total time (11 hours, 5 minutes) and number of games (183); the 5th set alone took more than 8 hours.

James Signs with Miami Heat—With unprecedented fanfare, LeBron James, the National Basketball Association's MVP in 2009 and 2010, announced in a nationally televised broadcast July 8 that he would end his 7-season stint with the Cleveland Cavaliers to join the Miami Heat. "King James," a free agent who had been courted by at least 5 other NBA teams, accepted a 6-year contract worth $110 mil. In other 6-year deals, the Heat also signed free agent power forward Chris Bosh for $110 mil and retained guard Dwyane Wade for $107 mil. All three players reportedly took less than they might have earned on other teams in order to play together for Miami.

Spain Triumphs in World Cup Soccer—Spain's national soccer team won its 1st FIFA World Cup title July 11 in Johannesburg, South Africa, defeating the Netherlands 1-0 on an overtime goal by Andrés Iniesta. The gold-medal match climaxed a month-long championship round that was the first played on African soil. Notable throughout the tournament were a series of embarrassing referee errors and the deafening drone of vuvuzelas, the plastic trumpets blown nonstop by South African soccer fans.

Switzerland Frees Filmmaker Roman Polanski—Citing uncertainties about his trial 33 years earlier on sex-abuse charges in California, Swiss authorities July 12 rejected a U.S. request to extradite Academy Award-winning film director Roman Polanski. The internationally famous filmmaker had been held in Switzerland since Sept. 2009 on charges stemming from the 1977 rape of a 13-year-old girl. Polanski's most recent film, the political thriller *The Ghost Writer*, had won the Silver Bear for Best Director at the Berlin International Film Festival Feb. 20.

Oosthuizen Captures British Open—Louis Oosthuizen of South Africa shot a 7-under par 65 in the 1st round, then held on for the next three days to win the British Open golf championship July 18 in St. Andrews, Scotland. Oosthuizen finished the 72-hole tournament with a 16-under-par total of 272, beating England's Lee Westwood by 7 strokes.

Contador Finishes 1st at Tour de France, as Doping Controversy Continues—On July 25 in Paris, for the 3rd time in 4 years, Spanish cyclist Alberto Contador was declared the winner of the Tour de France. But on Sept. 29 and Oct. 4, tests of Contador's urine during the race came back positive for banned substances. The 2010 Tour took place as U.S. investigators intensified their probe into whether 7-time Tour de France winner Lance Armstrong, Contador's rival and former teammate, had relied on performance-enhancing drugs and other banned techniques to gain unfair advantage. Competing in what he said was his final Tour, Armstrong (who has repeatedly denied any wrongdoing) finished in 23rd place, more than 39 minutes behind Contador.

August 2010

National

Same-Sex Marriage Ban Overturned in California—U.S. District Chief Judge Vaughn R. Walker ruled Aug. 4 in San Francisco that a California ballot measure barring same-sex marriage violated the federal constitution. The initiative, known as Proposition 8, had been approved by state voters in Nov. 2008 and upheld by the California Supreme Court in May 2009. Judge Walker disappointed gay-rights advocates by immediately staying his own ruling, pending appeal. A federal appellate panel extended the stay Aug. 16, with a full hearing scheduled to begin in early Dec.

Kagan Joins Supreme Court—In Aug. 7 ceremonies, U.S. Chief Justice John Roberts administered the constitutional and judicial oaths of office to Elena Kagan, swearing her in as associate justice of the Supreme Court. Along with Associate Justices Ruth Bader Ginsburg and Sonia Sotomayor, Kagan's membership marked the first time three women have served simultaneously as Supreme Court justices. Kagan received the approval of the Senate Judiciary Committee July 20 by a 13-6 margin, with Sen. Lindsey Graham (SC) the lone Republican voting in her favor. On Aug. 5 the Senate confirmed her, 63-37, with support from 56 Democrats, 5 Republicans, and 2 independents. Because she had served 14 months as the Obama administration's solicitor general, entrusted with supervising federal government litigation before the Supreme Court, she recused herself from 25 of the first 51 cases the Court accepted for its 2010-11 term.

550 Mil Eggs Recalled in Salmonella Outbreak—After public health officials traced cases of salmonella to one of the nation's leading egg producers, Wright County Egg of Galt, IA, the firm announced recalls Aug. 13-18 of 380 mil eggs that had been marketed since May under multiple brand names. On Aug. 19 another Iowa egg producer, Hillandale Farms, initiated the recall of 170 mil eggs, bringing the total to 550 mil. Wright County Egg was controlled by the DeCoster family, which also had close ties to the Hillandale operation. Press reports noted that DeCoster-owned egg farms had a long history of labor, immigration, environmental, and health problems, including a fine of $34,675 in June for animal cruelty at a Maine production facility.

Blagojevich Convicted of Lying to Federal Agents—A federal jury in Chicago Aug. 17 found former Illinois Gov. Rod Blagojevich (D) guilty on one felony count of making false statements to the FBI. The jury, which deliberated for 14 days, deadlocked on the remaining 23 counts, including the charge that the governor had tried to sell the U.S. Senate seat vacated by Barack Obama after his election as president in Nov. 2008. U.S. Attorney Patrick J. Fitzgerald pledged to retry Blagojevich, who had been impeached and removed from office in Jan. 2009.

Fed Pledges Steps to Spur Faltering Recovery—Addressing a conference of world economic policymakers Aug. 27 at Jackson Hole, WY, Federal Reserve Chairman Ben Bernanke acknowledged that "the pace of recovery in output and employment has slowed somewhat in recent months." He outlined several options the Fed might take to promote economic expansion, of which the most likely was the purchase of long-term U.S. government debt, a move that would exert downward pressure on long-term interest rates and stimulate borrowing. In an assessment of the economy published Aug. 10, the Federal Open Market Committee, a Fed policymaking body, had cited high unemployment, sluggish income growth, a weak housing market, and tight credit as factors holding back the recovery. The Federal Deposit Insurance Corp. reported Aug. 31 that during the Apr.-June period its "problem list" of banks at risk of failure had grown from 775 to 829, the highest number since 1993. By Oct. 15 the FDIC had taken over 132 failed banks, compared with 140 for the whole of 2009.

The Dow Jones Industrial Average had its worst Aug. performance in 9 years, closing Aug. 31 at 10,014.72, for a one-month drop of 4.3%. The S&P 500 sagged 4.7% to 1,049.33, and the Nasdaq Composite Index plunged 6.2% to 2,114.03.

International

Chile Mine Cave-In Leads to Record-Setting Rescue—A cave-in Aug. 5 at the San José gold and copper mine near Copiapó, in northern Chile, left 33 men trapped nearly 2,300 ft underground. Finding refuge in a small emergency shelter that had water and ventilation, the men shared meager food rations for 17 days until they made contact with rescue workers who had drilled a narrow borehole through the rock. Emergency crews then used the bore to send food and other supplies to the miners and to relay video images and messages back to the surface—a remote location in the Atacama Desert where Pres. Sebastián Piñera had staked the prestige of his government on the success of the rescue effort.

To extricate the trapped men, engineers drilled a 28-in. diameter shaft to the miners' chamber and lowered an emergency escape capsule, dubbed *Fénix 2*, into the hole. More than 1 bil people watched on television worldwide Oct. 12-13 as the capsule, painted in Chile's national colors of red, white, and blue, worked round-the-clock to shuttle all 33 workers to safety.

Gillard Retains Power in Australia—Federal elections in Australia Aug. 21 produced the first "hung" parliament in 70 years, with neither the governing Labor Party nor the center-right Liberal-National alliance winning a majority. With support from the lone Greens representative and two independents, Labor leader Julia Gillard cobbled together a minority government Sept. 7, leaving the Liberals' Tony Abbott as leader of the opposition. Gillard, who had served as deputy to Prime Min. Kevin Rudd, supplanted him as Labor leader and became Australia's first female prime minister June 24, after a succession of policy blunders eroded Rudd's standing with his party and the public at large. Rudd became foreign minister in the new cabinet that was sworn in Sept. 14 along with Gillard.

Russia Aids Startup of Iranian Nuclear Plant—With Russian assistance, Iran began loading fuel rods Aug. 21 into the Bushehr nuclear reactor. Construction of the 1,000-megawatt facility on Iran's southwest coast was begun by a German firm in 1975, before the Islamic revolution; the long-delayed project was completed by Russia under a contract signed in 1995. The UN, which had strengthened sanctions against Iran in June, and the U.S., which had toughened its own sanctions against the Iranian regime in July, reacted mildly to the startup of the Bushehr plant, which was expected to supply electricity for civilian purposes. At the same time, Iran pushed forward with its nuclear enrichment program, which could produce uranium suitable for use in nuclear weapons. Iranian officials said July 11 that the country planned a sixfold increase in its stockpile of 20% enriched uranium within 14 months. Iran's nuclear effort was disrupted in Sept. when the Bushehr plant and other industrial control systems were infected with the Stuxnet computer worm, the origin of which is still unknown.

Somali Insurgents Expand Terror Campaign—Four Somali legislators and at least 29 other people were killed Aug. 24 when members of Al Shabab, a radical Islamist group allied with al-Qaeda, attacked the Hotel Muna in the Somali capital city of Mogadishu. The attack was part of an offensive by Al Shabab jihadists against a Somali transitional government that has been supported by the UN, the U.S., and an African Union force (AMISON) comprising troops from Uganda, Burundi, and other countries. On July 11, Al Shabab had orchestrated a series of suicide bombings in Kampala, Uganda, that killed 76 people as they watched the World Cup soccer championship on outdoor video screens.

Al Shabab has also turned to Islamists in the U.S., many of them from Somali communities, as a source of fighters and funding. On Aug. 4, FBI agents in Chicago arrested the U.S.-born Shaker Masri and accused him of plotting to carry out a suicide bombing in Somalia. The following day, indictments unsealed in Minnesota, Alabama, and California charged 14 people with aiding Al Shabab.

U.S. Declares End to Iraq Combat Mission—In an address from the White House Aug. 31, Pres. Obama declared that the U.S. combat mission in Iraq had ended. More than 4,400 U.S. service members had lost their lives since Operation Iraqi Freedom began with the U.S.-led invasion of Iraq in Mar. 2003, and nearly 32,000 U.S. troops had been wounded in action. The Congressional Research Service estimated that by the end of the 2011 fiscal year the U.S. will have spent more than $800 bil on the conflict, in which 100,000 Iraqis have also been killed.

Vice Pres. Joe Biden arrived in Baghdad Aug. 30 to oversee the transition to Operation New Dawn, which began Sept. 1 with some 50,000 remaining U.S. troops primarily tasked with training Iraqi forces. The security challenges still facing Iraq had been demonstrated the previous week, when insurgents associated with al-Qaeda in Iraq claimed responsibility for a series of suicide bombings and other attacks that killed at least 56 people in 13 cities and towns. In talks with Iraqi leaders, Biden warned of the "frustration" caused by their inability to form a new government in the nearly 6 months that had passed since parliamentary elections.

General

Rodriguez Hits 600th Homer; Clemens Indicted in Steroid Case—New York Yankees 3rd baseman Alex Rodriguez hit his 600th regular-season home run Aug. 4, driving a 2-run shot over the centerfield fence at Yankee Stadium. The homer, which came in the 1st inning off Toronto Blue Jays pitcher Shaun Marcum, made the 35-year-old Rodriguez the youngest player to reach the 600 mark. Other members of baseball's "600 club" include Barry Bonds (762), Hank Aaron (755), Babe Ruth (714), Willie Mays (660), Ken Griffey Jr. (630), and Sammy Sosa (609).

In Feb. 2009, Rodriguez admitted using performance-enhancing drugs while he played for the Texas Rangers during 2001-03 but claimed he had stopped using them by the time he joined the Yankees in 2004. Another all-time baseball great, pitcher Roger Clemens, was indicted Aug. 19 on charges of lying to a congressional committee when he denied in testimony Feb. 2008 that he had used steroids or human growth hormone. Clemens entered a plea of not guilty Aug. 30. His trial was set to begin Apr. 2011, two weeks after former slugger Barry Bonds was expected to face trial on steroid-related charges of perjury and obstruction of justice.

Kaymer Takes PGA Golf Title—Martin Kaymer won the 92nd PGA Championship Aug. 15, defeating Bubba Watson in a 3-hole playoff at Whistling Straits in Kohler, WI. Kaymer and Watson tied at 11-under-par 277 at the end of regulation play, then tied again at the end of the first 2 holes of the playoff. Kaymer bogeyed the 3rd hole but Watson double-bogeyed, falling 1 stroke short. Leading as he started the 72nd and final hole of regulation play, Dustin Johnson had seen his chances vanish when a technical violation on a bunker shot cost him a 2-stroke penalty.

September 2010

National

Mosque, Koran Controversies Expose Divergent Views of Islam—An ABC News/*Washington Post* poll released Sept. 8 found that 49% of Americans held an unfavorable opinion of Islam. The results represented the most negative U.S. public view of Islam in the 9 years the pollsters had been asking the question. The survey followed weeks of controversy over a private developer's plan to build an Islamic center several blocks from the site of the World Trade Center that was destroyed by radical Islamist terrorists on Sept. 11, 2001. Many opponents of the Islamic center acknowledged that its construction was constitutionally protected but claimed it was disrespectful to the people who had died on Sept. 11.

Controversy also surrounded a plan by Terry Jones, the pastor of a small Pentecostal church in Gainesville, FL, to burn copies of the Koran, Islam's central religious text, on Sept. 11. The proposed Koran burning, publicized over the Internet, sparked protests in several Islamic countries and was denounced by Gen. David Petraeus, who warned Sept. 7 it could endanger troops in Afghanistan, and by Pres. Barack Obama, who said Sept. 9 that it was "completely contrary to our values as Americans." Following a direct appeal from Defense Sec. Robert Gates, Jones said on TV Sept. 11 that his church would not burn any Korans.

Judge Rules Against Military's "Don't Ask, Don't Tell" Policy—Federal Judge Virginia A. Phillips held Sept. 9 that the "Don't Ask, Don't Tell" (DADT) policy that prevented homosexuals from serving openly in the U.S. armed forces was unconstitutional. The California judge followed up her decision in *Log Cabin Republicans v. U.S.* with an Oct. 12

order barring the military from enforcing DADT. The Obama administration—which supported an end to DADT but favored a legislative approach—appealed the order, which was stayed by a federal appellate panel Oct. 20. During the intervening week, military recruiters had been instructed to accept openly gay recruits. After the stay was imposed, Defense Sec. Robert Gates issued a directive making it much more difficult to discharge openly gay service members. Republicans in the Senate blocked a congressional attempt to overturn DADT Sept. 21.

Tea Party Favorites Make Further Gains—Candidates backed by the Tea Party movement continued to make headway in Republican Party primaries. In GOP contests Sept. 14, Christine O'Donnell upset 9-term U.S. Rep. Mike Castle in the race for U.S. senator from Delaware, and self-financed candidate Carl Paladino defeated former U.S. Rep. Rick Lazio for the gubernatorial nomination in New York. The national and state Republican establishment had backed Castle as the party's best hope to capture the seat formerly held by Vice Pres. Joe Biden (D). On Sept. 17, incumbent Sen. Lisa Murkowski (R, AK), who had lost her primary election Aug. 24 to Joe Miller, rejected what she described as Miller's "extremist views" and declared that she would run as a write-in candidate in the general election.

Experts Say Recession Has Ended, But Economic Pain Remains—The Business Cycle Dating Committee of the National Bureau of Economic Research announced Sept. 20 that the recession that began Dec. 2007 had ended in June 2009. During that 18-month downturn—the longest recession since World War II—jobs on nonfarm payrolls shrank by more than 5%. Although some indicators continued to show that the economy was recovering, unemployment remained high at 9.6% for the month. To boost job creation, Pres. Obama proposed in a Labor Day speech Sept. 6 a $50 bil increase in federal spending on roads, rails, and runways. The Census Bureau reported Sept. 16 that the number of Americans living below the poverty line ($10,830 in pretax cash income for a single adult, $22,050 for a family of 4) had risen to 44 mil by the end of 2009. The share of residents living in poverty (14.3%) was the highest in 15 years.

With analysts forecasting that Democrats in Congress were likely to pay a steep electoral price for the economy's shaky performance, the Obama administration continued to reshape its economic team. On Sept. 10 the White House named Austan Goolsbee to replace the departing Christina Romer as head of the Council of Economic Advisers. Eleven days later the Obama administration revealed that another key economic aide, Lawrence Summers, would return to Harvard Univ. after the midterm elections Nov. 2. Obama had tapped Clinton-era budget director, Jack Lew, to succeed Peter Orszag as head of the Office of Management and Budget in July.

The mood was more euphoric on Wall Street, where stocks had their best Sept. since 1939. The Dow Jones Industrial Average closed Sept. 30 at 10,788.05, a gain of 7.7% for the month. The S&P finished at 1,141.20, for an increase of 8.8%, and the Nasdaq Composite Index soared 12% to 2,368.62. In international commodities trading, gold sold at over $1,300 an ounce for the first time Sept. 28.

Congress Adjourns After Passing Stopgap Funding Measure—With the 2010 fiscal year ending and midterm elections less than five weeks away, Congress adjourned in the early morning hours of Sept. 30. Just before members left Washington, DC, to campaign in their home districts, the Senate and House passed the Continuing Appropriations Act 2011, by votes of 69-30 and 228-194, respectively. The stopgap spending measure, which provided funds to keep the government running through Dec. 3, was quickly signed by Pres. Obama. Earlier, Congress had approved the Small Business Jobs and Credit Act of 2010, which established a $30 bil loan fund and provided $12 bil in tax breaks to aid small businesses. The Senate passed the measure Sept. 16, by a vote of 61-38; the House (which had initially passed the bill June 17) concurred with Senate changes Sept. 23, by a margin of 237-187; and Pres. Obama signed it into law Sept. 27.

At the time of adjournment, Congress had passed no regular appropriations measures for the 2011 fiscal year. Legislators had also deadlocked over whether Americans earning more than $250,000 should continue to receive the tax cuts passed in 2001 under Pres. George W. Bush, which were due to expire at the end of 2010.

International

Earthquake Rocks Christchurch, New Zealand—An earthquake measuring 7.0 on the open-ended Richter scale shook New Zealand's South Island Sept. 4. The quake was centered about 30 mi west of Christchurch, the South Island's largest urban area; about 100,000 houses in the city were damaged, with 500 requiring demolition. Some 100 people were treated for injuries, and property losses were estimated at $2.7 bil or more.

Spain Dismisses Truce Pledge by Basque Separatist Group ETA—Spanish authorities reacted coolly to a Sept. 5 announcement by the Basque separatist organization Euskadi Ta Askatasuna (ETA), that it had ceased armed attacks against the Spanish government. Violence by ETA, which the European Union classifies as a terrorist organization, has claimed more than 800 lives since 1968, and previous ceasefires had been broken. "I don't trust this one bit," said Alfredo Pérez Rubalcaba, Spain's interior minister, noting that ETA members had not pledged to lay down their arms. The Basque group had suffered multiple setbacks in 2010, including the arrest in northern France Feb. 28 of ETA guerrilla leader Ibon Gogeascoechea Arronategui.

French Government Faces Criticism Over Roma, Burqas, Pensions—By a margin of 246-1 (with most opposition legislators abstaining), the French Senate voted Sept. 14 to ban the burqa, niqab, and other face-hiding clothing worn by some Muslim women. The measure, which had passed the National Assembly in July, was strongly favored by Pres. Nicolas Sarkozy, who had called the burqa "a sign of enslavement and debasement." The legislation, which was scheduled to take effect within 6 months if approved by France's Constitutional Council, drew complaints from Islamic groups, who viewed it as an attempt to stigmatize the nation's 6 mil Muslims.

Sarkozy was already facing international criticism over his policy of shutting Roma (Gypsy) encampments and expelling thousands of Roma to Romania and Bulgaria. On Sept. 14, European Union Justice Commissioner Viviane Reding called the French expulsions "a disgrace." Meanwhile, union members, students, and others launched mass demonstrations to protest the Sarkozy government's plan to reform the pension system by raising the minimum retirement age from 60 to 62 and the age when workers qualify for a full pension from 65 to 67. The National Assembly approved the pension measure Sept. 15, by a vote of 329-233. The Senate debated the legislation in Oct. as strikers blocked fuel depots, disrupted road and rail traffic, and clashed with police.

Violence, Vote-Buying Mar Afghanistan Election—About 2,500 candidates competed for 249 parliamentary seats in national elections in Afghanistan Sept. 18. Taliban insurgents claimed responsibility for some 150 separate attacks, which were blamed for at least 15 deaths. Following reports of rampant vote-buying and other irregularities, Afghanistan's Independent Election Commission announced Oct. 20 that it had invalidated 1.3 mil of the 5.6 mil votes cast. Corruption also cast its shadow over the nation's financial system, when reports that the Kabul Bank had lost up to $300 mil led to a panic in early Sept. among depositors, including 300,000 government employees. The nation's central bank intervened to prevent the collapse of the private financial institution, in which Pres. Hamid Karzai's brother Mahmoud was a major shareholder. In military developments during the month, 57 coalition troops lost their lives, of whom 42 were from the U.S. Coalition casualties in Iraq numbered 7, all from the U.S.

Shootout Follows Standoff Between Ecuadoran President and Police—A Sept. 30 meeting between striking police officers and Ecuadoran Pres. Rafael Correa escalated into a violent confrontation in which 5 people were killed and hundreds more were wounded. Correa had gone to a police barracks to meet with officers who were angry at a new law that cut wages and benefits. Physically threatened and exposed to tear gas, Correa sought treatment at a nearby hospital. Disgruntled police surrounded the building, holding Correa captive for more than 10 hours. In a battle broadcast live on television, 500 government troops freed the president after storming the hospital and exchanging fire with the police. Police chief Freddy Martinez resigned the following day.

General

Clijsters Takes U.S. Open Title, as Nadal Caps Career Grand Slam—Kim Clijsters of Belgium needed only 59 minutes to dispatch Russia's Vera Zvonareva, 6-2, 6-1, to win the U.S. Open women's singles championship Sept. 11 at Arthur Ashe Stadium in Flushing, NY. The victory earned Clijsters her 3rd U.S. Open singles title and her 2nd in consecutive years. Two days later, in a rain-delayed men's final, Rafael Nadal of Spain bested Serbian-born Novak Djokovic, 6-4, 5-7, 6-4, 6-2. The U.S. Open title—Nadal's first—gave him career victories in all 4 of the tennis world's most prestigious Grand Slam tournaments.

U.S. Teams Win World Basketball Championships—Led by tournament MVP Kevin Durant, the U.S. men's team won the FIBA international basketball title Sept. 12 over Turkey, 81-64, at the Sinan Erdem Dome in Istanbul. The young U.S. squad, coached by Duke Univ.'s Mike Krzyzewski, took home the nation's first FIBA gold medal since 1994. In the women's final Oct. 3, a U.S. team coached by Geno Auriemma of the Univ. of Connecticut captured the world title by defeating the Czech Republic, 89-69, at Karlovy Vary, Czech Republic.

Bush Surrenders Heisman Trophy—Running back Reggie Bush, a college star at the Univ. of Southern California (USC), gave up the Heisman Trophy awarded to him in 2005 as the nation's outstanding college football player. Bush's Sept. 14 forfeiture followed the National Collegiate Athletic Association's June 10 decision to penalize USC for hundreds of thousands of dollars in gifts improperly given to Bush and his family, among other violations. The NCAA stripped USC of 14 victories in which Bush had played during 2004 and 2005, including the Trojans' Bowl Championship Series title win in Jan. 2005. The Heisman trustees announced Sept. 15 that the 2005 award would be left vacant.

U.S., Europe Limit Use of Diabetes Drug Avandia—European and American regulators Sept. 23 imposed strict limits on Avandia after the widely used diabetes drug was linked to elevated risk of heart attack, stroke, or heart failure. The European Medicines Agency required use of Avandia to be phased out within a few months. In the U.S., the Food and Drug Administration allowed people already taking Avandia to continue to do so, but required doctors to warn patients of the cardiovascular risks and to certify, before writing new prescriptions, that all other diabetes drugs had been tried without success. The FDA estimated that about 600,000 people in the U.S. with type 2 diabetes were using Avandia to control their blood sugar. In a settlement Oct. 26 with the U.S. Justice Department, a subsidiary of GlaxoSmithKline, the maker of Avandia, agreed to pay $750 mil in civil and criminal penalties for multiple quality defects in drugs manufactured at a pharmaceutical plant in Puerto Rico.

October 2010

National

Election Campaign Shatters Spending Records—Political ads crowded the airwaves during the last full month of campaigning before midterm elections Nov. 2. With all 435 seats in the House of Representatives, 37 of 100 seats in the Senate, 37 state governorships, more than 6,100 state legislative seats, and 160 ballot questions to be decided, the nonpartisan Center for Responsive Politics (CRP) estimated Oct. 27 that candidates, political parties, and interest groups would spend a combined total of nearly $4 bil by the time the campaign ended. That total—a record for a nonpresidential election year—was about $1 bil more than was spent in 2006. CRP calculated that, as of late Oct., Republicans had raised $1.64 bil and Democrats $1.59 bil. Corporations, labor unions, and nonprofit advocacy organizations had poured hundreds of millions of dollars into the campaign following the Jan. 21 ruling by the Supreme Court in the *Citizens United* case that eased limits on political fundraising and spending by outside groups. As of Election Day morning, four conservative-leaning organizations—the U.S. Chamber of Commerce ($34.9 mil), American Action Network ($26.6 mil), American Crossroads ($21.5 mil), and Crossroads Grassroots Policy Strategies ($17.1 mil)—topped the CRP list of spending by outside groups, followed by two liberal-leaning labor unions, the Service Employees International Union ($15.7 mil) and American Federation of State, County and Municipal Employees ($12.4 mil).

Courts Rule on Challenges to Health Care Law—Efforts to overturn a key provision of the landmark Patient Protection and Affordable Care Act, passed by Congress and signed by Pres. Barack Obama in Mar., met a mixed reception in federal courts. In Michigan, U.S. District Court Judge George Steeh Oct. 7 upheld the measure and rejected claims that Congress lacked constitutional authority to require individuals to purchase health insurance or pay a tax penalty. In Florida a week later, however, U.S. District Judge Roger Vinson allowed a suit brought against the health care law by officials in 20 states to go forward. "The power that the individual mandate seeks to harness is simply without prior precedent," he wrote. On Aug. 3, Missouri had become the first state where voters approved a measure aimed at nullifying the health insurance purchase requirement; the referendum, known as Proposition C, passed with a 71% majority. Legal analysts expected the Supreme Court to rule on the constitutionality of the individual mandate before the provision was scheduled to take effect in 2014.

Emanuel, Jones Leave White House Posts—Approaching the halfway point of his presidential term, Barack Obama announced Oct. 1 that Rahm Emanuel had resigned his powerful position as White House chief of staff. Emanuel planned to run for mayor of Chicago. Senior Advisor Pete Rouse, who had headed Obama's Senate staff, was named as Emanuel's interim successor. A week later, Obama replaced his national security adviser, Gen. James L. Jones, with Jones's civilian deputy, Thomas E. Donilon, a Democratic insider with extensive policymaking experience. According to Bob Woodward, author of the recently published *Obama's Wars*, Jones had privately called the president's top political aides "the water bugs" and other derisive terms. Woodward also reported that Defense Sec. Robert Gates had warned that appointing Donilon as national security adviser would be a "disaster." In an interview with the *New York Times*, Gates acknowledged that he and Donilon had clashed during the administration's 2009 review of military policy in Afghanistan and Pakistan. But Gates said the two men had since met privately to clear the air and "things ever since have been fine."

TARP Winds Down as Controversy Over Bailouts Persists; Other Economic Developments—Launched during the 2008 financial crisis, the Troubled Asset Relief Program reached the 2-year mark Oct. 3, the date on which its authority to make new financial commitments expired. In a report issued Oct. 5, the Treasury Dept.'s Office of Financial Stability estimated that TARP, originally authorized at $700 bil, would end up costing taxpayers $51 bil or less. As of Sept. 30, $388 bil in TARP funds had been spent, including $245 bil to bail out banks, $80 bil to rescue failing auto companies, and $48 bil to prop up the insurance giant American International Group (AIG). About $204 bil in TARP money had already been repaid by recipients, and taxpayers had earned $30 bil in interest. Critics insisted the Obama administration's balance sheet was far too optimistic; on Oct. 25 the special inspector general for TARP, Neil M. Barofsky, complained that the Treasury Dept. had shifted its customary accounting methods in order to conceal another $40 bil in likely losses on the AIG bailout. Meanwhile, taxpayers continued to foot the bill for the federal bailout of the mortgage-financing enterprises commonly known as Fannie Mae and Freddie Mac. Projections released Oct. 21 by the Federal Housing Finance Agency indicated that the two enterprises, which had already drawn $148 bil from the Treasury, would need additional draws of between $73 bil and $215 bil to remain solvent through Dec. 2013.

With inflation low, the Social Security Admin. announced Oct. 15 that in 2011 more than 58 mil recipients of monthly Social Security and Supplemental Security Income benefits would not receive an automatic cost of living adjustment, or COLA; the announcement marked the second consecutive year without a COLA. The Commerce Dept. reported Oct. 29 that the nation's economy had grown at an annual rate of 2% during July-Sept., a pace too sluggish to make much headway against a Sept. unemployment rate of 9.6%.

Expectations that the Federal Reserve would soon intervene to boost the economy helped propel stock prices upward. The Dow Jones Industrial Average closed Oct. 29 at 11,118.49, a gain of 6.6% since the year began, and the index's best Oct. in four years. The S&P 500 finished at 1,183.26, for a 10-month increase of 6.1%; during the same period, the Nasdaq Composite Index rose 10.5% to close at 2,507.41.

International

Religious Violence in Iraq, Corruption in Afghanistan Dim Hopes for War Efforts—Seven months after parliamentary elections, Iraq remained without a functioning government. Incumbent Prime Min. Nouri al-Maliki secured the backing Oct. 1 of a Shiite coalition, including followers of anti-American cleric Moqtada al-Sadr, but he still lacked sufficient broad-based support to form a governing majority. Political instability, coupled with a reduction in the U.S. presence, contributed to heightened religious tensions. In the worst violence against Christians since the 2003 war began, Islamic extremists commandeered a Catholic church, Our Lady of Salvation, in Baghdad's Karradah neighborhood; at least 58 people, including 5 attackers, died in the ensuing carnage, much of which occurred when the hostage takers detonated suicide vests. Militants launched a wave of car bomb attacks Nov. 2 in Shiite neighborhoods in Baghdad, killing at least 110 people.

Meanwhile, the WikiLeaks website, which in July had posted more than 75,000 previously undisclosed documents about the war in Afghanistan, on Oct. 22 released a trove of nearly 400,000 hitherto secret documents covering the Iraq conflict from Jan. 2004 through Dec. 2009. The war logs, advance copies of which were provided to the *New York Times* and other media organizations for validation and research, provided fresh evidence concerning civilian casualties, mistreatment of prisoners by Iraq's army and police, U.S. reliance on private contractors, and Iranian military assistance to Shiite combatants. On Oct. 26 the Iraqi High Tribunal, responsible for judging war crimes committed under Saddam Hussein, handed down a death sentence against Tariq Aziz, who had served as Hussein's foreign minister and deputy prime minister. Two U.S. service members were killed in Iraq during the month.

In Afghanistan, U.S. and Afghan forces launched an offensive against insurgents in the Taliban stronghold of Kandahar Province, even as reports emerged of possible high-level peace negotiations between Taliban representatives and the government of Pres. Hamid Karzai. The chronic problem of corruption among Afghan leaders resurfaced Oct. 23 when the *New York Times* reported that Karzai's chief of staff, Umar Daudzai, in Aug. on Karzai's personal plane had met with Iranian ambassador Feda Hussein Maliki, who handed him a large plastic bag filled with cash. Responding to reporters' questions Oct. 25, Karzai defended the cash payments, saying they were "done by various friendly countries to help the presidential office." Coalition fatalities during the month included 50 from the U.S. and 15 from other countries.

Rousseff Wins Brazilian Presidency—Workers' Party candidate Dilma Rousseff, the handpicked choice of departing Pres. Luiz Inácio Lula da Silva, led the first round of presidential balloting Oct. 3 with 47% of the vote and defeated José Serra of the Brazilian Social Democratic Party, 56% to 44%, in a runoff election Oct. 31. Born into an upper middle-class family in 1947, Rousseff joined a Marxist resistance group in the late 1960s while the military ruled Brazil. Arrested in 1970 and tortured by the military regime, she pursued a career in economics after her release in 1973. After joining the Workers Party in 2001, she served Pres. Lula's administration as energy minister, 2003-05, and then as his chief of staff. Her victory was seen largely as an endorsement of Lula's 8 years as president, during which (according to Brazilian government data) some 24 mil people rose from dire poverty and 31 mil entered the middle class. Lula, who had an approval rating over 80%, was constitutionally barred from seeking a third presidential term. Upon taking office Jan. 1, 2011, Rousseff would become Brazil's first female president.

British Government Outlines Steep Spending Cuts—Facing huge budget deficits, Britain's Conservative-led government announced spending reductions Oct. 20 of approximately $130 bil over a 4-year period. "Today's the day when Britain steps back from the brink, when we confront the bills from a decade of debt," declared Chancellor of the Exchequer George Osborne in a speech to Parliament. Under Osborne's plan, the official retirement age for men would rise from 65 to 66 by 2020, and 490,000 public-sector jobs would be eliminated by 2015. The Treasury chief also proposed reductions in welfare spending, unemployment benefits, law enforcement, central government grants to local governments, and financial support for the royal household. A strategic defense and security review unveiled Oct. 19 by Prime Min. David Cameron had envisaged an 8% reduction in defense spending over a 4-year period, with a loss of 42,000 armed-forces jobs by 2015.

Prime Minister of Barbados Dies—Prime Min. David Thompson of the Caribbean nation of Barbados succumbed to pancreatic cancer Oct. 23 at the age of 48. Thompson had become the youngest elected head of government in the history of Barbados when his Democratic Labor Party won parliamentary elections in Jan. 2008. He was succeeded in office by his deputy prime minister and attorney general, Freundel Stuart, who had run the government while Thompson received chemotherapy.

Volcanic Eruptions, Tsunami Strike Indonesia—Nearly 500 people died from two disasters, some 750 mi apart, that hit Indonesia Oct. 25. A 7.7-magnitude earthquake in the Mentawai Islands, off the western coast of Sumatra, triggered a tsunami that slammed into coastal villages, killing at least 425 people and leaving another 15,000 homeless. That same day, Mt. Merapi, an active volcano near Yogyakarta in central Java, began a series of major eruptions that claimed at least 38 lives and forced the evacuation of 75,000 people.

Authorities Foil Yemen-Based Bomb Plot—Acting on a tip Oct. 28 from Saudi Arabia's intelligence chief, Prince Muhammad bin Nayef, authorities in the UK and UAE confiscated packages containing printer cartridges that had been filled with a powerful explosive and rigged as bombs. Both air cargo shipments had originated in Yemen and were addressed to Chicago-area destinations. One suspicious package, sent via the United Parcel Service, was found at East Midlands Airport, about 115 mi northwest of London; another had already traveled via Qatari passenger aircraft from Yemen's capital, Sana'a', to Doha, Qatar, and then Dubai, where it was intercepted. The U.S., UK, France, and Germany suspended cargo shipments from Yemen, where the terrorist group al-Qaeda in the Arabian Peninsula (AQAP) maintains an active presence. The U.S. and Yemeni governments had stepped up military pressure against AQAP in 2010, and the Obama administration had reportedly targeted radical Yemeni-American cleric Anwar al-Awlaki for assassination.

General

Halladay Hurls Playoff No-Hitter—Making his postseason debut, Phillies right-hander Roy Halladay blanked the hard-hitting Cincinnati Reds, 4-0, in a division playoff game Oct. 6 at Citizens Bank Park in Philadelphia. Halladay allowed just one base runner (on a 5th-inning walk to Cincinnati outfielder Jay Bruce) and struck out eight in pitching only the second no-hit, no-run game in major-league baseball playoff history, and the first since NY Yankee Don Larsen's perfect game in the 1956 World Series. Halladay, who pitched a perfect game against the Florida Marlins May 29, 2010, became the fifth pitcher in major-league history to throw two no-hitters in the same season.

China Builds World's Fastest Supercomputer—At a conference Oct. 28 in Beijing, China unveiled the Tianhe-1A supercomputer, capable of a sustained performance of 2.507 petaflops, 40% higher than the previous mark set by the Jaguar system at Oak Ridge National Laboratory in Oak Ridge, TN. (One petaflop equals one quadrillion calculations per second.) Built by China's National University of Defense Technology and housed at the National Supercomputing Center in Tianjin, the Tianhe-1A combines 7,168 Nvidia Tesla graphics processing chips with 14,336 Intel Xeon microprocessors.

OBITUARIES

Nov. 1, 2009-Oct. 31, 2010

A

Albrecht, Theo, 88, German businessman who built the Aldi chain of supermarkets into a global empire; Essen, Germany, July 24, 2010.

Anderson, Alex, 90, cartoonist who created the characters Rocky the Flying Squirrel, Bullwinkle, and Dudley Do-Right; Carmel, CA, Oct. 22, 2010.

Aranne, Ike (born Yitzhak Aronowicz), 86, Polish-born captain of the ship *Exodus 1947*, which unsuccessfully tried to dock in British-occupied Palestine with Jewish refugees on July 11, 1947; Hadera, Israel, Dec. 23, 2009.

Auchincloss, Louis, 92, author of fiction and nonfiction about aristocratic New Yorkers best known for the novel *The Rector of Justin* (1964); New York, NY, Jan. 26, 2010.

B

Bacon, James, 96, reporter and syndicated columnist who chronicled Hollywood for six decades; Northridge, CA, Sept. 18, 2010.

Bainbridge, (Dame) Beryl, 77, British author best known for her 18 darkly-humorous novels; London, Eng., UK, July 2, 2010.

Baker, Vernon, 90, one of 7 black soldiers awarded the Medal of Honor for heroism during World War II by Pres. Bill Clinton in 1997; St. Maries, ID, July 13, 2010.

Ballantine, Carl, 92, comedic actor best known for his role as Lester Gruber on the TV series *McHale's Navy*; Hollywood, CA, Nov. 3, 2009.

Barry, Gene, 90, actor best known for his starring role in the classic *War of the Worlds* film (1953); Woodland Hills, CA, Dec. 9, 2009.

Bell, Glen, Jr., 86, businessman who founded the Taco Bell fast-food chain; Rancho Santa Fe, CA, Jan. 16, 2010.

Billingsley, Barbara, 94, TV and film actress best known for her role as June Cleaver on *Leave It to Beaver* (1957-63); Santa Monica, CA, Oct. 16, 2010.

Blanda, George, 83, NFL Hall of Fame quarterback and kicker who, during a 26-season career—the longest in pro football history—scored 2,002 points, the record at the time of his retirement; Alameda, CA, Sept. 27, 2010.

Bohlen, Jim, 84, engineer instrumental in the creation of the environmental organization Greenpeace; Comox, BC, Can., July 5, 2010.

Bol, Manute, 47, Sudanese-born center who was a 7 ft, 6 in.-tall shot-blocker on four NBA teams; Charlottesville, VA, June 19, 2010.

Bosley, Tom, 83, actor best known for portraying Howard Cunningham on *Happy Days* (1974-84); Tony award winner for his lead role in *Fiorello!* (1959-61); Rancho Mirage, CA, Oct. 19, 2010.

Bourgeois, Louise, 98, French-born sculptor inspired by feminism and psychoanalysis; New York, NY, May 31, 2010.

Boyle, Robert F., 100, production designer who created memorable scenes in *North by Northwest* (1959) and *The Birds* (1963); Los Angeles, CA, Aug. 1, 2010.

Brookshier, Tom, 78, defensive back who helped lead the Philadelphia Eagles to the NFL championship (1960); later became a football broadcaster; Wynnewood, PA, Jan. 29, 2010.

Brown, David, 93, journalist turned Hollywood film producer; managing editor of *Cosmopolitan* before wife Helen Gurley Brown; produced *The Sting* (1973), *Jaws* (1975), and *Cocoon* (1985); New York, NY, Feb. 1, 2010.

Brown, Himan, 99, producer and director of classic radio dramas, notably *Inner Sanctum Mysteries* (1941-52) and *CBS Radio Mystery Theater* (1974-82); New York, NY, June 4, 2010.

Burke, Solomon, (born James Solomon McDonald), 70, soul singer best known for the song "Everybody Needs Someone to Love"; Rock and Roll Hall of Fame inductee (2001); Amsterdam, Netherlands, Oct. 10, 2010.

Byrd, Robert, 92, U.S. senator (D, WV) since Jan. 1959, making him the longest-serving senator; repudiated his brief membership in the Ku Klux Klan and became a civil rights advocate; won billions of dollars in federal monies for his impoverished home state; Fairfax, VA, June 28, 2010.

C

Cannell, Stephen J., 69, producer and writer who created nearly 20 TV series, including *The Rockford Files* and *The A-Team*; Pasadena, CA, Sept. 30, 2010.

Carmichael, Ian, 89, British actor known for films such as *Private's Progress* (1956) and *I'm All Right Jack* (1959) and for TV roles such as P. G. Wodehouse's bumbling Bertie Wooster; Grosmont, Eng., UK, Feb. 5, 2010.

Carpenter, Liz, 89, journalist who served as press secretary to Lady Bird Johnson (1963-69); Austin, TX, Mar. 20, 2010.

Carter, Dixie, 70, actress best known for her role as Julia Sugarbaker in the TV sitcom *Designing Women* (1986-93); Houston, TX, Apr. 10, 2010.

Chabrol, Claude, 80, French film director in the New Wave film movement; among his most acclaimed films were *La Femme Infidèle* (*The Unfaithful Wife*) (1969) and *Le Boucher* (*The Butcher*) (1970); Paris, France, Sept. 12, 2010.

Clancy, Liam, 74, Irish singer who helped popularize Irish folk music as a member of U.S.-based quartet the Clancy Brothers; Cork, Ireland, Dec. 4, 2009.

Clokey, Art (born Arthur Charles Farrington), 88, animator who created the green clay character Gumby; Los Osos, CA, Jan. 8, 2010.

Coleman, Gary, 42, diminutive actor who starred in the TV sitcom *Diff'rent Strokes* (1978-86) then endured personal and financial difficulties; kidney disease stunted his growth (full height: 4 ft, 8 in.); Provo, UT, May 28, 2010.

Conrad, Paul, 86, political cartoonist who won 3 Pulitzer Prizes (1964, 1971, 1984) for skewering politicians; Rancho Palos Verdes, CA, Sept. 4, 2010.

Cooley, Earl, 98, one of the first two U.S. Forest Service "smoke jumpers" to parachute into a forest fire in 1940; Missoula, MT, Nov. 9, 2009.

Coryell, Don, 85, pro-football coach with St. Louis Cardinals (1973-77) and San Diego Chargers (1978-86); La Mesa, CA, July 1, 2010.

Cuellar, Mike, 72, Cuban-born pitcher whose screwball helped the Baltimore Orioles win 3 consecutive American League pennants; won Cy Young Award (1969); Orlando, FL, Apr. 2, 2010.

Culp, Robert, 79, actor best known for his role as a secret agent in the TV comedy-adventure series *I Spy* (1965-68); Los Angeles, CA, Mar. 24, 2010.

Curtis, Tony (born Bernard Schwartz), 85, classically handsome actor known for dramatic and comedic roles in films such as *The Defiant Ones* (1958) and *Some Like It Hot* (1959); Henderson, NV, Sept. 29, 2010.

D

Davis, Willie, 69, centerfielder who played most of his career with the L.A. Dodgers; his 31-game hitting streak (1969) is still a team record; Burbank, CA, Mar. 9, 2010.

Dean, Jimmy, 81, country singer, TV personality, and sausage maker; music career peaked with chart-topping song "Big Bad John" (1961); founded the Jimmy Dean Meat Co. (1969), becoming its TV pitchman; Varina, VA, June 13, 2010.

Dio, Ronnie James (born Ronald James Padavona), 67, lead singer with heavy metal bands Rainbow (1975-79), Black Sabbath (1979-82), and his own group, Dio; Los Angeles, CA, May 16, 2010.

Disney, Roy E., 79, last member of the family involved in the operations of the Walt Disney Co., the entertainment conglomerate founded by his uncle, Walt Disney (1901-66), and father, Roy O. Disney (1893-1971); Newport Beach, CA, Dec. 16, 2009.

Dobrynin, Anatoly, 90, long-serving Soviet ambassador to the U.S. (1962-86); played a key role in defusing the Cuban Missile Crisis (1962) and was heavily involved in nuclear arms control negotiations; Moscow, Russia, Apr. 6, 2010.

Donner, Clive, 84, British film director best known for *What's New Pussycat?* (1965); London, Eng., UK, Sept. 7, 2010.

Dudley, Bill, 88, Hall of Fame running back who once led the NFL in rushing punt returns, and interceptions in a single season (Pittsburgh Steelers, 1946); Lynchburg, VA, Feb. 4, 2010.

E

Ellis, Herb, 88, jazz guitarist; member of the Oscar Peterson Trio (1953-58); Los Angeles, CA, Mar. 28, 2010.

F

Fieger, Doug, 57, lead singer and rhythm guitarist for the Knack; co-wrote "My Sharona"; Woodland Hills, CA, Feb. 14, 2010.

Fignon, Laurent, 50, French cyclist who won the Tour de France twice (1983, 1984); later tested positive for banned amphetamines; Paris, France, Aug. 31, 2010.

Fisher, Eddie, 82, popular singer who received much attention in 1959 when he divorced actress Debbie Reynolds to marry Elizabeth Taylor; Berkeley, CA, Sept. 22, 2010.

Flew, Antony, 87, British philosopher and atheist who admitted in 2004 that he believed there was probably a God after all; Reading, Eng., UK, Apr. 8, 2010.

Foot, Michael, 96, leader of Britain's Labour Party (1980-83) when Labour was routed in the general election by then-Prime Minister Margaret Thatcher and the Conservative Party; London, Eng., UK, Mar. 3, 2010.

Forsythe, John (born John Lincoln Freund), 92, actor whose TV roles included the unseen millionaire in *Charlie's Angels* (1976-81) and Blake Carrington in *Dynasty* (1981-89); Santa Ynez, CA, Apr. 1, 2010.

Francis, Dick, 89, champion steeplechase jockey who, after retiring from racing (1957), became an internationally best-selling author of thrillers; Cayman Islands, Feb. 14, 2010.

G

Gardner, Martin, 95, author of long-running *Scientific American* magazine column "Mathematical Games" (1956-81); Norman, OK, May 22, 2010.

Gates, Daryl, 83, former chief of the Los Angeles Police Department (LAPD); pioneered use of Special Weapons and Tactics (SWAT) teams; resigned 2 months after the acquittal of 4 LAPD officers in the beating of black motorist Rodney King set off 3 days of riots; Dana Point, CA, Apr. 16, 2010.

Gies, Miep (born Hermine Santrouschitz), 100, Dutch preserver of Anne Frank's diary; protected the Frank family and other Dutch Jews for 25 months in German-occupied Netherlands during World War II; Netherlands, Jan. 11, 2010.

Ginzburg, Vitaly, 93, Russian physicist who shared the Nobel Prize in physics (2003) for developing the theory of superconductivity; Moscow, Russia, Nov. 8, 2010.

Goerke, Donald, 83, Campbell Soup Co. executive who invented SpaghettiOs® canned pasta (1965); Delran, NJ, Jan. 10, 2010.

Graham, Bruce, 84, architect who designed Chicago's John Hancock Center (1970) and Sears Tower (now known as Willis Tower) (1974); Hobe Sound, FL, Mar. 6, 2010.

Graves, Peter (born Peter Aurness), 83, actor who starred in two versions of the TV series Mission: Impossible; also played a bumbling pilot in the film Airplane! (1980); Los Angeles, CA, Mar. 14, 2010.

Grayson, Kathryn (born Zelma Kathryn Elisabeth Hedrick), 88, actress who starred in musicals, including *Anchors Aweigh* (1945), *Show Boat* (1951), and *Kiss Me Kate* (1953); Los Angeles, CA, Feb. 17, 2010.

Guccione, Bob, 79, founder and publisher of the adult magazine *Penthouse*; Plano, TX, Oct. 20, 2010.

Guinzburg, Thomas, 84, co-founder of literary journal *Paris Review*; New York, NY, Sept. 8, 2010.

H

Haddock, Doris (born Ethel Doris Rollins), 100, political activist nicknamed "Granny D" who gained attention for her 14-month-long (1999-2000) walk across the U.S. to rally support for campaign finance reform; Dublin, NH, Mar. 9, 2010.

Haig, Alexander M., Jr., 85, retired 4-star Army general who served as White House chief of staff during the final months of Pres. Richard Nixon's administration and as Pres. Ronald Reagan's sec. of state (1981-82); Baltimore, MD, Feb. 20, 2010.

Haim, Corey, 38, Canadian-born actor who became a teen idol when he starred in *Lucas* (1986) and *The Lost Boys* (1987); Burbank, CA, Mar. 10, 2010.

Haney, Chris, 59, one of two Canadians credited with the invention of the board game Trivial Pursuit; Toronto, ON, Can., May 31, 2010.

Harris, Phil, 53, captain of one of the crab fishing vessels featured on the reality TV series *Deadliest Catch*; Anchorage, AK, Feb. 9, 2010.

Harwell, Ernie, 92, radio and TV broadcaster for the Detroit Tigers (1960-91, 1993-2002); Novi, MI, May 4, 2010.

Havoc, June (born Ellen Evangeline Hovick), 97, actress and sister of burlesque queen Gypsy Rose Lee; their childhood experiences were the subject of the musical *Gypsy* (1959); Stamford, CT, Mar. 28, 2010.

Hawkins, Paula, 82, one-term senator (R, FL, 1981-87); first woman to win a full U.S. Senate term without benefit of being related to a prominent male politician; Orlando, FL, Dec. 4, 2009.

Height, Dorothy, 98, civil and women's rights activist; president of the National Council of Negro Women (1957-97), making her one of the most influential woman leaders in the civil rights movement; Washington, DC, Apr. 20, 2010.

Henrich, Tommy, 96, NY Yankee outfielder (1937-50, aside from a 3-year military service) nicknamed "Old Reliable"; Dayton, OH, Dec. 1, 2009.

Hickel, Walter, 90, Alaskan real-estate developer who was instrumental in its path to statehood; AK governor (1966-69, 1990-94); Pres. Richard Nixon's sec. of the interior (1969-70); Anchorage, AK, May 7, 2010.

Holm, Jeanne M., 88, first woman to achieve the rank of general in the U.S. Air Force (1971); first female 2-star general in any U.S. military branch (1973); Annapolis, MD, Feb. 15, 2010.

Hooks, Benjamin, 85, executive director of the National Association for the Advancement of Colored People (NAACP) (1977-92); Memphis, TN, Apr. 15, 2010.

Hopper, Dennis, 74, actor and director who played memorable characters in *Easy Rider* (1969), *Apocalypse Now* (1979), and *Blue Velvet* (1986); Venice, CA, May 29, 2010.

Horne, Lena, 92, singer, actress, and civil rights activist; one of the first black performers signed to a long-term contract by a major Hollywood studio (1942); New York, NY, May 9, 2010.

Houk, Ralph, 90, NY Yankees manager in the 1960s and early 1970s; later managed Detroit and Boston; Winter Haven, FL, July 21, 2010.

Hoving, Thomas, 78, director of New York's Metropolitan Museum of Art (1967-77); pioneered the mounting of blockbuster exhibitions; New York, NY, Dec. 10, 2009.

Howes, Ronald, Sr., 83, inventor of the Easy-Bake Oven toy (1963); Anderson Twp., OH, Feb. 16, 2010.

I

Isley, Marvin, 56, bass guitarist and songwriter since the late 1950s for band the Isley Brothers; Chicago, IL, June 6, 2010.

J

Javacheff, Jeanne-Claude, 74, artist who, under the name Jeanne-Claude with her husband Christo, created large-scale, temporary installations in public places; New York, NY, Nov. 18, 2009.

Jeppson, Morris, 87, U.S. Army air forces electronics specialist who made his only combat flight on the *Enola Gay*, the aircraft that dropped an atomic bomb on Hiroshima, Japan, in 1945; Las Vegas, NV, Mar. 30, 2010.

Jones, Hank, 91, jazz pianist, bandleader, and composer; Bronx, NY, May 16, 2010.

Jones, Jennifer (born Phylis Lee Isley), 90, actress who won an Oscar for her first major screen role in *The Song of Bernadette* (1943); married to producer David O. Selznick (1949-65); Malibu, CA, Dec. 17, 2009.

K

Kaczynski, Lech, 60, president of Poland since 2005; died in a plane crash along with his wife and a large entourage of government officials; Smolensk, Russia, Apr. 10, 2010.

Kamenshek, Dorothy, 84, star player in the All-American Girls Professional Baseball League in the 1940s and 1950s; inspired the film *A League of Their Own* (1992); Palm Desert, CA, May 17, 2010.

Kilpatrick, James J., 89, conservative columnist and TV commentator; Washington, DC, Aug. 15, 2010.

Kligman, Albert, 93, dermatologist and medical researcher who developed the acne drug Retin-A; Philadelphia, PA, Feb. 9, 2010.

Kluge, John, 95, founder of Metromedia Inc., once the largest U.S. operator of independent TV and radio stations; Charlottesville, VA, Sept. 7, 2010.

Koirala, Girija Prasad, 85, leading figure in Nepal's pro-democracy movement; held the post of prime minister five times, from 1991; Kathmandu, Nepal, Mar. 20, 2010.

L

Lebron, Lolita, 90, one of four Puerto Rican nationalists who shot and wounded five members of Congress on the floor of the U.S. House (1954); San Juan, PR, Aug. 1, 2010.

Lederer, William, 97, co-author of the best-selling novel *The Ugly American* (1958), which critiqued U.S. foreign policy; Baltimore, MD, Dec. 5, 2009.

Lee, Fran, 99, consumer advocate whose campaign against dog waste helped bring about New York City's "pooper-scooper" law (1978); Jerusalem, Israel, Feb. 13, 2010.

Levine, David, 83, caricaturist whose drawings of politicians, well-known authors, and other celebrities appeared in the *New York Review of Books*; New York, NY, Dec. 29, 2009.

Lilly, Ruth, 94, philanthropist estimated to have given away $800 mil of her family's pharmaceutical fortune; Indianapolis, IN, Dec. 30, 2009.

Lincoln, Abbey (born Anna Marie Wooldridge), 80, jazz singer-songwriter, actress, and civil rights activist; New York, NY, Aug. 14, 2010.

Linkletter, Art (born Gordon Arthur Kelly), 97, Canadian-born radio and TV personality known for the long-running shows *People Are Funny* and *House Party*; Los Angeles, CA, May 26, 2010.

M

MacArthur, James, 72, actor best known for his role as Daniel "Danno" Williams on *Hawaii Five*-O (1968-79); Jacksonville, FL, Oct. 28, 2010.

MacCorkindale, Simon, 58, British film and TV actor best known to U.S. audiences for *Falcon Crest* (1984-86); London, Eng., UK, Oct. 14, 2010.

Mandelbrot, Benoît, 85, Polish-born Franco-American mathematician known as the father of fractal geometry; Cambridge, MA, Oct. 14, 2010.

Mankiller, Wilma, 64, first woman to lead a major American Indian tribe; as principal chief of the Cherokee Nation (1985-95), she expanded the tribe's social services network; nr. Tahlequah, OK, Apr. 6, 2010.

McCarthy, Kevin, 96, veteran actor best known for starring role in the science-fiction film *Invasion of the Body Snatchers* (1956); Hyannis, MA, Sept. 11, 2010.

McClanahan, Rue, 76, actress who starred in the long-running TV sitcom *The Golden Girls* (1985-92); New York, NY, June 3, 2010.

McGuire, Dick, 84, All-Star point guard who led the NY Knicks to 3 NBA finals in the early 1950s; Huntington, NY, Feb. 3, 2010.

McQueen, Alexander, 40, British fashion designer whose work was known for meticulous craftsmanship and unconventional features; London, Eng., UK, Feb. 11, 2010.

Miller, Mitch, 99, oboist turned record producer; made a series of best-selling "sing-along" albums that led to the TV variety show *Sing Along With Mitch* (1961-64); New York, NY, July 31, 2010.

Moore, Charles Lee, 79, photojournalist best known for images of the U.S. civil rights movement; Palm Beach Gardens, FL, Mar. 11, 2010.

Morefield, Richard, 81, U.S. consul general to Iran who was held hostage for 444 days, with 51 others, in what became known as the Iran hostage crisis (1979-81); Raleigh, NC, Oct. 11, 2010.

Morrison, Fred, 90, inventor of the commercial version of the flying disc eventually marketed as the Frisbee; Monroe, UT, Feb. 9, 2010.

Mosbacher, Robert, 82, oil and gas tycoon who became a leading GOP fundraiser; served as commerce sec. for Pres. George H. W. Bush (1989-92); Houston, TX, Jan. 24, 2010.

Muhammad, John Allen, 48, former U.S. Army sergeant who orchestrated the 2002 sniper campaign in Maryland, Virginia, and Washington, DC, that killed 10 people; executed by lethal injection; Jarratt, VA, Nov. 10, 2009.

Murphy, Brittany, 32, actress whose breakthrough film was *Clueless* (1995); Los Angeles, CA, Dec. 20, 2009.

Murtha, John, 77, U.S. representative (D, PA) since 1974; first Vietnam War combat veteran elected to Congress; Arlington, VA, Feb. 8, 2010.

N

Neal, Patricia, 84, actress who won an Oscar for her role in *Hud* (1963); suffered three strokes (1965) requiring intense rehabilitation; she returned to acting three years later; Edgartown, MA, Aug. 8, 2010.

Neame, Ronald, 99, British filmmaker who co-wrote and produced the classic films *Brief Encounter* (1945) and *Great Expectations* (1946); Beverly Hills, CA, June 16, 2010.

Newman, Edwin, 91, TV journalist and commentator for NBC (1952-84); wrote two best-sellers on the English language; Oxford, Eng., UK, Aug. 13, 2010.

Nissen, George, 96, gymnast who invented and marketed the modern trampoline; San Diego, CA, Apr. 7, 2010.

O

Olsen, Merlin, 69, defensive tackle who played for the L.A. Rams (1962-76); became a TV football analyst and acted on the TV shows *Little House on the Prairie* (1977-81) and *Father Murphy* (1981-83); Duarte, CA, Mar. 11, 2010.

P

Palevsky, Max, 85, computer-industry pioneer who in 1968 helped launch Intel Corp., which became the world's largest computer chip maker; Beverly Hills, CA, May 5, 2010.

Parker, Fess, 85, actor who portrayed frontiersman Davy Crockett in a series of Walt Disney TV specials and 2 feature films; Santa Ynez Valley, CA, Mar. 18, 2010.

Parker, Robert B., 77, mystery novelist whose best-known creation was Spenser, a tough-talking yet highly literate private detective; Cambridge, MA, Jan. 18, 2010.

Peek, (Laurence) Kim, 58, inspiration for the autistic savant Raymond Babbitt in the film *Rain Man* (1988); Salt Lake City, UT, Dec. 19, 2009.

Peel, Andrée (born Andrée Marthe Virot), 105, a heroine of the French Resistance during World War II; Long Ashton, Eng., UK, Mar. 5, 2010.

Pekar, Harvey, 70, author of *American Splendor*, a series of largely autobiographical comic books; Cleveland Heights, OH, July 12, 2010.

Pendergrass, Teddy, 59, soul singer who helped shape the 1970s "Philadelphia sound"; a 1982 car crash left him paralyzed from the chest down; Bryn Mawr, PA, Jan. 13, 2010.

Penn, Arthur, 88, director and producer best known for his film *Bonnie and Clyde* (1967); New York, NY, Sept. 28, 2010.

Petty, Clarence, 104, park ranger and conservationist well-known for his protection of New York's Adirondack Park; Canton, NY, Nov. 30, 2009.

Plain, Belva, 95, bestselling novelist whose works focused on Jewish-American lives; Short Hills, NJ, Oct. 12, 2010.

Pollin, Abe, 85, real estate developer who brought pro hockey and basketball to Washington, DC; some-time owner of NHL's Washington Capitals, NBA's Washington Wizards, and WNBA's Washington Mystics; died Nov. 24, 2009.

Price, Sol, 93, founder of Price Club chain of members-only discount warehouses in San Diego, CA, in 1976; La Jolla, CA, Dec. 14, 2009.

Q

Quaife, Pete, 66, bass guitarist with the British rock band the Kinks during its 1960s heyday; Herlev, Denmark, June 23, 2010.

R

Raabe, Meinhardt, 94, actor whose 13-second performance as the Munchkin coroner in *The Wizard of Oz* (1939) made him a pop culture icon for 70 years; Orange Park, FL, Apr. 9, 2010.

Redgrave, Corin, 70, British actor from an illustrious acting family who was heavily involved in left-wing politics; London, Eng., UK, Apr. 6, 2010.

Redgrave, Lynn, 67, British actress who hailed from an illustrious acting family; achieved stardom as the title character in the film *Georgy Girl* (1966); Kent, CT, May 2, 2010.

Roberts, H. Edward, 68, inventor of the early personal computer MITS Altair 8800; Macon, GA, Apr. 1, 2010.

Roberts, (Granville) Oral, 91, pioneering TV evangelist whose "prosperity gospel" ministry emphasized faith healing and other Pentecostal practices; founder of Oral Roberts Univ.; Newport Beach, CA, Dec. 15, 2009.

Roberts, Pernell, 81, actor best known for TV roles in the long-running series *Bonanza* and as title character in *Trapper John, M.D.*; Malibu, CA, Jan. 24, 2010.

Roberts, Robin, 83, Hall of Fame pitcher who led the Philadelphia Phillies to the 1950 National League pennant, the team's first in 35 years; Temple Terrace, FL, May 6, 2010.

Rohmer, Eric, 89, French critic and director of more than 50 films, including *My Night at Maud's* (1969); Paris, France, Jan. 11, 2010.

Rostenkowski, Dan, 82, U.S. rep. (D, IL, 1959-95); indicted on federal corruption charges and served 15 months in prison; pardoned by outgoing Pres. Bill Clinton; Genoa City, WI, Aug. 11, 2010.

S

Salinger, J(erome) D(avid), 91, author of coming-of-age novel *The Catcher in the Rye* (1951) and three authorized collections of short stories; led a reclusive life from 1953 on; Cornish, NH, Jan. 27, 2010.

Samaranch Torello, Juan Antonio, 89, Spanish diplomat and president of the International Olympic Committee (1980-2001); Barcelona, Spain, Apr. 21, 2010.

Samuelson, Paul A., 94, Nobel Prize-winning economist (1970) viewed as a shaper of the modern mathematical approach to economics; Belmont, MA, Dec. 13, 2009.

Saramago, José (born José de Sousa), 87, writer who became the first Portuguese-language author to win the Nobel Prize for literature (1998); Lanzarote, Canary Islands, June 18, 2010.

Saxbe, William, 94, U.S. sen. (R, OH) who became Pres. Richard Nixon's fourth and final attorney general; Mechanicsburg, OH, Aug. 24, 2010.

Schorr, Daniel, 93, journalist known for investigative reporting at CBS News, CNN, and National Public Radio; Washington, DC, July 23, 2010.

Segal, Erich, 72, Yale Univ. classics professor and novelist best known for his first novel, *Love Story* (1970); London, Eng., UK, Jan. 17, 2010.

Shain, Edith, 91, woman who claimed to be the nurse kissed by a sailor in the famous V-J Day photograph taken by *Life* magazine photographer Alfred Eisenstaedt; Los Angeles, CA, June 20, 2010.

Sheffield, Johnny, 79, actor who played the role of "Boy" in the Tarzan movies of the 1930s and 1940s; Chula Vista, CA, Oct. 15, 2010.

Shepherd-Barron, John, 84, British inventor of the first automated teller machine (ATM) (1967); Inverness, Scotland, May 15, 2010.

Sheppard, Bob, 99, public-address announcer for the NY Yankees baseball team (1951-2007); Baldwin, NY, July 11, 2010.

Siepi, Cesare, 87, Italian opera singer; one of world's leading basses in the 1950s and 1960s; Atlanta, GA, July 5, 2010.

Simmons, Jean, 80, British-born actress best known for her roles in *Guys and Dolls* (1955) and *Elmer Gantry* (1960); Santa Monica, CA, Jan. 22, 2010.

Smith, Carl, 82, country music singer especially popular in the 1950s; Franklin, TN, Jan. 16, 2010.

Smith (Sullivan), Elinor, 98, record-setting aviator who was one of the youngest pilots of the 1920s; Palo Alto, CA, Mar. 19, 2010.

Soderstrom, Elisabeth, 82, Swedish soprano known for her musicianship and acting; Stockholm, Sweden, Nov. 20, 2009.

Sorensen, Theodore C., 82, trusted political adviser to Pres. John F. Kennedy; New York, NY, Oct. 31, 2010.

Stein, Joseph, 98, Tony award-winning playwright best known *Fiddler on the Roof* and *Zorba*; New York, NY, Oct. 24, 2010.

Steinbrenner, George, 80, outspoken owner of the NY Yankees since 1973; Tampa, FL, July 13, 2010.

Stevens, Ted, 86, long-time U.S. sen. (R, AK, 1968-2009); died in a small-plane crash in remote SW Alaska, Aug. 9, 2010.

Stuart, Gloria, 100, actress who was the oldest-ever nominee for an Academy Award for acting for her role in *Titanic* (1997); Los Angeles, CA, Sept. 26, 2010.

Sutherland, (Dame) Joan, 83, Australian-born soprano nicknamed "La Stupenda" (the Stupendous One); known for her participation in the "bel canto" revival of early-19th-century operas by Italian composers; near Geneva, Switzerland, Oct. 10, 2010.

Sutton, Percy, 89, civil rights lawyer, politician, and media mogul; New York, NY, Dec. 26, 2009.

T

Tatum, Jack, 61, defensive back for the Oakland Raiders who was one of the most feared tacklers of his era; nicknamed the "Assassin"; his hit left New England Patriot Darryl Stingley paralyzed (1978); Oakland, CA, July 27, 2010.

Thigpen, Ed(mund), 79, jazz drummer with the Oscar Peterson Trio (1959-65); Copenhagen, Denmark, Jan. 13, 2010.

Thomas, Jefferson, 67, one of nine black students who integrated an all-white high school in Little Rock, AR, in 1957; Columbus, OH, Sept. 5, 2010.

Thomson, Bobby (Robert), 86, baseball player who hit pennant-winning "shot heard 'round the world" for the NY Giants (1951); Savannah, GA, Aug. 16, 2010.

Todd, Richard, 90, Irish-born Oscar-nominated actor best known for war dramas such as *The Longest Day* (1962); Little Humby, Eng., UK, Dec. 3, 2009.

Travis, Doris Eaton, 106, entertainer believed to have been the last surviving Ziegfeld Follies dancer; Commerce, MI, May 11, 2010.

U

Udall, Stewart, 90, conservationist and U.S. sec. of the interior (1961-69) for Pres. John Kennedy and Pres. Lyndon Johnson; Santa Fe, NM, Mar. 20, 2010.

Uhl, Edward, 92, weapons developer and aerospace executive; helped develop the bazooka, a shoulder-fired rocket launcher; Easton, MD, May 9, 2010.

W

Wahid, Abdurrahman ad-Dakhil, 69, Muslim cleric who was president of Indonesia for 21 months (1999-2001); Jakarta, Indonesia, Dec. 30, 2009.

Warren, David, 85, Australian aeronautical researcher credited with inventing the flight data recorder, or black box; Melbourne, Australia, July 19, 2010.

Wayburn, Edgar, 103, physician who, as a longtime member and president of the Sierra Club, became a leading advocate of environmental conservation; San Francisco, CA, Mar. 5, 2010.

Wilson, Charlie, 76, U.S. rep. (D, TX, 1973-96); masterminded covert U.S. support of as much as $5 bil in arms sent to Afghan rebels during the Soviet Union's occupation; Lufkin, TX, Feb. 10, 2010.

Winner, Jim, 81, businessman who developed The Club, an anti-theft device for cars; Clarion Co., PA, Sept. 14, 2010.

Wirtz, W(illiam) Willard, 98, lawyer and law professor; U.S. labor sec. (1962-69) for Pres. John Kennedy and Pres. Lyndon Johnson; Washington, DC, Apr. 24, 2010.

Wisdom, (Sir) Norman, 95, British comedian, singer-songwriter, and actor; Isle of Man, UK, Oct. 4, 2010.

Wolper, David, 82, producer of the landmark TV miniseries *Roots* (1977); Beverly Hills, CA, Aug. 10, 2010.

Wooden, John, 99, Univ. of California at Los Angeles basketball coach who guided the Bruins to 10 national titles between 1964 and 1975; Los Angeles, CA, June 4, 2010.

Woodward, Edward, 79, British stage, screen, and TV actor; best known for the title role in the TV drama *The Equalizer* (1985-89); Truro, Eng., UK, Nov. 16, 2009.

Y

Yamaguchi, Tsutomu, 93, only confirmed survivor of the 1945 U.S. atomic bombings of both Hiroshima and Nagasaki, in Japan; Nagasaki, Japan, Jan. 4, 2010.

Young, Purvis, 67, artist who documented contemporary African American life in Miami; Miami, FL, Apr. 20, 2010.

Z

Zinn, Howard, 87, leftist historian and peace and civil rights activist; his best-known book was *A People's History of the United States*, a revisionist survey of U.S. history; Santa Monica, CA, Jan. 27, 2010.

Key Information on the 111th Congress

The 111th Congress convened Jan. 6, 2009, with both chambers under Democratic control. At the start of the term, the 435 members of the House of Representatives comprised 256 Democrats and 178 Republicans, with 1 vacancy. Of the 100 members of the Senate, 55 were Democrats, 41 were Republicans, and 2 were independents who caucused with the Democrats; the 2 remaining seats were vacant. A record 95 women were serving in Congress, of whom 78 (including 3 nonvoting delegates) were in the House and 17 in the Senate. The House had 41 African American members (including 2 nonvoting delegates), 28 Hispanics (including 1 nonvoting delegate), 9 Americans of Asian, Native Hawaiian, or Pacific Islander heritage (including 2 nonvoting delegates), and 1 American Indian. Among Senate members were 3 Hispanics and 2 Asian Pacific Americans; the lone African American senator in the 110th Congress, Barack Obama (D, IL), resigned following his election as president in Nov. 2008. Roland Burris (D, IL), also an African American, took over his seat Jan. 15, 2009.

Leadership. Nancy Pelosi (D, CA), the highest-ranking woman in Congressional history, retained her office as speaker of the House when the 111th Congress convened. Other leading House members were Majority Leader Steny Hoyer (D, MD), Minority Leader John Boehner (R, OH), Majority Whip James Clyburn (D, SC), and Minority Whip Eric Cantor (R, VA). The all-time longest continuously serving member of the House was John Dingell (D, MI), in office since 1955.

The top-ranking members of the Senate were Majority Leader Harry Reid (D, NV), Minority Leader Mitch McConnell (R, KY), Majority Whip Richard Durbin (D, IL), and Minority Whip Jon Kyl (R, AZ). Robert Byrd (D, WV), president pro tempore of the Senate, had set records both for Senate tenure (more than 51 years) and for combined House and Senate service by the time of his death June 28, 2010, at the age of 92. Byrd's successor as president pro tempore was 8-term Sen. Daniel Inouye (D, HI). Edward M. "Ted" Kennedy (D, MA) died in office Aug. 25, 2009, at the age of 77, after serving more than 46 years in the Senate.

Ethics. Freshman Rep. Eric Massa (D, NY) resigned his seat Mar. 8, 2010, after he was accused of sexually harassing a male aide. Rep. Mark Souder (R, IN), an 8-term congressman, left office May 21, 2010, after admitting that he had carried on an extramarital affair with a female staffer.

Rep. Charles Rangel (D, NY) surrendered his chairmanship of the House Ways and Means Committee Mar. 3, 2010, after he was cited by the House Ethics Committee for violating congressional travel restrictions. On July 29, the committee charged Rangel with 13 specific violations of House rules and federal statutes. In documents released Aug. 9, 2010, the committee alleged that Rep. Maxine Waters (D, CA) had violated House rules by allowing her chief of staff (who was also her grandson) to extend "special favors" to a failing bank in which her husband held an at-risk investment worth about $200,000.

Unfinished Business. Shortly before adjourning Sept. 30, 2010, for the midterm election campaign, Congress passed a stopgap measure—the Continuing Appropriations Act, 2011—that provided funds to keep the government running through Dec. 3. At the time of adjournment, Congress had passed no regular appropriations measures for the 2011 fiscal year. Legislators had also been unable to agree on major energy legislation or on whether to renew the so-called Bush tax cuts, which were passed in 2001 and 2003 under Pres. George W. Bush and were due to expire at the end of 2010.

For Further Information. Following is a summary of major actions taken by the 111th Congress through Oct. 31, 2010. Measures that have become law are identified by their Public Law (PL) number. Detailed legislative information can be accessed via the Internet at thomas.loc.gov.

Major Actions of Congress, 2009

Equal Pay. Lilly Ledbetter Fair Pay Act; makes it easier for women and minorities to challenge workplace pay discrimination. Passed by the Senate Jan. 22, 61-36; passed by the House Jan. 27, 250-177; signed by Pres. Obama Jan. 29 (PL 111-2).

Economic Stimulus. American Recovery and Reinvestment Act; $787 bil stimulus measure provides $212 bil in tax cuts and $575 bil in new federal spending, including $100 bil for education, $87 bil for Medicaid, $61 bil for transportation and housing infrastructure, $45 bil for energy conservation and alternative energy, and $39 bil for unemployment insurance benefits and job training; raises the national debt ceiling to $12.1 tril. Passed by the House Feb. 13, 246-183; passed by the Senate Feb. 13, 60-38; signed by Pres. Obama Feb. 17 (PL 111-5).

National Service. Serve America Act; expands the number of AmeriCorps community service volunteers from 75,000 to 250,000. Passed by the House Mar. 18, 321-105; passed by the Senate Mar. 26, 79-19; final votes by the House on resolving differences Mar. 31, 275-149; signed by Pres. Obama Apr. 21 (PL 111-13).

Credit Cards. Credit Card Accountability, Responsibility, and Disclosure (CARD) Act; limits ability of credit card issuers to hike interest rates and impose fees on cardholders. Passed by the House Apr. 30, 357-70; passed by the Senate (as amended) May 19, 90-5; final votes by the House on resolving differences May 20; signed by Pres. Obama May 22 (PL 111-24).

Sotomayor Confirmation. Senate acts on Pres. Barack Obama's May 26 nomination of Sonia Sotomayor to replace retiring Supreme Court Associate Justice David Souter. Confirmed by the Senate Aug. 6, 68-31.

Defense, War Funding, Hate Crimes. National Defense Authorization Act for 2010 fiscal year; appropriates $550 bil for Pentagon operations, provides $130 bil for Iraq and Afghanistan wars, and makes it a federal crime to assault someone based on sexual orientation or gender identity. Passed by the House Oct. 8, 281-146; passed by the Senate Oct. 22, 68-29; signed by Pres. Obama Oct. 28 (PL 111-84).

Major Actions of Congress, 2010

National Debt. Raises statutory debt limit to $14.3 tril. Passed by the Senate Jan. 28, 60-39; passed by the House Feb. 4, 233-187; signed by Pres. Obama Feb. 12 (PL 111-139).

Health Care. Patient Protection and Affordable Care Act; extends health insurance to some 32 mil Americans over a 10-year period; bars insurers from revoking coverage when people get sick or denying coverage for preexisting conditions; as of 2014, mandates that most U.S. citizens and legal residents obtain health insurance. Passed by the Senate Dec. 24, 60-39; final vote by the House on resolving differences Mar. 21, 219-212; signed by Pres. Obama Mar. 23 (PL 111-148).

Financial Reform. Dodd-Frank Wall Street Reform and Consumer Protection Act; establishes Consumer Financial Protection Bureau, expands federal oversight of derivative securities, limits speculative trading by banks, and expands federal authority to take over very large financial firms verging on collapse. Passed by the House June 30, 237-192; passed by the Senate July 15, 60-39; signed by Pres. Obama July 21 (PL 111-203).

War Funding. Supplemental appropriations provide $59 bil for troop surge in Afghanistan and other programs, raising cumulative spending on Afghanistan and Iraq wars to more than $1 tril since 2001. Passed by the House Mar. 24, 239-175; passed by the Senate (as amended) May 27, 67-28; final vote by the House on resolving differences July 22, 308-114; signed by Pres. Obama July 29 (PL 111-212).

Kagan Confirmation. Senate acts on Pres. Barack Obama's May 10 nomination of Elena Kagan to replace retiring Supreme Court Associate Justice John Paul Stevens. Confirmed by the Senate Aug. 5, 63-37.

Aid for Small Businesses. Small Business Jobs Act; establishes a $30 bil loan fund and provides $12 bil in tax incentives. Passed by the House June 17, 241-182; passed by the Senate (as amended) Sept. 16, 61-38; final vote by the House on resolving differences Sept. 23, 237-187; signed by Pres. Obama Sept. 27 (PL 111-240).

U.S. Supreme Court, 2009-10

The U.S. Supreme Court's 2009-10 term began Oct. 5, 2009, and concluded June 28, 2010, for its summer recess. The justices decided 87 cases (73 of which carried signed opinions), an increase from 79 in the 2008-09 term and 71 in 2007-08. The court issued 17 rulings (20%) by a 5-4 majority, a decline from 23 (29%) in 2008-09.

Membership. Chief Justice John G. Roberts Jr. presided over his fifth full term on the court. The eight associate justices, by order of seniority, were John Paul Stevens, Antonin Scalia, Anthony M. Kennedy, Clarence Thomas, Ruth Bader Ginsburg, Stephen G. Breyer, Samuel A. Alito Jr., and Sonia Sotomayor, who served her first term as David H. Souter's replacement. See also the historical listing of justices on p. 503. Justice Stevens announced Apr. 9, 2010, in a letter to Pres. Barack Obama, that he would retire at the end of the term after 34 years on the court; Pres. Obama nominated Solicitor General Elena Kagan May 10, 2010, to fill his vacated seat. Following confirmation hearings, Kagan was confirmed in the Senate by a 63-37 vote Aug. 5, 2010, as the 112th justice and fourth woman ever to serve on the Supreme Court; she was sworn in by Chief Justice Roberts Aug. 7, 2010.

In 2009-10, Roberts, Scalia, Thomas, and Alito tended to vote together as a conservative bloc, while Stevens, Ginsburg, Breyer, and Sotomayor comprised the court's liberal wing. Kennedy was often the swing vote on key 5-4 rulings. Chief Justice Roberts and Justice Kennedy were in the majority 91% of the time.

Following are summaries of major decisions issued during the 2009-10 term. Detailed information on Supreme Court activities and opinions may be accessed at www.supremecourtus.gov. A more extensive archive of recent and historic rulings is available through Cornell Law School's Legal Information Institute: www.law.cornell.edu/supct

Notable Supreme Court Decisions, 2009-10

Note: The columns on the right provide information on how each justice voted. Shading indicates a justice who was part of the majority. MO = justice authored majority opinion; CO = justice authored concurring opinion; DO = justice authored dissenting opinion. CD in part = justice authored opinion containing both concurring and dissenting opinions.

Stevens	Ginsburg	Breyer	Sotomayor	Kennedy	Scalia	Thomas	Alito	Roberts
	MO		CD in part	CO	CO		CO	

Business

In *Skilling v. United States* and *Black v. United States*, the Supreme Court June 24, 2010, ruled unanimously that a 1988 law used to prosecute corruption suspects was unconstitutionally vague. Known as the "honest services" law, the statute had been used to prosecute business leaders and politicians.

CD in part				MO	CO	CD in part		CO

Campaign Finance

The court Jan. 21, 2010, ruled 5-4 that a federal law barring corporations from using their general treasury funds to finance campaign advertisements was unconstitutional. The sweeping decision in *Citizens United v. Federal Election Commission* overturned two Supreme Court precedents, struck down provisions of two federal laws, and cast doubt on the validity of dozens of state laws aimed at minimizing corporate influence in electoral politics.

CO				MO		DO	DO	CD in part

Capital Punishment

In a 5-4 vote, the court ruled May 17, 2010, in *Graham v. Florida* that juveniles who had committed nonhomicide crimes could not be sentenced to life without parole, deeming the practice a violation of the Eighth Amendment's ban on "cruel and unusual punishment."

			DO	MO				
CO					MO	CO		
		MO		CO		DO	CO	

Defendants' Rights

The court June 1, 2010, ruled 5-4 that suspects must explicitly evoke their right to remain silent if they wanted to protect themselves from self-incrimination during a police interrogation. The decision, *Berghuis v. Thompkins*, circumscribed suspect protections that had been established by the 1966 case *Miranda v. Arizona*.

The court Feb. 24, 2010, ruled in *Maryland v. Shatzer* that police could resume an interrogation of a suspect 14 days after the suspect had requested the presence of a lawyer under his Miranda rights.

In *United States v. Comstock*, the court May 17, 2010, ruled 7-2 that the federal government could continue to detain "mentally ill, sexually dangerous" convicts after they had completed their prison terms.

DO		DO			CO	CO	MO	

Gun Rights

The court June 28, 2010, ruled 5-4 that state and local gun control laws must conform to the Second Amendment, which protected an individual's right to bear arms. The case, *McDonald v. Chicago*, expanded on the individual gun ownership protections first established in the 2008 case *District of Columbia v. Heller*.

		DO						MO

Terrorism

The court June 21, 2010, ruled 6-3 in *Holder v. Humanitarian Law Project* that provisions in the 2001 USA PATRIOT Act made it illegal to knowingly offer nonviolent assistance, including advice about peaceful resistance and petitioning the United Nations, to groups on the U.S. government's list of terrorist groups.

CO	MO			CO			DO	
DO		DO		MO	CO		CO	CO

Religion

In *Christian Legal Society v. Martinez*, the court June 28, 2010, ruled 5-4 that a public school had not violated the Constitution by refusing to officially recognize a Christian student group that limited the membership of homosexuals.

The court Apr. 28, 2010, in a 5-4 decision in *Salazar v. Buono*, overturned a lower court ruling that had forbidden the federal government from transferring ownership of a World War I memorial in the Mojave National Preserve to private hands. The memorial consisted of a cross, and critics said its presence on federal land violated the First Amendment.

Notable Quotes, 2010

National News

"If we ignore history, we're doomed to bail it out again."
—Phil Angelides, chair of the bipartisan Financial Crisis Inquiry Commission, Jan. 13, opening hearings into the 2008 financial crisis.

"It was a classic case of everyone getting caught napping."
—Obama adviser David Axelrod, on Republican Scott Brown's upset victory over Democrat Martha Coakley in a Jan. 19 special election to replace the late Sen. Ted Kennedy (D, MA).

"I didn't choose to tackle this issue to get some legislative victory under my belt. And by now, it should be fairly obvious that I didn't take on health care because it was good politics."
—Pres. Barack Obama, in his State of the Union address, Jan. 27.

"I think that it would be absurd to not consider what it is that I can potentially do to help our country."
—Sarah Palin, former Alaska governor and 2008 Republican vice-presidential candidate, on her possibly seeking the presidency in 2012; in an interview broadcast Feb. 7 on Fox News.

"I'm reminded of that every day."
—Sen. John McCain (R, AZ), during a televised health-care-reform summit Feb. 25, in response to Pres. Obama's admonishment that "We're not campaigning anymore. The election is over."

"I was also going to give a graduation speech in Arizona this weekend, but with my accent I was afraid they would try to deport me."
—Gov. Arnold Schwarzenegger (R, CA), making light of Arizona's controversial new immigration law, May 10, in a commencement speech at Emory University.

"I hear comments sometimes that large oil companies are greedy companies or don't care, but that is not the case with BP. We care about the small people."
—BP chairman Carl-Henric Svanberg, June 16, during efforts to contain and clean up the massive Gulf of Mexico oil spill that began Apr. 20. He later apologized for using the phrase "small people."

"It's like picking a team when you really don't want to root for either team."
—College student Kristin Johnson on the U.S.'s two major political parties, reported in a *New York Times* story, Sept. 3.

"The real battlefront, the real battle we must wage together today, is not between Muslims and non-Muslims, but it is between moderates of all faith traditions against the extremists of all the faith traditions. We must not let the extremists, whatever their faith, whatever their political persuasion, hijack the discourse and hijack the media."
—Imam Feisal Abdul Rauf, Sept. 13, speaking of his controversial plan to build an Islamic cultural center and mosque near the World Trade Center site in Manhattan.

"I dabbled into witchcraft—I never joined a coven. But I did, I did ... I dabbled into witchcraft. I hung around people who were doing these things … We went to a movie and then had a midnight picnic on a Satanic altar."
—Delaware Republican senatorial candidate Christine O'Donnell, in a tape recorded in 1999 for an unaired program, aired Sept. 17 by TV comedian/pundit Bill Maher.

War and Terrorism

"We dodged a bullet, but just barely."
—Pres. Barack Obama Jan. 5, on lapses that allowed a would-be terrorist to attempt to detonate a bomb aboard a Detroit-bound airliner on Christmas in 2009.

"While he may have terroristic tendencies at home, he does not have those on a plane."
—Photojournalist Najlah Feanny Hicks, on her 8-year-old son's inclusion on the government's terrorist watch list, in a *New York Times* story published Jan. 14.

"It ought to go with a healthy dose of thanks to George Bush."
—Former Vice Pres. Dick Cheney, Feb. 14 on ABC's *This Week*, countering Joe Biden's assertion that the Obama administration deserved credit for ending the war in Iraq.

"It's been a while."
—CIA Director Leon Panetta, answering question about when the U.S. last "had good intelligence" on whereabouts of al-Qaeda leader Osama bin Laden; June 27 on ABC's *This Week.*

"I have stories on all of you, photos of many, and I know a *Rolling Stone* reporter."
—Gen. Stanley McChrystal, former commander of U.S. and NATO forces in Afghanistan, at his July 23 retirement ceremony, joking about the *Rolling Stone* article that helped bring his 34-year military career to a close.

"Through this remarkable chapter in the history of the United States and Iraq, we have met our responsibility. Now, it's time to turn the page."
—Pres. Obama, Aug. 31, announcing that all U.S. combat units were now withdrawn from Iraq.

Around the World

"It's like trying to find a needle in a haystack, and each day the needles are disappearing."
—Rescue worker Steven Chin, Jan. 21, on continuing efforts to find survivors in the rubble after an earthquake hit southern Haiti Jan. 12.

"The greatest persecution of the church doesn't come from enemies on the outside but is born from the sin within the church."
—Pope Benedict XVI, May 11, speaking to reporters about the widespread sexual-abuse scandal in the Roman Catholic Church.

"I'm way too old to party this much, but you have to make an exception for something that took us 80 years to win."
—Soccer fan Gonzalo Fernandez, 61, celebrating Spain's July 11 World Cup win over the Netherlands.

"Pakistan is facing a slow-motion tsunami."
—Sec. Gen. Ban Ki-moon, addressing a special session of the UN General Assembly, Aug. 19, as summer floods left millions of Pakistanis homeless.

"You won't be left alone, nor have you been alone a single moment."
—Chilean Pres. Sebastián Piñera, Aug. 24, speaking on an intercom to 33 miners trapped a half-mile underground.

"It's like asking us to go naked."
—Oumeima Naceri, a young Muslim woman, speaking about legislation in France that would ban the wearing of face-concealing garments in public; the measure passed Sept. 14.

People

"When I was a little boy, I remember watching *The Tonight Show with Johnny Carson* and thinking, 'Someday, I'm going to host that show for 7 months.'"
—Conan O'Brien, in his monologue as *Tonight Show* host, Jan. 12; he quit the show after 7 months rather than agree to go on air a half-hour later so the time slot could go to Jay Leno.

"All I've ever wanted was to be able to just go to my own school's prom with my girlfriend."
—Constance McMillan, after her Fulton, MO, high school prom was cancelled Mar. 10, because she wanted to bring her girlfriend as her date and wear a tuxedo.

"Ain't nobody selling records unless you Susan Boyle."
—Rapper T-Pain, complaining that album sales were so sluggish he was not going to release new ones, in an interview with MTV reported June 16.

"I heard people say Larry didn't understand Lady Gaga. Who understands Lady Gaga?"
—Comic Bill Maher, June 29, disputing the idea that Larry King's just-announced plan to retire as host of *Larry King Live* was overdue.

"For 20 years, I thought about it. But you never think you're going to do it."
—Former flight attendant Steven Slater, after making headlines Aug. 9 for suddenly quitting his job and sliding down the plane's emergency chute onto the tarmac.

Offbeat News Stories, 2010

A Very Modest Proposal

Every state has a laundry list of state symbols—such as flowers, songs, and birds—that are considered emblematic. Wisconsin already has a state dance (polka), beverage (milk), and grain (corn). This year, they almost added the first state microbe in the nation.

On Apr. 15, 2010, the Wisconsin Assembly passed a bill naming *Lactococcus lactis* the official state microbe. Wisconsin is the nation's largest producer of cheese, and *Lactococcus lactis* is an important part of the cheese-making process. The bacterium converts the lactose in milk into lactic acid, which makes the milk curdle, forming curds that are used to make cheese. Without *Lactococcus lactis*, there would be no cheddar, no Colby, no cottage cheese—small wonder that the Assembly passed the measure, 56-41. But the Wisconsin Senate was not convinced, letting the bill die without a vote, so the microbes will have to wait for their time in the spotlight.

What the L?

What's in a name? Employees at the Chilean mint may have been asking that question after a spelling error was discovered on more than a million of the country's 50-peso coins: instead of CHILE, the coins read CHIIE. The error remained largely unnoticed until the *El Mercurio* newspaper broke the story in Dec. 2009.

The engraver explained that he had accidentally rubbed out the bottom of the "L" while fixing a different problem in 2008, and that he had no idea of the error until a coin collector brought it to the mint's attention in Oct. 2009. This was only one of several recent problems at the mint, and a number of employees—including the engraver—lost their jobs. While several sellers on eBay were billing this as a "rare coin" with an outrageous markup, they're actually all too common, and worth only the 10-cent face value.

To the Emergency Chute!

When flight attendant Steven Slater left his plane and his job via the escape chute on Aug. 9, it seemed to fulfill the fantasies of every American who'd dreamed of dramatically quitting a thankless job. According to officials, Slater claimed that a passenger on the flight from Pittsburgh to New York argued with him about luggage in the overhead bin, which hit him in the head during the argument. Slater requested an apology after the plane touched down, and the passenger cursed at him. Over the public address system, Slater cursed the passenger and announced that 20 years as a flight attendant were enough. He then deployed the emergency chute, grabbed a couple of beers from the galley, and slid down the chute. The police picked him up at home later that day and charged him with criminal mischief, reckless endangerment, and criminal trespass. He faced up to seven years in prison.

This story made Slater a folk hero, but whether the story is true remains an open question: police sources claimed that no passengers corroborated Slater's story, but at least two passengers publicly questioned those sources' claims. As of Nov. 2010, Slater had resigned from his job and accepted a plea agreement that included counseling and the cost of replacing the emergency chute.

Is the Hold Music by Usher?

Feel the need to unburden your soul, but don't have time to go to church? A new French service, *Le Fil du Seigneur* (Line to the Lord), offers help for busy would-be confessors. For 0.34 euro (48 cents) per minute, you can confess to an automated service, and 40% of that goes to charity. Most French people are nominally Catholic, but the vast majority doesn't attend church regularly. Camille Hautier, who set up the line in Feb. 2010 at the beginning of Lent, felt that offering a phone service on which people could confess and pray—in a broad, non-sacramental sense—might help put people back in touch with their religious roots. In its first week, the service picked up 300 calls. The service advised callers it was only an aid for prayer and meditation and could not offer absolution of serious or mortal sins. Nevertheless, the Conference of French Bishops issued a statement of disapproval, saying that it was "utterly unacceptable to allow confusion over the notion of confession," a sacrament that requires an actual priest.

License to Shill

Advertising is everywhere: on TV, radio, and the Internet. Billboards line roads, and ads appear on the sides of buses and buildings. It sometimes seems as if every possible empty place to put an ad has been exploited. Guess again.

The California Senate voted 25-0 on May 28 to investigate the possibility of a digital license plate that could display advertising when a car is parked or stopped for at least four seconds. The license number would be displayed as usual when cars were in motion but would be moved to the corner of the plate when ads were shown. California faced a $19 bil deficit and thought this could be a lucrative source of revenue. Lawmakers touted other possible benefits, including using the plate to display Amber alerts and emergency traffic updates. In theory, drivers would get to choose which ads, if any, to display.

Octopus Calls the World Cup

Would you go to an octopus for gambling tips? A lot of people did that during this year's World Cup matches. On 8 occasions, Paul, the "Psychic Octopus" who lived at an aquarium in Oberhausen, Germany, was presented with two boxes, each with a tasty mussel inside. Each box was labeled with a country's flag. Paul was said to favor whichever team whose box he chose first. He correctly predicted all 7 of Germany's games, including 2 losses, then forecast that Spain would beat the Netherlands in the final match, played on July 11. The odds of getting 8 predictions right by random chance are 1 in 256. Iranian president Mahmoud Ahmadinejad held up the octopus as an example of "Western propaganda and superstition." Paul was only one of many animals whose psychic abilities were tested during the tournament. The Netherlands had a rival octopus, Pauline; Mani the parakeet made picks in Singapore. But neither politicians nor statisticians are likely to be paid much attention when they get in the way of a good story about a psychic octopus.

Cell Phones Save the Day

A bus driver was supposed to arrive around 9 AM on May 19 to take middle-school students in Little Ferry, NJ, on a trip to the Six Flags Great Adventure amusement park. Unfortunately, she showed up at 7:45, when 30 students were waiting for the bus to their high school in Ridgefield Park. They got onboard, the driver drove off, and the students quickly realized that she was going the wrong way.

Once they figured out what was going on, the students tried to convince the driver that they weren't supposed to be going anywhere near Great Adventure—about 110 miles away—but she wouldn't listen to them. They called parents and school officials, but the driver refused to take the phone since it's illegal to talk on a cell phone while driving in New Jersey. Eventually, the school called the state police, which caught up with the bus. An officer boarded and redirected the bus back to the high school. Parents and school officials were particularly upset that the driver had left on a field trip without an adult chaperone being present.

The Day Is Saved!

On Apr. 29, Electron Boy saved the day in Seattle. It started with a phone call from Spider-Man, who told his fellow crimefighter that the evil Dr. Dark and Blackout Boy had trapped the entire Seattle Sounders soccer team. Electron Boy took off in a DeLorean sports car, driven by Moonshine Maiden and escorted by more than 20 police motorcycles on highways that had been shut down to speed his passage. By the end of the day, Electron Boy had freed the Sounders, saved an imprisoned electrical worker, and helped the police arrest the two supervillains at Seattle's Space Needle.

Don't let him know we told you this, but Electron Boy's secret identity is Erik Martin. He's a 13-year-old boy with cancer who always wanted to be a superhero, and the Make-A-Wish Foundation was determined to grant that wish. They pulled it off with the help of the Sounders, the Seattle police department, and hundreds of volunteers. Edgar Hansen and Jake Anderson of TV's *Deadliest Catch* played the villains. Erik called it "the best day of my life."

Historical Anniversaries, 2011

1911 – 100 Years Ago

The **Triangle Shirtwaist Co.** garment factory catches fire in New York Mar. 25; 146 mostly female workers die due to locked exits and inadequate fire safety measures.

In an antitrust case, the U.S. Supreme Court rules May 15 that **Standard Oil Co.** must be dissolved.

Amid revolutionary uprising in Mexico, Pres. **Porfirio Diaz resigns** May 25, ending more than 30 years in power.

Calbraith P. Rodgers is the **first to cross the United States by plane**, traveling from New York to Pasadena, CA, Sept. 17-Nov. 5, with a total flying time of 82 hours and 4 minutes.

Flooding on the Chang-Jiang (Yangtze) River in China kills an estimated 100,000 people in Sept.

Revolutionary soldiers—many of them followers of Sun Yat-sen—attack the governor general's office in Wuchang, China, Oct. 10, marking the **beginning of the Chinese revolution** and the end of the Ch'ing (Manchu) dynasty.

Art. Leonardo da Vinci's *Mona Lisa* is stolen from the Louvre. Marc Chagall's *I and the Village*; Henri Matisse's *L'atelier Rouge* [*The Red Studio*]; Pablo Picasso's *Still Life with a Bottle of Rum*; Egon Schiele's *Girl with Black Hair*.

Film. First film adaptation of *Anna Karenina*; Sarah Bernhardt in *La dame aux camélias* [*The Lady of the Camellias*].

Literature. *The Secret Garden* by Frances Hodgson Burnett; *Jennie Gerhardt* by Theodore Dreiser; *South Sea Tales* by Jack London; *Mother* by Kathleen Norris; *Ethan Frome* by Edith Wharton; *The Winning of Barbara Worth* by Harold Bell Wright.

Music. Richard Strauss's *Der Rosenkavalier*.

Nonfiction. *Principles of Scientific Management* by Frederick Taylor; *My Larger Education* by Booker T. Washington.

Pop music. Irving Berlin's "Alexander's Ragtime Band"; "Oh You Beautiful Doll" by A. Seymour Brown and Nathaniel Ayer; Harry Lauder's "Roamin' in the Gloamin'".

Science and technology. Marie Curie is awarded the Nobel Prize in Chemistry. IBM is formed as Computing-Tabulating-Recording Corp. Ernest Rutherford pioneers the planetary model of the atom. H. Kamerlingh Onnes develops theory on superconductivity of metals.

Sports. First Indianapolis 500 race is held May 30.

Theater. *Around the World*, *Bought and Paid For*, *Kismet*, *The Pink Lady*.

Miscellaneous. The Yale Peruvian Expedition of 1911 rediscovers Machu Picchu in Peru. The Carnegie Corporation is founded with initial endowment of $125 million.

1961 – 50 Years Ago

Congolese nationalist leader Patrice **Lumumba is assassinated** in Zaire Jan. 17.

43-year-old John F. **Kennedy is inaugurated** Jan. 20 as the youngest and first Catholic president.

Pres. Kennedy Mar. 13 announces the **Alliance for Progress**, a foreign-aid program to develop the economies of Latin American nations and combat communist influence.

Citizens of Washington, DC, are granted the right to vote in presidential elections with the ratification of the **23rd Amendment** Mar. 29.

Soviet cosmonaut Yuri Gagarin becomes the **first man in space** Apr. 12, orbiting Earth once on the *Vostok 1*; U.S. astronaut Alan B. Shepard Jr., aboard a *Mercury* capsule, becomes **first American in space** May 5.

A U.S.-directed invasion of Cuba's **Bay of Pigs** by Cuban exiles unsuccessfully attempts Apr. 17-19 to overthrow the regime of Prem. Fidel Castro.

South Africa withdraws from the British Commonwealth over member criticism of its **apartheid policies** and becomes an independent republic May 31.

Construction begins on the **Berlin Wall** Aug. 13 to block further East German exodus to the West.

Anti-segregation **"Freedom Rides"** protesting discrimination in transportation travel throughout the South in May and are met with violent opposition; hundreds of protesters are arrested.

Pres. Kennedy orders the first U.S. **combat detachment to Vietnam** late in the year.

Adolf **Eichmann**, considered the chief architect of the Nazi's "Final Solution," is convicted and **sentenced to death** in Jerusalem for war crimes Dec. 15.

Art. Christo and Jeanne-Claude create their first public "wrapped" work in Cologne, Germany. George Brecht's *Repository*; Jasper Johns's *Map*.

Film. Blake Edwards's *Breakfast at Tiffany's* starring Audrey Hepburn and George Peppard; Rodgers and Hammerstein's *Flower Drum Song*; *The Hustler* starring Paul Newman and Jackie Gleason; Stanley Kramer's *Judgment at Nuremberg* starring Burt Lancaster, Spencer Tracy, and Richard Widmark; Elia Kazan's *Splendor in the Grass* starring Warren Beatty and Natalie Wood; Akira Kurosawa's *Yojimbo*. *West Side Story* is released and goes on to win 10 Academy Awards.

Literature. Roald Dahl's *James and the Giant Peach*; Joseph Heller's *Catch-22*; Norton Juster's *The Phantom Tollbooth*; J. D. Salinger's *Franny and Zooey*; Muriel Spark's *The Prime of Miss Jean Brodie*; John Steinbeck's *The Winter of Our Discontent*. Grove Press publishes Henry Miller's *Tropic of Cancer* in the U.S., leading to landmark obscenity trial.

Music. Dmitri Shostakovich's *Symphony No. 12 (The Year of 1917)*; Robert Ward's *The Crucible.* Luciano Pavarotti begins his professional career in Puccini's *La Bohème*.

Nonfiction. Jane Jacobs's *The Death and Life of Great American Cities*; Webster's *Third New International Dictionary*.

Pop music. Bob Dylan debuts in Greenwich Village. Patsy Cline's "I Fall to Pieces"; Jimmy Dean's "Big Bad John"; Judy Garland's *Judy at Carnegie Hall*; Ben E. King's "Stand by Me"; Etta James's "At Last"; Bobby Lewis's "Tossin' and Turnin'"; Henry Mancini's "Moon River"; The Marcels' "Blue Moon"; Del Shannon's "Runaway".

Science and technology. Before a joint session of Congress, Pres. Kennedy commits the U.S. to putting a man on the moon before the end of the decade.

Sports. *Wide World of Sports* debuts on ABC. Roger Maris hits 61st home run, setting new single-season record; instant replay used during football games on ABC.

Television. Federal Communications Commission Chair Newton Minow calls television a "vast wasteland." *Gunsmoke* and *Wagon Train* are highest-rated shows. *The Dick Van Dyke Show*, *Mister Ed*, and *The Mike Douglas Show* debut.

Theater. Harold Pinter's *The Caretaker*; *How to Succeed in Business Without Really Trying*; *A Man for All Seasons*; Eugene Ionesco's *The Rhinoceros*; *Mary, Mary*.

Miscellaneous. The Peace Corps is created by an executive order of Pres. Kennedy.

1986 – 25 Years Ago

The space shuttle ***Challenger*** **explodes** 73 seconds after liftoff Jan. 28, killing 6 astronauts and "Teacher in Space" Christa McAuliffe.

Haiti's President-for-Life Jean Claude Duvalier, a.k.a. **Baby Doc, flees** Feb. 7, ending the Duvalier family's 28-year dictatorship.

"People Power" protests and international pressure oust Philippine Pres. Ferdinand Marcos, ending his 20-year rule and inaugurating Corazon Aquino Feb. 25.

Charging Libyan leader **Muammar al-Qaddafi** with ordering a Berlin dance club bombing that killed three, including an American serviceman Apr. 5, Pres. Ronald Reagan orders air strikes Apr. 14 on **"terrorist-related targets"** in Libya.

In the worst nuclear accident in history, **explosions and fire at the Chernobyl**, Ukraine nuclear power plant Apr. 26 leave thousands dead or disabled; radioactive material spreads throughout Europe.

More than 1,700 people are killed Aug. 21 when poisonous carbon-dioxide gas erupts from **Lake Nyos** in Cameroon.

Pres. Reagan's Supreme Court nominations—**William Rehnquist** as chief justice and **Antonin Scalia** as associate justice—are confirmed Sept. 17.

Pres. Reagan Oct. 22 signs into law a sweeping **tax code overhaul**, lowering maximum tax rates for individuals and corporations.

The **Iran-Contra affair** begins to come to light Nov. 25 as Pres. Reagan confirms that the proceeds of covert arms deals with Iran were diverted to weapons for Contra rebels in Nicaragua.

Congress overrides Pres. Reagan's veto and places **economic sanctions on South Africa** Oct. 2.

Art. *From Courbet to Cezanne: A New 19th Century* displays 130 works from the Musée D'Orsay at the Brooklyn Museum; Keith Haring's "Crack is Wack" mural in New York City; Andrew Wyeth's 247-item "Helga" series is revealed.

Film. James Cameron's *Aliens* starring Sigourney Weaver; David Lynch's *Blue Velvet*; Martin Scorsese's *The Color of Money* starring Paul Newman; John Hughes's *Ferris Bueller's Day Off*; Woody Allen's *Hannah and Her Sisters*; Jim Henson's *Labyrinth* starring David Bowie and Jennifer Connelly; *Lucas* starring Corey Haim; Francis Ford Coppola's *Peggy Sue Got Married* starring Kathleen Turner; Oliver Stone's *Platoon*; *Pretty in Pink* starring Molly Ringwald; *A Room With a View*; Alex Cox's *Sid and Nancy*; Rob Reiner's *Stand by Me*; Tony Scott's *Top Gun* starring Tom Cruise and Val Kilmer.

Literature. Robert Penn Warren named America's poet laureate by the Library of Congress. *The Old Devils* by Kingsley Amis; *Maus: A Survivor's Tale, Part I* by Art Spiegelman; *A Summons to Memphis* by Peter Taylor.

Music. *The Flight into Egypt* by John Harbison.

Nonfiction. *Voyagers to the West* by Bernard Bailyn; *Fatherhood* by Bill Cosby; *Arctic Dreams* by Barry Lopez; *Bearing the Cross: Martin Luther King Jr. and the Southern Christian Leadership Conference* by David J. Garrow.

Pop music. First artists are inducted into Rock and Roll Hall of Fame; Dolly Parton's "Dollywood" theme park opens. The Bangles' "Walk Like an Egyptian," Elvis Costello's *King of America*; Falco's "Rock Me Amadeus"; Whitney Houston's "Greatest Love of All"; Madonna's "Papa Don't Preach"; Pet Shop Boys' "West End Girls"; Prince's "Kiss"; Run-DMC's *Raising Hell*; Paul Simon's *Graceland*; The Smiths' *The Queen Is Dead*; Sonic Youth's *EVOL.*

Science and technology. AZT is the first medication to show promise treating AIDS. Study shows vast depletion of ozone layer over Antarctica. Halley's Comet reappears.

Sports. Greg LeMond becomes first American to win Tour de France. 20-year-old Mike Tyson KOs Trevor Berbick to become youngest heavyweight champion in history.

Television. Oprah Winfrey's syndicated talk-show begins broadcasting; *Designing Women*, *L.A. Law*, *Pee-wee's Playhouse* debut.

Theater. *I'm Not Rappaport* wins Tony for Best Play.

Miscellaneous. Martin Luther King Day is observed as a federal holiday for the first time Jan. 20. Media reporting of a crack cocaine "epidemic" reaches fever pitch. "Hands Across America" event raises funds for hunger and homeless charities. 100th birthday celebration for Statue of Liberty.

WORLD ALMANAC EDITORS' PICKS
2010 Time Capsule

The editors of *The World Almanac* have selected the following items as representative of the year 2010:

1. A copy of the Patient Protection and Affordable Care Act, the controversial health-care bill signed by Pres. Barack Obama Mar. 23, 2010.
2. Apple's iPad tablet computer, released in Apr. 2010, loaded with the year's hit movies and TV shows, including *Avatar*, which smashed box-office records in early 2010 to become the top-grossing movie of all time.
3. Video replay of umpire Jim Joyce's blown call that cost Detroit Tigers pitcher Armando Gallaraga a perfect game June 2, 2010.
4. A vuvuzela, one of the thousands of plastic horns that droned incessantly in the South African stadiums hosting the World Cup soccer tournament June-July 2010.
5. The *Rolling Stone* article containing comments about the Obama administration and NATO allies made by Afghanistan commander Gen. Stanley McChrystal and his staff, which cost the general his job June 23, 2010, when Pres. Obama accepted his resignation.
6. Vial of ash from the Eyjafjallajökull volcano that erupted Apr. 14, 2010, in Iceland, disrupting air traffic and stranding millions of travelers throughout Europe.
7. A tar ball retrieved from a Gulf shore beach during the three-month spill that followed the Apr. 20, 2010, blowout of the Deepwater Horizon drilling rig.
8. A 2010 Census form, which 72% of Americans had filled out and returned by mail as of Apr. 28, 2010.
9. Much-lampooned campaign video released Oct. 4, 2010, by Christine O'Donnell, the Republican nominee for the U.S. Senate from Delaware, which begins with O'Donnell saying, "I'm not a witch… I'm you."
10. The *Fénix 2* capsule that rescued 33 Chilean miners from their underground captivity Oct. 13, 2010, after more than two months of confinement following a cave-in.

ECONOMICS

Index of Leading Economic Indicators

Source: The Conference Board

The index of leading economic indicators is used to project the U.S. economy's performance. The index is made up of 10 measurements of economic activity that tend to change direction in advance of the overall economy. The index has predicted economic downturns from 8 to 20 months in advance and recoveries from 1 to 10 months in advance; however, it can be inconsistent, and has occasionally shown "false signals" of recessions. The following components make up the Leading Economic Index:

- Average weekly hours of production workers in manufacturing
- Average weekly initial claims for unemployment insurance, state programs
- Manufacturers' new orders for consumer goods and materials, adjusted for inflation
- Vendor performance (slower deliveries diffusion index)
- Stock prices, 500 common stocks
- Manufacturers' new orders, nondefense capital goods industries, adjusted for inflation
- New private housing units authorized by local building permits
- Money supply: M-2, adjusted for inflation
- Interest rate spread, 10-yr Treasury bonds less federal funds
- Consumer expectations (researched by Univ. of Michigan)

U.S. Gross Domestic Product, Gross National Product, Net National Product, National Income, and Personal Income, 1970-2009

Source: Bureau of Economic Analysis, U.S. Dept. of Commerce
(in billions of current dollars, revised)

	1970	1980	1990	2000	2005	2007	2008	2009
Gross domestic product	**$1,038.3**	**$2,788.1**	**$5,800.5**	**$9,951.5**	**$12,638.4**	**$14,061.8**	**$14,369.1**	**$14,119.0**
Gross national product	**1,044.7**	**2,822.3**	**5,835.0**	**9,989.2**	**12,735.5**	**14,185.1**	**14,543.6**	**14,265.3**
Less: Consumption of fixed capital	108.3	344.1	691.2	1,184.3	1,541.4	1,767.5	1,849.2	1,861.1
Net national product	**936.4**	**2,478.2**	**5,143.7**	**8,804.9**	**11,194.2**	**12,417.6**	**12,694.4**	**12,404.2**
Less: Statistical discrepancy	6.9	45.3	84.2	–134.0	–79.7	21.1	136.6	179.1
Equals: National income	**929.5**	**2,433.0**	**5,059.5**	**8,938.9**	**11,273.8**	**12,396.4**	**12,557.8**	**12,225.0**
Less: Corporate profits with inventory valuation and capital consumption adjustments	82.5	201.4	434.4	819.2	1,456.1	1,510.6	1,262.8	1,258.0
Taxes on production and imports less subsidies[1]	86.6	190.5	398.0	662.7	869.3	972.6	992.3	964.4
Contributions for government social insurance	46.4	166.2	410.1	705.8	872.7	959.5	987.2	970.3
Net interest and miscellaneous payments on assets	39.1	181.8	444.2	539.3	543.0	731.6	812.8	784.3
Business current transfer payments (net)	4.5	14.7	40.1	87.0	95.9	103.3	121.7	134.0
Current surplus of government enterprises	0.0	–5.1	1.6	9.1	–3.5	–11.8	–16.7	–13.2
Wage accruals less disbursements	0.0	0.0	0.1	0.0	5.0	–6.3	–5.0	5.0
Plus: Personal income receipts on assets	93.5	338.7	920.8	1,360.7	1,542.0	2,057.0	2,109.3	1,919.7
Personal current transfer receipts	74.7	279.5	594.9	1,083.0	1,508.6	1,718.5	1,879.2	2,132.8
Equals: Personal income	**838.6**	**2,301.5**	**4,846.7**	**8,559.4**	**10,485.9**	**11,912.3**	**12,391.1**	**12,174.9**

(1) subsidies are included net of the current surplus of government enterprises.

U.S. Gross Domestic Product, 1998-2010

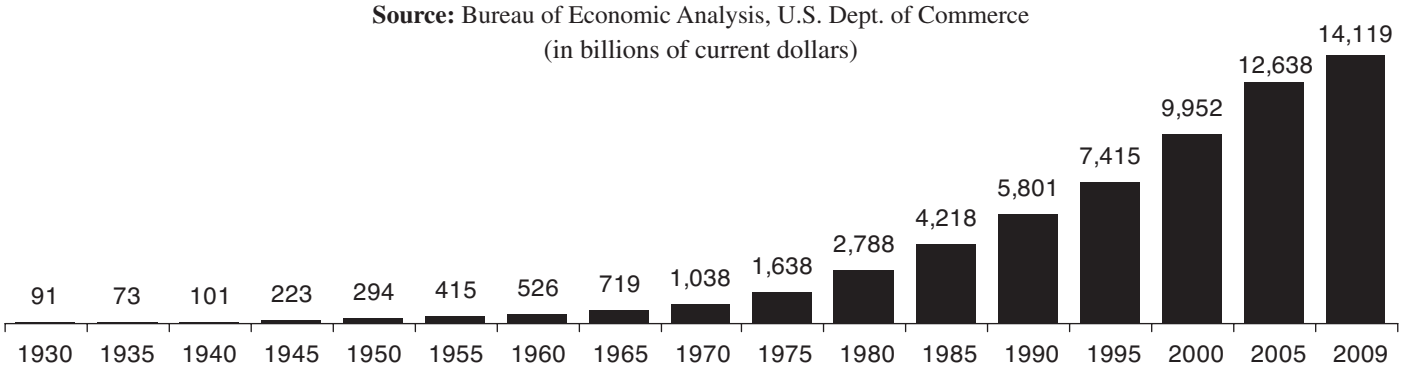
Source: Bureau of Economic Analysis, U.S. Dept. of Commerce
(in billions of current dollars)

	1998	2008	4th quarter 2009	1st quarter 2010	2nd quarter 2010[1]
Gross domestic product	**$8,793.5**	**$14,369.1**	**$14,277.3**	**$14,446.4**	**$14,578.7**
Personal consumption expenditures	**5,918.5**	**10,104.5**	**10,131.5**	**10,230.8**	**10,285.4**
Nondurable goods	1,330.0	2,296.0	2,269.0	2,319.3	2,303.4
Services	3,808.5	6,725.0	6,818.6	6,850.9	6,907.9
Gross private domestic investment	**1,510.8**	**2,096.7**	**1,637.7**	**1,739.7**	**1,841.8**
Fixed investment	1,447.1	2,137.8	1,681.9	1,689.8	1,761.4
Nonresidential	1,061.1	1,665.3	1,330.9	1,349.6	1,404.2
Structures	275.1	582.4	398.2	380.1	381.5
Equipment and software	786.0	1,082.9	932.7	969.5	1,022.7
Residential	385.9	472.5	351.0	340.2	381.5
Change in private inventories	63.7	–41.4	–44.2	50.0	80.4
Net exports of goods and services	**–161.8**	**–710.4**	**–426.4**	**–479.9**	**–539.3**
Exports	953.9	1,843.4	1,689.9	1,757.8	1,817.9
Goods	680.9	1,295.1	1,157.6	1,213.0	1,262.8
Services	273.0	548.3	532.3	544.8	555.1
Imports	1,115.7	2,553.8	2,116.3	2,237.6	2,357.1
Goods	930.8	2,148.8	1,731.8	1,843.5	1,957.2
Services	184.9	405.0	384.5	394.1	400.0
Government consumption expenditures and gross investment	**1,526.1**	**2,878.3**	**2,934.5**	**2,955.7**	**2,990.8**
National defense	346.1	737.3	785.4	796.3	813.0
Nondefense	184.9	342.5	374.5	381.8	393.7
State and local	995.0	1,798.5	1,774.7	1,777.6	1,784.1

(1) Seasonally adjusted at annual rates.

U.S. Gross Domestic Product, 1930-2009

Source: Bureau of Economic Analysis, U.S. Dept. of Commerce
(in billions of current dollars)



Consumer Price Index

The Consumer Price Index (CPI) is a measure of the change in prices over time of one or more kinds of basic consumer goods and services.

From Jan. 1978, the Bureau of Labor Statistics began publishing CPIs for two population groups: (1) a CPI for all urban consumers (CPI-U), which covers about 87% of the total population; and (2) a CPI for urban wage earners and clerical workers (CPI-W), which covers about 32% of the total population. The CPI-U includes, in addition to wage earners and clerical workers, groups such as professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force.

The CPI is based on prices of food, clothing, shelter, and fuels; transportation fares; charges for doctors' and dentists' services; drug prices; and prices of other goods and services bought for day-to-day living. The index currently measures price changes from a designated reference period, 1982-84, which equals 100.0. Use of this reference period began in Jan. 1988.

U.S. Consumer Price Index, 2008-10

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

(Data are semiannual averages of monthly figures, specified for all urban consumers; % change not annualized. **1982-84 = 100**, unless otherwise noted.)

	1st half 2009	% change, 2nd half 2008 to 1st half 2009	2nd half 2009	% change, 1st half 2009 to 2nd half 2009	1st half 2010	% change, 2nd half 2009 to 1st half 2010
All items	**213.1**	**–1.4%**	**216.0**	**1.3%**	**217.5**	**0.7%**
Food, beverages	218.7	0.5	217.8	–0.4	219.4	0.8
Housing	217.3	–0.2	216.8	–0.2	216.1	–0.4
Apparel	120.0	1.0	120.2	0.2	119.8	–0.3
Transportation	173.0	–10.1	185.6	7.3	192.3	3.6
Medical care	373.3	2.1	378.0	1.2	386.6	2.3
Recreation[1]	114.3	0.4	114.2	–0.1	113.5	–0.6
Education and communication[1]	126.3	0.9	128.5	1.7	129.2	0.6
Other goods, services	362.3	4.0	374.9	3.5	379.0	1.1
Services	258.5	0.3	259.8	0.5	260.4	0.2
Special indexes						
All items less food	212.3	–1.7	215.7	1.6	217.3	0.7
Commodities less food	144.0	–6.1	150.2	4.3	153.0	1.9
Nondurables	195.4	–5.0	201.6	3.2	204.9	1.6
Energy	183.8	–21.1	202.4	10.1	210.2	3.9
All items less energy	217.8	0.8	219.0	0.5	220.0	0.4

(1) Dec. 1997 = 100.

U.S. Consumer Price Indexes (CPI-U), Annual Percent Change, 1992-2009

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
All items	**3.0**	**3.0**	**2.6**	**2.8**	**3.0**	**2.3**	**1.6**	**2.2**	**3.4**	**2.8**	**1.6**	**2.3**	**2.7**	**3.4**	**3.2**	**2.8**	**3.8**	**–0.4**
Food	1.2	2.2	2.4	2.8	3.3	2.6	2.2	2.1	2.3	3.2	1.8	2.2	3.4	2.4	2.4	4.0	5.5	1.8
Shelter	3.3	3.0	3.1	3.2	3.2	3.1	3.3	2.9	3.3	3.7	3.7	2.4	2.7	2.6	3.4	3.7	2.5	1.1
Rent, residential	2.5	2.3	2.5	2.5	2.7	2.9	3.2	3.1	3.6	4.5	4.0	2.9	2.7	3.0	3.6	4.3	3.7	2.3
Fuel and other utilities	2.2	3.0	1.0	0.7	3.1	2.6	–1.8	0.2	7.1	8.9	–4.4	7.6	4.8	10.6	8.8	3.0	9.7	–4.2
Apparel and upkeep	2.5	1.4	–0.2	–1.0	–0.2	0.9	0.1	–1.3	–1.3	–1.8	–2.6	–2.5	–0.4	–0.7	0.0	–0.4	–0.1	1.0
Private transportation	2.2	2.3	3.1	3.7	2.7	0.7	–2.2	1.9	6.1	0.6	–0.8	3.2	3.8	6.8	4.0	2.1	5.7	–8.5
New cars	2.5	2.4	3.4	2.2	1.7	0.2	–0.6	–0.3	–0.1	–0.5	–1.2	–1.5	–0.6	0.6	–0.2	–1.0	–1.5	1.1
Gasoline	–0.2	–1.3	0.5	1.6	6.1	–0.1	–13.4	9.3	28.5	–3.6	–6.5	16.5	18.2	21.9	12.9	8.2	16.6	–27.4
Public transportation	1.7	10.3	3.0	2.3	3.4	2.6	1.9	3.9	6.0	0.5	–1.5	0.9	–0.1	3.9	4.3	1.5	8.9	–5.7
Medical care	7.4	5.9	4.8	4.5	3.5	2.8	3.2	3.5	4.1	4.6	4.7	4.0	4.4	4.2	4.0	4.4	3.7	3.2
Entertainment/ recreation[1,2]	2.8	2.5	2.9	2.5	3.4	2.1	1.5	0.9	1.3	1.5	1.2	1.2	1.0	0.7	1.4	0.5	1.6	0.9
Education[2]	—	—	6.3	5.6	5.3	5.0	4.9	4.8	5.1	5.3	6.3	1.8	6.9	6.3	6.2	5.7	5.8	5.3
Commodities	2.0	1.9	1.7	1.9	2.6	1.4	0.1	1.8	3.3	1.0	–0.7	1.0	2.3	3.6	2.4	2.1	4.3	–2.9

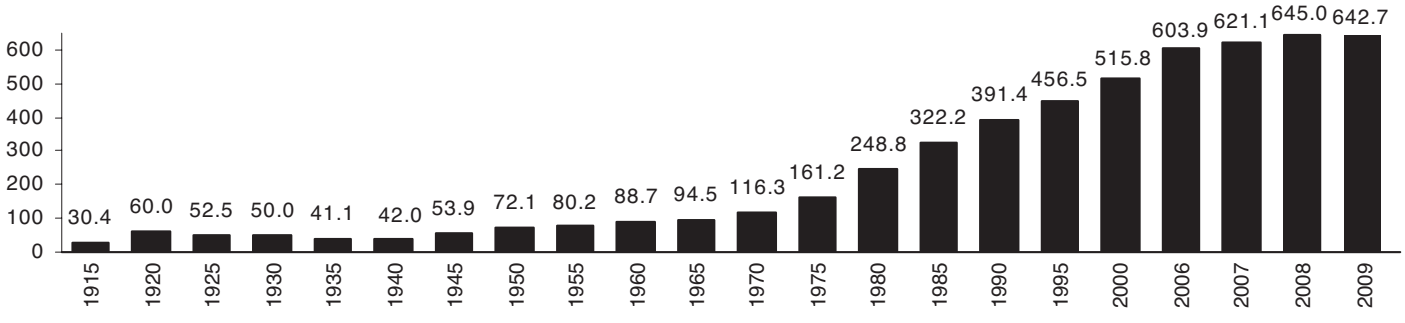
Note: The Consumer Price Index CPI-U measures average change in prices of goods and services purchased by all urban consumers. 1982-84 = 100, unless otherwise noted. (1) The Bureau of Labor Statistics reclassified Entertainment as Recreation in 1997. (2) Dec. 1997 = 100.

Consumer Price Index, 1915-2009

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

(Annual averages of monthly figures, specified for all urban consumers. **1967 = 100**.)

Until 2009, prices as measured by the U.S. Consumer Price Index had risen steadily since World War II. What cost $1.00 in 1967 cost about $0.30 in 1915, $0.54 in 1945, and $6.43 in 2009.



U.S. Consumer Price Indexes for Selected Items and Groups, 1970-2009

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

(Annual averages of monthly figures, specified for all urban consumers. **1982-84 = 100**, unless otherwise noted.)

	1970	1975	1980	1985	1990	1995	2000	2005	2006	2007	2008	2009
ALL ITEMS	**38.8**	**53.8**	**82.4**	**107.6**	**130.7**	**152.4**	**172.2**	**195.3**	**201.6**	**207.3**	**215.3**	**214.5**
Food and beverages	**40.1**	**60.2**	**86.7**	**105.6**	**132.1**	**148.9**	**168.4**	**191.2**	**195.7**	**203.3**	**214.2**	**218.2**
Food	39.2	59.8	86.8	105.6	132.4	148.4	167.8	190.7	195.2	202.9	214.1	218.0
Food at home	39.9	61.8	88.4	104.3	132.3	148.8	167.9	189.8	193.1	201.2	214.1	215.1
Cereals and bakery products	37.1	62.9	83.9	107.9	140.0	167.5	188.3	209.0	212.8	222.1	244.9	252.6
Meats, poultry, fish, and eggs	44.6	67.0	92.0	100.1	130.0	138.8	154.5	184.7	186.6	195.6	204.7	203.8
Dairy products	44.7	62.6	90.9	103.2	126.5	132.8	160.7	182.4	181.4	194.8	210.4	197.0
Fruits and vegetables	37.8	56.9	82.1	106.4	149.0	177.7	204.6	241.4	252.9	262.6	278.9	272.9
Sugar and sweets	30.5	65.3	90.5	105.8	124.7	137.5	154.0	165.2	171.5	176.8	186.6	196.9
Fats and oils	39.2	73.5	89.3	106.9	126.3	137.3	147.4	167.7	168.0	172.9	196.8	201.2
Nonalcoholic beverages	27.1	41.3	91.4	104.3	113.5	131.7	137.8	144.4	147.4	153.4	160.0	163.0
Other foods	39.6	58.9	83.6	106.4	131.2	151.1	172.2	182.5	185.0	188.2	198.1	205.5
Food away from home	37.5	54.5	83.4	108.3	133.4	149.0	169.0	193.4	199.4	206.7	215.8	223.3
Alcoholic beverages	52.1	65.9	86.4	106.4	129.3	153.9	174.7	195.9	200.7	207.0	214.5	220.8
Housing	**36.4**	**50.7**	**81.1**	**107.7**	**128.5**	**148.5**	**169.6**	**195.7**	**203.2**	**209.6**	**216.3**	**217.1**
Shelter	35.5	48.8	81.0	109.8	140.0	165.7	193.4	224.4	232.1	240.6	246.7	249.4
Rent of primary residence	46.5	58.0	80.9	111.8	138.4	157.8	183.9	217.3	225.1	234.7	243.3	248.8
Fuel and other utilities	29.1	45.4	75.4	106.5	111.6	123.7	137.9	179.0	194.7	200.6	220.0	210.7
Gas (piped) and electricity	25.4	40.1	71.4	107.1	109.3	119.2	128.0	166.5	182.1	186.3	202.2	193.6
Household furnishings and operations	46.8	63.4	86.3	103.8	113.3	123.0	128.2	126.1	127.0	126.9	127.8	128.7
Apparel	**59.2**	**72.5**	**90.9**	**105.0**	**124.1**	**132.0**	**129.6**	**119.5**	**119.5**	**119.0**	**118.9**	**120.1**
Men's and boys'	62.2	75.5	89.4	105.0	120.4	126.2	129.7	116.1	114.1	112.4	113.0	113.6
Women's and girls'	71.8	85.5	96.0	104.9	122.6	126.9	121.5	110.8	110.7	110.3	107.5	108.1
Footwear	56.8	69.6	91.8	102.3	117.4	125.4	123.8	122.6	123.5	122.4	124.2	126.9
Transportation	**37.5**	**50.1**	**83.1**	**106.4**	**120.5**	**139.1**	**153.3**	**173.9**	**180.9**	**184.7**	**195.5**	**179.3**
Private	37.5	50.6	84.2	106.2	118.8	136.3	149.1	170.2	177.0	180.8	191.0	174.8
New vehicles	53.0	62.9	88.4	106.1	121.4	139.0	142.8	137.9	137.6	136.3	134.2	135.6
Used cars and trucks	31.2	43.8	62.3	113.7	117.6	156.5	155.8	139.4	140.0	135.7	134.0	127.0
Gasoline	27.9	45.1	97.5	98.6	101.0	99.8	128.6	194.7	219.9	238.0	277.5	201.6
Public	35.2	43.5	69.0	110.5	142.6	175.9	209.6	217.3	226.6	230.0	250.5	236.3
Medical care	**34.0**	**47.5**	**74.9**	**113.5**	**162.8**	**220.5**	**260.8**	**323.2**	**336.2**	**351.1**	**364.1**	**375.6**
Entertainment/recreation[1]	**47.5**	**62.0**	**83.6**	**107.9**	**132.4**	**153.9**	**103.3**	**109.4**	**110.9**	**111.4**	**113.3**	**114.3**
Other goods and services	**40.9**	**53.9**	**75.2**	**114.5**	**159.0**	**206.9**	**271.1**	**313.4**	**321.7**	**333.3**	**345.4**	**368.6**
Tobacco products	43.1	54.7	72.0	116.7	181.5	225.7	394.9	502.8	519.9	554.2	588.7	730.3
Personal care	43.5	57.9	81.9	106.3	130.4	147.1	165.6	185.6	190.2	195.6	201.3	204.6
Personal care products	42.7	58.0	79.6	107.6	128.2	143.1	153.7	154.4	155.8	158.3	159.3	162.6
Personal care services	44.2	57.7	83.7	108.9	132.8	151.5	178.1	203.9	209.7	216.6	223.7	227.6

(1) Dec. 1997 = 100. Entertainment was reclassified as Recreation in 1997.

Consumer Price Indexes by Region and Selected Cities, 2007-09

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

(For all urban consumers; % change not annualized. **1982-84 = 100**, unless otherwise noted.)

	Semiannual averages				% change from preceding semiannual average			
	1st half 2008	2nd half 2008	1st half 2009	2nd half 2009	1st half 2008	2nd half 2008	1st half 2009	2nd half 2009
U.S. CITY AVERAGE	**214.4**	**216.2**	**213.1**	**215.9**	**2.6%**	**0.8%**	**–1.4%**	**1.3%**
Northeast urban	**227.9**	**230.7**	**227.6**	**231.1**	**2.5**	**1.2**	**–1.4**	**1.6**
Size A—Pop. greater than 1.5 mil	229.9	233.1	230.0	233.4	2.3	1.4	–1.3	1.5
Size B/C—Pop. 50,000-1.5 mil[1]	135.4	136.7	134.6	137.1	3.2	0.9	–1.5	1.8
Midwest urban	**204.8**	**206.0**	**202.5**	**205.6**	**2.6**	**0.6**	**–1.7**	**1.5**
Size A—Pop. greater than 1.5 mil	206.0	207.0	203.7	206.5	2.5	0.5	–1.6	1.4
Size B/C—Pop. 50,000-1.5 mil[1]	131.0	132.0	129.7	131.7	2.7	0.7	–1.7	1.6
Size D—Nonmetro. (pop. less than 50,000)	200.4	202.3	197.9	202.2	2.6	0.9	–2.2	2.2
South urban	**207.8**	**209.6**	**206.5**	**209.2**	**2.7**	**0.9**	**–1.5**	**1.3**
Size A—Pop. greater than 1.5 mil	210.0	212.1	208.8	211.2	2.6	1.0	–1.5	1.1
Size B/C—Pop. 50,000-1.5 mil[1]	132.2	133.1	131.2	133.0	2.7	0.7	–1.4	1.4
Size D—Nonmetro. (pop. less than 50,000)	208.6	211.6	208.1	211.9	3.5	1.4	–1.6	1.8
West urban	**219.0**	**220.3**	**217.8**	**219.9**	**2.5**	**0.6**	**–1.1**	**1.0**
Size A—Pop. greater than 1.5 mil	222.5	224.1	221.7	223.8	2.6	0.7	–1.1	1.0
Size B/C—Pop. 50,000-1.5 mil[1]	133.1	133.5	131.8	133.1	2.7	0.3	–1.3	1.0
SELECTED AREAS								
Atlanta, GA	206.7	206.2	200.1	201.9	2.4	–0.3	–2.9	0.9
Boston-Brockton-Nashua, MA-NH-ME-CT	234.2	236.5	231.8	235.8	2.3	1.0	–2.0	1.7
Chicago-Gary-Kenosha, IL-IN-WI	212.2	212.9	208.5	211.5	2.7	0.3	–2.0	1.4
Cleveland-Akron, OH	203.0	203.1	199.5	201.5	2.8	0.0	–1.8	1.0
Dallas-Fort Worth, TX	200.1	203.5	199.5	201.6	2.4	1.7	–2.0	1.1
Detroit-Ann Arbor-Flint, MI	204.5	205.0	202.4	204.6	1.9	0.3	–1.3	1.1
Houston-Galveston-Brazoria, TX	189.4	190.6	189.5	191.5	2.5	0.6	–0.6	1.1
L.A.-Riverside-Orange County, CA	224.4	225.6	221.9	224.5	2.7	0.6	–1.6	1.1
Miami-Fort Lauderdale, FL	221.2	223.1	220.7	222.1	3.0	0.8	–1.1	0.6
New York-Northern NJ-Long Island, NY-NJ-CT-PA	233.8	237.8	235.3	238.3	2.2	1.7	–1.0	1.3
Philadelphia-Wilmington-Atlantic City, PA-DE-NJ-MD	223.5	224.7	221.5	225.1	2.2	0.5	–1.5	1.7
San Francisco-Oakland-San Jose, CA	221.7	223.8	223.3	225.5	2.0	0.9	–0.2	1.0
Seattle-Tacoma-Bremerton, WA	223.6	225.9	225.6	226.5	2.8	1.0	–0.1	0.4
Washington-Baltimore, DC-MD-VA-WV[2]	138.5	140.5	138.8	140.9	2.6	1.5	–1.2	1.5

(1) Dec. 1996 = 100. (2) Nov. 1996 = 100.

U.S. National Income by Industry, 2003-09

Source: Bureau of Economic Analysis, U.S. Dept. of Commerce; in billions of current dollars; as of Sept. 30, 2010

	2003	2004	2005	2006	2007	2008	2009
National income without capital consumption adjustment	**$9,650.3**	**$10,373.9**	**$11,353.9**	**$12,126.9**	**$12,500.0**	**$12,444.2**	**$12,173.0**
Domestic industries	**9,581.6**	**10,282.7**	**11,256.8**	**12,054.4**	**12,376.7**	**12,269.7**	**12,026.8**
Private industries	**8,364.3**	**9,006.9**	**9,921.4**	**10,655.9**	**10,908.1**	**10,726.9**	**10,429.5**
Agriculture, forestry, fishing, and hunting	83.3	104.1	92.8	91.9	110.5	119.0	99.6
Mining	103.3	125.0	163.1	198.8	204.5	253.6	196.1
Utilities	136.8	149.1	161.3	196.5	198.4	181.4	184.3
Construction	534.8	583.3	657.0	701.8	685.8	626.1	518.6
Manufacturing	1,074.4	1,171.6	1,304.8	1,400.9	1,409.1	1,330.6	1,215.2
Durable goods	613.9	659.6	744.0	791.3	800.9	755.3	689.8
Nondurable goods	460.6	512.0	560.8	609.5	608.2	575.3	525.4
Wholesale trade	582.3	634.3	688.4	741.2	769.1	756.6	706.1
Retail trade	759.8	789.2	859.6	903.8	902.1	834.0	812.4
Transportation and warehousing	275.9	301.3	332.9	360.7	361.0	364.4	337.9
Information	309.8	357.6	408.1	424.5	452.6	442.3	423.2
Finance, insurance, real estate, rental, leasing	1,682.1	1,785.2	1,998.5	2,140.8	2,160.3	2,061.8	2,200.7
Professional and business services	1,272.8	1,349.2	1,490.3	1,623.2	1,684.9	1,737.1	1,684.8
Educ. services, health care, social assistance	873.5	937.7	993.5	1,059.4	1,114.8	1,184.9	1,244.8
Arts, entertainment, recreation, accommodation, food service	377.0	406.1	434.8	460.6	490.3	475.3	453.0
Other services, except government	298.5	313.1	336.3	351.7	364.8	359.8	352.8
Government	**1,217.3**	**1,275.8**	**1,335.3**	**1,398.5**	**1,468.6**	**1,542.8**	**1,597.2**
Non-domestic industries	**68.7**	**91.2**	**97.1**	**72.4**	**123.3**	**174.5**	**146.3**

Note: Figures may not add up to totals because of rounding. Total national income also includes income from outside the U.S.

U.S. National Income by Type, 1930-2009

Source: Bureau of Economic Analysis, U.S. Dept. of Commerce; in billions of current dollars; as of Sept. 30, 2010

	1930	1940	1950	1960	1970	1980	1990	2000	2008	2009
NATIONAL INCOME[1,2]	**$83.1**	**$90.9**	**$263.9**	**$473.9**	**$929.5**	**$2,433.0**	**$5,059.5**	**$8,938.9**	**$12,557.8**	**$12,225.0**
Employee compensation	**46.9**	**52.2**	**155.3**	**296.4**	**617.2**	**1,647.6**	**3,326.3**	**5,788.8**	**8,060.8**	**7,811.7**
Wage and salary accruals	46.2	49.9	147.3	272.9	551.6	1,373.4	2,741.2	4,827.7	6,554.0	6,279.1
Government	5.2	8.5	22.6	49.2	117.2	261.5	519.0	779.7	1,144.0	1,173.6
Supplements to wages and salaries	0.7	2.3	8.0	23.6	65.7	274.2	585.1	961.2	1,506.8	1,532.6
Employer contributions for employee pension and insurance funds	0.6	0.9	4.7	14.3	41.8	185.2	378.6	615.9	1,036.6	1,072.0
Employer contributions for government social insurance	0.0	1.4	3.4	9.3	23.8	88.9	206.5	345.2	470.1	460.6
Proprietors' income with inventory valuation and capital consumption adjustments	**11.1**	**12.3**	**37.5**	**50.7**	**78.5**	**173.5**	**365.1**	**817.5**	**1,102.0**	**1,011.9**
Farm	4.0	4.1	12.9	10.6	12.9	11.7	32.2	29.6	50.8	30.5
Nonfarm	7.0	8.2	24.6	40.1	65.6	161.8	333.0	787.8	1,051.2	981.5
Rental income of persons with capital consumption adjustments	5.5	3.9	9.1	17.0	21.1	28.5	49.8	215.3	222.0	274.0
Corporate profits with inventory valuation and capital consumption adjustment	**7.5**	**9.6**	**35.6**	**53.1**	**82.5**	**201.4**	**434.4**	**819.2**	**1,262.8**	**1,258.0**
Taxes on corporate income	0.8	2.8	17.9	22.8	34.8	87.2	145.4	265.1	308.4	254.9
Profits after tax with inventory valuation and capital consumption adjustments	6.6	6.8	17.7	30.3	47.7	114.2	289.0	554.1	954.4	1,003.1
Net dividends	5.5	4.0	8.8	13.4	24.3	64.1	169.1	377.9	797.7	718.9
Undistributed profits with inventory valuation and capital consumption adjustments	1.1	2.8	8.9	16.9	23.4	50.2	120.0	176.3	156.7	284.2
Net interest and miscellaneous payments	**4.8**	**3.3**	**3.2**	**10.6**	**39.1**	**181.8**	**444.2**	**539.3**	**812.8**	**784.3**

(1) Figures may not add up to totals because of rounding and incomplete enumeration. (2) National income is the aggregate of labor and property earnings that arise in the production of goods and services. It is the sum of employee compensation, proprietors' income, rental income, adjusted corporate profits, and net interest. It measures the total factor costs of goods and services produced by the economy. Income is measured before deduction of taxes. Total national income figures include adjustments not itemized.

Distribution of U.S. Total Personal Income, 1930-2009

Source: Bureau of Economic Analysis, U.S. Dept. of Commerce; in billions of current dollars; as of Aug. 27, 2010

Year	Personal income	Personal taxes and nontax payments	Disposable personal income	Personal outlays	Personal savings Amount	Personal savings As % of disposable income
1930	$76.1	$1.6	$74.6	$71.6	$2.9	4.0%
1940	78.4	1.7	76.8	72.4	4.3	5.7
1950	228.0	18.9	209.9	195.0	14.9	7.1
1960	411.3	46.1	365.2	338.9	26.3	7.2
1970	838.6	103.1	735.5	666.1	69.4	9.4
1980	2,301.5	298.9	2,002.7	1,806.4	196.3	9.8
1990	4,846.7	592.7	4,254.0	3,977.3	276.7	6.5
1995	6,200.9	743.9	5,457.0	5,170.8	286.3	5.2
2000	8,559.7	1,232.3	7,327.2	7,114.1	213.1	2.9
2001	8,883.3	1,234.8	7,648.5	7,443.5	204.9	2.7
2002	9,060.1	1,050.4	8.009.7	7,727.5	282.2	3.5
2003	9,378.1	1,000.3	8,377.8	8,088.0	289.8	3.5
2004	9,937.2	1,047.8	8,889.4	8,585.7	303.7	3.4
2005	10,485.9	1,208.6	9,277.3	9,149.6	127.7	1.4
2006	11,268.1	1,352.4	9,915.7	9,680.7	235.0	2.4
2007	11,912.3	1,488.7	10,423.6	10,208.9	214.7	2.1
2008	12,391.1	1,438.2	10,952.9	10,505.0	447.9	4.1
2009	12,174.9	1,140.0	11,034.9	10,379.6	655.3	5.9

Note: Personal income minus taxes/nontax payments = disposable income; disposable income minus outlays = savings. Figures may not add up to totals because of rounding.

Median Income by Race, Hispanic Origin, and Sex, 1947-2009

Source: U.S. Census Bureau, U.S. Dept. of Commerce

		Male			Female		
		No. with income	Median income		No. with income	Median income	
	Year	(thous.)	Current dollars	2009 dollars	(thous.)	Current dollars	2009 dollars
All races	2009	105,025	$32,184	$32,184	106,229	$20,957	$20,957
	2008	105,428	33,161	33,035	106,403	20,867	20,788
	2007	104,789	33,196	34,341	105,230	20,922	21,643
	2005	102,986	31,275	34,362	104,245	18,576	20,410
	2000	98,504	28,343	35,303	101,704	16,063	20,007
	1990	88,220	20,293	32,284	92,245	10,070	16,020
	1980	78,661	12,530	31,054	80,826	4,920	12,194
	1970	65,008	6,670	32,880	51,647	2,237	11,027
	1960	55,172	4,080	25,859	36,526	1,261	7,922
	1950	47,585	2,570	19,989	24,651	953	7,412
	1947	46,813	2,230	18,732	21,479	1,017	8,543
White	2009	87,400	33,748	33,748	85,760	21,118	21,118
	2008	87,581	35,120	34,987	86,228	20,950	20,870
	2007	87,223	35,141	36,353	85,230	21,069	21,796
	2005	85,996	32,179	35,355	84,768	18,669	20,512
	2000	83,372	29,797	37,114	84,123	16,079	20,027
	1990	76,480	21,170	33,680	78,566	10,317	16,413
	1980	69,420	13,328	33,032	70,573	4,947	12,260
	1970	58,447	7,011	34,561	45,288	2,266	11,170
	1960	49,788	4,296	27,228	32,001	1,352	8,569
	1950	NA	2,709	21,070	NA	1,060	8,244
	1948	NA	2,510	19,522	NA	1,133	8,812
White, not Hispanic	2009	73,845	36,785	36,785	74,693	21,939	21,939
	2008	73,748	37,409	37,267	75,322	21,749	21,666
	2007	73,617	37,373	38,662	74,902	21,687	22,435
	2005	73,219	35,345	38,834	75,014	19,451	21,371
	2000	72,530	31,508	39,245	75,206	16,665	20,757
	1990	69,987	21,958	34,933	72,939	10,581	16,833
	1980	65,564	13,681	33,906	67,084	4,980	12,342
Black	2009	11,064	23,674	23,674	13,793	19,413	19,413
	2008	11,183	25,118	25,023	13,616	20,203	20,126
	2007	10,981	25,792	26,681	13,427	19,712	20,392
	2005	10,651	22,609	24,841	13,237	17,595	19,332
	2000	9,905	21,343	26,584	12,461	15,881	19,781
	1990	8,820	12,868	20,472	10,687	8,328	13,249
	1980	7,387	8,009	19,849	8,596	4,580	11,351
	1970	5,844	4,157	20,492	5,844	2,063	10,170
	1960	5,384	2,260	14,324	4,525	837	5,305
	1950	NA	1,471	11,441	NA	474	3,687
Asian	2009	4,828	36,886	36,886	4,923	24,170	24,170
	2008	4,788	36,204	36,067	4,787	23,015	22,928
	2007	4,709	36,729	37,996	4,786	24,095	24,926
	2005	4,518	33,036	36,297	4,520	21,623	23,757
	2000	4,303	30,833	38,404	4,192	17,356	21,618
	1990	2,235	19,394	30,854	2,333	11,086	17,637
Hispanic	2009	14,919	22,256	22,256	12,035	16,210	16,210
	2008	14,855	24,003	23,912	11,828	16,417	16,355
	2007	14,609	24,451	25,294	11,265	16,748	17,326
	2005	13,714	22,089	24,269	10,638	15,036	16,520
	2000	11,343	19,498	24,286	9,431	12,248	15,256
	1990	6,767	13,470	21,430	5,903	7,532	11,983
	1980	3,996	9,659	23,939	3,617	4,405	10,917

NA = Not available. **Note:** Income for persons 15 years of age and over beginning in Mar. 1980; 14 years of age and over as of Mar. of the following year for previous years.

Consumer Credit Outstanding, 2007-09

Source: Federal Reserve System

(in billions of dollars, revised)

Estimated amounts of credit outstanding as of end of year listed. Not seasonally adjusted.

	2007	2008	2009
TOTAL	**$2,555.3**	**$2,594.1**	**$2,478.9**
Major holders			
Commercial banks	804.1	878.6	855.3
Finance companies	584.1	575.8	487.8
Credit unions	235.7	236.2	237.2
Fed. govt. and Sallie Mae	98.4	111.0	186.0
Savings institutions	90.8	86.3	77.5
Nonfinancial business	58.6	59.8	57.2
Pools of securitized assets[1]	683.7	646.4	577.9
Major types of credit			
Revolving[2]	**973.2**	**989.1**	**894.0**
Commercial banks	353.4	390.6	362.4
Finance companies	86.0	74.4	46.4
Credit unions	$31.1	$33.4	$35.4
Fed. govt. and Sallie Mae	NA	NA	NA
Savings institutions	44.8	39.6	38.1
Nonfinancial business	7.9	8.7	8.8
Pools of securitized assets[1]	450.0	442.4	402.8
Nonrevolving[2]	**1,582.1**	**1,605.1**	**1,584.9**
Commercial banks	450.7	488.1	492.9
Finance companies	498.0	501.3	441.3
Credit unions	204.6	202.8	201.7
Fed. govt. and Sallie Mae	98.4	111.0	186.0
Savings institutions	46.0	46.8	39.5
Nonfinancial business	50.7	51.1	48.4
Pools of securitized assets[1]	233.6	204.0	175.1

NA = Not available. (1) Outstanding balances of pools upon which securities have been issued; these balances are no longer carried on the balance sheets of the loan originators. (2) Includes estimates for holders that do not separately report consumer credit holding by type.

Distribution of Financial Assets of U.S. Families, 1989-2007

Source: *Survey of Consumer Finances* (triennial), Federal Reserve System; by type of asset, as percent of family financial assets

Type of financial asset	1989	1995	2001	2004	2007
Transaction accounts	19.0	13.9	11.5	13.2	11.0
Certificates of deposit	10.2	5.6	3.1	3.7	4.1
Savings bonds	1.5	1.3	0.7	0.5	0.4
Bonds	10.2	6.3	4.6	5.3	4.2
Stocks	15.0	15.6	21.7	17.6	17.9
Mutual funds (excluding money market funds)	5.3	12.7	12.2	14.7	15.9
Retirement accounts	21.5	28.1	28.4	32.0	34.6
Cash value of life insurance	6.0	7.2	5.3	3.0	3.2
Other managed assets	6.6	5.9	10.6	8.0	6.5
Other	4.8	3.3	2.0	2.1	2.1
Financial assets as % of total assets	**30.5**	**36.7**	**42.0**	**35.7**	**33.9**

Stock Ownership of U.S. Families, by Income and Age, 1989-2007

Source: *Survey of Consumer Finances* (triennial), Federal Reserve System

		Families having direct or indirect stock holdings[1]				Median value of portfolios (thous. of 2007 dollars)				Stock holdings as share of financial assets[2]			
		1989	2001	2004	2007	1989	2001	2004	2007	1989	2001	2004	2007
All families		**31.7%**	**52.2%**	**50.2%**	**51.1%**	**$12.5**	**$40.4**	**$35.7**	**$35.0**	**27.8%**	**56.1%**	**51.3%**	**53.3%**
Percentile of income:	Less than 20	3.3	12.9	11.7	13.6	29.3	8.8	8.2	6.5	13.6	37.4	32.0	39.0
	20-39.9	15.2	34.1	29.6	34.0	8.8	9.1	11.0	8.8	10.0	35.6	30.9	34.3
	40-59.9	28.6	52.5	51.7	49.5	6.8	17.5	16.5	17.7	16.7	46.8	43.4	38.3
	60-79.9	44.0	75.7	69.9	70.5	8.5	33.5	28.7	34.1	21.8	52.0	41.7	52.5
	80-89.9	57.6	82.0	83.8	84.4	13.9	75.6	60.9	62.0	26.1	57.3	48.8	49.3
	90-100	76.9	89.7	92.7	91.0	57.9	289.7	225.2	219.0	34.3	60.5	57.5	57.6
By age of family head (years):	Under 35	22.4	49.0	40.8	38.6	4.4	8.2	8.8	7.0	20.2	52.5	40.3	44.3
	35-44	39.0	59.5	54.5	53.5	7.6	32.2	22.0	26.0	29.4	57.2	53.5	53.7
	45-54	41.8	59.3	56.5	60.4	19.3	58.5	54.9	45.0	33.5	59.1	53.8	53.0
	55-64	36.2	57.4	62.8	58.9	27.0	94.2	78.0	78.0	27.7	56.2	55.0	55.0
	65-74	26.7	40.0	46.9	52.1	29.8	175.8	76.9	57.0	26.0	55.4	51.5	55.3
	75+	25.9	35.7	34.8	40.1	36.7	128.7	94.3	41.0	25.0	51.8	39.3	48.1

(1) Indirect holdings are those in mutual funds, retirement accounts, and other managed assets. (2) Among stock-holding families.

Wealthiest Americans, 2010

Source: *Forbes* magazine; as of Aug. 25, 2010

Rank	Name	Net worth (bil)	Age	Residence	Source
1.	William Gates III	$54.0	54	Medina, WA	Microsoft
2.	Warren Buffett	45.0	79	Omaha, NE	Berkshire Hathaway
3.	Lawrence Ellison	27.0	65	Redwood City, CA	Oracle
4.	Christy Walton	24.0	55	Jackson, WY	Wal-Mart
5.	Charles Koch	21.5	74	Wichita, KS	Manufacturing, energy
	David Koch	21.5	70	New York, NY	Manufacturing, energy
7.	Jim C. Walton	20.1	62	Bentonville, AR	Wal-Mart
8.	Alice Walton	20.0	61	Fort Worth, TX	Wal-Mart
9.	S. Robson Walton	19.7	66	Bentonville, AR	Wal-Mart
10.	Michael Bloomberg	18.0	68	New York, NY	Bloomberg

Poverty Rate

Source: U.S. Census Bureau, U.S. Dept. of Commerce

The poverty rate is the proportion of the population whose income falls below the government's official poverty level, and is adjusted each year for inflation. The national poverty rate was 14.3% in 2009, statistically higher than the 2008 rate of 13.2%, and above the 2000 rate of 11.3%. The percentage of people below the poverty line in 2009 was the highest in 15 years. About 43.6 mil people in the U.S. were in poverty in 2009, up from 39.8 mil in 2008. In 2009, 20.7% of children and 8.9% of people aged 65 and older were defined as poor.

Persons Below Poverty Level, 1960-2009

Source: U.S. Census Bureau, U.S. Dept. of Commerce

	Number below poverty level (millions)					% of subgroup below poverty level					Avg. income cut-offs, family of 4 at poverty level[4]
Year	All races[1]	Asian[2]	White	Black	Hispanic[3]	All races[1]	Asian[2]	White	Black	Hispanic[3]	
1960	39.9	NA	28.3	NA	NA	22.2%	NA	17.8%	NA	NA	$3,022
1970	25.4	NA	17.5	7.5	NA	12.6	NA	9.9	33.5%	NA	3,968
1980	29.3	NA	19.7	8.6	3.5	13.0	NA	10.2	32.5	25.7%	8,414
1990	33.6	0.9	22.3	9.8	6.0	13.5	12.2%	10.7	31.9	28.1	13,359
1992	38.0	1.0	25.3	10.8	7.6	14.8	12.7	11.9	33.4	29.6	14,335
1993	39.3	1.1	26.2	10.9	8.1	15.1	15.3	12.2	33.1	30.6	14,763
1994	38.1	1.0	25.4	10.2	8.4	14.5	14.6	11.7	30.6	30.7	15,141
1995	36.4	1.4	24.4	9.9	8.6	13.8	14.6	11.2	29.3	30.3	15,569
1996	36.5	1.5	24.7	9.7	8.7	13.7	14.5	11.2	28.4	29.4	16,036
1997	35.6	1.5	24.4	9.1	8.3	13.3	14.0	11.0	26.5	27.1	16,400
1998	34.5	1.4	23.5	9.1	8.1	12.7	12.5	10.5	26.1	25.6	16,660
1999	32.8	1.3	21.2	8.4	7.9	11.9	10.7	9.8	23.6	22.7	17,029
2000	31.6	1.3	21.6	8.0	7.7	11.3	9.9	9.5	22.5	21.5	17,063
2002	34.6	1.2	23.5	8.6	8.6	12.1	10.1	10.2	24.1	21.8	18,556
2003	35.9	1.4	24.3	8.8	9.1	12.5	11.8	10.5	24.4	22.5	18,979
2004	37.0	1.2	25.3	9.0	9.1	12.7	9.8	10.8	24.7	21.9	19,307
2005	37.0	1.4	24.9	9.2	9.4	12.6	11.1	10.6	24.9	21.8	19,971
2006	36.5	1.4	24.4	9.0	9.2	12.3	10.3	10.3	24.3	12.3	20,614
2007	37.2	1.3	25.1	9.2	9.9	12.5	10.2	10.5	24.5	21.5	21,203
2008	39.8	1.6	27.0	9.4	11.0	13.2	11.8	11.2	24.7	23.2	22,025
2009	43.6	1.7	29.8	9.9	12.4	14.3	12.5	12.3	25.8	25.3	21,954

NA = Not available. **Note:** Because of a change in the definition of poverty, data prior to 1980 are not directly comparable to data since 1980. (1) Includes other races not shown separately. (2) Asian and Pacific Islander, 1990-2000. (3) Persons of Hispanic origin may be of any race. (4) Figures for 1960-80 represent only nonfarm families.

Poverty Thresholds by Family Size, 1980-2009

Source: U.S. Census Bureau, U.S. Dept. of Commerce. Weighted average; not used for computing poverty data.

	1980	1990	2000	2009
1 person	$4,190	$6,652	$8,794	$10,956
Under age 65	4,290	6,800	8,959	11,161
Age 65 or older	3,949	6,268	8,259	10,289
2 people	5,363	8,509	11,239	13,991
Householder under age 65	5,537	8,794	11,590	14,366
Householder age 65 or older	4,983	7,905	10,419	12,968
3 people	$6,565	$10,419	$13,738	$17,098
4 people	8,414	13,359	17,603	21,954
5 people	9,966	15,792	20,819	25,991
6 people	11,269	17,839	23,528	29,405
7 people	12,761	20,241	26,754	33,372
8 people	14,199	22,582	29,701	37,252
9 people or more	16,896	26,848	35,060	44,366

Poverty by Family Status, Sex, and Race, 1990-2009

Source: U.S. Census Bureau, U.S. Dept. of Commerce
(numbers in thousands)

	1990		1995		2000		2007		2008		2009	
	No.	%[1]	No.	%[1]	No.	%[1]	No.	%[1]	No.	%[1]	No.	%[1]
TOTAL POOR	**33,585**	**13.5%**	**36,425**	**13.8%**	**31,581**	**11.3%**	**37,276**	**12.5%**	**39,829**	**13.2%**	**43,569**	**14.3%**
In families	**25,232**	**12.0**	**27,501**	**12.3**	**22,347**	**9.6**	**26,509**	**10.8**	**28,564**	**11.5**	**31,197**	**12.5**
Head of household	7,098	10.7	7,532	10.8	6,400	8.7	7,623	9.8	8,147	10.3	8,792	11.1
Related children	12,715	19.9	13,999	20.2	11,005	15.6	12,802	17.6	13,507	18.5	14,774	20.1
Families, female householder, no husband present	**12,578**	**37.2**	**14,205**	**36.5**	**10,926**	**28.5**	**13,478**	**30.7**	**13,812**	**31.4**	**14,746**	**32.5**
Head of household	3,768	33.4	4,057	32.4	3,278	25.4	4,078	28.3	4,163	28.7	4,441	29.9
Related children	7,363	53.4	8,364	50.3	6,300	40.0	7,558	42.9	7,587	43.5	7,942	44.4
Unrelated individuals	**7,446**	**20.7**	**8,247**	**20.9**	**8,653**	**19.0**	**10,189**	**19.7**	**10,710**	**20.8**	**11,678**	**22.0**
Unrelated female individuals	4,589	24.0	4,865	23.5	5,071	21.6	5,841	22.2	5,951	22.6	6,424	24.0
Unrelated male individuals	2,857	16.9	3,382	18.0	3,548	16.0	4,348	17.1	4,759	18.9	5,255	20.0
Total white poor[2]	**22,326**	**10.7**	**24,423**	**11.2**	**21,645**	**9.5**	**25,120**	**10.5**	**26,990**	**11.2**	**29,830**	**12.3**
In families	15,916	9.0	17,593	9.6	14,692	7.8	17,141	8.7	18,558	9.4	20,701	10.5
Head of household	4,622	8.1	4,994	8.5	4,333	7.1	5,046	7.9	5,414	8.4	5,994	9.3
Related children	7,696	15.1	8,474	15.5	6,834	12.4	8,024	14.4	8,441	15.3	9,440	17.0
Families, female householder, no husband present	6,210	29.8	7,047	29.7	5,609	23.2	7,188	26.5	7,340	27.2	8,283	29.4
Unrelated individuals	5,739	18.6	6,336	19.0	6,454	17.1	7,505	17.9	7,982	19.1	8,580	19.9
Total black poor[2]	**9,837**	**31.9**	**9,872**	**29.3**	**7,982**	**22.5**	**9,237**	**24.5**	**9,379**	**24.7**	**9,944**	**25.8**
In families	8,160	31.0	8,189	28.5	6,221	21.2	7,312	23.8	7,339	23.7	7,642	24.4
Head of household	2,193	29.3	2,127	26.4	1,686	19.3	2,045	22.1	2,055	22.0	2,125	22.7
Related children	4,412	44.2	4,644	41.5	3,495	30.9	3,848	34.4	3,781	34.4	3,919	35.3
Families, female householder, no husband present	6,005	50.6	6,553	48.2	4,774	38.6	5,459	39.7	5,533	40.5	5,427	39.7
Unrelated individuals	1,491	35.1	1,551	32.6	1,702	28.9	1,898	27.9	1,970	28.8	2,209	31.1

NA = Not available. (1) Percentage of total U.S. population in each category who fell below poverty level and are enumerated here. For example, of all persons in families in 2006, 10.6%, or 25,915,000, were poor. (2) Data are for one race only. The Census Bureau revised race categories in 2002; 2006 figures are not directly comparable with previous years.

Persons in Poverty, by State, 2004-09

Source: U.S. Census Bureau, U.S. Dept. of Commerce
(2-year average as percent of state population)

	2004-05	2005-06	2006-07	2007-08	2008-09		2004-05	2005-06	2006-07	2007-08	2008-09
Alabama	16.8%	15.5%	14.4%	14.4%	15.4%	Montana	14.0%	13.7%	13.2%	12.9%	13.2%
Alaska	9.5	9.4	8.3	7.9	9.9	Nebraska	9.5	9.9	10.1	10.3	10.2
Arizona	14.8	14.8	14.4	16.1	19.6	Nevada	10.8	10.1	9.6	10.3	11.9
Arkansas	14.5	15.8	15.8	14.5	17.1	New Hampshire	5.5	5.5	5.6	6.4	7.4
California	13.2	12.7	12.5	13.6	15.0	New Jersey	7.4	7.8	8.7	9.0	9.3
Colorado	10.7	10.6	9.8	10.4	11.7	New Mexico	17.2	17.4	15.5	16.6	19.3
Connecticut	9.7	8.7	8.4	8.5	8.2	New York	14.8	14.3	14.3	14.3	15.0
Delaware	9.1	9.3	9.3	9.4	10.9	North Carolina	13.8	13.5	14.7	14.7	15.4
Dist. of Columbia	19.1	19.8	18.1	17.3	17.2	North Dakota	10.4	11.3	10.3	10.5	11.4
Florida	11.4	11.3	12.0	12.8	13.9	Ohio	11.9	12.2	12.5	13.2	13.5
Georgia	13.7	13.5	13.1	14.6	16.9	Oklahoma	13.2	15.4	14.3	13.5	13.3
Hawaii	8.6	8.9	8.3	8.7	11.2	Oregon	11.9	11.9	12.3	11.7	12.0
Idaho	9.9	9.7	9.7	11.1	13.0	Pennsylvania	11.3	11.3	10.8	10.7	11.0
Illinois	11.9	11.0	10.3	11.1	12.8	Rhode Island	11.8	11.3	10.0	11.1	12.9
Indiana	12.1	11.6	11.2	13.1	15.2	South Carolina	15.0	13.1	12.7	14.0	13.9
Iowa	11.1	10.8	9.6	9.2	10.1	South Dakota	12.7	11.3	10.1	11.2	13.6
Kansas	12.0	12.7	12.3	12.2	13.2	Tennessee	15.4	14.9	14.8	14.9	15.8
Kentucky	16.3	15.8	16.2	16.3	17.0	Texas	16.3	16.3	16.5	16.2	16.6
Louisiana	17.6	17.6	16.5	17.1	16.2	Utah	9.6	9.2	9.4	8.6	8.6
Maine	12.1	11.4	10.5	11.4	11.7	Vermont	7.7	7.7	8.8	9.4	9.2
Maryland	9.8	9.1	8.6	8.8	9.1	Virginia	9.3	8.9	8.6	9.5	10.5
Massachusetts	9.7	11.1	11.6	11.2	11.1	Washington	10.8	9.1	9.1	10.3	11.0
Michigan	12.6	12.6	12.1	11.9	13.5	West Virginia	14.8	15.3	15.0	14.6	15.2
Minnesota	7.5	8.1	8.7	9.6	10.5	Wisconsin	11.3	10.2	10.6	10.4	10.3
Mississippi	19.4	20.4	21.6	20.4	20.6	Wyoming	10.3	10.3	10.4	10.5	9.7
Missouri	11.9	11.5	12.1	13.1	14.4	**U.S.**	**12.7**	**12.5**	**12.4**	**12.9**	**13.8**

Selected Personal Consumption Expenditures in the U.S., 1990-2009[1]

Source: Bureau of Economic Analysis, U.S. Dept. of Commerce
(in billions of dollars)

	1990	1995	2000	2005	2007	2008	2009
Personal consumption expenditures	**$3,835.5**	**$4,987.3**	**$6,830.4**	**$8,819.0**	**$9.806.3**	**$10,104.5**	**$10,001.3**
Durable goods	**497.1**	**635.7**	**915.8**	**1,105.5**	**1,159.4**	**1,083.5**	**1,026.5**
Motor vehicles and parts	**205.1**	**255.7**	**363.2**	**409.6**	**402.5**	**343.2**	**319.7**
New motor vehicles	134.7	147.5	210.7	248.9	233.2	184.9	165.3
Motor vehicle fuels, lubricants, and fluids	111.4	120.4	172.9	283.8	343.0	383.3	280.8
Furniture and durable household equipment	**120.9**	**146.7**	**208.1**	**263.9**	**277.7**	**266.0**	**248.1**
Furniture, furnishings, and floor coverings	65.3	78.8	114.4	143.0	149.8	141.1	130.0
Household appliances	24.8	29.0	37.6	47.6	50.2	49.3	46.4
Glassware, tableware, and household utensils	18.4	23.7	35.3	45.4	48.9	48.0	46.6
Video and audio equipment	43.7	56.8	83.1	107.8	116.0	115.6	107.1
Information processing equipment	9.6	25.0	44.1	55.9	65.6	65.8	64.7
Therapeutic appliances and equipment	18.4	21.0	32.2	38.2	43.3	44.3	43.9
Sports and recreational goods and related services	74.2	101.9	147.9	188.4	207.6	203.0	196.9
Jewelry and watches	30.3	37.8	49.1	56.2	62.0	60.4	58.8
Recreational books	10.9	16.4	24.4	29.8	33.3	33.7	33.8
Tools and equipment for house and garden	9.7	13.0	17.1	22.3	23.2	22.6	20.8
Nondurable goods	**994.2**	**1,179.8**	**1,543.4**	**1,968.4**	**2,198.2**	**2,296.0**	**2,204.2**
Food and beverages purchased for off-premise consumption	**391.2**	**443.7**	**537.5**	**665.0**	**737.4**	**775.2**	**777.9**
Alcoholic beverages purchased for off-premise consumption	49.3	55.0	74.0	95.1	109.2	112.1	113.5
Purchased meals and beverages	228.3	272.4	346.0	443.5	497.0	513.0	512.8
Food furnished to employees (incl. military) and food produced and consumed on farms	7.4	8.3	9.2	12.1	14.5	14.7	15.3
Clothing, footwear, and related services	**207.0**	**244.1**	**297.3**	**331.8**	**356.7**	**352.1**	**339.5**
Footwear	32.1	38.1	46.9	51.5	55.1	55.1	53.3
Women's and girls' clothing	94.5	108.9	132.7	151.9	164.3	160.8	154.8
Men's and boys' clothing	57.4	72.2	85.9	93.6	99.4	98.3	94.9
Gasoline and other energy goods	**124.2**	**133.4**	**188.8**	**304.8**	**366.6**	**411.4**	**303.7**
Fuel oil and other fuels	12.8	13.0	15.9	21.0	23.6	28.1	22.9
Other nondurable goods	**283.6**	**371.4**	**536.2**	**683.0**	**755.3**	**775.4**	**800.4**
Tobacco	41.0	49.2	68.5	71.1	73.7	75.7	87.9
Personal care products	39.3	50.2	68.5	79.5	86.8	88.3	87.4
Household supplies	54.2	70.4	86.7	103.0	111.6	112.7	110.7
Pharmaceuticals and other medical products	59.1	85.1	159.0	247.3	281.0	291.2	305.9
Magazines, newspapers, and stationery	36.5	46.1	56.6	63.2	69.9	71.2	71.3
Services	**2,344.2**	**3,171.7**	**4,371.2**	**5,745.1**	**6,448.6**	**6,725.0**	**6,770.6**
Housing	**570.4**	**756.2**	**1,010.5**	**1,328.9**	**1,472.9**	**1,533.2**	**1,581.6**
Owner-occupied nonfarm dwellings-imputed rental	412.8	559.8	768.9	1,044.5	1,141.3	1,184.5	1,211.9
Tenant-occupied nonfarm dwellings-rent	150.7	186.2	227.9	264.7	311.1	326.3	346.1
Rental value of farm dwellings	6.3	9.4	12.7	18.8	19.5	21.3	22.5
Household consumption expenditures	**2,264.5**	**3,064.6**	**4,205.9**	**5,531.0**	**6,194.5**	**6,446.1**	**6,511.8**
Housing and utilities	696.4	913.8	1,198.6	1,582.8	1,755.8	1,833.1	1,876.3
Electricity	71.8	87.6	98.4	128.7	148.7	155.8	157.8
Natural gas	27.0	30.7	39.3	61.6	61.7	67.6	56.9
Water and other sanitary services	27.1	39.3	50.4	63.6	72.5	76.5	80.0
Telecommunication services	60.7	85.2	130.2	146.1	163.9	169.4	168.9
Internet access	0.1	1.6	16.4	29.9	38.7	42.5	47.1
Transportation	**442.9**	**554.1**	**798.4**	**979.3**	**1,052.6**	**1,033.5**	**890.7**
Public transportation	39.2	48.8	73.0	76.8	83.2	84.5	77.0
Ground	12.9	16.7	21.6	26.4	28.6	29.9	29.3
Air	25.9	31.1	49.2	47.7	51.6	51.6	45.1
Water	0.3	1.1	2.2	2.7	3.0	3.0	2.7
Health	**583.7**	**826.0**	**1,109.6**	**1,601.5**	**1,789.7**	**1,882.7**	**1,973.1**
Physician services	134.8	177.8	229.2	332.4	364.8	382.5	396.2
Dental services	32.4	45.4	63.6	89.0	99.6	104.5	105.0
Other professional services	40.1	62.5	84.1	127.1	142.3	151.8	156.5
Home health care	18.4	41.6	42.8	61.2	70.1	75.2	81.2
Hospitals and nursing homes	274.1	383.3	481.8	679.5	759.6	801.9	850.9
Health insurance	43.4	60.7	88.1	145.1	158.3	162.1	163.0
Recreation services	**121.8**	**181.1**	**255.5**	**326.8**	**373.2**	**383.4**	**378.8**
Admissions to specified spectator amusements	14.4	20.1	30.6	39.2	44.1	45.6	45.6
Gambling	23.7	45.4	67.6	95.6	110.9	111.9	109.3
Pets, pet products, and related services	18.8	27.3	39.7	53.1	61.8	65.7	67.1
Personal care	**72.4**	**93.8**	**132.2**	**169.1**	**187.5**	**193.9**	**193.1**
Personal items	40.0	48.7	63.7	72.6	80.4	79.1	77.4
Financial services and insurance	**253.2**	**364.7**	**570.0**	**712.6**	**818.9**	**848.1**	**813.8**
Financial services furnished without payment	93.0	130.6	195.4	220.0	251.0	281.2	271.2
Financial service charges, fees, and commissions	48.5	81.9	174.6	207.2	256.9	252.9	234.0
Life insurance	42.3	54.3	65.0	76.5	83.6	82.3	77.1
Legal services	41.0	47.4	65.4	89.7	101.5	104.0	102.5
Funeral and burial expenses	9.5	12.4	15.8	19.0	18.6	19.0	18.9
Education services	**66.0**	**92.3**	**134.3**	**170.4**	**195.8**	**210.2**	**222.8**
Higher education	34.7	51.9	76.8	108.8	125.0	135.1	145.5
Nursery, elementary, and secondary schools	14.8	19.2	24.1	31.8	36.1	38.2	39.7
Commercial and vocational schools	11.1	14.4	24.3	29.8	34.6	36.9	37.5
Social services and religious activities	**41.2**	**58.1**	**85.0**	**118.7**	**134.3**	**141.7**	**145.7**
Net foreign travel	**–10.3**	**–23.0**	**–16.5**	**–5.1**	**–9.3**	**–19.0**	**–19.1**
Foreign travel by U.S. residents	42.7	54.7	84.3	99.8	113.9	119.8	105.4
Less: expenditures in the United States by nonresidents	53.0	77.7	100.8	104.9	123.2	138.7	124.5
Final consumption expenditures of nonprofit institutions serving households	**79.6**	**107.2**	**165.4**	**214.1**	**254.2**	**278.8**	**258.9**

(1) Subtotals may not add up to totals due to rounding or incomplete enumeration.

Leading U.S. Businesses, 2010

Source: *Fortune* magazine

(in millions of revenue-dollars; rank among all businesses by 2009 revenue)

Company (rank)	Revenue
Advertising, Marketing	
Omnicom (198)	$11,721
Interpublic Group (358)	6,028
Aerospace and Defense	
Boeing (28)	$68,281
United Technologies (37)	52,920
Lockheed Martin (44)	45,189
Northrop Grumman (61)	35,291
General Dynamics (69)	31,981
Honeywell International (74)	30,908
Raytheon (95)	24,881
L-3 Communications (148)	15,615
ITT (214)	10,905
Textron (220)	10,548
Precision Castparts (325)	6,914
Goodrich (334)	6,686
Airlines	
Delta Air Lines (84)	$28,063
AMR (120)	19,917
UAL (140)	16,335
Continental Airlines (183)	12,586
US Airways Group (222)	10,458
Southwest Airlines (229)	10,350
Apparel	
Nike (124)	$19,176
VF (310)	7,220
Polo Ralph Lauren (417)	5,019
Automotive Retailing, Services	
AutoNation (212)	$11,016
Penske Automotive Group (245)	9,558
Hertz Global Holdings (318)	7,102
CarMax (323)	7,028
Sonic Automotive (345)	6,350
Avis Budget Group (409)	5,131
Group 1 Automotive (457)	4,526
Beverages	
Coca-Cola (72)	$30,990
Coca-Cola Enterprises (113)	21,645
Pepsi Bottling (174)	13,219
Dr Pepper Snapple Group (378)	5,531
PepsiAmericas (464)	4,421
Chemicals	
Dow Chemical (46)	$44,945
DuPont (86)	27,328
PPG Industries (190)	12,239
Monsanto (197)	11,740
Mosaic (231)	10,298
Praxair (262)	8,956
Air Products & Chemicals (273)	8,381
Ashland (280)	8,106
Huntsman (293)	7,763
Sherwin-Williams (319)	7,094
Avery Dennison (362)	5,953
Ecolab (365)	5,901
Celanese (414)	5,082
Eastman Chemical (415)	5,047
Lubrizol (453)	4,586
Commercial Banks	
Bank of America Corp. (5)	$150,450
JPMorgan Chase & Co. (9)	115,632
Citigroup (12)	108,785
Wells Fargo (19)	98,636
Goldman Sachs Group (39)	51,673
Morgan Stanley (70)	31,515
American Express (88)	26,730
U.S. Bancorp (121)	19,490
GMAC (122)	19,403
PNC Financial Services Group (123)	19,231
Capital One Financial (144)	15,980
BB&T Corp. (217)	10,818
SunTrust Banks (224)	10,420
Fifth Third Bancorp (248)	9,450
State Street Corp. (249)	9,362
Regions Financial (254)	9,087
Bank of New York Mellon Corp. (274)	8,345
Discover Financial Services (286)	7,986
KeyCorp (382)	6,068
Computer Peripherals	
EMC (166)	$14,026
Western Digital (304)	7,453
Computer Software	
Microsoft (36)	$58,437
Oracle (105)	23,252

Company (rank)	Revenue
Computers, Office Equipment	
Hewlett-Packard (10)	$114,552
Dell (38)	52,902
Apple (56)	36,537
Xerox (152)	15,179
Sun Microsystems (204)	11,449
Pitney Bowes (375)	5,569
NCR (451)	4,612
Construction and Farm Machinery	
Caterpillar (66)	$32,396
Deere (107)	23,112
Cummins (218)	10,800
AGCO (337)	6,630
Terex (402)	5,205
Diversified Financials	
General Electric (4)	$156,779
International Assets Holding (49)	43,604
Freddie Mac (54)	37,614
Fannie Mae (81)	29,065
Marsh & McLennan (221)	10,493
Ameriprise Financial (288)	7,946
Aon (298)	7,595
SLM (354)	6,145
Diversified Outsourcing	
Aramark (189)	$12,298
Automatic Data Processing (265)	8,867
Electronics, Electrical Equipment	
Emerson Electric (117)	$20,915
Whirlpool (136)	17,099
General Cable (469)	4,385
Rockwell Automation (476)	4,333
Energy	
Constellation Energy (149)	$15,599
AES (156)	14,690
American Electric Power (172)	13,489
Energy Future Holdings (246)	9,546
NRG Energy (263)	8,952
Williams (276)	8,255
Integrys Energy Group (302)	7,500
Calpine (338)	6,564
Global Partners (368)	5,818
UGI (369)	5,738
Engineering, Construction	
Fluor (111)	$21,990
KBR (193)	12,105
Jacobs Engineering Group (203)	11,467
Peter Kiewit Sons' (238)	9,985
URS (252)	9,249
Shaw Group (309)	7,280
AECOM Technology (352)	6,192
Emcor Group (377)	5,548
Entertainment	
Walt Disney (57)	$36,149
News Corp. (76)	30,423
Time Warner (82)	28,842
Viacom (170)	13,619
CBS (177)	13,015
CC Media Holdings (376)	5,552
Financial Data Services	
First Data (250)	$9,314
Visa (326)	6,911
SunGard Data Systems (380)	5,508
MasterCard (411)	5,099
Food	
PepsiCo (50)	$43,232
Kraft Foods (53)	40,386
General Mills (155)	14,691
ConAgra Foods (178)	12,981
Sara Lee (180)	12,881
Kellogg (184)	12,575
Dean Foods (208)	11,158
Land O'Lakes (226)	10,409
H.J. Heinz (233)	10,148
Campbell Soup (299)	7,586
Dole Food (331)	6,783
Hormel Foods (340)	6,534
Hershey (395)	5,299
Food and Drug Stores	
CVS Caremark (18)	$98,729
Kroger (23)	76,733
Walgreen (32)	63,335
Supervalu (47)	44,564

Company (rank)	Revenue
Safeway (52)	40,851
Rite Aid (89)	26,290
Publix Super Markets (99)	24,515
Great Atlantic & Pacific Tea (247)	9,516
Whole Food Market (284)	8,032
Winn-Dixie Stores (306)	7,367
Food Production	
Archer Daniels Midland (27)	$69,207
Tyson Foods (87)	27,165
Smithfield Foods (163)	14,191
Pilgrim's Pride (317)	7,114
Food Services	
McDonald's (108)	$22,745
Yum Brands (216)	10,836
Starbucks (241)	9,775
Darden Restaurants (311)	7,218
Forest and Paper Products	
International Paper (104)	$23,366
Weyerhaeuser (379)	5,528
Domtar (383)	5,465
AbitibiBowater (472)	4,366
General Merchandisers	
Wal-Mart Stores (1)	$408,214
Target (30)	65,357
Sears Holdings (48)	44,043
Macy's (103)	23,489
J.C. Penney (133)	17,556
Kohl's (135)	17,178
Dollar General (195)	11,796
Nordstrom (270)	8,627
Dillard's (305)	7,401
Family Dollar Stores (348)	6,227
Health Care: Insurance & Managed Care	
UnitedHealth Group (21)	$87,138
WellPoint (31)	65,028
Aetna (63)	34,764
Humana (73)	30,960
Cigna (129)	18,414
Health Net (146)	15,713
Coventry Health Care (168)	13,993
WellCare Health Plans (328)	6,878
Health Care: Medical Facilities	
Community Health Systems (191)	$12,150
Tenet Healthcare (253)	9,215
DaVita (355)	6,109
Universal Health Services (403)	5,202
Healthcare Management Associates (443)	4,687
Health Care: Pharmacy and Other Services	
Medco Health Solutions (35)	$59,804
HCA (77)	30,052
Express Scripts (96)	24,749
Quest Diagnostics (303)	7,455
Omnicare (347)	6,243
Laboratory Corp. of America (442)	4,695
Home Equipment, Furnishings	
Masco (291)	$7,858
Fortune Brands (351)	6,205
Newell Rubbermaid (373)	5,578
Jarden (406)	5,153
Hotels, Casinos, Resorts	
Marriott International (213)	$10,908
Harrah's Entertainment (264)	8,907
MGM Mirage (360)	5,979
Household and Personal Products	
Procter & Gamble (22)	$76,697
Kimberly-Clark (126)	19,115
Colgate-Palmolive (151)	15,327
Avon Products (228)	10,383
Estée Lauder (308)	7,324
Clorox (384)	5,450
Industrial Machinery	
Illinois Tool Works (169)	$13,904
Eaton (194)	11,873
Parker Hannifin (230)	10,309
Dover (367)	5,831
SPX (427)	4,936
Information Technology Services	
International Business Machines (20)	$95,758
Computer Sciences (138)	16,740
SAIC (215)	10,847
Affiliated Computer Services (341)	6,523

Company (rank)	Revenue
Insurance: Life, Health (Mutual)	
New York Life Insurance (64)	$34,014
TIAA-CREF (90)	26,278
Massachusetts Mutual Life Insurance (93)	25,424
Northwestern Mutual (115)	21,603
Guardian Life Ins. Co. of America (237)	10,041
Thrivent Financial for Lutherans (342)	6,515
Mutual of Omaha Insurance (408)	5,150
Insurance: Life, Health (Stock)	
MetLife (51)	$41,098
Prudential Financial (65)	32,688
AFLAC (130)	18,254
Unum Group (235)	10,091
Lincoln National (256)	9,072
Genworth Financial (257)	9,069
Principal Financial (266)	8,849
Reinsurance Group of America (321)	7,067
Pacific Life (401)	5,211
Insurance: Property & Casualty (Mutual)	
State Farm Insurance Cos. (34)	$61,480
Insurance: Property & Casualty (Stock)	
Berkshire Hathaway (11)	$112,493
American International Group (16)	103,189
Allstate (68)	32,013
Liberty Mutual Insurance Group (71)	31,094
Hartford Financial Services (97)	24,701
Travelers Cos. (98)	24,680
Nationwide (118)	20,751
United Services Automobile Association (132)	17,558
Progressive (161)	14,564
Loews (165)	14,123
Chubb (176)	13,016
Assurant (268)	8,701
American Family Insurance Group (344)	6,453
First American Corp. (361)	5,973
Fidelity National Financial (366)	5,858
Internet Services and Retailing	
Amazon.com (100)	$24,509
Google (102)	23,651
Liberty Media (227)	10,398
eBay (267)	8,727
Yahoo (343)	6,460
Mail, Package, Freight Delivery	
United Parcel Service (43)	$45,297
FedEx (60)	35,497
Medical Products and Equipment	
Medtronic (160)	$14,599
Baxter International (185)	12,562
Boston Scientific (279)	8,188
Becton Dickinson (312)	7,217
Stryker (333)	6,723
Metals	
Alcoa (127)	$18,745
Nucor (206)	11,190
United States Steel (211)	11,048
Commercial Metals (327)	6,883
Mining, Crude Oil Production	
Occidental Petroleum (150)	$15,531
Freeport-McMoRan Copper & Gold (154)	15,040
XTO Energy (258)	9,064
Anadarko Petroleum (260)	9,000
Devon Energy (261)	8,960
Apache (271)	8,615
Newmont Mining (295)	7,737
Chesapeake Energy (296)	7,702
Peabody Energy (346)	6,314
Miscellaneous	
3M (106)	$23,123
Mattel (387)	5,431
Mohawk Industries (392)	5,344
Motor Vehicles and Parts	
Ford Motor (8)	$118,308
General Motors (15)	104,589
Johnson Controls (83)	28,497
Goodyear Tire & Rubber (141)	16,301
TRW Automotive Holdings (201)	11,614
Navistar International (202)	11,569
Lear (242)	9,740
Paccar (282)	8,087
Icahn Enterprises (290)	7,865
Visteon (335)	6,685
Oshkosh (386)	5,433
Dana Holding (398)	5,228
Network and Other Communications Equipment	
Cisco Systems (58)	$36,117
Motorola (110)	22,063
Qualcomm (225)	10,416
Harris (371)	5,600
Corning (391)	5,395
Oil and Gas Equipment Services	
Halliburton (158)	$14,675
National Oilwell Varco (182)	12,712
Baker Hughes (243)	9,664
Smith International (277)	8,219
Cameron International (399)	5,223
Packaging, Containers	
Crown Holdings (289)	$7,938
Ball (307)	7,345
Owens-Illinois (322)	7,067
MeadWestvaco (357)	6,049
Smurfit-Stone Container (374)	5,574
Petroleum Refining	
Exxon Mobil (2)	$284,650
Chevron (3)	163,527
ConocoPhillips (6)	139,515
Valero Energy (26)	70,035
Marathon Oil (41)	49,403
Sunoco (78)	29,630
Hess (79)	29,569
Murphy Oil (125)	19,138
Tesoro (139)	16,589
Western Refining (330)	6,807
Pharmaceuticals	
Johnson & Johnson (33)	$61,897
Pfizer (40)	50,009
Abbott Laboratories (75)	30,765
Merck (85)	27,428
Eli Lilly (112)	21,836
Bristol-Myers Squibb (114)	21,634
Amgen (159)	14,642
Gilead Sciences (324)	7,011
Pipelines	
Enterprise GP Holdings (92)	$25,511
Plains All American Pipeline (128)	18,520
Oneok (209)	11,112
Kinder Morgan (315)	7,185
Enbridge Energy Partners (364)	5,905
Energy Transfer Equity (388)	5,417
Publishing, Printing	
R.R. Donnelley & Sons (240)	$9,857
McGraw-Hill (363)	5,952
Gannett (370)	5,613
Railroads	
Union Pacific (164)	$14,143
Burlington Northern Santa Fe (167)	14,016
CSX (259)	9,041
Norfolk Southern (287)	7,969
Scientific, Photo, Control Equipment	
Danaher (207)	$11,185
Thermo Fisher Scientific (234)	10,110
Eastman Kodak (297)	7,606
Semiconductors and Other Electronic Components	
Intel (62)	$35,127
Jabil Circuit (199)	11,685
Texas Instruments (223)	10,427
Advanced Micro Devices (390)	5,403
Specialty Retailers	
Costco Wholesale (25)	$71,422
Home Depot (29)	66,176
Lowe's (42)	47,220
Best Buy (45)	45,015
Staples (101)	24,276
TJX (119)	20,288
Gap (162)	14,197
Toys "R" Us (171)	13,568
Office Depot (192)	12,145
BJ's Wholesale Club (232)	10,187
GameStop (255)	9,078
Limited Brands (269)	8,633
OfficeMax (313)	7,212
Bed Bath & Beyond (314)	7,208
Ross Stores (316)	7,184
AutoZone (329)	6,817
Barnes & Noble (372)	5,596
Pantry (382)	5,472
Advance Auto Parts (389)	5,413
PetSmart (393)	5,336
Dollar Tree (397)	5,231
Telecommunications	
AT&T (7)	$123,018
Verizon Communications (13)	107,808
Comcast (59)	35,756
Sprint Nextel (67)	32,260
DirecTV Group (116)	21,565
Time Warner Cable (131)	17,868
Qwest Communications (188)	12,311
DISH Network (200)	11,664
Liberty Global (210)	11,110
Cablevision Systems (292)	7,773
Charter Communications (332)	6,755
Virgin Media (359)	6,014
Temporary Help	
Manpower (143)	$16,039
Tobacco	
Philip Morris International (94)	$25,035
Altria Group (137)	16,824
Reynolds American (272)	8,419
Transportation and Logistics	
C.H. Robinson Worldwide (301)	$7,577
Trucking, Truck Leasing	
YRC Worldwide (396)	$5,283
Utilities: Gas and Electric	
Exelon (134)	$17,318
Southern (145)	15,743
FPL Group (147)	15,643
Dominion Resources (153)	15,131
PG&E Corp. (173)	13,399
Consolidated Edison (175)	13,032
FirstEnergy (179)	12,967
Duke Energy (181)	12,731
Public Service Enterprise Group (186)	12,406
Edison International (187)	12,361
Entergy (219)	10,746
Progress Energy (239)	9,885
Xcel Energy (244)	9,644
Pepco Holdings (251)	9,259
CenterPoint Energy (275)	8,281
Sempra Energy (280)	8,106
DTE Energy (285)	8,014
PPL (300)	7,585
Ameren (320)	7,090
NiSource (336)	6,653
CMS Energy (350)	6,212
Northeast Utilities (385)	5,439
Waste Management	
Waste Management (196)	$11,791
Republic Services (278)	8,199
Wholesalers: Diversified	
World Fuel Services (205)	$11,295
Genuine Parts (236)	10,058
W.W. Grainger (349)	6,222
Reliance Steel & Aluminum (394)	5,318
Wholesalers: Electronics and Office Equipment	
Ingram Micro (80)	$29,515
Tech Data (109)	22,100
Avnet (142)	16,230
Arrow Electronics (157)	14,684
Synnex (294)	7,756
Wholesalers: Food and Grocery	
Sysco (55)	$36,853
CHS (91)	25,730
Wholesalers: Health Care	
McKesson (14)	$106,632
Cardinal Health (17)	99,613
AmerisourceBergen (24)	71,789
Owens & Minor (283)	8,038
Henry Schein (339)	6,546

75 U.S. Corporations with Largest Revenues, 2010

Source: *Fortune* magazine

(in millions of dollars; ranked by 2009 revenues)

Rank	Company (2008 rank)	Revenues	Profits
1.	Wal-Mart Stores (2)	$408,214.0	$14,335.0
2.	Exxon Mobil (1)	284,650.0	19,280.0
3.	Chevron (3)	163,527.0	10,483.0
4.	General Electric (5)	156,779.0	11,025.0
5.	Bank of America Corp. (11)	150,450.0	6,276.0
6.	ConocoPhillips (4)	139,515.0	4,858.0
7.	AT&T (8)	123,018.0	12,535.0
8.	Ford Motor (7)	118,308.0	2,717.0
9.	JPMorgan Chase & Co. (16)	115,632.0	11,728.0
10.	Hewlett-Packard (9)	114,552.0	7,660.0
11.	Berkshire Hathaway (13)	112,493.0	8,055.0
12.	Citigroup (12)	108,785.0	–1,606.0
13.	Verizon Communications (17)	107,808.0	3,651.0
14.	McKesson (15)	106,632.0	823.0
15.	General Motors (6)	104,589.0	NA
16.	American International Group (245)	103,189.0	–10,949.0
17.	Cardinal Health (18)	99,612.9	1,151.6
18.	CVS Caremark (19)	98,729.0	3,696.0
19.	Wells Fargo (41)	98,636.0	12,275.0
20.	International Business Machines (14)	95,758.0	13,425.0
21.	UnitedHealth Group (21)	87,138.0	3,822.0
22.	Procter & Gamble (20)	79,697.0	13,436.0
23.	Kroger (22)	76,733.2	70.0
24.	AmerisourceBergen (26)	71,789.0	503.4
25.	Costco Wholesale (24)	71,422.0	1,086.0
26.	Valero Energy (10)	70,035.0	–1,982.0
27.	Archer Daniels Midland (27)	69,207.0	1,707.0
28.	Boeing (34)	68,281.0	1,312.0
29.	Home Depot (25)	66,176.0	2,661.0
30.	Target (28)	65,357.0	2,488.0
31.	WellPoint (32)	65,028.1	4,745.9
32.	Walgreen (36)	63,335.0	2,006.0
33.	Johnson & Johnson (29)	61,897.0	12,266.0
34.	State Farm Insurance Cos. (31)	61,479.6	766.7
35.	Medco Health Solutions (45)	59,804.2	1,280.3
36.	Microsoft (35)	58,437.0	14,569.0
37.	United Technologies (37)	52,920.0	3,829.0
38.	Dell (33)	$52.902.0	$1,433.0
39.	Goldman Sachs Group (40)	51,673.0	13,385.0
40.	Pfizer (46)	50,009.0	8,635.0
41.	Marathon Oil (23)	49,403.0	1,463.0
42.	Lowe's (47)	47,220.0	1,783.0
43.	United Parcel Service (43)	45,297.0	2,152.0
44.	Lockheed Martin (54)	45,189.0	3,024.0
45.	Best Buy (56)	45,015.0	1,003.0
46.	Dow Chemical (38)	44,945.0	648.0
47.	Supervalu (51)	44,564.0	–2,855.0
48.	Sears Holdings (49)	44,043.0	235.0
49.	International Assets Holding (140)	43,604.4	27.6
50.	PepsiCo (52)	43,232.0	5,946.0
51.	MetLife (39)	41,098.0	–2,246.0
52.	Safeway (50)	40,850.7	–1,097.5
53.	Kraft Foods (53)	40,386.0	3,021.0
54.	Freddie Mac (220)	37,614.0	–21,553.0
55.	Sysco (62)	36,853.3	1,055.9
56.	Apple (71)	36,537.0	5,704.0
57.	Walt Disney (60)	36,149.0	3,307.0
58.	Cisco Systems (57)	36,117.0	6,134.0
59.	Comcast (68)	35,756.0	3,638.0
60.	FedEx (59)	35,497.0	98.0
61.	Northrop Grumman (69)	35,291.0	1,686.0
62.	Intel (61)	35,127.0	4,369.0
63.	Aetna (77)	34,764.1	1,276.5
64.	New York Life Insurance (76)	34,014.3	682.7
65.	Prudential Financial (84)	32,688.0	3,124.0
66.	Caterpillar (44)	32,396.0	895.0
67.	Sprint Nextel (64)	32,260.0	–2,436.0
68.	Allstate (81)	32,013.0	854.0
69.	General Dynamics (83)	31,981.0	2,394.0
70.	Morgan Stanley (30)	31,515.0	1,346.0
71.	Liberty Mutual Insurance Group (86)	31,094.0	1,023.0
72.	Coca-Cola (73)	30,990.0	6,824.0
73.	Humana (85)	30,960.4	1,039.7
74.	Honeywell International (63)	30,908.0	2,153.0
75.	Abbott Laboratories (80)	30,764.7	5,745.8

NA = Not available.

Fastest-Growing U.S. Franchises, 2010

Source: *Entrepreneur* magazine; ranked by number of new franchise units added

	Company	Type of business	Minimum start-up cost[1]
1.	Jan-Pro Franchising Intl. Inc.	Commercial cleaning	$3.1K-50.4K
2.	Subway	Submarine sandwiches and salads	$84.3K-258.3K
3.	Stratus Building Solutions	Commercial cleaning	$3.5K-57.8K
4.	Dunkin' Donuts	Coffee, doughnuts, baked goods	$538.2K-2.0M
5.	Anago Cleaning Systems	Commercial cleaning	$8.5K-65.4K
6.	McDonald's	Hamburgers, chicken, salads	$1.1M-1.9M
7.	CleanNet USA Inc.	Commercial cleaning	$6.7K-93.0K
8.	Bonus Building Care	Commercial cleaning	$9.0K-41.9K
9.	Liberty Tax Service	Income tax preparation services	$56.8K-69.9K
10.	Vanguard Cleaning Systems	Commercial cleaning	$8.2K-38.1K
11.	Pizza Hut Inc.	Pizza, pasta, wings	$302.0K-2.1M
12.	Anytime Fitness	Fitness center	$44.1K-300.1K
13.	Sonic Drive In Restaurants	Drive-in restaurant	$1.2M-3.2M
14.	ampm Mini Market	Convenience store and gas station	$1.8M-7.6M
15.	Long John Silver's Restaurants Inc.	Fish and chicken	$873.5K-1.3M
16.	System4	Commercial cleaning	$5.5K-37.8K
17.	Jazzercise Inc.	Dance fitness classes	$3.0K-75.5K
18.	InterContinental Hotels Group	Hotels	$5.1M-93.9M
19.	Choice Hotels Intl.	Hotels	$1.3M-14.6M
20.	Snap Fitness Inc.	24-hour fitness center	$79.4K-195.8K
21.	Jimmy John's Gourmet Sandwich Shops	Gourmet sandwiches	$305.5K-460.5K
22.	Hampton Inn/Hampton Inn & Suites	Mid-priced hotels	$3.7M-13.1M
23.	Massage Envy	Therapeutic massage services	$300.9K-512.2K
24.	Chester's Intl.	Quick-service chicken restaurant	$53.4K-344.5K
25.	7-Eleven Inc.	Convenience store	$30.8K-604.5K

(1) K = thousands; M = millions. This number does not include franchise fee, which varies.

United States Mint

Source: United States Mint, U.S. Dept. of the Treasury

The United States Mint was created on Apr. 2, 1792, by an act of Congress, which established the U.S. national coinage system. In 1799 the mint became an independent agency reporting directly to the president. It was made a statutory bureau of the Treasury Department in 1873, with a director appointed by the president. The mint manufactures and ships all U.S. coins for circulation to Federal Reserve banks and branches, which in turn issue coins to the public and business community through depository institutions. The mint also safeguards the Treasury Department's stored gold and silver, as well as other monetary assets.

The composition of dimes, quarters, and half dollars, traditionally produced from silver, was changed by the Coinage Act of 1965, which mandated that these coins from then on be minted from a cupronickel-clad alloy and reduced the silver content of the half dollar to 40%. In 1970, legislative action mandated that the half dollar and a dollar coin be minted from the same alloy.

Mint headquarters are in Washington, DC. Mint production facilities are in Philadelphia, Denver, San Francisco, and West Point, NY. In addition, the mint is responsible for the U.S. Bullion Depository at Fort Knox, KY.

The mint offers free public tours and operates sales centers at the U.S. mints in Denver and Philadelphia. Further information is available from the U.S. Mint, Customer Care Center, 801 9th St. NW, Washington, DC 20220; (800) USA-MINT. **Website:** www.usmint.gov

History of the dollar coin: The Eisenhower dollar was minted 1971 through 1978, when legislation called for the minting of the smaller Susan B. Anthony dollar coin. The Anthony dollar, minted through 1981, marked the first time that a woman other than a mythical figure appeared on a generally circulated U.S. coin. It was replaced in 2000 by the Golden Dollar Coin. Golden in color, with a smooth edge and wide border, the obverse depicts Sacagawea (a Shoshone woman who helped guide explorers Lewis and Clark) and her infant son. The reverse shows an American eagle and 17 stars, one for each of the states at the time of the Lewis and Clark expedition. In 2007, the mint began issuing a series of Golden Dollar Coins featuring U.S. presidents. Each includes the president's name, likeness, and years of service. Four will be issued each year in the order in which the presidents served. Presidents serving non-consecutive terms (Grover Cleveland) will be honored twice. According to the current schedule, coins will be minted through 2016 and only presidents deceased more than two years will be honored. The reverse features the Statue of Liberty. The mint mark, "e Pluribus Unum," and "In God We Trust," are edge-incused.

New Circulating and Commemorative Coins

Source: United States Mint, U.S. Dept. of the Treasury

In 2010, the U.S. Mint began its America the Beautiful quarters program, an initiative to honor 56 national parks and other sites in each state, the District of Columbia, and outlying U.S. territories. Five new reverse designs will appear on the quarter-dollar each year, 2010-21, issued in the order in which the featured site was first established as a national park or site. The 2010 America the Beautiful quarters were released in the following order: Hot Springs National Park, AR; Yellowstone National Park, WY; Yosemite National Park, CA; Grand Canyon National Park, AZ; and Mt. Hood National Forest, OR. The 2011 America the Beautiful quarters will be released in the following order: Gettysburg Military National Park, PA; Glacier National Park, AK; Olympic National Park, WA; Vicksburg Military National Park, MS; Chickasaw National Recreation Area Site, OK.

The mint produced congressionally authorized commemorative coins from 1892 to 1954, and again since 1982. Through 2010, Congress has authorized 50 commemorative coin programs. Recent congressionally authorized coins are the 2007 Jamestown 400th Anniversary gold $5 and silver $1; the 2007 Little Rock Central High School Desegregation silver $1; the 2008 American Bald Eagle Recovery and National Emblem gold $5, silver $1, and clad half dollar; the 2009 Louis Braille Bicentennial-Braille Literacy silver $1; the 2009 Lincoln Penny Series; 2010 American Veterans Disabled for Life silver $1; the 2010 Boy Scouts of America Centennial silver $1; and the 2011 Medal of Honor gold $5 and silver $1.

Bureau of Engraving and Printing

Source: Bureau of Engraving and Printing, U.S. Dept. of the Treasury

The Bureau of Engraving and Printing manufactures the financial and other securities of the United States. It designs and prints a variety of products, including Federal Reserve notes (bills in various denominations), Treasury securities, identification cards, naturalization certificates, and other special security documents. Denominations of the various types of printings produced by the bureau range from a 1/5-cent wine stamp to a $100,000,000 International Monetary Fund special note. Among its products are all hand-engraved invitations issued by the White House.

The first general circulation of paper money by the federal government dates back to 1861, prior to the establishment of the bureau, when, to finance the Civil War, Congress authorized the U.S. Treasury to issue non-interest-bearing demand notes, nicknamed "greenbacks" because of their color. A portrait of Pres. Abraham Lincoln appeared on the face of the first $10 notes. By 1862, the design of U.S. currency incorporated fine-line engraving, intricate geometric lathe work patterns, a Treasury seal, and engraved signatures to aid in counterfeit deterrence. All U.S. currency issued since 1861 remain valid and redeemable at full face value.

The Bureau of Engraving and Printing began operations by 1862, originally separating and sealing bank notes that were printed by private companies. In 1877, the bureau became the sole producer of U.S. currency. In 1894, it also began producing postage stamps. On June 10, 2005, the bureau printed its last stamps, a roll of 37-cent flag stamps; stamps are now produced by private printers.

The Federal Reserve Act of 1913 created the Federal Reserve as the nation's central bank, and provided for currency called Federal Reserve notes. The first notes, issued the following year, were $10 notes bearing a portrait of Pres. Andrew Jackson. In 1929, the look of U.S. currency was standardized. The national motto, "In God We Trust," was added to paper money in 1957.

The Bureau of Engraving and Printing currently operates two facilities, one in Washington, DC, opened in 1914, and one in Fort Worth, TX, which began operations in 1991.

Denominations of U.S. Currency

Since 1969 the largest denomination of U.S. currency that has been issued is the $100 bill. As larger-denomination bills reach the Federal Reserve Bank, they are removed from circulation. Because some discontinued currency is expected to be in the hands of holders for many years, the description of the various denominations below is continued.

Amt.	Portrait	Embellishment on back	Amt.	Portrait	Embellishment on back
$1	Washington	Great Seal of U.S.	$500	McKinley	Ornate denominational marking
2	Jefferson	Signers of Declaration	1,000	Cleveland	Ornate denominational marking
5	Lincoln	Lincoln Memorial	5,000	Madison	Washington Resigning as Army Commander
10	Hamilton	U.S. Treasury			
20	Jackson	White House	10,000	Salmon Chase	Embarkation of the Pilgrims
50	Grant	U.S. Capitol	100,000*	Wilson	Ornate denominational marking
100	Franklin	Independence Hall			

*For use only in transactions between Federal Reserve System and Treasury Department.

Portraits on U.S. Treasury Bills, Bonds, Notes, and Savings Bonds

The U.S. Treasury discontinued issuing treasury bill, bond, and note certificates in 1986. Since then, all issues of marketable treasury securities have been available only in book-entry form, although some certificates remain in circulation.

Denomination	EE savings bonds	Treasury bills	Treasury bonds	Treasury notes
$50	Washington		Jefferson	
75	Adams			
100	Jefferson		Jackson	
200	Madison			
500	Hamilton		Washington	
1,000	B. Franklin	H. McCulloch	Lincoln	Lincoln
5,000	P. Revere	J. G. Carlisle	Monroe	Monroe
10,000	J. Wilson	J. Sherman	Cleveland	Cleveland
50,000	C. Glass			
100,000		A. Gallatin	Grant	Grant
1,000,000		O. Wolcott	T. Roosevelt	T. Roosevelt
100,000,000				Madison
500,000,000				McKinley

U.S. Currency Designs

The U.S. Dept. of the Treasury, the Board of Governors of the Federal Reserve System, and the U.S. Secret Service unveiled a new design for the $100 note Apr. 21, 2010. A number of new security and anti-counterfeiting features are included in the redesign, which was initially scheduled for release in Feb. 2011 (a delay was announced Oct. 1, 2010). Upon the issue date of the new currency, older $100 notes will remain legal tender and do not need to be exchanged for new currency.

New security features incorporated in the redesigned $100 note include a blue 3-D security ribbon and the image of a bell in an inkwell on the front of the note. The security ribbon contains images of bells and numeral "100"s that change from one to the other as the note is tilted. The bell in the copper-colored inkwell changes color from copper to green when the note is tilted. Three security features were retained from the 1996 design: the watermark portrait of Benjamin Franklin, the security thread, and the color-changing "100" numeral.

In addition to the inkwell, phrases from the Declaration of Independence and an image of the quill used to sign it appear to the right of the Franklin portrait. The back of the note features a new illustration of the rear of Independence Hall. The Franklin portrait and Independence Hall illustrations are both larger than on the older design and are no longer encapsulated in oval frames.

The new $100 bill is considered the last denomination of the major currency redesign that the Treasury launched in 2003: on Oct. 9, 2003, the U.S. Treasury introduced a new $20 note, using background colors for the first time since 1905. The notes have a security thread running vertically up one side, with "USA TWENTY" and a small U.S. flag; the thread glows green under UV light. Other security features include color-shifting ink in the number "20" in the lower right corner on the note's face. A new $50 note with similar security features was released Sept. 28, 2004, followed by a $10 note on Mar. 2, 2006, and a $5 note Mar. 13, 2008.

Website: www.newmoney.gov

The U.S. $1 Bill



Plate position: Shows where on the 32-note plate this bill was printed.

Serial number Each bill has its own.

Federal Reserve District Number: Shows which district issued the bill.

Federal Reserve District Seal: The name of the Federal Reserve Bank that issued the bill is printed in the seal. The letter tells you quickly where the bill is from. Here are the letter codes for the 12 Federal Reserve Districts:

- **A:** Boston
- **B:** New York
- **C:** Philadelphia
- **D:** Cleveland
- **E:** Richmond
- **F:** Atlanta
- **G:** Chicago
- **H:** St. Louis
- **I:** Minneapolis
- **J:** Kansas City
- **K:** Dallas
- **L:** San Francisco

The Treasury Department seal: The balancing scales represent justice. The pointed stripe across the middle has 13 stars for the original 13 colonies. The key represents authority.

Plate serial number Shows which printing plate was used for the face of the bill.

Treasurer of the U.S. signature

Series indicator (year note's design was first used)

Secretary of the Treasury signature



Plate serial number Shows which plate was used for the back.

Front of the Great Seal of the United States: The bald eagle is the national bird. The shield has 13 stripes for the 13 original colonies. The eagle holds 13 arrows (symbol of war) and an olive branch (symbol of peace). Above the eagle is the motto "E Pluribus Unum," Latin for "out of many, one," and a constellation of 13 stars.

Reverse of the Great Seal of the United States: The pyramid symbolizes something that endures for ages. The eye, known as the "Eye of Providence," probably comes from an ancient Egyptian symbol. The pyramid has 13 levels; at its base are the Roman numerals for 1776, the year of American independence. "Annuit Coeptis" is Latin for "God has favored our undertaking." "Novus Ordo Seclorum" is Latin for "a new order of the ages." Both phrases are from the works of the Roman poet Virgil.

U.S. Currency and Coin

Source: Financial Management Service, U.S. Dept. of the Treasury; as of June 30, 2010

Comparative Totals of Money in Circulation—Selected Dates

Date	Dollars (mil)	Per capita[1]	Date	Dollars (mil)	Per capita[1]	Date	Dollars (mil)	Per capita[1]
June 30, 2010	$945,138	$3,051	Apr. 30, 2008	$814,027	$2,676	Sept. 30, 1980	$129,916	$581
June 30, 2009	909,697	2,963	Sept. 30, 2005	766,487	2,578	June 30, 1975	81,196	380
May 31, 2009	908,504	2,962	Sept. 30, 2000	568,614	2,061	June 30, 1970	54,351	265
Apr. 30, 2009	903,317	2,947	Sept. 30, 1995	409,272	1,553	June 30, 1965	39,719	204
June 30, 2008	826,314	2,712	Sept. 30, 1990	278,903	1,105	June 30, 1960	32,064	177
May 31, 2008	822,745	2,703	Sept. 30, 1985	187,337	782	June 30, 1955	30,229	183

(1) Based on Census Bureau population estimates.

Amounts Outstanding and in Circulation, 2010

Currency	Total currency and coin	Total currency	Federal Reserve notes[1]	U.S. notes	Currency no longer issued
Amounts outstanding	$1,140,797,162,388	$1,098,076,826,170	$1,097,592,442,272	$240,789,466	$243,594,432
Less amounts held by:					
Treasury	221,947,865	11,257,584	11,209,753	7,505	40,326
Federal Reserve banks	195,437,287,705	193,462,454,024	193,462,433,147	—	20,877
Amounts in circulation	945,137,926,818	904,603,114,562	904,118,799,372	240,781,961	243,533,229

Coins[2]	Total	Dollars[3]	Fractional coins
Amounts outstanding	$42,720,336,218	$5,874,943,008	$36,845,393,210
Less amounts held by:			
Treasury	210,690,281	183,659,128	27,031,153
Federal Reserve banks	1,974,833,681	1,013,250,367	961,583,314
Amounts in circulation	40,534,812,256	4,678,033,513	35,856,778,743

(1) Issued on or after July 1, 1929. (2) Excludes coins sold to collectors at premium prices. (3) Includes $481,781,898 in standard silver dollars.

Currency in Circulation by Denominations, 2010

Denomination	Total currency in circulation	Federal Reserve notes[1]	U.S. notes	Currency no longer issued
$1	$9,596,337,438	$9,453,966,528	$143,503	$142,227,407
$2	1,750,590,484	1,618,539,144	132,038,718	12,622
$5	11,048,667,090	10,913,862,410	108,578,510	26,226,170
$10	15,796,210,750	15,775,402,230	6,300	20,802,220
$20	128,211,455,200	128,191,344,860	3,840	20,106,500
$50	64,811,901,500	64,800,400,100	500	11,500,900
$100	673,074,835,500	673,052,836,600	NA	21,998,900
$500	142,241,000	142,036,500	5,500	199,000
$1,000	165,585,000	165,341,000	5,000	239,000
$5,000	1,780,000	1,710,000	NA	70,000
$10,000	3,510,000	3,360,000	NA	150,000
Fractional notes[2]	600	NA	90	510
Total currency	**$904,603,114,562**	**$904,118,799,372**	**$240,781,961**	**$243,533,229**

NA = Not available. (1) Issued on or after July 1, 1929. (2) Represents the value of certain partial denominations not presented for redemption.

U.S. Budget Receipts and Outlays, Fiscal Years 2004-09

Source: Congressional Budget Office; Budget of the U.S. Government, Office of Mgt. and Budget, Exec. Office of the President

As of Sept. 2008, the estimate from the Congressional Budget Office of the total U.S. budget deficit for fiscal year 2009 was $407 mil, a $3 mil decrease from the $410 mil deficit in 2008, but a $245 mil increase from the $162 mil deficit in 2007.

(In millions of current dollars. Figures may not add up to totals because of independent rounding or omitted subcategories, including some subcategories with negative values.)

Function and subfunction	2004	2005	2006	2007	2008	2009
NET RECEIPTS	**$1,880,126**	**$2,153,625**	**$2,406,876**	**$2,568,001**	**$2,523,999**	**$2,104,995**
Individual income taxes	**808,959**	**927,222**	**1,043,908**	**1,163,472**	**1,145,747**	**915,308**
Corporation income taxes	**189,371**	**278,282**	**353,915**	**370,243**	**304,346**	**138,229**
Social insurance and retirement receipts	**733,407**	**794,125**	**837,821**	**869,607**	**900,155**	**890,917**
Employment and general retirement	**689,360**	**747,664**	**790,043**	**824,258**	**856,459**	**848,885**
Old-age and survivors insurance (off-budget)	457,120	493,646	520,069	542,901	562,519	559,067
Disability insurance (off-budget)	77,625	83,830	88,313	92,188	95,527	94,942
Hospital insurance	150,589	166,068	177,429	184,908	193,980	190,663
Railroad retirement/pension fund	2,297	2,284	2,338	2,309	2,404	2,301
Railroad social security equivalent account	1,729	1,836	1,894	1,952	2,029	1,912
Unemployment insurance	**39,453**	**42,002**	**43,420**	**41,091**	**39,527**	**37,889**
Other retirement	**4,594**	**4,459**	**4,358**	**4,258**	**4,169**	**4,143**
Excise taxes	**69,855**	**73,094**	**73,961**	**65,069**	**67,334**	**62,483**
Federal funds	**24,566**	**22,547**	**22,460**	**11,076**	**15,726**	**13,854**
Alcohol	8,105	8,111	8,484	8,648	9,283	9,903
Tobacco	7,926	7,920	7,710	7,556	7,639	12,841
Telephone	5,997	6,047	4,897	–2,125	1,048	1,115
Transportation fuels	1,381	–770	–2,386	–3,291	–5,127	–10,324
Trust funds	**45,289**	**50,547**	**51,501**	**53,993**	**51,608**	**48,629**
Highway	34,711	37,892	38,542	39,361	36,385	34,961
Airport and airway	9,174	10,314	10,426	11,468	11,992	10,569
Black lung disability	566	610	607	639	653	645
Inland waterway	91	91	81	91	88	76
Oil spill liability	—	—	54	452	333	447
Aquatic resources	416	429	519	581	595	576
Leaking underground storage tank	189	189	197	226	171	169
Tobacco assessments	—	899	891	934	1,140	951
Vaccine injury compensation	142	123	184	241	251	235
Other receipts	**78,534**	**80,902**	**97,271**	**99,610**	**106,417**	**98,058**

Function and subfunction	2004	2005	2006	2007	2008	2009
OUTLAYS	**$2,292,853**	**$2,471,971**	**$2,655,057**	**$2,728,702**	**$2,982,554**	**$3,517,681**
National defense	**455,833**	**495,308**	**521,827**	**551,271**	**616,073**	**661,049**
Department of Defense—Military						
Military personnel	113,576	127,463	127,543	127,544	138,940	147,348
Operation and maintenance	174,045	188,118	203,789	216,631	244,836	259,312
Procurement	76,216	82,294	89,757	99,647	117,398	129,218
Research, development, test, and evaluation	60,759	65,694	68,629	73,136	75,120	79,030
Military construction	6,312	5,331	6,245	7,899	11,563	17,614
Family housing	3,905	3,720	3,717	3,473	3,590	2,721
Subtotal, Department of Defense—Military	436,439	474,071	499,297	528,548	594,632	636,742
Atomic energy defense activities	16,625	18,042	17,468	17,050	17,126	17,552
Defense-related activities	2,769	3,195	5,062	5,673	4,315	6,755
International affairs	**26,870**	**34,565**	**29,499**	**28,482**	**28,857**	**37,529**
International development and humanitarian assistance	13,807	17,696	16,693	15,542	14,074	22,095
International security assistance	8,369	7,895	7,811	7,982	9,480	6,247
Conduct of foreign affairs	7,895	9,148	8,559	8,379	10,388	12,152
Foreign information and exchange activities	1,140	1,129	1,162	1,220	1,330	1,330
International financial programs	–4,341	–1,303	–4,726	–4,623	–6,415	–4,295
General science, space and technology	**23,029**	**23,597**	**23,584**	**25,525**	**27,731**	**29,449**
General science and basic research	8,392	8,819	9,093	10,267	10,531	11,052
Space flight, research, and supporting activities	14,637	14,778	14,491	15,258	17,200	18,397
Energy	**–167**	**429**	**782**	**–860**	**628**	**4,749**
Energy supply	–1,556	–940	231	–1,991	–416	2,045
Energy conservation	926	883	747	580	409	1,432
Emergency energy preparedness	158	162	–441	195	179	754
Energy information, policy, and regulation	305	324	245	356	456	518
Natural resources and environment	**30,706**	**27,994**	**33,028**	**31,732**	**31,825**	**35,574**
Water resources	5,571	5,723	8,026	5,099	6,071	8,063
Conservation and land management	9,758	6,226	7,813	9,646	8,718	9,813
Recreational resources	2,944	2,990	3,042	2,956	3,208	3,550
Pollution control and abatement	8,485	8,079	8,572	8,426	8,087	8,276
Agriculture	**15,439**	**26,565**	**25,969**	**17,662**	**18,387**	**22,237**
Farm income stabilization	11,186	22,048	21,411	13,094	13,762	17,635
Agricultural research and services	4,253	4,517	4,558	4,568	4,625	4,602
Commerce and housing credit	**5,265**	**7,566**	**6,187**	**487**	**27,870**	**291,535**
Mortgage credit	2,659	–862	–619	–4,986	17	99,760
Postal Service	–4,070	–1,223	–971	–3,161	–3,074	–978
Deposit insurance	–1,976	–1,371	–1,110	–1,492	18,760	22,573
Transportation	**64,627**	**67,894**	**70,244**	**72,905**	**77,616**	**84,289**
Ground transportation	40,744	42,317	45,209	46,818	49,978	54,103
Air transportation	16,743	18,807	18,005	18,096	19,399	20,799
Water transportation	6,898	6,439	6,688	7,695	8,121	9,093
Community and regional development	**15,820**	**26,262**	**54,465**	**29,567**	**23,952**	**27,650**
Community development	6,167	5,861	5,845	11,834	10,198	7,719
Area and regional development	2,351	2,745	2,580	2,514	2,584	3,221
Disaster relief and insurance	7,302	17,656	46,040	15,219	11,170	16,710
Education, training, employment, and social services	**87,974**	**97,555**	**118,482**	**91,656**	**91,287**	**79,746**
Elementary, secondary, and vocational education	34,360	38,271	39,710	38,427	39,788	53,206
Higher education	25,264	31,442	50,471	24,637	24,475	–3,258
Research and general education aids	3,031	3,124	2,998	3,153	3,194	3,456
Training and employment	7,918	6,852	7,199	7,080	7,181	7,652
Social services	15,855	16,251	16,473	16,724	16,805	17,044
Health	**240,122**	**250,548**	**252,739**	**266,382**	**280,599**	**334,327**
Health care services	210,080	219,559	220,800	233,878	247,739	300,010
Health research and training	27,099	28,050	28,828	29,279	29,883	30,565
Consumer and occupational health and safety	2,943	2,939	3,111	3,225	2,977	3,752
Medicare	**269,360**	**298,638**	**329,868**	**375,407**	**390,758**	**430,093**
Income security	**333,059**	**345,847**	**352,477**	**365,975**	**431,313**	**533,224**
Retirement and disability insurance (excl. social security)	6,573	6,976	4,592	7,829	8,899	8,218
Federal employee retirement and disability	88,729	93,351	98,296	103,916	108,998	118,119
Unemployment compensation	44,994	35,435	33,814	35,107	45,340	122,537
Housing assistance	36,790	37,899	38,295	39,715	40,556	50,913
Food and nutrition assistance	46,012	50,833	53,928	54,458	60,673	79,080
Social security	**495,548**	**523,305**	**548,549**	**586,153**	**617,027**	**682,963**
Veterans benefits and services	**59,746**	**NA**	**69,811**	**72,818**	**84,653**	**95,429**
Income security for veterans	30,849	35,767	35,771	35,684	41,338	45,952
Veterans education, training, and rehabilitation	2,562	2,790	2,638	2,713	2,730	3,495
Hospital and medical care for veterans	26,859	28,754	29,888	32,294	36,974	41,882
Veterans housing	–1,982	860	–1,242	–868	–419	–578
Administration of justice	**45,576**	**40,019**	**41,016**	**41,244**	**47,138**	**51,549**
Federal law enforcement activities	19,131	19,912	20,039	19,617	24,615	27,552
Federal litigative and judicial activities	9,685	9,641	10,051	10,954	11,781	12,083
Federal correctional activities	5,509	5,862	6,158	6,328	6,888	7,298
Criminal justice assistance	11,251	4,604	4,768	4,345	3,854	4,616
General government	**22,338**	**16,997**	**18,177**	**17,425**	**20,325**	**22,026**
Legislative functions	3,187	3,451	3,446	3,541	3,660	3,813
Executive direction and management	503	569	522	490	525	535
Central fiscal operations	9,301	9,515	10,163	10,298	10,553	10,752
General property and records management	224	472	327	285	570	554
Central personnel management	217	101	151	–20	–12	102
General purpose fiscal assistance	7,675	3,333	3,798	3,556	4,089	4,097
Deductions for offsetting receipts	–1,068	–2,841	–1,359	–2,346	–462	–1,001
Net interest	**160,245**	**183,986**	**226,603**	**237,109**	**252,757**	**186,902**
Undistributed offsetting receipts	**–58,537**	**–65,224**	**–68,250**	**–82,238**	**–86,242**	**–92,639**
Employer share, employee retirement (on-budget)	–42,100	–47,977	–49,231	–49,476	–53,033	–56,431
Total surplus/deficit	**–412,727**	**–318,346**	**–248,181**	**–160,701**	**–458,555**	**–1,412,686**

Note: Fiscal year ends Sept. 30.

Federal Receipts, Outlays, and Surpluses or Deficits, 1941-2010

Source: Financial Management Service, U.S. Dept. of the Treasury; Congressional Budget Office
(in millions of current dollars)

Fiscal year[1]	Receipts	Outlays	Surplus or deficit (–)[2]	Fiscal year[1]	Receipts	Outlays	Surplus or deficit (–)[2]
1941	$8,712	$13,653	–$4,941	Transition quarter[3]	$81,232	$95,975	–$14,744
1942	14,634	35,137	–20,503	1977	355,559	409,218	–53,659
1943	24,001	78,555	–54,554	1978	399,561	458,746	–59,185
1944	43,747	91,304	–47,557	1979	463,302	504,028	–40,726
1945	45,159	92,712	–47,553	1980	517,112	590,941	–73,830
1946	39,296	55,232	–15,936	1981	599,272	678,241	–78,968
1947	38,514	34,496	4,018	1982	617,766	745,743	–127,977
1948	41,560	29,764	11,796	1983	600,562	808,364	–207,802
1949	39,415	38,835	580	1984	666,438	851,805	–185,367
1950	39,443	42,562	–3,119	1985	734,037	946,344	–212,308
1951	51,616	45,514	6,102	1986	769,155	990,382	–221,227
1952	66,167	67,686	–1,519	1987	854,288	1,004,017	–149,730
1953	69,608	76,101	–6,493	1988	909,238	1,064,416	–155,178
1954	69,701	70,855	–1,154	1989	991,105	1,143,744	–152,639
1955	65,451	68,444	–2,993	1990	1,031,972	1,253,007	–221,036
1956	74,587	70,640	3,947	1991	1,054,996	1,324,234	–269,238
1957	79,990	76,578	3,412	1992	1,091,223	1,381,543	–290,321
1958	79,636	82,405	–2,769	1993	1,154,341	1,409,392	–255,051
1959	79,249	92,098	–12,849	1994	1,258,579	1,461,766	–203,186
1960	92,492	92,191	301	1995	1,351,801	1,515,753	–163,952
1961	94,388	97,723	–3,335	1996	1,453,055	1,560,486	–107,431
1962	99,676	106,821	–7,146	1997	1,579,240	1,601,124	–21,884
1963	106,560	111,316	–4,756	1998	1,721,733	1,652,463	69,270
1964	112,613	118,528	–5,915	1999	1,827,459	1,701,849	125,610
1965	116,817	118,228	–1,411	2000	2,025,198	1,788,957	236,241
1966	130,835	134,532	–3,698	2001	1,991,142	1,862,906	128,236
1967	148,822	157,464	–8,643	2002	1,853,149	2,010,907	–157,758
1968	152,973	178,134	–25,161	2003	1,782,321	2,159,906	–377,585
1969	186,882	183,640	3,242	2004	1,880,126	2,292,853	–412,727
1970	192,807	195,649	–2,842	2005	2,153,625	2,471,971	–318,346
1971	187,139	210,172	–23,033	2006	2,406,876	2,655,057	–248,181
1972	207,309	230,681	–23,373	2007	2,568,001	2,728,702	–160,701
1973	230,799	245,707	–14,908	2008	2,523,999	2,982,554	–458,555
1974	263,224	269,359	–6,135	2009	2,104,995	3,517,681	–1,412,686
1975	279,090	332,332	–53,242	2010[E]	2,165,119	3,720,701	–1,555,582
1976	298,060	371,792	–73,732				

E = Estimate as of Feb. 1, 2010. (1) Through 1976, fiscal years end June 30; after 1976, fiscal years end Sept. 30. (2) May not equal difference between figures shown because of rounding. (3) Transition quarter covers July 1, 1976-Sept. 30, 1976.

Budget Receipts and Outlays, 1789-1940

Source: U.S. Dept. of the Treasury
(in thousands of dollars; annual statements for years ending June 30, unless otherwise noted)

Yearly average	Receipts	Outlays	Yearly average	Receipts	Outlays
1789-1800[1]	$5,717	$5,776	1881-1885	$366,961	$257,691
1801-1810[2]	13,056	9,086	1886-1890	375,448	279,134
1811-1820[2]	21,032	23,943	1891-1895	352,891	363,599
1821-1830[2]	21,928	16,162	1896-1900	434,877	457,451
1831-1840[2]	30,461	24,495	1901-1905	559,481	535,559
1841-1850[2]	28,545	34,097	1906-1910	628,507	639,178
1851-1860	60,237	60,163	1911-1915	710,227	720,252
1861-1865	160,907	683,785	1916-1920	3,483,652	8,065,333
1866-1870	447,301	377,642	1921-1925	4,306,673	3,578,989
1871-1875	336,830	287,460	1926-1930	4,069,138	3,182,807
1876-1880	288,124	255,598	1931-1935	2,770,973	5,214,874
			1936-1940	4,960,614	10,192,367

(1) Average for period Mar. 4, 1789, to Dec. 31, 1800. (2) Years 1801-42 end Dec. 31; average for 1841-50 is for the period Jan. 1, 1841, to June 30, 1850.

Budget Deficits as Percent of GDP, Selected Countries, 1990-2010

Source: Organization for Economic Cooperation and Development

Country	1995	2000	2005	2008	2009	2010	Country	1995	2000	2005	2008	2009	2010
Australia	–3.4%	0.5%	1.4%	0.3%	–3.9%	–3.2%	Korea, South	3.5%	5.4%	3.4%	3.0%	0.0%	1.0%
Austria	–5.9	–1.9	–1.8	–0.5	–3.4	–4.7	Luxembourg	2.4	6.0	0.0	2.9	–0.7	–3.8
Belgium	–4.5	–0.1	–2.8	–1.2	–6.1	–4.9	Netherlands	–9.2	2.0	–0.3	0.7	–5.3	–6.4
Canada	–5.3	2.9	1.5	0.1	–5.1	–3.4	New Zealand	2.7	1.9	4.5	0.4	–3.5	–4.3
Czech Republic	–13.4	–3.7	–3.6	–2.7	–5.9	–5.4	Norway	3.2	15.4	15.1	19.1	9.7	9.7
Denmark	–2.9	2.2	5.0	3.4	–2.8	–5.5	Poland	–4.4	–3.0	–4.1	–3.7	–7.1	–6.9
Finland	–6.1	6.8	2.5	4.1	–2.4	3.8	Portugal	–5.0	–3.0	–6.1	–2.9	–9.4	–7.4
France	–5.5	–1.5	–3.0	–3.3	–7.6	–7.8	Slovak Republic	–3.4	–12.3	–2.8	–2.3	–6.8	–6.4
Germany	–9.7	1.3	–3.3	0.0	–3.3	–5.4	Spain	–6.5	–1.0	1.0	–4.1	–11.2	–9.4
Greece	–9.1	–3.7	–5.3	–7.7	–13.5	–8.1	Sweden	–7.3	3.6	1.9	2.2	–1.1	2.9
Hungary	–8.6	–3.0	–7.9	–3.8	–3.9	–4.5	Switzerland	–2.0	0.1	–0.7	2.5	0.7	–0.8
Iceland	–3.0	1.7	4.9	–13.5	–9.1	–6.4	United Kingdom	–5.8	3.7	–3.3	–4.9	–11.3	–11.5
Ireland	–2.0	4.8	1.6	–7.3	–14.3	–11.7	United States	–3.3	1.5	–3.3	–6.5	–11.0	–10.7
Italy	–7.4	–0.9	–4.4	–2.7	–5.2	–5.2	Euro area	–7.5	0.0	–2.6	–2.0	–6.3	–6.6
Japan	–4.7	–7.6	–6.7	–2.1	–7.2	–7.6	**Total OECD**	**–4.8**	**0.1**	**–2.7**	**–3.3**	**–7.9**	**–7.8**

NA = Not available. **Note:** Financial balances include revenues from the sale of mobile telephone licenses in some years.

Public Debt of the U.S., 1870-2009

Source: Bureau of Public Debt, U.S. Dept. of the Treasury; World Almanac research

Fiscal year	Debt (bil)	Debt per cap. (dollars)	Interest paid (bil)	% of federal outlays	Fiscal year	Debt (bil)	Debt per cap. (dollars)	Interest paid (bil)	% of federal outlays
1870	$2.4	$61.06	—	—	1989	$2,857.4	$11,545	$240.9	21.0%
1880	2.0	41.60	—	—	1990	3,233.3	13,000	264.8	21.1
1890	1.1	17.80	—	—	1991	3,665.3	14,436	285.5	21.6
1900	1.2	16.60	—	—	1992	4,064.6	15,846	292.3	21.2
1910	1.1	12.41	—	—	1993	4,411.5	17,105	292.5	20.8
1920	24.2	228	—	—	1994	4,692.8	18,025	296.3	20.3
1930	16.1	131	—	—	1996	5,224.8	19,805	344.0	22.0
1940	43.0	325	$1.0	10.5%	1997	5,413.1	20,026	355.8	22.2
1950	256.1	1,688	5.7	13.4	1998	5,526.2	20,443	363.8	22.0
1960	284.1	1,572	9.2	10.0	1999	5,656.3	20,746	353.5	20.7
1970	370.1	1,814	19.3	9.9	2000	5,674.2	20,106[1]	362.0	20.2
1977	698.8	3,170	41.9	10.2	2001	5,807.5	20,361[1]	359.5	19.3
1978	771.5	3,463	48.7	10.6	2002	6,228.2	21,616[1]	332.5	16.5
1979	826.5	3,669	59.8	11.9	2003	6,783.2	23,326[1]	318.1	14.7
1980	907.7	3,985	74.9	12.7	2004	7,379.1	25,130[1]	321.6	14.0
1981	997.9	4,338	95.6	14.1	2005	7,932.7	26,754[1]	352.4	14.3
1982	1,142.0	4,913	117.4	15.7	2006	8,507.0	28,414[1]	405.9	15.3
1983	1,377.2	5,870	128.8	15.9	2007	9,007.7	29,804[1]	430.0	15.8
1984	1,572.3	6,640	153.8	18.1	2008	10,025.0	33,237[1]	451.2	15.1
1986	2,125.3	8,774	190.2	19.2	2009	11.956.6	38,850[1]	383.1	9.6[1]
1987	2,350.3	9,615	195.4	19.5	2010	13,561.6	44,174[1]	414.0	11.5[1]
1988	2,602.3	10,534	214.1	20.1					

Note: As of end of fiscal year. Through 1976, the fiscal year ended June 30. From 1977 on, the fiscal year ends Sept. 30. (1) Estimated.

State Finances: Revenue, Expenditures, Debt, and Taxes, 2008

Source: U.S. Census Bureau, U.S. Dept. of Commerce

(fiscal year)

State	Revenue (thous.)	Expenditures (thous.)	Debt (thous.)	Per capita debt	Per capita taxes	Per capita expenditures
Alabama	$18,353,578	$24,892,739	$8,472,097	$1,817	$1,946	$5,340
Alaska	16,027,757	10,115,914	6,491,713	9,459	12,276	14,740
Arizona	27,697,541	30,778,930	10,519,389	1,618	2,109	4,735
Arkansas	15,106,880	15,655,753	4,283,024	1,500	2,637	5,483
California	201,069,818	246,683,951	121,929,578	3,317	3,193	6,711
Colorado	26,503,025	22,806,051	15,879,387	3,215	1,949	4,617
Connecticut	22,160,095	23,528,530	27,554,245	7,870	4,169	6,720
Delaware	6,658,241	7,151,941	5,722,757	6,555	3,357	8,192
Florida	68,621,353	77,195,462	42,320,929	2,309	1,956	4,212
Georgia	41,153,807	41,165,128	13,072,416	1,350	1,866	4,250
Hawaii	9,298,617	10,533,869	6,028,067	4,679	3,996	8,177
Idaho	7,107,284	7,675,083	3,379,159	2,218	2,397	5,037
Illinois	58,523,576	63,368,160	58,436,829	4,529	2,472	4,912
Indiana	29,314,749	30,783,257	19,916,264	3,123	2,371	4,827
Iowa	15,939,920	16,522,737	7,235,998	2,410	2,295	5,503
Kansas	13,541,510	14,968,811	5,836,651	2,083	2,555	5,342
Kentucky	20,581,938	25,421,531	12,209,861	2,860	2,356	5,955
Louisiana	30,307,726	33,003,929	16,387,658	3,715	2,495	7,483
Maine	7,656,061	8,151,041	5,296,282	4,023	2,876	6,192
Maryland	28,422,851	34,029,818	23,070,309	4,095	2,789	6,041
Massachusetts	51,759,773	45,634,948	71,892,262	11,064	3,371	7,023
Michigan	42,259,206	56,869,012	29,065,260	2,906	2,477	5,685
Minnesota	29,707,313	34,283,510	9,538,669	1,827	3,509	6,567
Mississippi	16,278,166	18,642,916	6,331,031	2,154	2,304	6,344
Missouri	25,243,465	26,788,804	19,708,834	3,334	1,855	4,532
Montana	6,402,859	6,137,669	4,924,359	5,090	2,541	6,344
Nebraska	8,387,599	8,443,129	2,719,139	1,525	2,371	4,734
Nevada	10,438,721	10,845,375	4,248,696	1,634	2,352	4,171
New Hampshire	6,284,782	6,601,654	7,908,632	6,010	1,711	5,017
New Jersey	55,046,270	58,539,173	52,785,000	6,079	3,526	6,742
New Mexico	12,892,523	15,793,049	7,763,822	3,913	2,845	7,959
New York	147,340,334	157,397,509	114,240,227	5,861	3,354	8,076
North Carolina	51,421,057	46,707,349	19,605,315	2,126	2,470	5,065
North Dakota	5,018,609	4,125,920	1,951,959	3,043	3,604	6,432
Ohio	65,614,628	67,788,590	26,885,476	2,341	2,275	5,902
Oklahoma	18,656,746	19,517,639	9,129,789	2,507	2,287	5,359
Oregon	17,138,167	22,386,883	11,647,145	3,073	1,920	5,907
Pennsylvania	71,142,087	71,635,287	40,100,004	3,211	2,572	5,736
Rhode Island	6,691,311	7,495,870	8,911,977	8,481	2,628	7,134
South Carolina	23,119,297	27,593,614	15,212,910	3,396	1,781	6,160
South Dakota	2,910,381	3,698,335	3,408,138	4,238	1,643	4,599
Tennessee	25,699,084	26,253,469	4,366,410	703	1,857	4,224
Texas	119,094,697	99,126,766	33,299,313	1,369	1,836	4,075
Utah	15,407,801	14,293,669	5,907,105	2,159	2,233	5,223
Vermont	5,148,584	5,070,156	3,371,915	5,427	4,095	8,161
Virginia	36,232,142	39,765,229	21,875,483	2,816	2,369	5,118
Washington	36,659,905	39,689,815	23,524,009	3,592	2,742	6,060
West Virginia	10,724,135	10,596,812	6,365,585	3,508	2,691	5,840
Wisconsin	25,643,528	32,625,430	22,107,148	3,928	2,681	5,797
Wyoming	6,718,235	5,081,586	1,342,710	2,521	4,515	9,540
All states[1]	**$1,619,127,732**	**$1,733,861,802**	**$1,004,180,935**	**$3,303**	**$2,571**	**$5,702**

(1) Figures may not add up to totals because of rounding.

State and Local Government Receipts and Current Expenditures, 2001-09

Source: Bureau of Economic Analysis, U.S. Dept. of Commerce

(in billions of current dollars; as of Oct. 2010)

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Receipts	**$1,374.0**	**$1,412.7**	**$1,496.3**	**$1,601.0**	**$1,730.4**	**$1,829.7**	**$1,923.1**	**$1,967.2**	**$2,005.8**
Current tax receipts	914.8	928.7	977.7	1,059.4	1,163.1	1,249.0	1,313.6	1,332.5	1,267.0
Personal current taxes	243.0	221.8	226.2	248.6	276.7	302.5	323.1	335.4	287.3
Income taxes	223.3	201.3	204.1	224.7	251.7	276.1	295.9	308.0	259.1
Other	19.7	20.5	22.1	23.8	25.0	26.4	27.2	27.5	28.2
Taxes on production and imports	642.4	676.0	717.5	769.1	831.4	887.4	932.7	949.1	930.3
Sales taxes	321.8	331.1	348.8	370.7	402.2	430.4	447.1	442.7	421.1
Property taxes	268.0	289.4	306.8	326.7	346.9	370.1	396.0	411.7	425.2
Other	52.6	55.5	61.9	71.7	82.3	86.9	89.7	94.7	84.0
Taxes on corporate income	28.9	30.9	34.0	41.7	54.9	59.2	57.8	48.0	49.4
Contributions for government social insurance	13.7	15.9	20.1	24.1	24.8	21.8	18.9	19.7	21.6
Income receipts on assets	90.0	79.6	74.0	77.1	88.3	103.5	114.5	115.2	116.0
Interest receipts	82.1	71.5	64.6	66.7	76.4	90.9	100.6	99.5	98.8
Dividends	1.4	1.6	1.7	2.0	2.1	2.3	2.4	2.5	2.7
Rents and royalties	6.5	6.6	7.6	8.5	9.8	10.3	11.5	13.2	14.5
Current transfer receipts	348.0	382.3	421.3	439.4	454.3	456.7	485.1	512.7	610.2
Federal grants-in-aid	276.1	304.2	338.0	349.2	361.2	359.0	380.8	396.2	484.6
From business (net)	29.8	32.6	33.8	36.5	36.5	38.4	41.3	46.8	50.4
From persons	42.0	45.6	49.5	53.7	56.5	59.2	63.1	69.7	75.2
Current surplus of government enterprises	8.0	6.1	3.3	1.0	0.1	–1.3	–9.1	–13.0	–9.0
Current expenditures	**1,389.9**	**1,466.8**	**1,535.1**	**1,609.3**	**1,704.5**	**1,778.6**	**1,910.8**	**2,014.6**	**2,025.9**
Consumption expenditures	994.2	1,049.4	1,096.5	1,139.1	1,212.0	1,282.3	1,368.9	1,448.2	1,424.4
Government social benefit payments to persons	305.1	333.0	333.0	384.3	404.8	402.9	433.7	455.2	492.1
Interest payments	83.0	83.5	83.5	85.6	87.3	93.0	101.1	108.2	108.0
Subsidies	7.7	0.9	0.1	0.4	0.4	0.4	7.1	3.0	1.4
Less: Wage accruals less disbursements	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net state and local government saving	–15.9	–54.1	–38.8	–8.4	25.9	51.0	12.2	–47.4	–20.1
Social insurance funds	2.6	1.5	3.4	6.9	7.4	4.7	1.9	1.7	2.6
Other	–18.5	–55.6	–42.2	–15.3	18.5	46.4	10.4	–49.1	–22.7
Addenda:									
Total receipts	1,425.2	1,465.1	1,547.8	1,648.5	1,780.2	1,887.1	1,982.0	2,029.1	2,073.1
Current receipts	1,374.0	1,412.7	1,496.3	1,601.0	1,730.4	1,829.7	1,923.1	1,967.2	2,005.8
Capital transfer receipts	51.2	52.4	51.5	47.5	49.8	57.4	58.9	61.9	67.4
Total expenditures	1,524.5	1,609.5	1,678.9	1,752.7	1,846.2	1,931.4	2,075.0	2,186.2	2,189.3
Current expenditures	1,389.9	1,466.8	1,535.1	1,609.3	1,704.5	1,778.6	1,910.8	2,014.6	2,025.9
Gross government investment	240.5	253.3	259.6	269.1	281.6	304.4	329.0	350.3	351.0
Net purchases of nonproduced assets	10.1	11.2	11.4	11.4	10.3	11.1	13.8	13.9	13.4
Less: Consumption of fixed capital	116.0	121.8	127.3	137.1	150.1	162.7	178.7	192.6	200.9
Net lending or net borrowing (–)	**–99.3**	**–144.4**	**–131.1**	**–104.2**	**–66.0**	**–44.3**	**–93.1**	**–157.1**	**–116.1**

Federal Deposit Insurance Corporation (FDIC)

The Federal Deposit Insurance Corporation (FDIC) is the independent deposit insurance agency created by Congress to maintain stability and public confidence in the nation's banking system. In its unique role as deposit insurer of banks and savings associations, and in cooperation with other federal and state regulatory agencies, the FDIC seeks to promote the safety and soundness of insured depository institutions in the U.S. financial system by identifying, monitoring, and addressing risks to the deposit insurance funds. The FDIC aims to promote public understanding and sound public policies by providing financial and economic information and analyses. It seeks to minimize disruptive effects from the failure of banks and savings associations, and to ensure fairness in the sale of financial products and the provision of financial services.

To maintain its insurance funds, the FDIC assesses depository institutions insurance premiums four times a year (quarterly). The amount of the premium is based on the institution's balance of insured deposits for the preceding quarter and the institution's risk to the insurance fund. In 2009, Congress permanently increased the limit that the Corporation may borrow from the U.S. Treasury from $30 bil to $100 bil, and temporarily raised this borrowing limit to $500 bil through the end of 2010. The FDIC's Bank Insurance Fund and the Savings Association Insurance Fund were merged Mar. 31, 2006, to form the Deposit Insurance Fund, which stood at –$15.2 bil on June 30, 2010, significantly lower than the Oct. 7, 2008, level of $45.2 bil; nevertheless, it is projected to have sufficient cash to resolve projected bank failures.

U.S. Banks, 1935-2009

Source: Federal Deposit Insurance Corp.; as of June 30, 2009

Comprises all FDIC-insured commercial and savings banks, including savings and loan institutions (S&Ls).

	Total number of banks					Total deposits (mil dollars)				
		Commercial banks[1]					Commercial banks[1]			
Year	All banks	Natl.	State	Non-members	All savings	All deposits	Natl.	State	Non-members	All savings
1935	**15,295**	5,386	1,001	7,735	1,173	**$45,102**[2]	$24,802	$13,653	$5,669	$978[2]
1940	**15,772**	5,144	1,342	6,956	2,330	**67,494**	35,787	20,642	7,040	4,025
1950	**16,500**	4,958	1,912	6,576	3,054	**171,963**	84,941	41,602	19,726	25,694
1960	**17,549**	4,530	1,641	6,955	4,423	**310,262**	120,242	65,487	34,369	90,164
1970	**18,205**	4,621	1,147	7,743	4,694	**686,901**	285,436	101,512	95,566	204,367
1980	**18,763**	4,425	997	9,013	4,328	**1,832,716**	656,752	191,183	344,311	640,470
1990	**15,158**	3,979	1,009	7,355	2,815	**3,637,292**	1,558,915	397,797	693,438	987,142
2000	**9,905**	2,230	991	5,094	1,590	**4,914,808**	2,250,464	1,032,110	894,000	738,234
2002	**9,354**	2,077	950	4,861	1,439	**5,568,508**	2,565,771	1,152,380	971,730	878,627
2003	**9,182**	2,001	935	4,833	1,413	**5,954,288**	2,786,756	1,195,914	1,046,195	925,423
2004	**8,976**	1,907	919	4,805	1,345	**6,584,200**	3,581,416	872,228	1,139,168	991,388
2005	**8,832**	1,818	907	4,802	1,305	**7,141,178**	3,850,051	936,299	1,286,983	1,067,845
2006[3]	**8,767**	1,780	903	4,796	1,276	**6,449,864**	3,190,482	818,565	1,311,720	1,118,948
2007[3]	**8,605**	1,676	888	4,786	1,244	**6,702,212**	3,273,531	831,081	1,425,607	1,165,119
2008[3]	**8,441**	1,585	874	4,744	1,227	**7,025,790**	3,596,712	857,003	1,432,609	1,132,360
2009[3]	**8,185**	1,505	858	4,632	1,180	**7,559,616**	4,141,792	962,232	1,512,703	936,101

(1) "Nonmembers" are banks that are not members of the Federal Reserve System; "National" and "State" institutions are members. (2) Figures for 1935 do not include data for S&Ls (not available). (3) June 30.

U.S. Bank Failures, 1934-2010

Source: Federal Deposit Insurance Corp.; as of Oct. 22, 2010
Covers all FDIC-insured commercial and savings banks, including savings and loan institutions (S&Ls) 1980 and after.

Year	Closed or assisted	Year	Closed or assisted	Year	Closed or assisted	Year	Closed or assisted	Year	Closed or assisted
1934	9	1963	2	1976	17	1988	465	1999	8
1935	26	1964	7	1978	7	1989	534	2000	7
1936	69	1965	5	1979	10	1990	382	2001	4
1937	77	1966	7	1980	22	1991	271	2002	11
1938	74	1967	4	1981	40	1992	181	2003	3
1939	60	1969	9	1982	119	1993	50	2004	4
1940	43	1970	7	1983	99	1994	15	2007	3
1955	5	1971	7	1984	106	1995	8	2008	25
1959	3	1972	2	1985	180	1996	6	2009	140
1960	1	1973	6	1986	204	1997	1	2010	139
1961	5	1975	13	1987	262	1998	3		

Note: There were no bank failures in 2005 or in 2006.

50 Largest U.S. Bank Holding Companies

Source: Federal Reserve System; as of June 30, 2010; ranked by total assets, in thousands

Company, location	Total assets
Bank of America, Charlotte, NC	$2,366,086,945
JPMorgan Chase & Co., New York, NY	2,014,019,000
Citigroup Inc., New York, NY	1,937,656,000
Wells Fargo & Co., San Francisco, CA	1,225,862,000
Goldman Sachs Group, Inc., The, New York, NY	883,529,000
Morgan Stanley, New York, NY	809,456,000
Barclays Group US Inc., Wilmington, DE	573,907,057
Metlife, Inc., New York, NY	356,186,000
Taunus Corp., New York, NY	348,586,000
HSBC North America Holdings Inc., New York, NY	333,997,956
U.S. Bancorp, Minneapolis, MN	283,243,000
PNC Financial Services Group, Inc., Pittsburgh, PA.	261,769,262
Bank of New York Mellon Corp., The, New York, NY	235,944,000
Capital One Financial Corp., McLean, VA	197,488,678
Ally Financial Inc., Detroit, MI	176,814,000
Suntrust Banks, Inc., Atlanta, GA	170,668,470
State Street Corporation, Boston, MA	160,664,212
TD Bank US Holding Co., Portland, ME	159,058,393
BB&T Corp., Winston-Salem, NC	155,083,058
American Express Co., New York, NY	142,729,358
Citizens Financial Group, Inc., Providence, RI	140,019,495
Regions Financial Corporation, Birmingham, AL	135,392,660
Fifth Third Bancorp, Cincinnati, OH	112,025,234
Keycorp, Cleveland, OH	94,286,771
UnionBanCal Corp., San Francisco, CA.	$84,310,013
Northern Trust Corp., Chicago, IL	80,048,900
Bancwest Corporation, Honolulu, HI	75,333,902
M & T Bank Corp., Buffalo, NY.	68,153,616
Harris Financial Corp., Wilmington, DE	65,163,503
BBVA USA Bancshares, Inc., Houston, TX	65,109,021
Discover Financial Services, Riverwoods, IL	60,721,686
Comerica Inc., Dallas, TX.	55,997,505
CIT Group, Inc., New York, NY	54,917,588
Marshall & Ilsley Corp., Milwaukee, WI	54,021,895
Zions Bancorp, Salt Lake City, UT	52,150,505
Huntington Bancshares Inc., Columbus, OH	51,771,443
Popular, Inc., San Juan, Puerto Rico	42,444,000
New York Community Bancorp, Inc., Westbury, NY	42,026,691
Ultrecht-America Holdings, Inc., New York, NY	39,848,176
Synovus Financial Corp., Columbus, GA	32,382,340
RBC Bancorp, Raleigh, NC	26,481,625
First Horizon National Corp., Memphis, TN	26,254,887
BOK Financial Corp., Tulsa, OK.	23,740,965
Associated Banc-Corp., Green Bay, WI	22,760,901
City National Corporation, Los Angeles, CA.	21,239,625
First Citizens Bancshares, Inc., Raleigh, NC	21,105,769
First Niagara Financial Group, Inc., Buffalo, NY	20,548,059
East West Bancorp. Inc., Pasadena, CA	19,967,321
Commerce Bancshares, Inc., Kansas City, MO	18,393,325
First Bancorp, San Juan, Puerto Rico	18,116,023

Note: Includes foreign-owned banks with a strong presence in the U.S.

Status of Top Recipients of Treasury Department "Bailout" Funds, 2010

Source: ProPublica; as of Oct. 29, 2010

	Disbursed (bil)	Returned to govt. (bil)	Dividends to govt. (mil)
Auto industry			
General Motors	$50.7	$7.1	$183.8
Chrysler	10.8	2.2	0.0
Bank (public)			
Bank of America	45.0	45.0	2,729.3
Citigroup	45.0	36.4	2,941.2
JPMorgan Chase	25.0	25.0	795.1
Wells Fargo	25.0	25.0	1,441.0
Goldman Sachs	10.0	10.0	318.1
Morgan Stanley	10.0	10.0	318.1
PNC Financial Services	7.6	7.6	421.1
U.S. Bancorp	6.6	6.6	195.2
SunTrust	4.9	0.0	376.0
Capital One Financial Corp.	3.6	3.6	105.2
Regions Financial Corp.	3.5	0.0	306.7
Fifth Third Bancorp	3.4	0.0	255.6
BB&T	3.1	3.1	92.7
Bank of New York Mellon	3.0	3.0	95.4
KeyCorp	2.5	0.0	219.1
CIT Group	2.3	0.0	43.7
Comerica Incorporated	2.3	2.3	140.9
State Street	2.0	2.0	63.6
Marshall & Ilsley	1.7	0.0	150.3
Northern Trust	1.6	1.6	46.6
Zions Bancorp	1.4	0.0	122.7
Huntington Bancshares	1.4	0.0	122.5
Financial services			
GMAC (now Ally Financial)	$16.3	$0.0	$1,631.5
American Express	3.4	3.4	74.4
Chrysler Financial Services	1.5	1.5	0.0
Discover Financial Services	1.2	1.2	67.7
Govt.-sponsored enterprise			
Fannie Mae	85.1	0.0	5,902.0
Freddie Mac	63.1	0.0	6,865.0
Insurance			
AIG	47.5	0.0	0.0
Hartford Financial Services	3.4	3.4	108.1
Investment fund			
AG GECC PPIF Master Fund, L.P.	3.7	0.0	22.2
Oaktree PPIP Fund, L.P.	3.5	0.0	0.0
AllianceBernstein Legacy Securities Master Fund, L.P.	3.5	0.0	37.3
Wellington Management Legacy Securities PPIF Master Fund, L.P.	3.4	0.0	2.0
Invesco Legacy Securities Master Fund, L.P.	2.6	0.1	62.9
Blackrock PPIF, L.P.	2.1	0.0	0.7
RLJ Western Asset PPMF, L.P.	1.9	0.0	23.9
Marathon Legacy Securities PPIP, L.P.	1.4	0.0	2.5

Federal Reserve System

The Federal Reserve System is the central bank for the U.S. The system was established on Dec. 23, 1913, originally to give the country an elastic currency, provide facilities for discounting commercial paper, and improve the supervision of banking. Since then, the system's responsibilities have been broadened. Over the years, stability and growth of the economy, a high level of employment, stability in the purchasing power of the dollar, and reasonable balance in transactions with other countries have come to be recognized as primary objectives of governmental economic policy.

The Federal Reserve System consists of the Board of Governors, the 12 District Reserve Banks and their branch offices, and the Federal Open Market Committee. Several advisory councils help the board meet its varied responsibilities.

The hub of the system is the 7-member **Board of Governors** in Washington, DC. The members of the board are appointed by the president and confirmed by the Senate, to serve 14-year terms. The president also appoints the chairman and vice chairman of the board from among the board members for 4-year terms that may be renewed. As of Oct. 2010, the board members were: Ben S. Bernanke, chair; Janet L. Yellen, vice-chair; Kevin M. Warsh; Elizabeth A. Duke; Daniel K. Tarullo; and Sarah Bloom Raskin.

The 12 **District Reserve Banks** and their branch offices serve as the decentralized portion of the system, carrying out day-to-day operations such as circulating currency and coin and providing fiscal agency functions and payments mechanism services. The 12 are in Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, Dallas, and San Francisco.

The system's principal function is monetary policy, which it controls using three tools: reserve requirements, the discount rate, and open market operations.

Uniform **reserve requirements**, set by the board, are applied to the transaction accounts and nonpersonal time deposits of all depository institutions. Responsibility for setting the **discount rate** (the interest rate at which depository institutions can borrow money from the Reserve Banks) is shared by the Board of Governors and the Reserve Banks. Changes in the discount rate are recommended by the individual boards of directors of the Reserve Banks and are subject to approval by the Board of Governors.

The most important tool of monetary policy is **open market operations** (the purchase and sale of government securities). Responsibility for influencing the cost and availability of money and credit through the purchase and sale of government securities lies with the **Federal Open Market Committee** (FOMC), which is composed of the 7 members of the Board of Governors, the president of the Federal Reserve Bank of New York, and 4 other Federal Reserve Bank presidents, who each serve 1-year terms on a rotating basis. The committee bases its decisions on economic and financial developments and outlook, setting yearly growth objectives for key measures of money supply and credit. The decisions of the committee are carried out by the Domestic Trading Desk of the Federal Reserve Bank of New York.

A Federal Advisory Council meets with the Federal Reserve Board four times a year to discuss business and financial conditions, as well as to make recommendations.

Website: www.federalreserve.gov

Federal Reserve Board Primary and Secondary Credit Rate, 1980-2010

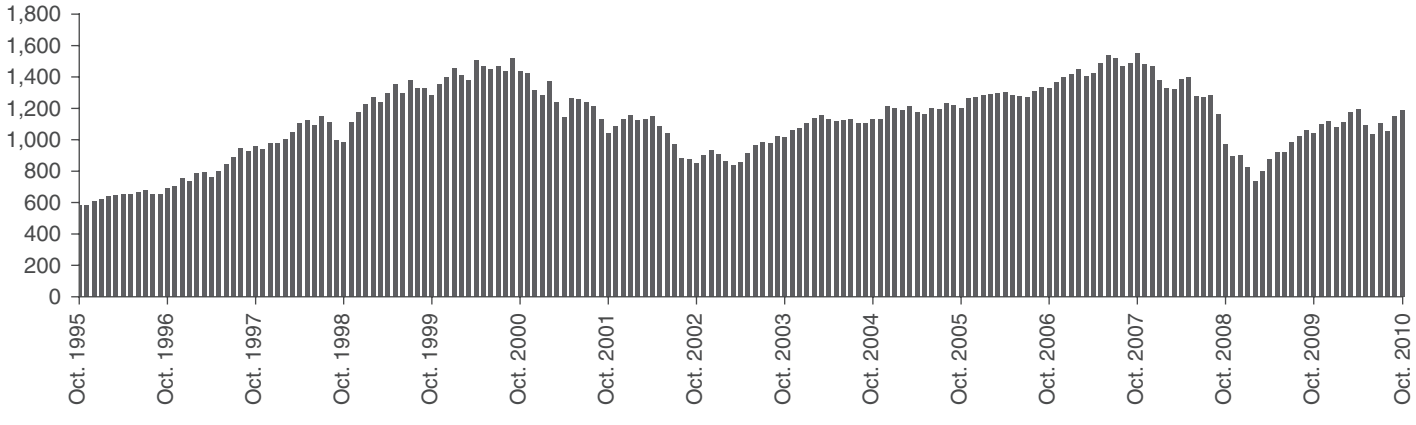
Prior to Jan. 9, 2003, the federal reserve set a single "discount rate," the interest rate that member banks were charged when borrowing money through the Federal Reserve System. This adjustment credit rate was replaced with two rates, the primary credit rate and secondary credit rate. The primary credit rate (listed first) is available to banks in generally sound financial condition. The secondary credit (listed second) rate is given to banks that do not qualify for the primary credit rate. Both are extended for very short terms, usually overnight. On Aug. 17, 2007, this term was temporarily extended to 30 days. Under the new system, financially sound institutions are not required to exhaust all funds before borrowing from the Fed.

Effective date	Rates	Effective date	Rates	Effective date	Rates	Effective date	Rates	Effective date	Rates	Effective date	Rates
1980:		**1984:**		**1991:**		**1999:**		**2002:**		**2006:**	
Feb. 15	13	Apr. 9	9	Apr. 30	5½	Aug. 24	4¾	Nov. 6	¾	Jan. 31	5½, 6
May 30	12	Nov. 21	8½	Sept. 13	5	Nov. 16	5	**2003:**		Mar. 28	5¾, 6¼
June 13	11	Dec. 24	8	Nov. 6	4½	**2000:**		Jan. 9	2¼, 2¾	May 10	6, 6½
July 28	10	**1985:**		Dec. 20	3½	Feb. 2	5¼	June 25	2, 2½	June 29	6¼, 6¾
Sept. 26	11	May 20	7½	**1992:**		Mar. 21	5½	**2004:**		**2007:**	
Nov. 17	12	**1986:**		July 2	3	May 16	6	June 30	2¼, 2¾	Aug. 17	5¾, 6¼
Dec. 5	13	Mar. 7	7	**1994:**		**2001:**		Aug. 10	2½, 3	Sept.18	5¼, 5¾
1981:		Apr. 21	6½	May 17	3½	Jan. 3	5¾	Sept. 21	2¾, 3¼	Nov. 1	5, 5½
May 5	14	July 11	6	Aug. 16	4	Jan. 31	5	Nov. 10	3, 3½	Dec. 12	4¾, 5¼
Nov. 2	13	Aug. 21	5½	Nov. 15	4¾	Mar. 20	4½	Dec. 14	3¼, 3¾	**2008:**	
Dec. 4	12	**1987:**		**1995:**		Apr. 18	4	**2005:**		Jan. 22	4, 4½
1982:		Sept. 4	6	Feb. 1	5	May 15	3½	Feb. 2	3½, 4	Jan. 30	3½, 4
July 20	11½	**1988:**		**1996:**		June 27	3¼	Mar. 22	3¾, 4¼	Mar. 17	3¼, 3¾
Aug. 2	11	Aug. 9	6½	Jan. 31	5	Aug. 21	3	May 3	4, 4½	Mar. 18	2½, 3
Aug. 16	10	**1989:**		**1998:**		Sept. 17	2½	June 30	4¼, 4¾	Apr. 30	2¼, 2¾
Aug. 27	10	Feb. 24	7	Oct. 15	4¾	Oct. 2	2	Aug. 9	4½, 5	Oct. 8	1¾, 2¼
Oct. 12	9½	**1990:**		Nov. 17	4½	Dec. 11	1¼	Sept. 20	4¾, 5¼	Oct. 29	1¼, 1¾
Dec. 15	8½	Dec. 18	6½					Nov. 1	5, 5½	Dec. 16	½, 1
								Dec. 13	5¼, 5¾	**2010:**	
										Feb. 19	¾, 1¼

(1) Through Oct. 31, 2008.

Standard & Poor's 500 Index, 1995-2010

Monthly closing levels; record high daily closing was 1,565.15, Oct. 9, 2007.



U.S. Holdings of Foreign Securities, 2006-09

Source: U.S. Treasury Department, Federal Reserve Bank of New York, Board of Governors of the Federal Reserve System

(in billions of dollars)

	2006	2007	2008	2009
Europe	**$3,129**	**$3,652**	**$2,172**	**$3,001**
United Kingdom	1,076	1,142	647	958
France	402	448	285	362
Switzerland	264	288	218	305
Germany	292	426	255	294
Netherlands	234	235	169	233
Ireland	121	132	63	120
Spain	111	146	93	113
Italy	106	120	62	79
Sweden	102	112	59	76
Finland	60	94	41	35
Luxembourg	60	95	60	94
Canada	**478**	**586**	**378**	**540**
Latin America and Caribbean	**$946**	**$1,300**	**$733**	**$965**
Bermuda	208	273	163	148
Cayman Islands	376	544	315	373
Brazil	110	189	91	213
Mexico	108	110	65	88
Asia	**1,166**	**1,325**	**775**	**1,053**
Japan	596	594	403	419
South Korea	124	140	56	105
China[1]	75	97	55	102
Taiwan	74	81	41	77
Hong Kong	88	121	65	93
Africa	**57**	**76**	**43**	**67**
South Africa	43	53	32	54
Australia	173	223	146	276
Total holdings	**$5,991**	**$7,212**	**$4,291**	**$5,977**

(1) Excludes Hong Kong and Macau.

Global Stock Markets, 1960-2010

Source: The Conference Board; not seasonally adjusted (1990 = 100)

Stock price index[1]	June 1, 1960	June 1, 1970	June 1, 1980	June 1, 1990	June 1, 2000	June 1, 2005	June 1, 2006	June 1, 2007	June 1, 2008	June 1, 2009	June 1, 2010
United States	17.1	21.9	34.3	107.6	437.2	358.1	381.8	451.9	384.8	276.3	309.8
Japan	4.4	7.3	23.8	110.8	60.4	40.2	53.8	62.9	46.8	34.5	32.5
Germany	36.1	27.5	30.5	111.1	407.9	271.2	336.0	473.4	379.5	284.3	352.7
France	16.3	15.6	23.8	112.0	354.7	232.7	273.2	333.2	244.0	172.8	189.4
United Kingdom	8.2	11.6	24.9	108.2	279.9	236.5	274.1	314.5	263.8	200.6	235.0
Italy	28.9	20.6	15.9	117.3	309.0	241.1	271.5	319.9	221.0	149.1	151.4
Canada	14.8	25.0	60.3	103.6	298.0	289.5	339.4	406.5	422.9	303.3	330.1

(1) 12-month average.

Record One-Day Gains and Losses on the Dow Jones Industrial Average

Source: Dow Jones & Co., Inc.; as of Oct. 29, 2010

(Ranked by largest one-day losses and gains for two terms.)

Greatest % losses

Rank	Date	Close	Net chg.	% chg.
1.	10/19/1987	1738.74	–508.00	–22.61%
2.	10/28/1929	260.64	–38.33	–12.82
3.	10/29/1929	230.07	–30.57	–11.73
4.	11/6/1929	232.13	–25.55	–9.92
5.	12/18/1899	58.27	–5.57	–8.72
6.	8/12/1932	63.11	–5.79	–8.40
7.	3/14/1907	76.23	–6.89	–8.29
8.	10/26/1987	1793.93	–156.83	–8.04
9.	10/15/2008	8577.91	–733.08	–7.87
10.	7/21/1933	88.71	–7.55	–7.84

Greatest point losses

Rank	Date	Close	Net chg.	% chg.
1.	9/29/2008	10365.45	–777.68	–6.98%
2.	10/15/2008	8577.91	–733.08	–7.87
3.	9/17/2001	8920.70	–684.81	–7.13
4.	12/1/2008	8149.09	–679.95	–7.70
5.	10/9/2008	8579.19	–678.92	–7.33
6.	4/14/2000	10305.78	–617.78	–5.66
7.	10/27/1997	7161.14	–554.26	–7.18
8.	10/22/2008	8519.21	–514.45	–5.69
9.	8/31/1998	7539.06	–512.61	–6.37
10.	10/7/2008	9447.11	–508.39	–5.11

Greatest % gains

Rank	Date	Close	Net chg.	% chg.
1.	3/15/1933	62.10	8.26	15.34%
2.	10/6/1931	99.34	12.86	14.87
3.	10/30/1929	258.47	28.40	12.34
4.	9/21/1932	75.16	7.67	11.36
5.	10/13/2008	9387.61	936.42	11.08
6.	10/28/2008	9065.12	889.35	10.88
7.	10/21/1987	2027.85	186.84	10.15
8.	8/3/1932	58.22	5.06	9.52
9.	2/11/1932	78.60	6.80	9.47
10.	11/14/1929	217.28	18.59	9.36

Greatest point gains

Rank	Date	Close	Net chg.	% chg.
1.	10/13/2008	9387.61	936.42	11.08%
2.	10/28/2008	9065.12	889.35	10.88
3.	11/13/2008	8835.25	552.60	6.67
4.	3/16/2000	10630.61	499.19	4.93
5.	3/23/2009	7775.86	497.48	6.84
6.	11/21/2008	8046.42	494.14	6.54
7.	7/24/2002	8191.29	488.95	6.35
8.	9/30/2008	10850.66	485.21	4.68
9.	7/29/2002	8711.88	447.48	5.41
10.	3/18/2008	12392.66	420.40	3.51

Dow Jones Industrial Average, 1963-2010

Source: Dow Jones & Co., Inc.; as of Oct. 29, 2010

Highest close		Year	Lowest close	
Dec. 18	767.21	**1963**	Jan. 2	646.79
Dec. 31	969.26	**1965**	June 28	840.59
Dec. 29	842.00	**1970**	May 6	631.16
July 15	881.81	**1975**	Jan. 2	632.04
Sept. 21	1014.79	**1976**	Jan. 2	858.71
Jan. 3	999.75	**1977**	Nov. 2	800.85
Sept. 8	907.74	**1978**	Feb. 28	742.12
Oct. 5	897.61	**1979**	Nov. 7	796.67
Nov. 20	1000.17	**1980**	Apr. 21	759.13
Apr. 27	1024.05	**1981**	Sept. 25	824.01
Dec. 27	1070.55	**1982**	Aug. 12	776.92
Nov. 29	1287.20	**1983**	Jan. 3	1027.04
Jan. 6	1286.64	**1984**	July 24	1086.57
Dec. 16	1553.10	**1985**	Jan. 4	1184.96
Dec. 2	1955.57	**1986**	Jan. 22	1502.29
Aug. 25	2722.42	**1987**	Oct. 19	1738.74
Oct. 21	2183.50	**1988**	Jan. 20	1879.14
Oct. 9	2791.41	**1989**	Jan. 3	2144.64
July 16	2999.75	**1990**	Oct. 11	2365.10
Dec. 31	3168.83	**1991**	Jan. 9	2470.30
June 1	3413.21	**1992**	Oct. 9	3136.58
Dec. 29	3794.33	**1993**	Jan. 20	3241.95
Jan. 31	3978.36	**1994**	Apr. 4	3593.35
Dec. 13	5216.47	**1995**	Jan. 30	3832.08
Dec. 27	6560.91	**1996**	Jan. 10	5032.94
Aug. 6	8259.31	**1997**	Apr. 11	6391.69
Nov. 23	9374.27	**1998**	Aug. 31	7539.07
Dec. 31	11497.12	**1999**	Jan. 22	9120.67
Jan. 14	11722.98	**2000**	Mar. 7	9796.03
May 21	11337.92	**2001**	Sept. 21	8235.81
Mar. 19	10635.25	**2002**	Oct. 9	7286.27
Dec. 31	10453.90	**2003**	Mar. 11	7524.06
Dec. 28	10854.54	**2004**	Oct. 25	9749.99
Mar. 4	10940.50	**2005**	Apr. 20	10012.36
Dec. 27	12510.57	**2006**	Jan. 20	10667.39
Oct. 9	14164.53*	**2007**	Mar. 5	12050.41
Jan. 3	13056.72	**2008**	Nov. 20	7552.29
Oct. 19	10092.19	**2009**	Mar. 9	6547.05
Apr. 26	11205.03	**2010**	July 2	9686.48

*Record high closing.

Milestones of the Dow Jones Industrial Average

(as of Oct. 29, 2010)

First close over...		First close over...		First close over...		First close over...		First close over...	
100	Jan. 12, 1906	8000	July 16, 1997	9100	Apr. 14, 1998	11000	May 3, 1999*	12600	Jan. 24, 2007
500	Mar. 12, 1956	8100	July 24, 1997	9200	May 13, 1998	11100	May 13, 1999	12700	Feb. 14, 2007
1000	Nov. 14, 1972	8200	July 30, 1997	9300	July 16, 1998	11200	July 12, 1999	12800	Apr. 18, 2007
1500	Dec. 11, 1985	8100	July 24, 1997	9500	Jan. 6, 1999*	11300	Aug. 25, 1999	12900	Apr. 20, 2007
2000	Jan. 8, 1987	8200	July 30, 1997	9600	Jan. 8, 1999	11400	Dec. 23, 1999	13000	Apr. 25, 2007
2500	July 17, 1987	8300	Feb. 12, 1998	9700	Mar. 5, 1999	11500	Jan. 7, 2000	13100	Apr. 26, 2007
3000	Apr. 17, 1991	8400	Feb. 18, 1998	9800	Mar. 11, 1999	11700	Jan. 14, 2000*	13200	May 2, 2007
3500	May 19, 1993	8300	Feb. 12, 1998	9900	Mar. 15, 1999	11800	Oct. 4, 2006	13300	May 7, 2007
4000	Feb. 23, 1995	8400	Feb. 18, 1998	10000	Mar. 29, 1999	11900	Oct. 12, 2006	13400	May 16, 2007
4500	June 16, 1995	8500	Feb. 27, 1998	10100	Apr. 8, 1999	12000	Oct. 19, 2006	13500	May 18, 2007
5000	Nov. 21, 1995	8600	Mar. 10, 1998	10300	Apr. 12, 1999*	12100	Oct. 23, 2006	13600	May 30, 2007
5500	Feb. 8, 1996	8700	Mar. 16, 1998	10400	Apr. 14, 1999	12200	Nov. 14, 2006	13800	July 12, 2007*
6000	Oct. 14, 1996	8800	Mar. 19, 1998	10500	Apr. 21, 1999	12300	Nov. 16, 2006	13900	July 13, 2007
6500	Nov. 25, 1996	8900	Mar. 20, 1998	10700	Apr. 22, 1999*	12400	Dec. 14, 2006	14000	July 19, 2007
7000	Feb. 13, 1997	9000	Apr. 6, 1998	10800	Apr. 27, 1999	12500	Dec. 27, 2006	14100	Oct. 9, 2007
7500	June 10, 1997								

*9,400; 10,200; 10,600; 10,900; 11,600; and 13,700 are not listed because the Dow had risen another 100 points or more by the time the market closed for the day.

Components of the Dow Jones Averages

(as of Oct. 29, 2010)

Dow Jones Industrial Average

Alcoa
American Express Co.
AT&T Inc.
Bank of America Corp.
Boeing Co.
Caterpillar Inc.
Chevron Corp.
Cisco Systems, Inc.
Coca-Cola Co.
E. I. DuPont de Nemours & Co.
Exxon Mobil Corp.
General Electric Co.
Hewlett-Packard Co.
Home Depot Inc.
IBM
Intel Corp.
JPMorgan Chase & Co.
Johnson & Johnson
Kraft Foods Inc.
McDonald's Corp.
Merck & Co. Corp.
Microsoft Corp.
Pfizer Inc.
Procter & Gamble Co.
3M Co.
Travelers Companies, Inc.
United Technologies Corp.
Verizon Communications Inc.
Wal-Mart Stores Inc.
Walt Disney Co.

Dow Jones Utility Average

AES Corp.
American Electric Power Co. Inc.
CenterPoint Energy
Consolidated Edison Inc.
Dominion Resources Inc. (Virginia)
Duke Energy Corp.
Edison International
Exelon Corp.
FirstEnergy Corp.
NextEra Energy Inc.
NiSource Inc.
PG&E Corp.
Public Service Enterprise Group Inc.
Southern Co.
Williams Cos.

Dow Jones Transportation Average

Alexander & Baldwin Inc.
AMR (American Airlines) Corp.
C.H. Robinson Worldwide Inc.
Con-way Inc.
CSX Corp.
Delta Air Lines Inc.
Expeditors Intl. of Washington Inc.
FedEx Corp.
GATX Corp.
J.B. Hunt Transportation Services Inc.
JetBlue Airways Corp.
Kansas City Southern
Landstar System Inc.
Norfolk Southern Corp.
Overseas Shipholding Group Inc.
Ryder System Inc.
Southwest Airlines Co.
Union Pacific Corp.
United Continental Holdings
United Parcel Service Inc. C.I.B.

Record One-Day Gains and Losses on the Nasdaq Stock Market

Source: Nasdaq Stock Market; as of Oct. 29, 2010

(Ranked by largest one-day losses and gains for two terms.)

Greatest point gains			Greatest % gains			Greatest point losses			Greatest % losses		
Rank	Date	Change	Rank	Date	% change	Rank	Date	Change	Rank	Date	% change
1.	1/3/2001	324.83	1.	1/3/2001	14.17%	1.	4/14/2000	–355.49	1.	10/19/1987	–11.35%
2.	12/5/2000	274.05	2.	10/13/2008	11.81	2.	4/3/2000	–349.15	2.	4/14/2000	–9.67
3.	4/18/2000	254.41	3.	12/5/2000	10.48	3.	4/12/2000	–286.27	3.	9/29/2008	–9.14
4.	5/30/2000	254.37	4.	10/28/2008	9.53	4.	4/10/2000	–258.25	4.	10/20/1987	–9.00
5.	10/19/2000	247.04	5.	4/5/2001	8.92	5.	1/4/2000	–229.46	5.	10/26/1987	–9.00
6.	10/13/2000	242.09	6.	4/18/2001	8.12	6.	3/14/2000	–200.61	6.	12/1/2008	–8.95
7.	6/2/2000	230.88	7.	5/30/2000	7.94	7.	5/10/2000	–200.28	7.	8/31/1998	–8.56
8.	4/25/2000	228.75	8.	10/13/2000	7.87	8.	5/23/2000	–199.66	8.	10/15/2008	–8.47
9.	4/17/2000	217.87	9.	10/19/2000	7.79	9.	9/29/2008	–199.61	9.	4/3/2000	–7.64
10.	10/13/2008	194.74	10.	5/8/2002	7.78	10.	10/25/2000	–190.22	10.	1/2/2001	–7.23

Nasdaq Stock Market, 1971-2010

High	Year	Low	High	Year	Low	High	Year	Low	High	Year	Low
114.12	**1971**	99.68	223.96	**1981**	170.80	586.35	**1991**	352.85	2892.36	**2001**	1387.06
135.15	**1972**	113.65	241.63	**1982**	158.92	676.95	**1992**	545.85	2059.38	**2002**	1114.11
136.84	**1973**	88.67	329.11	**1983**	229.88	790.56	**1993**	645.02	2009.88	**2003**	1271.47
96.53	**1974**	54.87	288.41	**1984**	223.91	803.93	**1994**	691.23	2178.00	**2004**	1752.00
88.00	**1975**	60.70	325.53	**1985**	245.82	1072.82	**1995**	740.53	2273.37	**2005**	1904.18
97.88	**1976**	78.06	411.21	**1986**	322.14	1328.45	**1996**	978.17	2465.98	**2006**	2020.39
105.05	**1977**	93.66	456.27	**1987**	288.49	1748.62	**1997**	1194.39	2811.61	**2007**	2340.68
139.25	**1978**	99.09	397.54	**1988**	329.00	2200.63	**1998**	1357.09	2609.63	**2008**	1505.90
152.29	**1979**	117.84	487.60	**1989**	376.87	4090.61	**1999**	2193.13	2167.70	**2009**	1265.52
208.29	**1980**	124.09	470.30	**1990**	322.93	5048.62*	**2000**	2332.78	2530.15	**2010**	2091.79

*Record high closing, Mar. 10, 2000; as of Oct. 29, 2010.

Milestones of the Nasdaq Stock Market

Source: Nasdaq Stock Market; as of Oct. 29, 2010

First close over...	First close over...	First close over...	First close over...	First close over...
100 Feb. 5, 1971	400 May 30, 1986	1,500 July 11, 1997	3,000 Nov. 3, 1999	4,500 Feb. 17, 2000
200 Nov. 13, 1980	500 Apr. 12, 1991	2,000 July 16, 1998	3,500 Dec. 3, 1999	5,000 Mar. 9, 2000
300 May 6, 1983	1,000 July 17, 1995	2,500 Jan. 29, 1999	4,000 Dec. 29, 1999	

U.S. Dollar Index, 1995-2008

Source: Federal Reserve Bank of Atlanta

Year[1]	Dollar Index	Americas	Europe	Pacific	Pacific (excl. Japan)	Year[1]	Dollar Index	Americas	Europe	Pacific	Pacific (excl. Japan)
1995	103.505	105.454	100.340	103.663	100.498	2004	108.816	114.779	93.026	113.810	116.195
2000	125.347	124.427	134.919	121.740	123.397	2005	111.753	108.547	104.654	120.086	116.105
2001	130.183	127.373	136.137	130.685	127.266	2006	107.545	103.386	93.961	116.050	110.306
2002	127.021	133.303	119.893	126.488	124.301	2007	100.196	97.897	86.773	111.765	106.589
2003	115.066	121.124	101.702	118.428	121.136	2008	110.025	121.212	98.043	107.546	115.454

(1) Trade-weighted dollar index shows foreign exchange movements of the U.S. dollar, as of Dec. of year listed.

Average Yields of Long-Term Treasury, Corporate, and Municipal Bonds

Source: Office of Market Finance, U.S. Dept. of the Treasury; Federal Reserve System

Period	Treasury 30-year bonds[1]	New Aa corporate bonds[2]	New Aa municipal bonds[3]	Period	Treasury 30-year bonds[1]	New Aa corporate bonds[2]	New Aa municipal bonds[3]	Period	Treasury 30-year bonds[1]	New Aa corporate bonds[2]	New Aa municipal bonds[3]
1986				**1995**				**2002**			
June	7.57	9.39	7.87	June	6.57	7.42	5.84	June	5.65	6.57	5.09
Dec.	7.37	8.87	6.87	Dec.	6.06	7.02	5.45	Dec.	5.01	5.93	4.85
1987				**1996**				**2004**			
June	8.57	9.64	7.79	June	7.06	8.00	6.02	June	5.45	6.01	5.05
Dec.	9.12	10.22	7.96	Dec.	6.55	7.45	5.64	Dec.	4.88	5.47	4.49
1988				**1997**				**2005**			
June	9.00	10.08	7.78	June	6.77	7.71	5.53	June	4.35	4.96	4.23
Dec.	9.01	10.05	7.61	Dec.	5.99	6.68	5.19	Dec.	4.73	5.37	4.46
1989				**1998**				**2006**			
June	8.27	9.24	7.02	June	5.70	6.43	5.12	June	5.15	5.89	4.60
Dec.	7.90	9.23	6.98	Dec.	5.06	6.13	4.98	Dec.	4.68	5.32	4.11
1990				**1999**				**2007**			
June	8.46	9.69	7.24	June	6.04	7.21	5.37	June	5.20	5.79	4.60
Dec.	8.24	9.55	7.09	Dec.	6.35	7.55	5.95	Dec.	4.53	5.49	4.42
1991				**2000**				**2008**			
June	8.47	9.37	7.13	June	5.93	7.75	5.80	June	4.69	5.68	4.69
Dec.	7.70	8.55	6.69	Dec.	5.49	7.21	5.22	Dec.	2.87	5.05	5.56
1992				**2001**				**2009**			
June	7.84	8.45	6.49	June	5.67	7.11	5.20	June	4.52	5.61	4.81
Dec.	7.44	8.12	6.22	Dec.	5.48	6.80	5.25	Dec.	4.49	5.26	4.21
1993				**2003**				**2010**			
June	6.81	7.48	5.63	June	4.34	4.97	4.33	June	4.13	4.88	4.36
Dec.	6.25	7.22	5.35	Dec.	5.11	5.62	4.65				
1994											
June	7.40	8.16	6.11								
Dec.	7.87	8.66	6.80								

(1) On Feb. 18, 2002, the U.S. treasury discontinued the 30-year constant maturity yield and reintroduced it on Feb. 9, 2006; rates in the interim are for 20-year yields. (2) Treasury series based on 3-week moving average of reoffering yields of new corporate bonds rated Aa by Moody's Investors Service with an original maturity of at least 20 years. Treasury discontinued yield index after Jan. 31, 2003. Rates thereafter are for Moody's seasoned Aaa corporate bonds as listed by Federal Reserve. (3) Index of new reoffering yields on 20-year general obligations rated Aa by Moody's Investors Service; discontinued by Treasury Jan. 31, 2003; rates thereafter are from Bond Buyer Index of general obligation, 20-year-to-maturity, mixed quality state and local bonds.

U.S. Capital Gains Tax, 1960-2010

Source: George W. Smith IV, CPA, Partner, George W. Smith & Company, P.C.; as of Oct. 2010

The following shows changes in the maximum tax rate on net long-term capital gains for individuals since 1960.

Year	Max %	Year	Max %	Year	Max %	Year	Max %	Year	Max %	Year	Max %
1960	25.0	1972	35.0[1]	1981	20.0	1988	33.0[2]	1997	20.0[4]	2001	20/18[6]
1970	29.5	1978	28.0	1987	28.0	1990	28.0[3]	1999	20.0[5]	2003	20/15[7]
1971	32.5										

(1) From 1972 to 1976, the interplay of minimum tax and maximum tax resulted in a marginal rate of 49.125%. (2) Statutory maximum of 28%, but "phase-out" notch increased marginal rate to 33%; interplay of all "phase-outs" could produce an effective marginal rate to 49.5%. (3) The Budget Act of 1990 increased the statutory rate to 31% and capped the marginal rate at 28%; effective marginal rates could exceed 34% because of the phase-out of personal exemptions and itemized deductions. (4) New rate was for those who, after July 28, 1997, sell capital assets held for more than 18 mos. (12 mos. for sales after Dec. 31, 1997). A 10% capital gains rate applied to individuals in the 15% income tax bracket. (Those who, after July 28, 1997, but before Jan. 1, 1998, sold capital assets held 12-18 mos. to be taxed at the old top rate of 28%. Those who sold capital assets after May 6, 1997, but before July 29, 1997, to be taxed at the 20% rate, so long as such assets were held for at least a year.) (5) The IRS Restructuring and Reform Act of 1998 repealed the more-than-18-mo. holding period for sales after Dec. 31, 1997. Beginning Jan. 1, 1998, capital assets needed only be held 12 mos. to have the 20%/10% capital gains rates apply. (6) For capital assets bought after Dec. 31, 2000, and held for more than 5 years, the 20% minimum capital gains rate was lowered to 18%. The 10% rate was lowered to 8%, regardless of when the assets were bought. This provision was repealed in 2003. (7) The maximum capital gains rate for capital assets held more than one year and sold on or after May 6, 2003, was decreased to 15%. The 10% bracket was reduced to 5%. The capital gains rate for the sale of collectibles such as antiques remained at 28%, and the sale of certain depreciable real estate was to be taxed at a maximum of 25%. A 0% rate replaced the 5% tax rate for tax years beginning after Dec. 31, 2007.

2010 Federal Corporate Tax Rates

Personal service corporations (used by incorporated professionals such as attorneys and doctors) pay a flat rate of 35%.

Taxable income amount	Tax rate	Taxable income amount	Tax rate
Not more than $50,000	15%	$335,001 to $10,000,000	34%
$50,001 to $75,000	25%	$10,000,001 to $15,000,000	35%
$75,001 to $100,000	34%	$15,000,001 to $18,333,333	38%
$100,001 to $335,000	39%	More than $18,333,333	35%

Performance of Mutual Funds by Type, 2010

Source: *Kiplinger* magazine

(as of Aug. 31, 2010)

Fund type/fund objective	Average annual return 1-year	3-year	5-year
Large-Company			
Growth	12.41%	–8.10%	–0.17%
Blend	13.45	–9.93	–0.81
Value	13.69	–11.49	–1.48
Midsize-Company			
Growth	19.62	–7.76	1.28
Blend	21.41	–8.80	0.35
Value	23.65	–9.20	0.50
Small-Company			
Growth	19.07	–8.61	0.53
Blend	21.98	–8.86	0.38
Value	25.83	–8.25	0.66
Taxable Government Bond			
Short-Term	4.26	4.86	4.00
Intermediate-Term	8.12	6.92	4.91
Long-Term	14.04	11.58	5.27
Tax-Free Government Bond			
Long-Term Municipal	10.69	3.44	3.04

Fund type/fund objective	Average annual return 1-year	3-year	5-year
Sector			
Financial	13.78%	–16.90%	–6.73%
Precious Metals	40.50	12.25	20.79
Health	10.30	–3.39	1.84
Natural Resources	7.86	–9.94	5.32
Realty	51.22	–9.73	–0.69
Technology	18.18	–4.66	3.05
Utilities	7.75	–8.26	2.48
Hybrid	13.57	–4.31	1.58
International			
Diversified	7.41	–12.86	1.33
Small/Midsize Diversified	15.91	–12.23	3.55
Specialized	13.22	–8.95	5.98
Corporate Bond			
High Yield	23.93	3.45	5.06
Short-Term	6.69	3.27	3.31
Intermediate-Term	13.10	6.09	4.55
Long-Term	19.31	6.97	4.95

U.S. Mutual Fund Shareholders[1]

Source: The Investment Company Institute

Shareholder characteristics, 2009	
Median age[2]	50
Median annual household income	$80,000
Median household financial assets[3]	$150,000
Median mutual fund assets	$80,000
Median number of funds owned	4
Employed[2]	74%
Married or living with a partner[2]	76%
Four-year college degree or more[2]	47%
Invest to save for retirement	94%

Owning:

Equity funds	77%
Bond funds	49%
Hybrid funds	42%
Money market funds	64%

Households owning mutual funds

Year	No. (mil)[4]	Year	No. (mil)[4]	Year	No. (mil)[4]
1980	4.6	1999	48.4	2005	53.7
1984	10.2	2000	51.7	2006	54.9
1988	22.2	2001	56.3	2007	51.0
1992	25.8	2002	54.2	2008	52.5
1994	30.2	2003	53.3	2009	50.4
1996	36.8	2004	53.9		

(1) Except where noted, data include mutual funds both inside and outside employer-sponsored retirement plans. (2) Of persons responding to survey. (3) Excluding primary residence. (4) Data from 1980-88 exclude households owning mutual funds solely through employer-sponsored retirement plans.

Chicago Board of Trade, Contracts Traded, 2008-09

Source: Chicago Board of Trade

Futures Group	2008	2009	% change 2008-09
Commodity	147,251,479	135,720,621	–7.8%
Energy	279,398	338,189	21.0
Equity index	56,581,806	40,386,510	–28.6
Interest rate	615,569,379	411,531,727	–33.1
Metals	5,862,554	0	–100.0
Total futures[1]	**825,544,634**	**587,977,047**	**–28.8**
Options Group			
Commodity	37,256,647	29,839,275	–19.9
Energy	42,864	8,933	–31.5
Equity index	356,902	108,652	–69.6

(1) Includes real estate futures (18 in 2008, 0 in 2009).

Futures Group	2008	2009	% change 2008-09
Interest rate	97,835,233	62,891,994	–35.7%
Metals	28,701	0	–100.0
Total options	**135,520,347**	**92,848,854**	–31.5
Combined Futures and Options			
Commodity	184,508,126	165,559,896	–10.3
Energy	322,262	347,122	7.7
Equity index	56,938,708	40,495,162	–28.9
Interest rate	713,404,612	474,423,721	–33.5
Metals	5,891,255	0	–100.0
Total[1]	**961,064,981**	**680,825,901**	**–29.2**

Economic and Financial Glossary

Source: Reviewed by William M. Gentry, Graduate School of Business, Columbia University

Annuity contract: An investment vehicle sold by insurance companies. Annuity buyers can elect to receive periodic payments for the rest of their lives. Annuities provide insurance against outliving one's wealth.

Arbitrage: A form of hedged investment meant to capture slight differences in the prices of two related securities—for example, buying gold in London and selling it at a higher price in New York.

Balanced budget: A budget is balanced when receipts equal expenditures. When receipts exceed expenditures, there is a **surplus**; when they fall short of expenditures, there is a **deficit**.

Balance of payments: The difference between all payments, for some categories of transactions, made to and from foreign countries over a set period of time. A favorable balance of payments exists when more payments are coming in than going out; an unfavorable balance of payments obtains when the reverse is true. Payments may include gold, the cost of merchandise and services, interest and dividend payments, money spent by travelers, and repayment of principal on loans.

Balance of trade (trade gap): The difference between exports and imports, in both actual funds and credit. A nation's balance of trade is favorable when exports exceed imports and unfavorable when the reverse is true.

Bear market: A market in which prices are falling.

Bearer bond: A bond issued in bearer form rather than being registered in a specific owner's name. Ownership is determined by possession.

Bond: A written promise, or IOU, by the issuer to repay a fixed amount of borrowed money on a specified date and generally to pay interest at regular intervals in the interim.

Bull market: A market in which prices are on the rise.

Capital gain (loss): An increase (decrease) in the market value of an asset over some period of time. For tax purposes, capital gains are typically calculated from when an asset is bought to when it is sold.

Commercial paper: An extremely short-term corporate IOU, generally due in 270 days or less.

Consumer price index (CPI): A statistical measure of the change in the price of consumer goods.

Convertible bond: A corporate bond (see below) that may be converted into a stated number of shares of common stock. Its price tends to fluctuate along with fluctuations in the price of the stock and with changes in interest rates.

Corporate bond: A bond issued by a corporation. The bond normally has a stated life and pays a fixed rate of interest. Considered safer than the common or preferred stock of the same company.

Cost of living: The cost of maintaining a standard of living measured in terms of purchased goods and services. Inflation typically measures changes in the cost of living.

Cost-of-living adjustments: Changes in promised payments, such as retirement benefits, to account for changes in the cost of living.

Credit crunch (liquidity crisis): A situation in which cash for lending is in short supply.

Debenture: An unsecured bond backed only by the general credit of the issuing corporation.

Deficit spending: Government spending in excess of revenues, generally financed with the sale of bonds. A deficit increases the government debt.

Deflation: A decrease in the level of prices.

Depression: A long period of economic decline marked by low prices, high unemployment, and many business failures.

Derivatives: Financial contracts, such as options, whose values are based on, or derived from, the price of an underlying financial asset or indicator such as a stock or an interest rate.

Devaluation: The official lowering of a nation's currency, decreasing its value in relation to foreign currencies.

Discount rate: The rate of interest set by the Federal Reserve that member banks are charged when borrowing money through the Federal Reserve System.

Disposable income: Income after taxes that is available to persons for spending and saving.

Diversification: Investing in more than one asset in order to reduce the riskiness of the overall asset portfolio. By holding more than one asset, losses on some assets may be offset by gains realized on other assets.

Dividend: Discretionary payment by a corporation to its shareholders, usually in the form of cash or stock shares.

Dow Jones Industrial Average: An index of stock market prices, based on the prices of 30 companies, 28 of which are on the New York Stock Exchange.

Econometrics: The use of statistical methods to study economic and financial data.

Federal Deposit Insurance Corp. (FDIC): A U.S. government-sponsored corporation that insures accounts in national banks and other qualified institutions against bank failures.

Federal Reserve System: The entire banking system of the U.S., incorporating 12 Federal Reserve banks (one in each of 12 Federal Reserve districts), 25 Federal Reserve branch banks, all national banks, and state-chartered commercial banks and trust companies that have been admitted to its membership. The governors of the system greatly influence the nation's monetary and credit policies.

Full employment: The economy is said to be at full employment when everyone who wishes to work at the going wage-rate for his or her type of labor is employed, save only for the small amount of unemployment due to the time it takes to switch from one job to another.

Futures: A futures contract is an agreement to buy or sell a specific amount of a commodity or financial instrument at a particular price at a set date in the future. For example, futures based on a stock index (such as the Dow Jones Industrial Average) are bets on the future price of that group of stocks.

Golden parachute: Provisions in contracts of some high-level executives guaranteeing substantial severance benefits if they lose their position in a corporate takeover.

Government bond: A bond issued by the U.S. Treasury, considered a safe investment. These are divided into 2 categories—marketable and not marketable. Savings bonds cannot be bought and sold once the original purchase is made. Marketable bonds fall into several categories. Treasury bills are short-term U.S. obligations, maturing in 3, 6, or 12 months. Treasury notes mature in up to 10 years. Treasury bonds mature in 10 to 30 years. Indexed bonds are adjusted for inflation.

Greenmail: A company buying back its own shares for more than the going market price to avoid a threatened hostile takeover.

Gross domestic product (GDP): The market value of all goods and services that have been bought for final use during a period of time. It became the official measure of the size of the U.S. economy in 1991, replacing gross national product (GNP), in use since 1941. GDP covers workers and capital employed within the nation's borders. GNP covers production by U.S. residents regardless of where it takes place. The switch aligned U.S. terminology with that of most other industrialized countries.

Hedge fund: A flexible investment fund for a limited number of large investors (the minimum investment is typically $1 million). Hedge funds use a variety of investment techniques, including those forbidden to mutual funds, such as short-selling and heavy leveraging.

Hedging: Taking 2 positions whose gains and losses will offset each other if prices change, in order to limit risk.

Individual retirement account (IRA): A self-funded tax-advantaged retirement plan that allows employed individuals to contribute up to a maximum yearly sum. With a traditional IRA, individuals contribute pre-tax earnings and defer income taxes until retirement. With a Roth IRA, individuals contribute after-tax earnings but do not pay taxes on future withdrawals (the interest is never taxed). 401(k) plans are employer-sponsored plans similar to traditional IRAs, but having higher contribution limits.

Inflation: An increase in the level of prices.

Insider information: Important facts about the condition or plans of a corporation that have not been released to the general public.

Interest: The cost of borrowing money.

Investment bank: A financial institution that arranges the initial issuance of stocks and bonds and offers companies advice about acquisitions and divestitures.

Junk bonds: Bonds issued by companies with low credit ratings. They typically pay relatively high interest rates because of the fear of default.

Leading indicators: A series of 11 indicators from different segments of the economy used by the U.S. Commerce Department to predict when changes in the level of economic activity will occur.

Leverage: The extent to which a purchase was paid for with borrowed money. Amplifies the potential gain or loss for the purchaser.

Leveraged buyout (LBO): An acquisition of a company in which much of the purchase price is borrowed, with the debt to be repaid from future profits or by subsequently selling off company assets. A leveraged buyout is typically carried out by a small group of investors, often including incumbent management.

Liquid assets: Assets consisting of cash and/or items that are easily converted into cash.

Margin account: A brokerage account that allows a person to trade securities on credit. A **margin call** is a demand for more collateral on the account.

Money supply: The currency held by the public, plus checking accounts in commercial banks and savings institutions.

Mortgage-backed securities: Created when a bank, builder, or government agency gathers together a group of mortgages and then sells bonds to other institutions and the public. The investors receive their proportionate share of the interest payments on the loans as well as the principal payments. Usually, the mortgages in question are guaranteed by the government.

Municipal bond: Issued by governmental units such as states, cities, local taxing authorities, and other agencies. Interest is exempt from U.S.—and sometimes state and local—income tax. Municipal bond unit investment trusts offer a portfolio of many different municipal bonds chosen by professionals. The income is exempt from federal income taxes.

Mutual fund: A portfolio of professionally bought and managed financial assets in which you pool your money along with that of many other people. A share price is based on net asset value, or the value of all the investments owned by the funds, less any debt, and divided by the total number of shares. The major advantage, relative to investing individually in only a small number of stocks, is less risk—the holdings are spread out over many assets and if one or two do badly the remainder may shield you from the losses. Bond funds are mutual funds that deal in the bond market exclusively. Money market mutual funds buy in the so-called money market—institutions that need to borrow large sums of money for short terms. These funds often offer special checking account advantages.

National debt: The debt of the national government, as distinguished from the debts of political subdivisions of the nation and of private business and individuals.

National debt ceiling: Total borrowing limit set by Congress beyond which the U.S. national debt cannot rise. This limit is periodically raised by congressional vote.

Option: A type of contractual agreement between a buyer and a seller to buy or sell shares of a security. A **call** option contract gives the right to purchase shares of a specific stock at a stated price within a given period of time. A **put** option contract gives the buyer the right to sell shares of a specific stock at a stated price within a given period of time.

Per capita income: The total income of a group divided by the number of people in the group.

Prime interest rate: The rate charged by banks on short-term loans to large commercial customers with the highest credit rating.

Producer price index: A statistical measure of the change in the price of wholesale goods. It is reported for 3 different stages of the production chain: crude, intermediate, and finished goods.

Program trading: Trading techniques involving large numbers and large blocks of stocks, usually used in conjunction with computer programs. Techniques include index arbitrage, in which traders profit from price differences between stocks and futures contracts on stock indexes, and portfolio insurance, which is the use of stock-index futures to protect stock investors from potentially large losses when the market drops.

Public debt: The total of a nation's debts owed by state, local, and national government. Increases in this sum, reflected in public-sector deficits, indicate how much of the nation's spending is being financed by borrowing rather than by taxation.

Recession: A mild decrease in economic activity marked by a decline in real (inflation-adjusted) GDP, employment, and trade, usually lasting from 6 months to a year, and marked by widespread decline in many sectors of the economy.

Savings Association Insurance Fund (SAIF): Created in 1989 to insure accounts in savings and loan associations up to $100,000.

Seasonal adjustment: Statistical changes made to compensate for regular fluctuations in data that are so great they tend to distort the statistics and make comparisons meaningless. For instance, seasonal adjustments are made for a slowdown in housing construction in midwinter and for the rise in farm income in the fall after summer crops are harvested.

Short-selling: Borrowing shares of stock from a brokerage firm and selling them, hoping to buy the shares back at a lower price, return them, and realize a profit from the decline in prices.

Stagnation: Economic slowdown in which there is little growth in the GDP, capital investment, and real income.

Stock: Common stocks are shares of ownership in a corporation. For publicly held firms, the stock typically trades on an exchange, such as the New York Stock Exchange; for closely held firms, the founders and managers own most of the stock. There can be wide swings in the prices of this kind of stock. Preferred stock is a type of stock on which a fixed dividend must be paid before holders of common stock are issued their share of the issuing corporation's earnings. Preferred stock is less risky than common stock. Convertible preferred stock can be converted into the common stock of the company that issued the preferred. Over-the-counter stock is not traded on the major or regional exchanges, but rather through dealers from whom you buy directly. Blue chip stocks are so called because they have been leading stocks for a long time. Growth stocks are from companies that reinvest their earnings, rather than pay dividends, with the expectation of future stock price appreciation.

Supply-side economics: A school of thinking about economic policy holding that lowering income tax rates will inevitably lead to enhanced economic growth and general revitalization of the economy.

Takeover: Acquisition of one company by another company or group by sale or merger. A friendly takeover occurs when the acquired company's management is agreeable to the merger; when management is opposed to the merger, it is a hostile takeover.

Tender offer: A public offer to buy a company's stock; usually priced at a premium above the market.

Zero coupon bond: A corporate or government bond that is issued at a deep discount from the maturity value and pays no interest during the life of the bond. It is redeemable at face value.

Minerals

Source: U.S. Geological Survey, U.S. Dept. of the Interior; as of mid-2010

Aluminum: The second most abundant metallic element in the Earth's crust. Bauxite is the main source of aluminum, and leading bauxite-producing countries are Australia, China, Brazil, India, and Guinea. Main uses in the U.S. are transportation (33%), packaging (26%), and construction (14%).

Chromium: Chromite is the mineral from which chromium is produced, and the leading chromite-producing countries are South Africa, India, Kazakhstan, and Turkey. The metallurgical industry uses about 95% of the chromite consumed in the world; the refractory and foundry industry, 3%; and the chemical industry, 2%.

Cobalt: Used in rechargeable batteries; superalloys for jet engines; cemented carbides for cutting tools; catalysts, ceramics, and other chemical applications; permanent magnets, tool steels, and other alloys. Congo (Kinshasa), Russia, China, Australia, Cuba, Zambia, and Canada lead the world in mine production of cobalt.

Construction aggregates: Construction sand and gravel and crushed stone are two of the most accessible natural resources in the world. Construction sand and gravel is produced in every U.S. state, and crushed stone is mined in every state except Delaware. They are used mostly in construction but also in agriculture, chemicals, and metallurgy and are produced worldwide.

Copper: Uses of copper and copper alloy products in the U.S. are in building construction (50%), electrical and electronic products (21%), transportation (11%), consumer and general products (10%), and industrial machinery and equipment (8%). The leading mine producers are Chile, Peru, the U.S. (mostly in Arizona, Utah, New Mexico, and Nevada), China, Australia, Russia, Indonesia, Zambia, and Canada.

Gold: Used in the U.S. in jewelry and the arts (72%), dentistry and other industrial applications (21%), and electrical and electronic components (7%). Leading mine producers are China, the U.S. (mined in most western states and Alaska), Australia, South Africa, Russia, and Peru.

Gypsum: Used in wallboard and plaster products, cement production, and agriculture. Leading producers are China, Iran, Spain, the U.S., and Thailand.

Iron ore: The source of primary iron for the world's iron and steel industries. Leading iron ore producers (in terms of iron content) are China, Australia, Brazil, and India.

Lead: China, Australia, the U.S. (mostly in Alaska and Missouri), Peru, Mexico, and India are the world's leading producers of lead concentrates. The major end use in the U.S. is in lead-acid storage batteries (88%). The U.S. produces 14% and consumes about 17% of the world's lead metal. Most U.S. lead production (91%) is recycled material, and 96% of lead-acid batteries (mostly automotive) are recycled.

Manganese: Essential to steel production. Leading mine producers are China, Australia, South Africa, Brazil, and India.

Nickel: Vital to the stainless steel industry; and used to make superalloys. Leading mine producers are Russia, Canada, Indonesia, Australia, New Caledonia, the Philippines, and Colombia.

Phosphate rock: Primary source of phosphorus used in fertilizers, animal feed supplements, chemicals, and food. Phosphorus is an essential element for plant and animal nutrition. China, the U.S., Morocco, Russia, Brazil, and Tunisia are the world's leading producers.

Platinum-group metals (PGMs): This group consists of 6 metals: platinum, palladium, rhodium, ruthenium, iridium, and

osmium. They commonly occur together in nature and are among the scarcest of the metallic elements. In the U.S., the automotive and chemical industries use PGMs mainly as catalysts. They also are consumed in electrical, electronics, glass, dental, and medical industries. Russia and South Africa are the world's leading mine producers.

Salt: Used in chemicals, highway deicing, chemicals, agriculture, food, and water treatment. Leading producers are China, the U.S., India, Peru, Germany, and Canada.

Silver: Used in decorative, industrial, and medical applications; coins; jewelry and silverware; and photography. Silver is mined in more than 50 countries, mainly as a byproduct from gold, copper, and lead-zinc mining. Alaska and Nevada are the leading U.S. silver-producing states. Peru, China, Mexico, Chile, and Australia lead the world in mine production.

Soda ash: A raw material for glass, chemicals, and detergents, it can be mined or produced synthetically. The world's leading producers of natural soda ash are the U.S., Kenya, and Botswana.

Sulfur: Used in agricultural chemicals, oil refining, metal mining, and many other industries. It is produced as a byproduct of oil refining, natural gas processing, and nonferrous metal smelting. Leading producers are the U.S., China, Russia, Canada, Germany, and Japan.

Titanium: Ilmenite and rutile are the major mineral sources of titanium. Titanium minerals are used to produce TiO_2 pigments (94%) and other uses (6%) including alloys, ceramics, chemicals, titanium metal, and welding rod coatings. Leading mine producers are Australia, South Africa, Canada, China, India, and Norway. U.S. mine production is in Florida and Virginia.

Zinc: Used as a protective coating on steel, as diecastings, as an alloying metal with copper to make brass, and as a component of chemical compounds in rubber and paints. Leading producers of zinc ores and concentrates by zinc content are China, Peru, Australia, Canada, the U.S. (in Alaska, Idaho, Missouri, and Tennessee), and India.

U.S. Reliance on Foreign Supplies of Minerals

Source: U.S. Geological Survey, U.S. Dept. of the Interior

Mineral	% imported in 2009	Major sources (2005-08)	Major uses
Arsenic (trioxide)	100%	China, Morocco, Belgium, Hong Kong	Wood preservatives, nonferrous alloys
Asbestos	100	Canada	Roofing products, gaskets, chloralkali industry
Bauxite & alumina	100	Jamaica, Brazil, Guinea, Australia	Aluminum production, refractories, abrasives, chemicals
Cesium	100	Canada	Drilling fluids, atomic clocks, DNA separation, infrared detectors, night vision devices
Fluorspar	100	China, Mexico, South Africa	Hydrofluoric acid, aluminum fluoride, steelmaking
Graphite (natural)	100	China, Mexico, Canada, Brazil	Refractories, batteries, foundry operations, lubricants, brake linings, steelmaking
Indium	100	China, Japan, Canada, Belgium	Coatings, electrical components, semiconductors, solders, alloys
Manganese	100	South Africa, Gabon, China, Australia	Iron & steelmaking, batteries, agricultural chemicals
Mica, sheet (natural)	100	China, Brazil, Belgium, India	Electronic and electrical components
Niobium	100	Brazil, Canada, Germany, Estonia	Steelmaking, superalloys
Quartz crystal (industrial)	100	China, Japan, Russia	Electronics components, optical applications
Rare earths	100	China, Japan, France, Russia	Catalysts, metallurgy, glass polishing, ceramics, phosphors, magnets
Rubidium	100	Canada	DNA separation, fiber optics, inorganic chemicals, lamps, night vision devices
Strontium	100	Mexico, Germany	Ferrite magnets, pyrotechnics
Tantalum	100	Australia, China, Brazil, Japan	Capacitors, superalloys, cemented carbide tools
Thallium	100	Russia, Germany, Netherlands	Medical imaging, radiation detection, superconductors, glass, alloys
Thorium	100	United Kingdom, France, Canada	High-temperature ceramics, catalysts, welding electrodes
Vanadium	100	Czech Republic, South Korea, Canada, Austria	Steelmaking, catalysts
Yttrium	100	China, Japan, France	Lamp & cathode ray tube phosphors, alloys
Gallium	99	Germany, Canada, China, Ukraine	Electronic components
Gemstones	99	Israel, India, Belgium, South Africa	Jewelry, carvings, gem & mineral collections
Antimony	93	China, Mexico, Belgium	Flame retardants, transportation, chemicals, ceramics & glass
Bismuth	90	Belgium, China, United Kingdom, Mexico	Alloys, solder, ammunition, metallurgy, pharmaceuticals, chemicals
Germanium	90	Belgium, China, Germany, Russia	Fiber and infrared optics, catalysts, electronic components, solar cells
Platinum	89	South Africa, Germany, United Kingdom, Canada	Catalysts, jewelry, dental & medical alloys
Barite	80	China, India	Oil & gas well drilling fluids, fillers & extenders, chemicals
Tin	80	Peru, Bolivia, China, Indonesia	Tinplate, chemicals, solder, alloys
Rhenium	79	Chile, Netherlands	Petroleum-reforming catalysts, superalloys
Diamond (industrial stone)	78	Botswana, South Africa, Namibia, India	Abrasives, stone cutting, highway repair & construction
Stone (dimension)	78	Brazil, Italy, China, Turkey	Construction, monuments
Zinc	76	Canada, Peru, Mexico, Ireland	Galvanizing, zinc-base alloys, brass & bronze
Cobalt	75	Norway, Russia, China, Canada	Superalloys, cemented carbides, magnetic alloys, chemicals
Potash	73	Canada, Belarus, Germany, Russia	Fertilizers, chemicals
Titanium mineral concentrates	73	South Africa, Australia, Canada, Ukraine	Pigment, titanium metal, welding rod coatings, chemicals, ceramics
Titanium (sponge)	67	Kazakhstan, Japan, China, Ukraine	High-strength alloys for aerospace and nonaerospace uses
Silver	63	Mexico, Canada, Peru, Chile	Industrial applications, photography, coins & medals, jewelry & silverware
Tungsten	63	China, Germany, Canada, Bolivia	Cemented carbides, electrical & electronic components, tool steels, alloys
Peat	60	Canada	Horticulture, absorbents, filter media

World Mineral Reserve Base, 2009

Source: U.S. Geological Survey, U.S. Dept. of the Interior; as of year-end 2009

Mineral	Reserve base[1]	Mineral	Reserve base[1]
Aluminum[2]	27,000 mil metric tons	Nickel	71 mil metric tons
Cobalt	6.6 mil metric tons	Phosphate rock	16,000 mil metric tons
Copper	540 mil metric tons	Platinum-group metals	71,000 metric tons
Gold	47,000 metric tons	Silver	400,000 metric tons
Iron ore	160,000 mil metric tons	Soda ash (Natural)	24,000 mil metric tons
Lead	79 mil metric tons	Titanium (ilmenite/rutile)[3]	730 mil metric tons
Manganese	540 mil metric tons	Zinc	200 mil metric tons

(1) Includes demonstrated resources that are currently economic. (2) Bauxite. (3) Titanium dioxide (TiO_2) content of titanium minerals (ilmenite and rutile).

World Gold Production, 1980-2009

Source: U.S. Geological Survey, U.S. Dept. of the Interior

(in thousands of troy ounces, rounded)

		Africa			North and South America				Other			
Year	World prod.	South Africa	Ghana	Congo, (Kinshasa)	U.S.	Canada	Mexico	Colombia	Australia	China	Philip-pines	Russia[1]
1980	39,197	21,669	353	96	970	1,627	196	510	548	NA	753	8,425
1985	49,284	21,565	299	257	2,427	2,815	266	1,142	1,881	1,950	1,063	8,700
1990	70,207	19,454	541	299	9,458	5,447	311	944	7,849	3,215	791	9,710
1995	71,800	16,800	1,710	322	10,200	4,890	652	680	8,150	4,500	873	4,250
1996	73,600	16,000	1,580	160	10,500	5,350	787	710	9,310	4,660	970	3,960
1997	78,900	15,800	1,760	220	11,600	5,510	836	605	10,100	5,630	1,050	3,990
1998	80,300	15,000	2,330	160	11,800	5,320	817	605	10,000	5,720	1,090	3,690
1999	82,600	14,500	2,570	180	11,000	5,070	764	1,410	9,680	5,560	1,000	4,050
2000	81,700	13,900	2,320	231	11,300	5,020	848	1,190	9,530	5,790	1,170	5,000
2001	81,700	12,700	2,200	196	10,800	5,110	757	701	9,000	5,950	1,090	4,900
2002	81,300	12,800	2,230	244	9,580	4,880	686	669	8,560	6,170	1,150	5,410
2003	81,800	12,000	2,270	286	8,900	4,530	656	1,500	9,070	6,590	1,220	5,470
2004	77,800	10,800	2,030	338	8,290	4,160	701	1,210	8,330	6,910	1,140	5,250
2005	79,500	9,470	2,150	231	8,220	3,840	976	1,150	8,420	7,230	1,210	5,280
2006	76,200	8,750	2,240	331	8,100	3,330	1,250	504	7,940	7,880	1,160	5,120
2007	76,000	8,120	3,000	163	7,660	3,290	1,270	498	7,940	8,840	1,250	5,040
2008	73,500	6,840	2,590	106	7,500	3,050	1,620	1,100	6,910	9,160	1,140	5,530
2009[P]	78,700	6,360	2,760	64	7,180	3,130	1,650	1,540	7,140	10,300	1,190	6,130

P = Preliminary. NA = Not available. (1) 1980-94 figures for USSR as constituted prior to Dec. 1991; after 1994, Russia only.

U.S. Nonfuel Minerals Production, 1998-2009

Source: U.S. Geological Survey, U.S. Dept. of the Interior

Production as measured by mine shipments, sales, or marketable production, including consumption by producers.

Commodity	Measurement	1998	2000	2005	2007	2008	2009
Asbestos	thousand metric tons	—	5	—	—	—	—
Barite (sold or used)	thousand metric tons	476	392	489	455	648	383
Beryllium (metal equivalent)	metric tons	243	180	110	150	175	120
Boron minerals (B_2O_3 equivalent)	thousand metric tons	587	546	612	W	W	W
Bromine	thousand metric tons	230	228	226	W	W	W
Cement (portland, masonry; excludes Puerto Rico)	thousand metric tons	83,931	87,846	99,319	95,464	86,310	64,200[E]
Clays	thousand metric tons	41,900	40,800	41,200	36,700	33,200	25,300[E]
Copper (recoverable content of ores, etc.)	thousand metric tons	1,860	1,450	1,140	1,170	1,310	1,180
Diatomite	thousand metric tons	725	677	653	687	764	575
Feldspar[E]	thousand metric tons	820[E]	790	750	730	650	530
Garnet (industrial)	metric tons	74,000	60,200	40,100	61,400	62,900	48,900
Gemstones (natural)	million dollars	14	17.2	13.4	11.9	11.5	8.4
Gold (recoverable content of ores, etc.)	metric tons	366	353	256	233	234	223
Gypsum	thousand metric tons	19,000	19,500	18,800	17,900	14,400	11,500
Helium (extracted from natural gas)	million cubic meters	114	98	76	77	80	78
Iodine	thousand kilograms	1,490	1,470	1,570	W	W	W
Iron ore, usable	million metric tons	62.9	63.1	54.3	52.5	53.6	31.3[E]
Lead (recoverable content of ores, etc.)	thousand metric tons	481	449	426	434	399	395
Lime	thousand metric tons	20,100	19,500	20,000	20,200	19,900	15,800
Mica (scrap and flake)	thousand metric tons	87	101	78	97	84	50[E]
Molybdenum (content of ore and concentrates)	metric tons	53,300	40,900	58,000	57,000	55,900	47,800
Peat	thousand metric tons	685	792	685	635	615	609
Perlite (sold and used by producers)	thousand metric tons	685	672	508	409	434	348
Phosphate rock (marketable product)	thousand metric tons	44,200	38,600	36,100	29,700	30,200	26,400
Potash (K_2O equivalent)	thousand metric tons	1,300	1,300	1,200	1,100	1,100	700
Pumice and pumicite	thousand metric tons	872	1,050	1,270	1,270	791	410
Salt	thousand metric tons	40,800	43,300	45,000	45,500	47,400	43,100
Sand and gravel (construction)	million metric tons	1,070	1,120	1,280	1,230	1,040	782[E]
Sand and gravel (industrial)	thousand metric tons	28,200	28,400	30,600	30,100	30,400	25,000
Silver (recoverable content of ores, etc.)	metric tons	2,060	1,860	1,230	1,280	1,230	1,250
Soda ash (sodium carbonate)	thousand metric tons	10,100	10,200	11,000	11,100	11,300	9,310
Stone (crushed)	million metric tons	1,510	1,550	1,700	1,650	1,460	1,170
Stone (dimension)	thousand metric tons	1,140	1,320	2,000	1,920	1,800	1,620
Sulfur (in all forms)	thousand metric tons	11,700	10,500	9,500	9,100	9,450	9,760
Talc	thousand metric tons	971	851	856	769	706	511
Titanium mineral concentrates (TiO_2 content)[1]	thousand metric tons	400	300	300	300	200	200
Vermiculite concentrate[E]	thousand metric tons	W	150	100	100	100	100
Zinc (recoverable content of ores, etc.)	thousand metric tons	722	796	720	769	748	710

E = Estimated. W = Withheld to avoid disclosing company proprietary data. — = Zero. (1) Rounded to one significant digit to avoid disclosing company proprietary data.

Who Owns What: Familiar Consumer Products and Services

The following is a partial list of well-known consumer brands with their (U.S.) parent companies as of Oct. 2010. Among brands not listed are many brands whose parent companies have the same or a similar name (e.g., Colgate is a product of Colgate-Palmolive Co.). For company contact information, see Businesses Directory on p. 422.

A&W root beer: Dr Pepper Snapple Group
ABC broadcasting: Walt Disney
Admiral appliances: Whirlpool Corp.
Advil: Pfizer
Ajax cleanser: Colgate-Palmolive
Almond Joy candy bar: Hershey
American Girl: Mattel
Arm & Hammer: Church & Dwight
Arrid antiperspirant: Church & Dwight
Aunt Jemima Pancake mix: PepsiCo
Banana Republic stores: Gap Inc.
Band-Aid bandages: Johnson & Johnson
Barbie dolls: Mattel
Bengay: Johnson & Johnson
Betty Crocker prods.: General Mills
Bounty paper towels: Procter & Gamble
Brillo soap pads: Church & Dwight
Brita water systems: Clorox
Budweiser beer: Anheuser-Busch
Cap'n Crunch cereal: PepsiCo
Calphalon cookware: Newell Rubbermaid
Camel cigarettes: Reynolds American
Charmin toilet tissue: Procter & Gamble
Cheer detergent: Procter & Gamble
Cheerios cereal: General Mills
Cheez Whiz: Kraft
Chef Boyardee: ConAgra
Chips Ahoy!: Kraft
Clairol hair prods.: Procter & Gamble
Clinique: Estée Lauder
CNN: Time Warner
Combat insecticides: Henkel
Coppertone sun care prods.: Schering-Plough
Crest toothpaste: Procter & Gamble
Crisco shortening: J.M. Smucker
DC Comics: Time Warner
Dr Pepper: Dr Pepper Snapple Group
Doritos chips: PepsiCo
Dove soap: Unilever
Duracell batteries: Procter & Gamble
Dutch Boy paints: Sherwin-Williams
Efferdent dental cleanser: Johnson & Johnson
ESPN: Walt Disney
Fantastik: S.C. Johnson
Febreze: Procter & Gamble
Fisher Price toys: Mattel
Folger's coffee: J.M. Smucker
Formula 409 spray cleaner: Clorox
FOX News Channel: News Corp.
Fortune magazine: Time Warner
Friskies cat food: Nestlé
Frito-Lay's snacks: PepsiCo
Fruit of the Loom apparel: Berkshire Hathaway
Gatorade: PepsiCo
Gillette razors: Procter & Gamble
Glade air fresheners: S.C. Johnson
Glad products: Clorox
Häagen-Dazs: General Mills
Halcion: Pfizer
Halls cough drops: Cadbury Adams USA
Hamburger Helper: General Mills
HBO: Time Warner
Head and Shoulders shampoo: Procter & Gamble
Hellmann's mayonnaise: Unilever
Hi-C fruit drinks: Coca-Cola
Hidden Valley prods.: Clorox
Hillshire Farm meats: Sara Lee
Hot Wheels/Matchbox cars: Mattel
Hostess cupcakes: Interstate Bakeries
Huggies diapers: Kimberly-Clark
Irish Spring: Colgate-Palmolive
Ivory soap: Procter & Gamble
Jack Daniel's whiskey: Brown-Forman
Jell-O: Kraft
Jennie-O turkey: Hormel
Jif peanut butter: J.M. Smucker
Jim Beam bourbon: Fortune Brands
Keds footwear: Collective Brands
Kent cigarettes: Lorillard Tobacco Co.
KFC restaurants: Yum! Brands
Kibbles 'n Bits pet foods: Del Monte
KitchenAid appliances: Whirlpool
Kit Kat candy: Hershey
Kleenex: Kimberly-Clark
Kmart: Sears Holdings Corp.
Knorr soups: Unilever
Kool-Aid: Kraft
Ladies Home Journal magazine: Meredith
Lee jeans: V.F. Corp.
L'eggs hosiery: Hanesbrands
LifeSavers candy: Wm. Wrigley Jr. Co.
Lipton tea: Unilever
Listerine mouthwash: Johnson & Johnson
Marlboro cigarettes: Altria (Philip Morris)
Max Factor beauty products: Procter & Gamble
Maxwell House coffee: Kraft
Maytag appliances: Whirlpool
Metamucil: Procter & Gamble
Michelob beer: Anheuser-Busch
Miller beer: MillerCoors
Milton Bradley games: Hasbro
Minute Maid juices: Coca-Cola
Mr. Clean: Procter & Gamble
Monroe automotive parts: Tenneco Inc.
Mountain Dew soda: PepsiCo
MTV: Viacom
Nature Valley granola bars: General Mills
NBC broadcasting: General Electric
Neosporin: Johnson & Johnson
Neutrogena soap: Johnson & Johnson
Newport cigarettes: Lorillard Tobacco Co.
Newsweek magazine: Washington Post Co.
Nickelodeon TV: Viacom
9 Lives cat food: Del Monte
Olay: Procter & Gamble
Old Navy clothing: Gap Inc.
Oreo cookies: Kraft
Oscar Mayer meats: Kraft
Pampers: Procter & Gamble
Pantene shampoo: Procter & Gamble
Parker Bros. games: Hasbro
People magazine: Time Warner
Pepperidge Farm prods.: Campbell Soup
Pepto-Bismol: Procter & Gamble
Philadelphia Cream Cheese: Kraft
Pillsbury: General Mills
Pine-Sol cleaner: Clorox
Pizza Hut restaurants: Yum! Brands
Planters nuts: Kraft
Playskool toys: Hasbro
PlayStation: Sony
Playtex apparel: Hanesbrands
Post cereals: Ralcorp
Post-it notes: 3M
Prego pasta sauce: Campbell Soup
Prozac: Eli Lilly
Purina pet foods: Nestlé
Q-Tips: Unilever
Ragu sauce: Unilever
Reese's candy: Hershey
Rice-A-Roni: PepsiCo
Rice Krispies: Kellogg Co.
Right Guard deodorant: Henkel
Ritz crackers: Kraft
Robitussin: Pfizer
Rogaine hair growth aide: Johnson & Johnson
Ruffles chips: PepsiCo
Schick razors: Energizer
Scope mouthwash: Procter & Gamble
Scotch tape: 3M
Scott tissue: Kimberly-Clark
Simon & Schuster publishing: CBS Corp.
Skippy peanut butter: Unilever
SlimFast: Unilever
SnackWell's cookies: Kraft
S.O.S. cleanser: Clorox
Southern Comfort liquor: Brown-Forman
SPAM meat: Hormel Foods
Sports Illustrated magazine: Time Warner
Sprite soda: Coca-Cola
StarKist tuna: Del Monte
Sudafed: Johnson & Johnson
Swanson broth: Campbell Soup
Swiffer: Procter & Gamble
Taco Bell restaurants: Yum! Brands
Tampax tampons: Procter & Gamble
Tide detergent: Procter & Gamble
Time magazine: Time Warner
Titleist: Fortune Brands
Tombstone pizza: Kraft
Triscuit crackers: Kraft
Trojan condoms: Church & Dwight
Tropicana juice: PepsiCo
Tylenol: Johnson & Johnson
USA Today newspaper: Gannett
V8 vegetable juice: Campbell Soup
Vanity Fair apparel: Berkshire Hathaway
Vaseline: Unilever
Velveeta cheese products: Kraft
VH1: Viacom
Viagra: Pfizer
Vicks cold medicines: Procter & Gamble
Victoria's Secret stores: Limited Brands
Visine eye drops: Johnson & Johnson
Wheaties cereal: General Mills
Windex: S.C. Johnson
Windows software applications: Microsoft
Wonderbra: Hanesbrands
Wonder bread: Interstate Bakeries
Xbox: Microsoft
Zest soap: Procter & Gamble
Ziploc storage bags: S.C. Johnson

Top Brands in Selected Categories, 2009-10

Source: Information Resources, Inc., a Chicago-based marketing research company; figures for 52-week period ending Sept. 5, 2010. Sales in millions of dollars; change represents dollar sales change in 2009-10 over same period in 2008-09.

Beer	Sales	% change	Market share
Bud Light	$1,423.1	–0.4%	15.0%
Coors Light	723.2	2.7	7.6
Miller Lite	656.6	–3.0	6.9
Budweiser	623.7	–5.5	6.6
Corona Extra	425.6	–2.6	4.5
Total sales	9,476.3	1.3	
Baby Food			
Gerber Second Foods	$261.1	21.8%	29.4%
Gerber	93.9	3.5	10.6
Gerber Graduates	76.1	4.0	8.6
Gerber Third Foods	54.1	–14.5	6.1
Beechnut Stage 2	51.7	42.7	5.8
Total sales	889.2	4.6	
Batteries (Alkaline)			
Duracell Coppertop	$451.0	–6.1%	40.2%
Energizer Max	315.7	–6.3	28.1
Private label	209.3	–7.7	18.6
Energizer	40.0	0.8	3.6
Ray O Vac	23.1	–27.3	2.1
Total sales	1,123.0	–6.6	
Bottled Water			
Private label	$829.3	11.8%	21.7%
Aquafina	353.2	–9.8	9.2
Dasani	291.1	–19.7	7.6
Glaceau Vitamin Water	288.9	–20.1	7.6
Poland Spring	267.5	2.9	7.0
Total sales	3,823.7	–0.7	
Cat Food (Dry)			
Meow Mix	$113.2	–3.6%	9.8%
Private label	105.9	3.4	9.2
Purina Cat Chow Indoor Formula	77.1	2.8	6.7
Purina ONE	60.3	21.5	5.2
Purina Kit 'N' Ka Boodle	56.5	–2.2	4.9
Total sales	1,156.0	–1.1	
Chocolate Candies			
M & Ms	$297.4	13.1%	14.2%
Hershey's	195.1	1.0	9.3
Reese's	100.5	9.2	4.8
Dove	95.6	–13.2	4.6
Hershey's Kisses	94.5	–0.7	4.5
Total sales	2,093.2	4.7	
Coffee (Ground)			
Folgers	$666.4	–0.1%	27.7%
Maxwell House	403.9	6.2	16.8
Private label	237.6	–1.3	9.9
Starbucks	227.3	8.5	9.5
Dunkin' Donuts	154.4	18.4	6.4
Total sales	2,402.1	1.9	
Coffee (Decaf)			
Folgers	$59.9	–0.9%	23.7%
Private label	41.3	–3.0	16.4
Maxwell House	25.1	–14.4	9.9
Starbucks	20.8	–1.4	8.2
Dunkin Donuts	19.8	10.2	7.8
Total sales	252.3	–3.2	
Cold Cereals (Ready-to-Eat)			
Private label	$659.2	–6.0%	10.2%
General Mills Honey Nut Cheerios	332.6	–2.8	5.1
Post Honey Bunches of Oats	307.2	0.5	4.7
General Mills Cheerios	281.0	–10.6	4.3
Kelloggs Frosted Flakes	241.2	2.5	3.7
Total sales	6,473.4	–2.4	
Cookies			
Private label	$639.5	7.2%	15.6%
Nabisco Chips Ahoy	314.4	–1.1	7.7
Nabisco Oreo	290.5	10.2	7.1
Nabisco Oreo Double Stuf	160.1	–5.8	3.9
Lofthouse	133.5	0.7	3.2
Total sales	4,110.4	0.7	
Dog Food (Dry)			
Private label	$231.9	5.0%	10.9%
Pedigree	179.2	8.3	8.4
Purina Beneful	132.9	8.2	6.2
Purina ONE	124.5	–1.4	5.8
Purina Beneful Healthy Weight	109.1	9.4	5.1
Total sales	2,128.8	1.1	
Ice Cream			
Private label	$992.4	–4.9%	25.0%
Breyers	435.2	–3.2	11.0
Dreyer's Edy's SlowChurned	298.4	–5.9	7.5
Blue Bell	296.6	3.7	7.5
Häagen-Dazs	246.8	–4.3	6.2
Total sales	3,968.5	–4.1	
Paper Towels			
Bounty	$945.8	2.9%	38.0%
Private label	626.5	6.8	25.2
Kleenex Viva	184.9	6.0	7.4
Bounty Basic	168.7	5.2	6.8
Brawny	115.3	4.6	4.6
Total sales	2,486.3	1.0	
Potato Chips			
Lay's	$981.1	8.1%	27.6%
Ruffles	328.3	7.8	9.2
Wavy Lay's	317.5	–4.4	8.9
Private label	245.0	2.6	6.9
Pringles	189.4	92.3	5.3
Total sales	3,553.9	5.5	
Frozen Pizza			
Di Giorno	$671.3	16.3%	21.0%
Private label	305.2	–3.6	9.6
Red Baron	272.2	8.7	8.5
Tombstone	262.2	1.1	8.2
Totino's Party Pizza	166.2	11.1	5.2
Total sales	3,194.5	2.5	
Salad Dressing			
Hidden Valley Ranch	$228.7	2.4%	16.4%
Private label	190.0	2.9	13.6
Kraft	189.7	–3.9	13.6
Wishbone	160.0	5.1	11.4
Ken's Steak House	149.1	0.8	10.7
Total sales	1,397.4	0.3	
Soft Drinks			
Coke Classic	$1,767.8	–6.2%	21.5%
Pepsi	1,298.9	–8.1	15.8
Mountain Dew	741.7	–3.7	9.0
Private label	642.4	–4.1	7.8
Dr Pepper	639.7	–1.1	7.8
Total sales	8,217.3	–3.4	
Soft Drinks (Low Calorie)			
Diet Coke	$1,151.6	–3.7%	24.3%
Diet Pepsi	701.3	–7.0	14.8
Diet Dr Pepper	338.6	4.6	7.1
Diet Mountain Dew	307.0	1.1	6.5
Caffeine Free Diet Coke	297.4	–6.3	6.3
Total sales	4,736.2	–3.7	
Toothpaste			
Crest Whitening plus Scope	$106.4	–1.6%	8.2%
Crest	103.6	–4.2	8.0
Colgate Total	90.2	–0.4	7.0
Crest Pro Health	81.7	1.9	6.3
Colgate	76.5	–1.2	5.9
Total sales	1,291.2	0.9	

Note: For all categories, brands are ranked by dollar sales at supermarkets, drugstores, and mass merchandisers, excluding Wal-Mart. "Private label" represents the aggregated sales figures for store-branded products in that category. Total category sales include other brands not listed here.

Median Price of Existing Single-Family Homes, by Metropolitan Area, 2008-10

Source: National Association of REALTORS®

Median prices are in thousands of dollars and based on all transactions within time period shown. 2nd qtr. 2010 figures are preliminary.

Metropolitan area	2008	2009	2nd qtr. 2010
Akron, OH	100.5	93.2	119.7
Albany-Schenectady-Troy, NY	197.9	189.1	194.3
Albuquerque, NM	192.6	180.6	177.9
Allentown-Bethlehem-Easton, PA-NJ	243.6	223.4	227.2
Amarillo, TX	124.7	123.8	127.2
Anaheim-Santa Ana, CA (Orange Co.)	533.2	477.2	504.5
Atlanta-Sandy Springs-Marietta, GA	149.5	123.5	122.7
Atlantic City, NJ	253.3	221.3	224.4
Austin-Round Rock, TX	188.6	187.4	196.6
Baltimore-Towson, MD	274.1	251.2	251.6
Baton Rouge, LA	165.0	163.0	170.4
Beaumont-Port Arthur, TX	127.4	132.4	120.7
Birmingham-Hoover, AL	153.9	146.1	146.5
Bismarck, ND	155.2	156.6	163.1
Bloomington-Normal, IL	159.8	152.8	160.8
Boise City-Nampa, ID	188.7	153.8	140.1
Boston-Cambridge-Quincy, MA-NH	361.1	332.6	360.2
Boulder, CO	359.6	345.5	352.4
Bridgeport-Stamford-Norwalk, CT	437.9	379.2	419.4
Buffalo-Niagara Falls, NY	105.4	113.6	121.4
Cedar Rapids, IA	136.5	139.7	145.3
Champaign-Urbana, IL	141.9	140.6	142.5
Charleston-North Charleston, SC	206.2	192.7	197.5
Charleston, WV	126.9	126.8	132.0
Charlotte-Gastonia-Concord, NC-SC	197.8	189.1	199.1
Chattanooga, TN-GA	129.1	122.6	125.7
Chicago-Naperville-Joliet, IL	245.6	199.2	203.8
Cincinnati-Middletown, OH-KY-IN	131.8	125.8	131.1
Cleveland-Elyria-Mentor, OH	108.5	106.8	118.2
Colorado Springs, CO	205.5	189.8	196.8
Columbia, MO	146.3	146.7	147.3
Columbia, SC	145.0	139.2	142.1
Columbus, OH	139.3	134.9	149.7
Corpus Christi, TX	139.1	134.3	135.5
Cumberland, MD-WV	99.5	118.3	104.5
Dallas-Fort Worth-Arlington, TX	145.8	140.5	134.7
Davenport-Moline-Rock Island, IA-IL	94.2	110.3	113.5
Dayton, OH	107.0	104.1	112.4
Decatur, IL	87.4	86.7	96.0
Denver-Aurora, CO	219.3	219.9	234.7
Des Moines, IA	153.2	149.3	156.2
Detroit-Warren-Livonia, MI	NA	NA	NA
Dover, DE	206.2	197.1	196.3
Durham, NC	180.6	176.9	186.4
El Paso, TX	137.5	132.6	133.8
Erie, PA	99.5	97.9	110.2
Eugene-Springfield, OR	224.7	203.7	201.6
Fargo, ND-MN	139.1	140.2	141.6
Farmington, NM	190.6	187.5	174.8
Ft. Wayne, IN	92.6	94.0	103.3
Gainesville, FL	188.6	167.6	172.9
Gary-Hammond, IN	127.7	119.2	127.0
Glens Falls, NY	161.1	153.5	148.3
Grand Rapids, MI	100.9	87.4	93.0
Green Bay, WI	146.2	136.2	133.8
Greensboro-High Point, NC	145.3	132.8	134.2
Greenville, SC	155.7	141.4	149.6
Gulfport-Biloxi, MS	140.2	133.9	128.5
Hartford-West Hartford-East Hartford, CT	246.2	232.0	236.0
Honolulu, HI	624.0	596.2	621.6
Houston-Baytown-Sugar Land, TX	151.6	153.1	155.9
Indianapolis, IN	111.2	114.2	129.9
Jackson, MS	128.7	134.9	137.9
Jacksonville, FL	174.6	145.9	139.0
Kankakee-Bradley, IL	130.8	129.2	126.5
Kansas City, MO-KS	144.3	140.7	150.6
Kennewick-Richland-Pasco, WA	166.1	167.1	173.1
Knoxville, TN	149.1	141.4	143.5
Lansing-E. Lansing, MI	97.7	80.7	92.1
Las Vegas-Paradise, NV	220.5	142.9	142.3
Lexington-Fayette, KY	144.3	141.4	144.2
Lincoln, NE	135.2	133.3	134.2
Little Rock-N. Little Rock, AR	129.8	131.8	132.8
Los Angeles-Long Beach-Santa Ana, CA	402.1	333.9	339.9
Louisville, KY-IN	132.2	131.1	136.4
Madison, WI	226.6	212.3	213.2
Manchester-Nashua, NH	242.8	227.1	241.0
Memphis, TN-MS-AR	119.3	119.2	127.2
Miami-Fort Lauderdale-Miami Beach, FL	285.1	211.2	214.2
Milwaukee-Waukesha-West Allis, WI	212.3	193.4	200.2
Minneapolis-St. Paul-Bloomington, MN-WI	202.0	177.7	176.2
Mobile, AL	134.2	127.6	129.5
Montgomery, AL	135.2	130.2	129.2
New Haven-Milford, CT	263.8	235.7	237.8
New Orleans-Metairie-Kenner, LA	160.5	160.1	161.9
New York-Northern New Jersey-Long Island, NY-NJ-PA	437.9	381.4	393.9
New York-Wayne-White Plains, NY-NJ	494.3	437.2	443.8
New York: Nassau-Suffolk, NY	435.8	383.3	395.1
New York: Newark-Union, NJ-PA	417.2	366.6	386.5
Ocala, FL	137.5	107.4	95.9
Oklahoma City, OK	128.1	140.5	149.9
Omaha, NE-IA	135.2	133.7	138.8
Orlando, FL	208.9	147.4	140.2
Pensacola-Ferry Pass-Brent, FL	155.7	145.7	143.1
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	231.4	215.9	223.2
Phoenix-Mesa-Scottsdale, AZ	191.3	137.0	144.7
Pittsburgh, PA	118.4	118.9	126.6
Portland-South Portland-Biddeford, ME	229.3	203.5	217.4
Portland-Vancouver-Beaverton, OR-WA	280.1	244.1	238.5
Providence-New Bedford-Fall River, RI-MA	250.6	218.5	224.7
Raleigh-Cary, NC	223.4	215.4	223.7
Reading, PA	155.7	152.8	155.6
Reno-Sparks, NV	259.1	193.8	180.3
Richmond, VA	223.5	NA	199.6
Riverside-San Bernardino-Ontario, CA	234.2	169.7	190.2
Rochester, NY	117.0	116.4	121.4
Sacramento–Arden-Arcade–Roseville, CA	216.7	180.5	192.2
Saginaw-Saginaw Township North, MI	62.2	56.9	59.7
Saint Louis, MO-IL	133.2	127.1	143.1
Salem, OR	208.8	183.7	176.8
Salt Lake City, UT	229.6	217.0	207.3
San Antonio, TX	152.8	149.3	148.2
San Diego-Carlsbad-San Marcos, CA	385.6	359.5	392.6
San Francisco-Oakland-Fremont, CA	622.0	493.3	591.2
San Jose-Sunnyvale-Santa Clara, CA	668.0	530.0	630.0
Sarasota-Bradenton-Venice, FL	240.6	170.5	184.6
Seattle-Tacoma-Bellevue, WA	357.2	306.2	307.3
Shreveport-Bossier City, LA	138.5	147.0	155.9
Sioux Falls, SD	142.3	139.2	141.4
South Bend-Mishawaka, IN	86.0	85.2	95.9
Spartanburg, SC	127.3	120.7	121.3
Spokane, WA	191.2	175.2	171.4
Springfield, IL	108.0	113.9	123.6
Springfield, MA	200.6	186.4	189.2
Springfield, MO	121.1	114.6	112.4
Syracuse, NY	120.2	121.0	125.3
Tallahassee, FL	179.9	150.9	142.3
Tampa-St.Petersburg-Clearwater, FL	173.0	140.7	141.4
Toledo, OH	91.2	83.4	90.9
Topeka, KS	108.0	108.4	109.6
Trenton-Ewing, NJ	303.2	263.7	259.3
Tucson, AZ	204.3	172.5	150.2
Tulsa, OK	136.9	130.1	133.2
Virginia Beach-Norfolk-Newport News, VA-NC	220.0	210.0	210.0
Washington-Arlington-Alexandria, DC-VA-MD-WV	343.4	308.6	331.6
Waterloo/Cedar Falls, IA	111.5	110.6	115.3

NA = Not available.

U.S. Home Ownership Rates, by Selected Characteristics, 2005, 2010

Source: U.S. Census Bureau, U.S. Dept. of Commerce

Region	2005	2010
Northeast	64.7%	64.2%
Midwest	73.4	70.8
South	70.4	69.1
West	63.8	61.4

Age	2005	2010
Under 35	42.8%	39.0%
35-44	68.7	65.6
45-54	76.3	73.6
55-64	81.3	78.7
65+	80.3	80.4

Race/ethnicity[1]	2005	2010
White, non-Hispanic	75.6%	74.4%
Black	48.0	46.2
Hispanic	49.2	47.8
Other	58.0	55.7

Income	2005	2010
Median family income or more	84.0%	81.9%
Below median family income	52.7	51.9
Total U.S.	**68.6%**	**66.9%**

Note: Figures are for 2nd quarter of the year shown. Not seasonally adjusted. (1) Hispanic householders may be of any race. "Other" includes householders reporting Asian, Native Hawaiian/Pacific Islander, and Native American/Alaska Native, as well as combinations of two or more races/ethnicities.

U.S. Housing Affordability, 1990-2010

Source: National Association of REALTORS®

Year	Median priced existing home	Avg. mortgage rate[1]	Monthly principal & interest payment	Payment as % of median monthly income	Year	Median priced existing home	Avg. mortgage rate[1]	Monthly principal & interest payment	Payment as % of median monthly income
1990	$92,000	10.04%	$648	22.0%	2001	$147,800	7.03%	$789	18.4%
1991	97,100	9.30	642	21.4	2002	158,100	6.55	804	18.3
1992	99,700	8.11	591	19.3	2003	180,200	5.74	840	19.1
1993	103,100	7.16	558	18.1	2004	195,200	5.73	909	20.2
1994	107,200	7.47	598	18.5	2005	219,000	5.91	1,040	22.4
1995	110,500	7.85	639	18.9	2006	221,900	6.58	1,131	23.2
1996	115,800	7.71	661	18.8	2007	217,900	6.52	1,104	21.7
1997	121,800	7.68	693	18.7	2008	196,600	6.15	958	18.1
1998	128,400	7.10	690	17.4	2009	172,100	5.14	751	14.6
1999	133,300	7.33	733	18.0	2010[2]	179,300	4.76	749	14.9
2000	139,000	8.03	818	19.3					

(1) All figures assume a down payment of 20% of the home price. Based on effective rate on loans closed on existing homes for the period shown. (2) Preliminary figures, as of Aug. 2010.

U.S. Foreclosure Filings by State, 2010

Source: RealtyTrac, Inc.

(Foreclosure filings, Jan.-June 2010)

State	No. filings	Rank	% total housing units	% change[1]	State	No. filings	Rank	% total housing units	% change[1]
Alabama	11,419	35	0.53%	18.25%	Montana	1,507	40	0.34%	419.66%
Alaska	1,529	33	0.54	42.63	Nebraska	1,708	44	0.22	167.71
Arizona	91,484	2	3.36	1.88	Nevada	64,429	1	5.72	–6.23
Arkansas	11,093	21	0.85	28.30	New Hampshire	4,528	24	0.76	11.97
California	340,740	4	2.54	–12.99	New Jersey	36,542	15	1.04	52.97
Colorado	30,177	10	1.40	13.60	New Mexico	6,338	27	0.73	140.90
Connecticut	13,315	16	0.92	51.29	New York	24,506	41	0.31	1.22
Delaware	2,386	32	0.61	53.05	North Carolina	20,097	37	0.48	58.97
Dist. of Columbia	1,221	NA	0.43	–31.25	North Dakota	278	48	0.09	39.00
Florida	277,073	3	3.15	3.36	Ohio	59,927	14	1.18	1.68
Georgia	71,949	6	1.79	27.59	Oklahoma	10,343	31	0.63	84.40
Hawaii	6,482	12	1.26	79.91	Oregon	21,538	11	1.32	13.04
Idaho	10,799	8	1.68	35.80	Pennsylvania	27,684	36	0.50	16.01
Illinois	85,223	9	1.61	23.63	Rhode Island	2,979	29	0.66	–6.08
Indiana	25,524	17	0.91	3.48	South Carolina	17,616	20	0.86	34.01
Iowa	3,248	43	0.24	8.41	South Dakota	576	46	0.16	125.00
Kansas	6,602	34	0.54	41.67	Tennessee	23,100	23	0.84	13.43
Kentucky	6,653	39	0.35	52.73	Texas	64,883	28	0.68	32.03
Louisiana	8,137	38	0.43	57.69	Utah	18,058	5	1.91	33.80
Maine	1,965	42	0.28	27.60	Vermont	78	50	0.02	122.86
Maryland	28,293	13	1.21	56.21	Virginia	30,063	18	0.91	5.98
Massachusetts	22,933	22	0.84	24.24	Washington	20,960	25	0.75	5.57
Michigan	78,509	7	1.73	29.16	West Virginia	549	49	0.06	–17.19
Minnesota	17,109	26	0.73	10.12	Wisconsin	22,640	19	0.88	25.89
Mississippi	2,243	45	0.18	3.13	Wyoming	359	47	0.15	–13.08
Missouri	17,242	30	0.65	24.22	**U.S.**	**1,654,634**		**1.28**	

NA = Not available. (1) Percent change over same period in 2009 (Jan.-June 2009).

Average Premiums for Homeowners and Renters Insurance by State, 2007

Source: © 2009 National Association of Insurance Commissioners (NAIC)

State	Home-owners[1]	Renters[2]	State	Home-owners[1]	Renters[2]	State	Home-owners[1]	Renters[2]
Alabama	$905	$218	Louisiana	$1,400	$248	Ohio	$540	$162
Alaska	861	175	Maine	596	142	Oklahoma	1,054	223
Arizona	634	200	Maryland	692	147	Oregon	496	161
Arkansas	762	201	Massachusetts	1,023	223	Pennsylvania	689	144
California[3]	925	231	Michigan	721	170	Rhode Island	950	182
Colorado	826	172	Minnesota	800	138	South Carolina	808	176
Connecticut	929	196	Mississippi	1,019	250	South Dakota	618	113
Delaware	559	155	Missouri	726	154	Tennessee	723	204
Dist. of Columbia	1,089	190	Montana	700	155	Texas[5]	1,448	226
Florida[4]	1,534	202	Nebraska	807	143	Utah	505	138
Georgia	724	218	Nevada	695	201	Vermont	704	158
Hawaii	850	209	New Hampshire	699	153	Virginia	683	145
Idaho	422	150	New Jersey	776	172	Washington	506	170
Illinois	700	165	New Mexico	667	185	West Virginia	646	175
Indiana	647	169	New York	936	218	Wisconsin	491	122
Iowa	610	132	North Carolina	674	133	Wyoming	656	149
Kansas	904	168	North Dakota	771	112	**U.S.**	**822**	**182**
Kentucky	578	143						

Note: Average premium = Premiums/exposure per house years. A house year is equal to 365 days of insured coverage for a single dwelling. The NAIC does not rank state average expenditures and does not endorse any conclusions drawn from this data. (1) Based on the HO-3 homeowner package policy for owner-occupied dwellings, 1 to 4 family units. Provides "all risks" coverage (except those specifically excluded in the policy) on buildings and broad named-peril coverage on personal property, and is the most common package written. (2) Based on the HO-4 renters insurance policy for tenants. Includes broad named-peril coverage for the personal property of tenants. (3) Data provided by the California Dept. of Insurance. (4) Excludes policies written by Citizens Property Insurance Corp., the state's insurer of last resort, and are not directly comparable to other states. (5) The Texas Dept. of Insurance developed home insurance policy forms that are similar but not identical to the standard forms.

U.S. Trade with Selected Countries and Major Areas, 2009

Source: U.S. Census Bureau and U.S. Bureau of Economic Analysis, U.S. Dept. of Commerce
(in millions of dollars; ranked by amount of total trade with U.S.)

Country	Total trade with U.S.	U.S. exports to	Rank[1]	U.S. imports from	Rank[1]	U.S. trade balance with	Rank[2]
Canada	$430,906.4	$204,658.0	1	$226,248.4	2	–$21,590.5	5
China[3]	365,870.6	69,496.7	3	296,373.9	1	–226,877.2	1
Mexico	305,546.5	128,892.1	2	176,654.4	3	–47,762.2	2
Japan	146,937.9	51,134.2	4	95,803.7	4	–44,669.5	3
Germany	114,804.5	43,306.3	6	71,498.2	5	–28,191.9	4
United Kingdom	93,183.5	45,703.6	5	47,479.9	6	–1,776.3	38
South Korea	67,827.5	28,611.9	8	39,215.6	7	–10,603.7	14
France	60,729.0	26,493.0	9	34,236.0	8	–7,743.0	21
Netherlands	48,340.0	32,241.5	7	16,098.5	21	16,143.1	231
Taiwan	46,847.7	18,485.6	15	28,362.1	9	–9,876.5	15
Brazil	46,165.1	26,095.5	10	20,069.6	16	6,025.8	226
Italy	38,697.8	12,268.0	18	26,429.8	12	–14,161.8	9
Singapore	37,936.7	22,231.8	11	15,704.9	23	6,526.9	227
India	37,607.4	16,441.4	17	21,166.0	15	–4,724.6	23
Venezuela	37,374.5	9,315.5	25	28,059.0	11	–18,743.6	7
Ireland	35,565.6	7,465.0	27	28,100.6	10	–20,635.6	6
Belgium	35,433.4	21,607.7	12	13,825.7	24	7,782.0	228
Malaysia	33,685.9	10,403.3	21	23,282.6	13	–12,879.3	10
Switzerland	33,557.3	17,504.4	16	16,052.9	22	1,451.5	214
Saudi Arabia	32,845.3	10,792.2	20	22,053.1	14	–11,261.0	13
Israel	28,303.8	9,559.4	22	18,744.4	19	–9,185.0	18
Australia	27,610.8	19,599.3	14	8,011.5	32	11,587.8	230
Thailand	26,000.9	6,918.4	29	19,082.5	18	–12,164.1	12
Hong Kong	24,621.4	21,050.5	13	3,570.9	49	17,479.6	232
Russia	23,531.8	5,332.1	32	18,199.7	20	–12,867.6	11
Nigeria	22,815.3	3,687.1	43	19,128.2	17	–15,441.1	8
Major area/group							
North America	$736,452.9	$333,550.1		$402,902.8		–$69,352.7	
Europe	589,277.5	258,061.6		331,215.9		–73,154.3	
Euro Area	374,558.9	162,002.1		212,556.8		–50,554.7	
EU	502,400.1	220,599.3		281,800.8		–61,201.5	
Africa	86,733.1	24,329.5		62,403.6		–38,074.1	
OECD	1,534,329.1	680,987.7		853,341.4		–172,353.8	
Pacific Rim Countries	787,569.7	254,572.4		532,997.3		–278,424.9	
Asia Near East	103,404.2	44,802.9		58,601.3		–13,798.4	
NICS	177,233.4	90,379.9		86,853.5		3,526.4	
Asia/South	50,054.4	20,263.1		29,791.3		–9,528.2	
ASEAN	145,878.4	53,778.6		92,099.8		–38,321.2	
APEC	1,612,931.0	617,525.5		995,405.5		–377,880.0	
South/Central America	217,647.9	109,548.8		108,099.1		1,449.7	
Twenty Latin American Republics	501,555.7	225,617.7		275,938.0		–50,320.3	
Central American Common Market	30,188.2	14,675.5		15,512.7		–837.2	
LAFTA	456,298.8	200,057.3		256,241.5		–56,184.2	
NATO Allies	889,535.7	418,879.0		470,656.7		–51,777.7	
OPEC	161,459.3	49,857.0		111,602.3		–61,745.3	
World total	**$2,615,667.8**	**$1,056,043.0**		**$1,559,624.8**		**–$503,581.9**	

Note: Figures may not add up to totals due to rounding. Country grouping data reflect the groups as they were at the time of reporting. (1) Rank shown is for column to the left. Ranking includes territories as well as nations. (2) Rank by size of U.S. trade deficit. Ranking includes territories as well as nations. (3) Not including Hong Kong, Macao, and Taiwan. ***Definitions of major areas/groups used in table, as provided by source:*** **North America**—Canada, Mexico. **Europe**—Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Faroe Isls., Finland, France, Georgia, Germany, Gibraltar, Greece, Hungary, Iceland, Ireland, Italy, Liechtenstein, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Macedonia, Malta and Gozo, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Slovakia, Slovenia, Spain, Svalbard, Jan Mayen Isl., Sweden, Switzerland, Tajikistan, Turkey, Turkmenistan, Ukraine, United Kingdom, Uzbekistan, Vatican City. **Euro Area**—Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Slovenia, Spain. **EU (European Union)**—Euro Area plus Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Sweden, United Kingdom. **Africa**—Algeria, Angola, Benin, Botswana, British Indian Ocean Territories, Burkina, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo (Brazzaville), Congo (Kinshasa), Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, French Southern and Antarctic Lands, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Côte d'Ivoire, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mayotte, Morocco, Mozambique, Namibia, Niger, Nigeria, Réunion, Rwanda, St. Helena, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Tunisia, Uganda, Western Sahara, Zambia, Zimbabwe. **OECD (Org. for Economic Cooperation and Development)**—Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, South Korea, Spain, Sweden, Switzerland, Turkey, United Kingdom. **Pacific Rim Countries**—Australia, Brunei, China, Hong Kong, Indonesia, Japan, Korea, Macao, Malaysia, New Zealand, Papua New Guinea, Philippines, Singapore, Taiwan. **Asia Near East**—Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen. **NICS (Newly Industrialized Countries)**—Hong Kong, South Korea, Singapore, Taiwan. **Asia/South**—Afghanistan, Bangladesh, India, Nepal, Pakistan, Sri Lanka. **ASEAN (Assoc. of South East Asia Nations)**—Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam. **APEC (Asia-Pacific Economic Cooperation)**—Australia, Brunei, Canada, Chile, China, Hong Kong, Indonesia, Japan, South Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, Philippines, Russia, Singapore, Taiwan, Thailand, Vietnam. **South/Central America**—Anguilla, Antigua and Barbuda, Argentina, Aruba, Bahamas, Barbados, Belize, Bermuda, Bolivia, Brazil, British Virgin Isls., Cayman Isls., Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Falkland Isls., French Guiana, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Montserrat, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Isls., Uruguay, Venezuela. **Twenty Latin American Republics**—Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela. **Central American Common Market**—Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua. **LAFTA (Latin American Free Trade Assoc.)**—Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, Venezuela. **NATO (North Atlantic Treaty Org.) Allies**—Belgium, Bulgaria, Canada, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Turkey, United Kingdom. **OPEC (Org. of Petroleum Exporting Countries)**—Algeria, Angola, Ecuador (reinstated Dec. 2007), Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, Venezuela.

U.S. Exports and Imports by Principal Commodity Groupings, 2009

Source: U.S. Census Bureau and U.S. Bureau of Economic Analysis, U.S. Dept. of Commerce (in millions of dollars)

Item	Exports	Imports
TOTAL CENSUS BASIS[1]	**$1,056,043**	**$1,559,625**
Manufactured goods[2]	**743,321**	**1,185,889**
Agricultural commodities[2]	**98,423**	**71,849**
Mineral fuels[2]	**54,536**	**271,739**
Selected commodities[2]		
ADP equipment; office machinery	21,282	91,098
Airplanes, engines, and parts	78,273	22,073
Alcoholic bev., distilled	1,007	5,011
Aluminum	4,291	8,679
Animal feeds	7,763	1,162
Artwork/antiques	4,605	5,031
Basketware, etc.	8,068	11,530
Cereal flour	2,957	4,161
Chemicals-cosmetics	11,120	8,396
Chemicals-dyeing	5,546	2,424
Chemicals-fertilizers	3,475	4,156
Chemicals-inorganic	10,203	10,790
Chemicals-medicinal	41,809	60,002
Chemicals-organic	27,779	42,183
Chemicals-plastics	33,078	13,694
Chemicals[3]	20,428	9,582
Cigarettes	413	183
Clothing	2,919	69,326
Coal	6,162	1,766
Coffee	7	3,375
Copper	2,375	5,596
Cork, wood, and lumber	3,495	3,574
Corn	9,146	283
Cotton, raw and linters	3,365	1
Crude fertilizers	1,765	1,682
Crude oil	1,618	194,603
Electrical machinery	63,964	91,683
Fish and preparations	3,763	12,982
Footwear	620	17,523
Furniture and bedding	4,023	24,588
Gem diamonds	2,156	12,736
General industrial machines	45,034	50,181
Glass	2,828	2,117
Glassware	864	1,966
Gold, nonmonetary	13,898	8,810
Hides and skins	1,298	31
Iron and steel mill products	12,022	18,230
Jewelry	4,322	8,676
Lighting, plumbing	2,141	6,120
Liquefied propane/butane	$1,409	$2,202
Live animals	785	2,004
Meat and preparations	11,618	4,598
Metal manufactures[3]	14,669	21,414
Metal ores; scrap	20,058	5,460
Metalworking machinery	4,294	4,961
Mineral fuels, other	5,131	2,444
Natural gas	3,271	16,056
Nickel	931	1,665
Oils/fats, vegetable	1,997	3,424
Optical goods	2,773	4,513
Paper and paperboard	12,891	14,463
Petroleum preparations	36,351	52,584
Photographic equipment	3,211	1,776
Plastic articles[3]	8,224	13,743
Platinum	844	2,982
Pottery	100	1,188
Power generating machines	28,056	36,181
Printed materials	5,601	4,231
Pulp and waste paper	6,694	2,441
Records/magnetic media	4,413	5,183
Rice	2,167	588
Rubber articles[3]	1,625	2,481
Rubber tires and tubes	3,641	8,136
Scientific instruments	38,105	31,975
Ships, boats	1,917	1,267
Silver and bullion	888	2,139
Soybeans	16,443	210
Spacecraft[3]	150	NA
Specialized industrial machines	36,956	24,235
Sugar	42	776
Televisions, VCRs, etc.	19,992	119,392
Textile yearn, fabric	9,288	18,232
Tobacco, unmanufactured	1,159	888
Toys, games, and sporting goods	4,170	27,918
Travel goods	449	6,444
Vegetables and fruits	14,014	18,571
Vehicles	65,288	127,863
Watches, clocks, and parts	356	3,065
Wheat	5,380	698
Wood manufactures	1,725	6,230
Re-exports	**$120,345**	**NA**
Agricultural commodities	2,822	NA
Manufactured goods	116,359	NA
Mineral fuels	312	NA

NA = Not available. **Note:** Commodity group totals include products not listed here. Figures may not equal totals due to rounding. (1) Both domestic and foreign exports (re-exports). (2) Domestic exports. (3) Not specified elsewhere.

Trends in U.S. Foreign Trade, 1790-2009

Source: U.S. Census Bureau and U.S. Bureau of Economic Analysis, U.S. Dept. of Commerce
(in millions of dollars)

In 1790, U.S. exports and imports combined came to $43 mil, and there was a $3 mil trade deficit. The global recession caused U.S. exports and imports to fall from $3.39 tril in 2008 to $2.62 tril in 2009. The U.S. trade deficit—which had been climbing steadily since the last recorded surplus in 1975—also declined from $816 bil to $504 bil.

Year	Exports	Imports	Trade balance	Year	Exports	Imports	Trade balance	Year	Exports	Imports	Trade balance
1790	$20	$23	–$3	1890	$858	$789	$69	1990	$394,030	$495,042	–$101,012
1795	48	70	–22	1895	808	732	76	1991	421,730	485,453	–63,723
1800	71	91	–20	1900	1,394	850	545	1992	448,164	532,665	–84,501
1805	96	121	–25	1905	1,519	1,118	401	1993	465,091	580,659	–115,568
1810	67	85	–19	1910	1,745	1,557	188	1994	512,626	683,256	–170,630
1815	53	113	–60	1915	2,769	1,674	1,094	1995	584,742	743,445	–158,703
1820	70	74	–5	1920	8,228	5,278	2,950	1996	625,075	795,289	–170,214
1825	91	90	1	1925	4,910	4,227	683	1997	689,182	870,671	–181,489
1830	72	63	9	1930	3,843	3,061	782	1998	682,138	911,896	–229,758
1835	115	137	–22	1935	2,283	2,047	235	1999	695,797	1,024,618	–328,821
1840	124	98	25	1940	4,021	2,625	1,396	2000	781,918	1,218,022	–436,104
1845	106	113	–7	1945	9,806	4,159	5,646	2001	729,100	1,140,999	–411,899
1850	144	174	–29	1950	9,997	8,954	1,043	2002	693,103	1,161,366	–468,263
1855	219	258	–39	1955	14,298	11,566	2,732	2003	724,771	1,257,121	–532,350
1860	334	354	–20	1960	19,659	15,073	4,586	2004	818,775	1,469,704	–650,930
1865	166	239	–73	1965	26,742	21,520	5,222	2005	905,978	1,673,455	–767,477
1870	393	436	–43	1970	42,681	40,356	2,325	2006	1,036,635	1,853,939	–817,304
1875	513	533	–20	1975	107,652	98,503	9,149	2007	1,162,479	1,956,962	–794,483
1880	836	668	168	1980	220,626	244,871	–24,245	2008	1,287,442	2,103,641	–816,199
1885	742	578	165	1985	213,133	345,276	–132,143	2009	1,056,043	1,559,625	–503,582

World Trade Organization (WTO)

The World Trade Organization is an international body that seeks to promote free trade by eliminating barriers to trade. Founded in 1995, the WTO had grown to 153 member countries as of Aug. 2010, with 31 others, including Russia and Vatican City, granted observer status. International intergovernmental organizations, such as the International Monetary Fund and the World Bank, may also be granted observer status. With the exception of Vatican City, observers must start accession negotiations within five years of becoming observers.

Foreign Exchange Rates, 1970-2009

Source: Federal Reserve Board

(national currency units per U.S. dollar except as noted; annual average rates of exchange)

Year	Australia[1] (dollar)	Austria[1] (schilling; euro)	Belgium[1] (franc; euro)	Canada (dollar)	China (yuan)	Denmark (krone)	France[1] (franc; euro)	Germany[1,2] (deutsche mark; euro)	Greece[1] (drachma; euro)
1970	1.1136	25.8800	49.6800	1.0103	NA	7.4890	5.5200	3.6480	30.0000
1975	1.3077	17.4430	36.7990	1.0175	NA	5.7480	4.2876	2.4613	32.2900
1980	1.1400	12.9450	29.2370	1.1693	NA	5.6340	4.2250	1.8175	42.6200
1985	0.7003	20.6900	59.3780	1.3655	NA	10.5960	8.9852	2.9440	138.1200
1990	0.7813	11.3700	33.4180	1.1668	NA	6.1890	5.4453	1.6157	158.5100
1995	0.7415	10.0810	29.4800	1.3724	8.3700	5.6020	4.9915	1.4331	231.6600
2000	0.5815	0.9232	0.9232	1.4855	8.2784	8.0950	0.9232	0.9232	365.9200
2005	0.7627	1.2449	1.2449	1.2115	8.1936	5.9953	1.2449	1.2449	1.2449
2006	0.7535	1.2563	1.2563	1.1340	7.9723	5.9422	1.2563	1.2563	1.2563
2007	0.8391	1.3711	1.3711	1.0734	7.6058	5.4413	1.3711	1.3711	1.3711
2008	0.8537	1.4726	1.4726	1.0660	6.9477	5.0885	1.4726	1.4726	1.4726
2009	0.7927	1.3935	1.3935	1.1412	6.8307	5.3574	1.3935	1.3935	1.3935

Year	Hong Kong (dollar)	India (rupee)	Ireland[1] (pound; euro)	Italy[1] (lira; euro)	Japan (yen)	Malaysia (ringgit)	Mexico (new peso)	Netherlands[1] (guilder; euro)	Norway (krone)
1970	NA	7.576	2.3959	623.0000	357.60	3.0900	NA	3.5970	7.1400
1975	NA	8.409	2.2216	653.0000	296.78	2.4030	NA	2.5293	5.2282
1980	NA	7.887	2.0577	856.0000	226.63	2.1767	NA	1.9875	4.9381
1985	NA	12.369	1.0656	1,909.0000	238.54	2.4830	NA	3.3214	8.5972
1990	NA	17.504	1.6585	1,198.0000	144.79	2.7049	2.812	1.8209	6.2597
1995	7.7357	32.427	1.6038	1,628.9000	94.06	2.5044	6.419	1.6057	6.3352
2000	7.7925	45.000	0.9232	0.9232	107.80	3.8000	9.459	0.9232	8.8131
2005	7.7775	44.000	1.2449	1.2449	110.11	3.7869	10.894	1.2449	6.4412
2006	7.7681	45.190	1.2563	1.2563	116.31	3.6661	10.906	1.2563	6.4095
2007	7.8016	41.180	1.3711	1.3711	117.76	3.4354	10.928	1.3711	5.8557
2008	7.7862	43.390	1.4726	1.4726	103.39	3.3292	11.143	1.4726	5.6365
2009	7.7514	48.330	1.3935	1.3935	93.68	3.5231	13.498	1.3935	6.2908

Year	Portugal[1] (escudo; euro)	Singapore (dollar)	South Korea (won)	Spain[1] (peseta; euro)	Sweden (krona)	Switzerland (franc)	Taiwan (dollar)	Thailand (baht)	UK[1] (pound)
1970	28.7500	3.0800	310.57	69.7200	5.1700	4.3160	NA	21.000	2.3959
1975	25.5100	2.3713	484.00	57.4300	4.1530	2.5839	NA	20.379	2.2216
1980	50.0800	2.1412	607.43	71.7600	4.2309	1.6772	NA	20.476	2.3243
1985	170.3900	2.2002	870.02	170.0400	8.6039	2.4571	NA	27.159	1.2963
1990	142.5500	1.8125	707.76	101.9300	5.9188	1.3892	NA	25.585	1.7847
1995	151.1100	1.4174	771.27	124.6900	7.1333	1.1825	26.495	24.915	1.5785
2000	0.9232	1.7250	1,130.90	0.9232	9.1735	1.6904	31.260	40.210	1.5156
2005	1.2449	1.6639	1,023.75	1.2449	7.4710	1.2459	32.131	40.252	1.8204
2006	1.2563	1.5882	54.32	1.2563	7.3718	1.2532	32.506	37.876	1.8434
2007	1.3711	1.5065	928.97	1.3711	6.7550	1.1999	32.852	32.203	2.0020
2008	1.4726	1.4140	1,098.71	1.4726	6.5846	1.0816	31.521	32.962	1.8545
2009	1.3935	1.4543	1,274.63	1.3935	7.6539	1.0860	33.020	34.310	1.5661

NA = Not available. **Note:** The euro, the European Union's single currency, replaced the national currencies in the EU nations shown above. Exchange rates have been in euros since 1999 for the following countries: Austria, Belgium, France, Germany, Ireland, Italy, Netherlands, Portugal, Spain. For Greece, exchange rates from 2001 on are in euros. (1) U.S. dollars per unit of national currency. (2) West Germany before 1991.

North American Free Trade Agreement (NAFTA)

NAFTA, a free trade pact between the U.S., Canada, and Mexico, took effect Jan. 1, 1994. Major provisions, which were fully implemented Jan. 1, 2008, are as follows:

Agriculture: With limited exceptions, tariffs on all agricultural products to be eliminated over 15 years. Domestic price-support systems may continue provided they do not distort trade.

Automobiles: At least 62.5% of an automobile's value must have been produced in North America for it to qualify for duty-free status. Tariffs to be phased out over 10 years.

Disputes: Special judges have jurisdiction to resolve disagreements within strict timetables.

Energy: Mexico bars foreign ownership of its oil fields but, as of 2004, U.S. and Canadian companies could bid on contracts offered by Mexico's state-owned oil and electricity monopolies.

Environment: The trade agreement cannot be used to overrule national and state environmental, health, or safety laws.

Finance: Limits on ownership of banks, insurance companies, and brokerages eliminated by Jan. 1, 2000.

Immigration: Restrictions on the movement of business executives and professionals eased.

Jobs: Barriers to limit Mexican migration to U.S. remain unaffected by NAFTA.

Patent and copyright protection: Mexico strengthened its laws providing protection to intellectual property and agreed to honor pharmaceutical patents for 20 years.

Tariffs: Tariffs on 10,000 customs goods are to be eliminated over 15 years. One-half of U.S. exports to Mexico were considered duty-free by 1999.

Textiles: A "rule of origin" provision requires most garments to be made from yarn and fabric that have been produced in North America. Most tariffs phased out by 1999.

Trucking: Trucks to have free access throughout the three countries by 1999, but the U.S. restricted Mexican trucks to a 20-mi comm. zone at the border. In 2001, an arbitration panel ruled the restrictions were in violation of NAFTA. In 2008, the U.S. House terminated a pilot program, begun in 2007, granting limited access to some Mexican trucks.

U.S. Trade with Mexico and Canada, 1996-2009

Source: U.S. Census Bureau and U.S. Bureau of Economic Analysis, U.S. Dept. of Commerce

(in millions of dollars)

	WITH MEXICO			WITH CANADA		
Year	Exports	Imports	U.S. trade balance[1]	Exports	Imports	U.S. trade balance[1]
1996	$56,792	$74,297	–$17,506	$134,210	$155,893	–$21,682
1998	78,773	94,629	–15,857	156,603	173,256	–16,653
1999	86,909	109,721	–22,812	166,600	198,711	–32,111
2000	111,349	135,926	–24,577	178,941	230,838	–51,897
2001	101,297	131,338	–30,041	163,424	216,268	–52,844
2002	97,470	134,616	–37,146	160,923	209,088	–48,165
2003	97,412	138,060	–40,648	169,924	221,595	–51,671
2004	110,835	155,902	–45,067	189,880	256,360	–66,480
2005	120,365	170,109	–49,744	211,899	290,384	–78,486
2006	133,979	198,253	–64,274	230,656	302,438	–71,782
2007	136,092	210,714	–74,622	248,888	317,057	–68,169
2008	151,220	215,942	–64,722	261,150	339,491	–78,342
2009	128,892	176,654	–47,762	204,658	226,248	–21,591

(1) Figures may not equal totals due to rounding.

Central American Free Trade Agreement (CAFTA)

CAFTA (also known as CAFTA-DR) is a free trade agreement between the U.S. and Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua. The U.S. and El Salvador approved the agreement Mar. 1, 2006; Nicaragua joined a month later, and Guatemala entered into the accord July 1, 2006. The Dominican Republic approved CAFTA Mar. 1, 2007, and Costa Rica completed the treaty by signing on Jan. 1, 2009. Some highlights of the agreement:

Agriculture: Tariffs on 50% of U.S. farm goods eliminated; other goods deemed "sensitive"—including corn, milk, and potatoes—to have tariffs reduced to zero over 20 years. Sugar imports to the U.S. allowed to rise to 1.2% of annual U.S. production, up to 1.7% over 15 years.

Automobiles: Tariffs on autos and auto parts to be phased out over 5 years.

Environment and labor: Party nations agree to enforce local labor and environmental protections, although no mechanisms to monitor enforcement currently exist.

Intellectual property: Party nations agree to uphold international standards of trademark, copyright, and patent protection to which the U.S. is a signatory. This includes seizing pirated and counterfeit goods and prosecuting those who traffic in them.

Manufacturing: Tariffs eliminated on 80% of U.S. goods.

Market barriers: Barriers on services such as telecommunications, insurance, and financial services eliminated or reduced.

Pharmaceuticals: U.S. pharmaceuticals given 5-year patent protection from their date of introduction to CAFTA markets, regardless of date introduced in U.S.

Textiles and clothing: Elimination of duties on nearly all textiles and clothing instituted, retroactive to Jan. 1, 2004.

Busiest U.S. Ports, 2008

Source: U.S. Army Corps of Engineers, Dept. of the Army, U.S. Dept. of Defense

(figures in tons; ranked by total tonnage handled)

Rank	Port	Total	Domestic	Foreign	Imports	Exports
1.	South Louisiana, LA	223,987,363	112,550,059	111,437,304	47,269,743	64,167,561
2.	Houston, TX	212,207,921	65,808,295	146,399,626	92,018,956	54,380,670
3.	New York, NY-NJ	153,480,226	62,378,857	91,101,369	71,460,174	19,641,195
4.	Long Beach, CA	80,205,281	12,934,262	67,271,019	45,186,084	22,084,935
5.	Corpus Christi, TX	76,786,173	21,430,962	55,355,211	43,373,738	11,981,473
6.	New Orleans, LA	73,011,136	36,529,804	36,481,332	19,582,528	16,898,804
7.	Beaumont, TX	69,483,539	22,687,915	46,795,624	41,167,853	5,627,771
8.	Huntington, WV-KY-OH	69,334,669	69,334,669	0	0	0
9.	Mobile, AL	67,635,501	29,524,081	38,111,420	23,806,279	14,305,141
10.	Plaquemines, LA	63,744,333	35,812,906	27,931,427	8,149,817	19,781,610
11.	Los Angeles, CA	59,788,339	6,875,050	52,913,289	32,732,756	20,180,533
12.	Lake Charles, LA	53,778,140	22,011,762	31,766,378	26,008,901	5,757,477
13.	Texas City, TX	52,606,030	13,895,595	38,710,435	33,926,630	4,783,805
14.	Baton Rouge, LA	51,809,486	35,908,661	15,900,825	10,885,160	5,015,665
15.	Duluth-Superior, MN-WI	45,341,808	30,332,525	15,009,283	485,952	14,523,331
16.	Norfolk Harbor, VA	44,593,115	7,706,741	36,886,374	9,576,840	27,309,534
17.	Baltimore, MD	43,412,662	12,454,063	30,958,599	16,613,101	14,345,498
18.	Pittsburgh, PA	41,837,440	41,837,440	0	0	0
19.	Tampa, FL	39,676,105	26,296,389	13,379,716	7,677,324	5,702,392
20.	Paulsboro, NJ	36,351,709	12,481,932	23,869,777	22,304,498	1,565,279
21.	Valdez, AK	35,966,984	35,966,984	0	0	0
22.	Savannah, GA	35,393,680	1,838,727	33,554,953	19,584,370	13,970,583
23.	Pascagoula, MS	33,589,817	9,452,514	24,137,303	19,062,768	5,074,535
24.	Philadelphia, PA	32,282,853	11,959,966	20,322,887	19,656,961	665,926
25.	Port Arthur, TX	31,752,742	10,004,521	21,748,221	14,834,711	6,913,510
26.	Freeport, TX	29,842,295	4,135,091	25,707,204	22,971,011	2,736,193
27.	St. Louis, MO-IL	29,511,843	29,511,843	0	0	0
38.	Tacoma, WA	27,165,629	6,886,159	20,279,470	6,103,651	14,175,819
29.	Portland, OR	26,668,489	8,745,228	17,923,261	4,115,179	13,808,082
30.	Richmond, CA	26,357,184	10,414,366	15,942,818	13,044,242	2,898,576
31.	Seattle, WA	26,168,818	5,936,425	20,232,393	7,901,554	12,330,839
32.	Marcus Hook, PA	24,670,971	10,389,513	14,281,458	13,829,715	451,743
33.	Chicago, IL	22,659,554	19,084,362	3,575,192	2,723,098	852,094
34.	Newport News, VA	22,602,651	3,964,349	18,638,302	571,465	18,066,837
35.	Portland, ME	22,124,178	1,307,333	20,816,845	20,782,937	33,908
36.	Port Everglades, FL	21,652,027	9,815,730	11,836,297	8,516,033	3,320,264
37.	Jacksonville, FL	21,049,729	7,385,038	13,664,691	12,095,380	1,569,311
38.	Boston, MA	21,035,413	7,872,423	13,162,990	11,741,989	1,421,001
39.	Charleston, SC	20,936,313	2,604,988	18,331,325	11,783,716	6,547,609
40.	Oakland, CA	17,809,805	2,681,725	15,128,080	6,497,039	8,631,041
41.	Memphis, TN	16,361,042	16,361,042	0	0	0
42.	Indiana Harbor, IN	15,380,630	14,989,793	390,837	318,761	72,076
43.	Honolulu, HI	14,006,294	12,924,056	1,082,238	721,544	360,694
44.	Cincinnati, OH	13,445,352	13,445,352	0	0	0
45.	Two Harbors, MN	13,432,959	13,432,959	0	0	0
46.	Kalama, WA	12,934,895	478,554	12,456,341	634,158	11,822,183
47.	Detroit, MI	12,836,319	9,500,899	3,335,420	3,006,726	328,694
48.	Anacortes, WA	11,468,133	8,502,818	2,965,315	1,381,953	1,583,362
49.	San Juan, PR	10,973,237	6,053,478	4,919,759	4,168,920	750,839
50.	Toledo, OH	10,954,686	3,934,102	7,020,584	4,055,009	2,965,575

U.S. Railroad Freight and Miles, 1890-2009

Source: Association of American Railroads

(in billion ton-miles)

Year	Class I freight[1]	All freight	Miles[2]	Year	Class I freight[1]	All freight	Miles[2]	Year	Class I freight[1]	All freight	Miles[2]
1890	NA	76	163,597	1950	589	592	223,779	2005	1,696	1,733	140,810
1900	NA	142	193,346	1960	572	575	217,552	2006	1,772	1,856	140,490
1910	NA	255	240,293	1970	765	771	205,782	2007	1,771	1,820	140,695
1920	410	414	252,845	1980	919	932	178,056	2008	1,777	NA	139,326
1930	383	386	249,052	1990	1,034	1,064	145,979	2009	1,532	NA	NA
1940	373	375	233,670	2000	1,466	1,546	144,473				

NA = Not available. **Note:** A ton-mile equals one ton of freight transported one statute mile. (1) Largest class of freight railroad companies, determined by annual operating revenue. (2) Aggregate length of operating roadway in U.S., excluding yard tracks, sidings, and parallel tracks.

Merchant Fleets of the World, 2006

Source: Maritime Administration, U.S. Dept. of Transportation
(tonnage in thousands; self-propelled oceangoing vessels of 10,000 gross deadweight tons or more, ranked by total tons, all vessels)

	All vessels		Tanker		Dry bulk carrier		Container		Other[1]	
By flag of registry	**No.**	**Tons**	**No.**	**Tons**	**No.**	**Tons**	**No.**	**Tons**	**No.**	**Tons**
Panama	3,668	221,216	616	59,016	1,851	122,519	588	25,324	613	14,357
Liberia	1,620	100,329	585	52,270	327	19,915	537	22,975	171	5,169
Greece	567	54,966	247	32,294	262	19,501	47	2,755	11	416
Hong Kong	777	51,850	88	11,839	512	33,244	112	5,168	65	1,599
Marshall Islands	738	51,315	341	32,511	185	11,098	148	4,890	64	2,816
Bahamas	772	49,755	235	26,085	310	16,028	70	2,561	157	5,081
Singapore	760	47,411	304	26,949	182	11,931	194	5,456	80	3,076
Malta	759	38,100	187	13,782	441	21,427	49	1,316	82	1,574
Cyprus	675	30,787	98	6,520	349	18,428	148	4,431	80	1,408
China[2]	812	28,862	133	7,143	375	14,926	89	3,374	215	3,418
Norway (NIS)[3]	389	20,189	158	8,869	86	5,409	4	165	141	5,747
Isle of Man	193	14,232	108	9,400	41	3,413	16	566	28	852
India	197	12,613	101	8,443	74	3,394	4	101	18	675
Germany	271	12,368	19	791	4	456	239	10,986	9	135
United States	286	12,269	94	5,494	60	2,314	70	2,922	62	1,538
South Korea	193	11,398	17	1,231	126	8,769	37	1,150	13	247
Italy	271	11,119	124	5,180	48	3,432	27	1,017	72	1,489
Japan	125	9,752	18	3,144	48	3,920	11	519	48	2,169
United Kingdom	226	9,526	43	1,575	24	1,785	112	5,105	47	1,061
Denmark (DIS)[4]	136	9,246	40	2,856	4	322	77	5,724	15	344
All others	3,314	132,577	726	49,156	1,155	48,555	583	15,955	850	18,911
By country[5]										
Greece	2,506	171,099	795	76,865	1,347	82,124	174	7,499	190	4,611
Japan	2,259	150,308	428	44,368	1,150	85,121	225	10,118	456	10,701
China[2]	1,798	87,734	220	18,424	1,016	53,763	214	8,749	348	6,798
Germany	1,622	64,740	148	8,343	187	10,986	1,152	41,984	135	3,427
United States	684	39,632	301	23,931	203	10,157	52	1,736	128	3,808
Singapore	587	38,419	235	22,967	173	9,596	110	3,145	69	2,711
Norway	693	35,941	287	19,391	176	8,174	10	361	220	8,015
United Kingdom	500	35,583	167	18,184	158	11,246	68	2,636	107	3,517
South Korea	428	28,961	63	8,188	222	15,879	75	2,641	68	2,253
Taiwan	482	28,186	42	5,388	216	14,893	201	7,332	23	573
Denmark	385	20,655	102	6,651	41	1,822	191	11,274	51	908
Bermuda	97	19,277	79	17,620	5	153	2	47	11	1,458
India	239	14,740	103	8,795	105	5,007	3	87	28	851
Italy	334	14,551	153	7,035	79	5,023	19	728	83	1,766
Cyprus	259	11,972	86	6,729	90	3,404	50	1,247	33	591
Monaco	171	11,589	42	3,822	71	4,998	43	2,271	15	498
Saudi Arabia	72	11,136	64	10,888	—	—	—	—	8	248
Switzerland	242	10,198	13	352	26	1,195	173	8,080	30	571
Russia	222	10,061	102	7,506	73	1,633	21	419	26	503
Iran	126	9,792	35	6,272	52	2,534	11	409	28	578
All others	3,043	115,305	817	42,830	1,074	43,078	368	11,700	784	17,698
Total	**16,749**	**929,880**	**4,282**	**364,549**	**6,464**	**370,785**	**3,162**	**122,462**	**2,841**	**72,083**

— = Not available. (1) Includes roll-on/roll-off, gas carriers, general cargo carriers, partial container ships, refrigerated cargo ships, barge carriers, and specialized cargo ships. (2) Excludes Hong Kong. (3) Norwegian Intl. Shipping Registry. (4) Danish Intl. Shipping Registry. (5) Based on parent company nationality.

U.S. International Transactions, 1970-2009

Source: U.S. Bureau of Economic Analysis, U.S. Dept. of Commerce
(in millions of dollars; as of Sept. 2010)

CURRENT ACCT.	**1970**	**1980**	**1990**	**1995**	**2000**	**2005**	**2008**	**2009**
Exports of goods and services and income receipts	**$68,387**	**$344,440**	**$706,975**	**$1,004,631**	**$1,421,515**	**$1,816,449**	**$2,635,540**	**$2,159,000**
Goods, BOP basis[1]	42,469	224,250	387,401	575,204	784,181	909,016	1,304,896	1,068,499
Services	14,171	47,584	147,832	219,183	286,416	372,171	534,116	502,298
Income receipts on U.S.-owned assets abroad	11,748	72,606	170,570	208,065	348,083	532,373	793,484	585,256
Imports of goods and services and income payments	**–59,901**	**–333,774**	**–759,290**	**–1,080,124**	**–1,779,241**	**–2,458,268**	**–3,182,368**	**–2,412,489**
Goods, BOP basis[1]	–39,866	–249,750	–498,438	–749,374	–1,230,413	–1,692,817	–2,139,548	–1,575,443
Services	–14,520	–41,491	–117,659	–141,397	–218,964	–302,546	–398,266	–370,262
Income payments on foreign-owned assets in U.S.	–5,515	–42,532	–139,728	–183,090	–322,345	–453,615	–634,190	–456,027
Unilateral current transfers, net	**–6,156**	**–8,349**	**–26,654**	**–38,074**	**–58,645**	**–105,772**	**–122,026**	**–124,943**
CAPITAL ACCT.: Transactions, net	**NA**	**NA**	**–7,220**	**–222**	**–1**	**13,116**	**6,010**	**–140**
FINANCIAL ACCT.								
U.S.-owned assets abroad (decrease/ financial outflow [–])[2]	**–9,337**	**–86,967**	**–81,234**	**–352,264**	**–560,523**	**–546,631**	**156,077**	**–140,465**
U.S. official reserve assets	2,481	–8,155	–2,158	–9,742	–290	14,096	–4,848	–52,256
U.S. govt. assets, other than official reserve assets	–1,589	–5,162	2,317	–984	–941	5,539	–529,615	541,342
U.S. private assets	–10,229	–73,651	–81,393	–341,538	–559,292	–566,266	690,540	–629,552
Foreign-owned assets in U.S. (increase/financial inflow [+])[2]	**7,226**	**62,037**	**139,357**	**435,102**	**1,038,224**	**1,247,347**	**454,722**	**305,736**
Stat. discrepancy (sum of above with sign reversed)	**–219**	**22,613**	**28,066**	**30,951**	**–61,329**	**33,758**	**84,991**	**162,497**
MEMO: BALANCE ON CURRENT ACCT.	**2,331**	**2,317**	**–78,968**	**–113,567**	**–416,371**	**–747,590**	**–668,854**	**–378,432**

NA = Not available or applicable. (1) BOP = Balance of payments. Excl. exports of goods under U.S. military agency sales contracts identified in Census export documents, excl. imports of goods under direct defense expenditures identified in Census import documents, and reflects various other adjustments. (2) Excl. financial derivatives.

Foreign Direct Investment[1] in the U.S. by Selected Countries and Territories, 1995-2009

Source: U.S. Bureau of Economic Analysis, U.S. Dept. of Commerce
(in millions of dollars)

	2009	2000	1995
ALL COUNTRIES[2]	**$2,319,585**	**$1,256,867**	**$535,553**
Canada	225,836	114,309	45,618
Europe	**1,685,279**	**887,014**	**332,374**
Austria	2,868	3,007	1,553
Belgium	38,541	14,787	4,397
Denmark	5,246	4,025	3,444
Finland	7,628	8,875	2,710
France	189,285	125,740	36,167
Germany	218,153	122,412	46,017
Ireland	32,610	25,523	4,749
Italy	9,693	6,576	3,062
Liechtenstein	NA	319	176
Luxembourg	127,768	58,930	5,756
Netherlands	237,959	138,894	65,116
Norway	7,260	2,665	2,172
Spain	43,901	5,068	3,237
Sweden	38,929	21,991	9,584
Switzerland	189,371	64,719	27,458
United Kingdom	453,875	277,613	116,272
Latin America and other Western Hemisphere	**27,864**	**53,691**	**27,873**
South and Central America	**17,733**	**13,384**	**8,067**
Brazil	–647	882	750
Mexico	11,361	7,462	1,850
Panama	1,045	3,819	4,939
Venezuela	4,850	792	–152
Other Western Hemisphere	**$10,131**	**$40,307**	**$19,806**
Bahamas	466	1,254	1,286
Bermuda	–13,181	18,336	2,626
Netherlands Antilles	7,354	3,807	8,044
UK isls., Caribbean	17,529	15,191	7,207
Africa	**1,689**	**2,700**	**1,113**
South Africa	621	704	–3
Middle East	**17,614**	**6,506**	**5,801**
Israel	7,306	3,012	1,883
Kuwait	345	908	2,525
Lebanon	NA	1	–9
Saudi Arabia	NA	NA	1,211
United Arab Emirates	2,628	64	98
Asia and Pacific	**361,303**	**192,647**	**122,774**
Australia	45,663	18,775	10,356
China	791	NA	NA
Hong Kong	3,836	1,493	1,511
India	4,366	NA	NA
Japan	264,208	159,690	104,997
Malaysia	430	310	400
New Zealand	1,641	395	149
Philippines	NA	47	75
Singapore	22,893	5,087	1,637
South Korea	12,020	3,110	692
Taiwan	4,211	3,174	2,142
European Union[3]	**1,475,071**	**814,033**	**302,193**
OPEC[4]	**15,457**	**4,330**	**3,854**

NA = Not available. **Note:** On a historical cost basis for comparison purposes. (1) In all industries. Book value of foreign direct investors' equity in, and net outstanding loans to, their U.S. affiliates. A U.S. affiliate is a U.S. business enterprise in which a single foreign direct investor owns at least 10% of the voting securities, or the equivalent. (2) Totals and subtotals include countries or territories not shown in table. (3) EU members in 2009: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and UK. (4) Org. of Petroleum Exporting Countries in 2009: Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

U.S. Direct Investment Abroad[1] in Selected Countries and Territories, 1995-2009

Source: U.S. Bureau of Economic Analysis, U.S. Dept. of Commerce
(in millions of dollars)

	2009	2000	1995
ALL COUNTRIES[2]	**$3,508,142**	**$1,316,247**	**$699,015**
Canada	259,792	132,472	83,498
Europe	**1,976,222**	**687,320**	**344,596**
Austria	18,203	2,872	2,829
Belgium	69,773	17,973	18,706
Czech Republic	5,871	1,228	NA
Denmark	9,318	5,270	2,161
Finland	2,094	1,342	965
France	85,801	42,628	33,358
Germany	116,832	55,508	44,242
Greece	2,028	795	533
Hungary	9,287	1,920	NA
Ireland	165,924	35,903	7,996
Italy	31,470	23,484	17,096
Luxembourg	174,092	27,849	5,929
Netherlands	471,567	115,429	42,113
Norway	26,984	4,379	4,741
Poland	13,957	3,884	NA
Portugal	2,461	2,664	1,413
Russia	21,328	1,147	NA
Spain	50,644	21,236	10,856
Sweden	27,418	25,959	6,816
Switzerland	148,239	55,377	31,125
Turkey	6,268	1,826	973
United Kingdom	471,384	230,762	106,332
Latin America and other Western Hemisphere	**678,956**	**266,576**	**131,377**
South America	**125,949**	**84,220**	**49,170**
Argentina	14,108	17,488	7,660
Brazil	56,692	36,717	25,002
Chile	22,608	10,052	6,216
Colombia	6,728	3,693	3,506
Ecuador	1,269	832	889
Peru	6,232	3,130	1,335
Venezuela	14,506	10,531	3,634
Central America	**113,793**	**73,841**	**33,493**
Costa Rica	2,419	1,716	921
Guatemala	NA	NA	233
Honduras	$844	$399	$68
Mexico	97,897	39,352	16,873
Panama	7,845	30,758	15,123
Other Western Hemisphere	**439,214**	**108,515**	**48,714**
Bahamas	NA	NA	1,768
Barbados	3,650	2,141	698
Bermuda	245,671	60,114	28,374
Dominican Republic	1,006	1,143	330
Jamaica	NA	NA	1,287
Netherlands Antilles	NA	NA	6,835
Trinidad and Tobago	NA	NA	673
UK isls., Caribbean	141,527	33,451	8,358
Africa	**44,805**	**11,891**	**6,017**
Egypt	9,826	1,998	1,093
Nigeria	5,369	470	629
South Africa	5,922	3,562	1,422
Middle East	**37,012**	**10,863**	**7,198**
Israel	10,013	3,735	1,831
Saudi Arabia	8,122	3,661	2,741
United Arab Emirates	3,993	683	500
Asia and Pacific	**511,355**	**207,125**	**122,711**
Australia	106,370	34,838	24,328
China	49,403	11,140	2,765
Hong Kong	50,459	27,447	11,768
India	18,610	2,379	1,105
Indonesia	16,005	8,904	6,777
Japan	103,643	57,091	37,309
Malaysia	13,486	7,910	4,237
New Zealand	5,816	4,271	4,601
Philippines	5,806	3,638	2,719
Singapore	76,862	24,133	12,140
South Korea	26,953	8,968	5,557
Taiwan	19,534	7,836	4,293
Thailand	10,209	5,824	4,283
European Union[3]	**1,733,787**	**609,674**	**301,345**
OPEC[4]	**55,978**	**28,545**	**15,546**

NA = Not available. **Note:** On a historical cost basis for comparison purposes. (1) In all industries. Book value of U.S. direct investors' equity in, and net outstanding loans to, their foreign affiliates. A foreign affiliate is a foreign business enterprise in which a single U.S. investor owns at least 10% of the voting securities, or the equivalent. (2) Totals and subtotals include countries or territories not shown in table. (3) EU members in 2009: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and UK. (4) Org. of Petroleum Exporting Countries in 2009: Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

TRANSPORTATION AND TRAVEL

Top Motor Vehicle Producing Nations, 2009

Source: R.L. Polk
(numbers in thousands of units; ranked by total production)

	Total motor vehicles	Cars	Trucks[1]	% change 2008-09		Total motor vehicles	Cars	Trucks[1]	% change 2008-09
China[2]	12,234	8,402	3,832	49.47%	Belgium	527	527	NA	–22.50
Japan	7,648	6,862	786	–30.28	Argentina	510	380	130	–13.27
U.S.	5,591	2,246	3,345	–34.25	Slovakia	494	494	NA	–3.89
Germany	5,029	4,885	145	–12.96	Malaysia	475	373	102	–7.23
South Korea	3,425	3,158	266	–8.32	South Africa	402	240	162	–26.24
Brazil	3,024	2,578	447	0.57	Indonesia	389	31	357	–18.28
India	2,367	2,135	232	29.34	Romania	384	367	17	9.71
Spain	2,158	1,813	345	–13.92	Hungary	295	295	NA	–16.67
France	2,006	1,817	190	–19.01	Australia	223	188	35	–31.17
Mexico	1,504	956	548	–28.31	Taiwan	222	185	37	24.72
Canada	1,476	822	654	–27.86	**Asia-Pacific/ Middle East**	**29,229**	**22,702**	**6,527**	**1.21**
Iran	1,144	999	146	–15.13	**Western Europe**	**12,008**	**11,068**	**940**	**–19.19**
UK	1,080	999	80	–33.42	**North America**	**8,570**	**4,024**	**4,547**	**–32.24**
Thailand	1,021	326	695	–17.19	**Central & Eastern Europe**	**5,067**	**4,558**	**509**	**–24.91**
Czech Republic	970	967	3	2.75	**South America**	**3,729**	**3,101**	**628**	**–2.05**
Poland	900	835	65	–9.18	**Africa**	**494**	**328**	**166**	**–25.15**
Turkey	851	511	340	–21.78	**World[3]**	**59,096**	**45,781**	**13,316**	**–12.58**
Italy	819	661	158	–15.91					
Russia	671	596	75	–59.63					

NA = Not available. (1) Light commercial vehicles (pickup trucks and vans). (2) Not including Taiwan. (3) Total includes countries or territories not shown.

World Motor Vehicle Production, 1950-2009

Source: For 1950-97, American Automobile Manufacturers Assn.; for 1998 and on, Automotive News Data Center and R.L. Polk
(thousands of units)

Year	United States	Canada	Europe[1]	Japan	Other	World total	U.S. % of world total
1950	8,006	388	1,991	32	160	10,577	75.7%
1960	7,905	398	6,837	482	866	16,488	47.9
1970	8,284	1,160	13,049	5,289	1,637	29,419	28.2
1980	8,010	1,324	15,496	11,043	2,692	38,565	20.8
1985	11,653	1,933	16,113	12,271	2,939	44,909	25.9
1990	9,783	1,928	18,866	13,487	4,496	48,554	20.1
1995	11,985	2,408	17,045	10,196	8,349	49,983	24.0
1996	11,799	2,397	17,550	10,346	9,241	51,332	23.0
1997	12,119	2,571	17,773	10,975	10,024	53,463	22.7
1998	12,047	2,568	16,332	10,050	12,844	53,841	22.4
1999	13,107	3,042	17,603	9,985	14,050	57,787	22.7
2000	12,832	2,952	17,678	10,145	16,098	59,704	21.5
2001	11,518	2,535	17,825	9,777	16,170	57,705	19.7
2002	12,328	2,624	17,419	10,240	16,975	59,587	20.7
2003	12,145	2,547	16,943	10,286	19,641	61,562	19.7
2004	12,021	2,698	20,850	10,512	16,573	65,654	18.3
2005	12,018	2,665	21,718	10,800	20,691	67,892	17.7
2006	11,351	2,545	22,430	11,486	23,180	70,992	16.0
2007	10,611	2,602	23,819	11,596	26,019	74,647	14.2
2008	8,503	2,046	14,860	10,969	31,224	67,602	12.6
2009	5,591	1,476	12,008	7,648	32,374	59,096	9.5

Note: Data for 1998 and on not fully comparable with earlier years because derived from different source. Number of units may not add up to totals due to rounding. (1) Prior to 2004, numbers exclude Eastern European production.

New and Used Passenger Cars Imported into the U.S., by Country of Origin[1], 1970-2009

Source: Foreign Trade Division, U.S. Census Bureau
(in number of units)

Year	Japan	Germany[2]	Italy	United Kingdom	Sweden	France	South Korea	Mexico	Canada	Total[3]
1970	381,338	674,945	42,523	76,257	57,844	37,114	NA	NA	692,783	2,013,420
1975	695,573	370,012	102,344	67,106	51,993	15,647	NA	0	733,766	2,074,653
1980	1,991,502	338,711	46,899	32,517	61,496	47,386	NA	1	594,770	3,116,448
1985	2,527,467	473,110	8,689	24,474	142,640	42,882	NA	13,647	1,144,805	4,397,679
1988	2,123,051	264,249	6,053	31,636	108,006	15,990	455,741	148,065	1,191,357	4,450,213
1989	2,051,525	216,881	9,319	29,378	101,571	4,885	270,609	133,049	1,151,122	4,042,728
1990	1,867,794	245,286	11,045	27,271	93,084	1,976	201,475	215,986	1,220,221	3,944,602
1995	1,114,360	204,932	1,031	42,450	82,593	14	131,718	462,800	1,552,691	3,624,428
1996	1,190,896	234,909	1,365	44,373	86,619	27	225,623	550,867	1,690,733	4,069,113
1997	1,387,812	300,489	1,912	43,691	79,780	67	222,568	544,075	1,731,209	4,378,295
1998	1,456,081	373,330	2,104	49,891	84,543	56	211,650	584,795	1,837,615	4,673,418
1999	1,707,277	461,061	1,697	68,394	83,399	186	372,965	639,878	2,170,427	5,639,616
2000	1,839,093	488,323	3,125	81,196	86,707	134	568,121	934,000	2,138,811	6,324,284
2001	1,790,346	494,131	2,580	82,487	92,439	92	633,769	861,853	1,855,789	6,065,138
2002	2,046,902	574,455	3,504	157,633	87,709	150	627,881	845,181	1,882,660	6,477,659
2003	1,770,355	561,482	2,943	207,158	119,773	298	692,863	680,214	1,811,892	6,127,485
2004	1,727,065	547,008	3,373	185,621	98,131	2,417	860,424	652,509	2,035,345	6,521,248
2005	1,832,534	547,191	5,377	184,716	93,736	412	730,500	693,149	1,967,985	6,564,844
2006	2,347,532	532,022	5,469	148,014	81,008	567	697,061	947,824	1,963,922	7,380,077
2007	2,300,913	466,458	5,650	108,576	92,600	1,746	676,594	889,474	1,912,744	7,220,792
2008	2,190,013	502,971	5,783	110,737	59,638	28,198	612,300	928,273	1,609,005	6,525,836
2009	1,238,773	348,093	3,067	78,999	27,017	16,909	476,912	649,740	1,164,849	4,276,163

NA = Not available. (1) Excludes cars assembled in U.S. foreign trade zones. (2) Figures prior to 1991 are for West Germany. (3) Includes units imported from countries not shown in table.

Passenger Car Production in U.S. Plants, 2008-09

Source: Ward's AutoInfoBank, Ward's Automotive Group, Penton Media Inc.

(in number of units)

	2009	2008
AUTOALLIANCE TOTAL[1]	**102,003**	**167,490**
Ford Mustang	69,921	92,345
Mazda6	32,082	75,145
CHRYSLER TOTAL	**84,069**	**290,547**
Sebring Convertible	4,489	25,592
Sebring Sedan	18,907	53,664
Chrysler total	**23,396**	**79,256**
Avenger	35,315	82,247
Caliber	25,020	127,499
Viper	338	1,545
Dodge total	**60,673**	**211,291**
FORD TOTAL	**236,606**	**318,614**
Focus	166,453	236,612
Taurus	50,976	46,546
Ford total	**217,429**	**283,158**
Lincoln MKS	15,378	23,388
Mercury Sable	3,799	12,068
GENERAL MOTORS TOTAL	**413,750**	**1,019,184**
LaCrosse	25,632	—
Lucerne	22,957	53,301
Buick total	**48,589**	**53,301**
CTS	36,496	86,333
DTS	12,807	32,558
STS	2,945	14,796
XLR	234	1,451
Cadillac total	**52,482**	**135,138**
Cobalt	79,314	250,002
Corvette	7,355	30,897
Malibu	160,855	251,296
Chevrolet total	**247,524**	**532,195**
G5	8,603	58,013
G6	50,758	157,154
Solstice	1,771	6,843
Pontiac total	**61,132**	**222,010**
Aura	3,727	64,510
Sky	275	8,902
Saturn total	**4,002**	**73,412**
Opel GT	21	3,128
HONDA TOTAL	**391,550**	**553,045**
Acura TL	28,841	57,207
Honda Accord	279,408	381,533
Honda Civic	83,301	114,305
HYUNDAI TOTAL	**103,876**	**152,588**
Hyundai Sonata	103,876	152,588
MITSUBISHI TOTAL	**14,798**	**54,480**
Mitsubishi Eclipse	2,653	15,944
Mitsubishi Galant	12,145	38,536
NISSAN TOTAL	**259,093**	**373,882**
Nissan Altima	205,637	320,628
Nissan Maxima	53,456	53,254
NUMMI[2] TOTAL	**201,437**	**220,192**
Pontiac Vibe	28,449	70,843
Toyota Corolla	172,988	149,349
SUBARU TOTAL	**166,958**	**165,160**
Subaru Legacy	79,032	73,489
Toyota Camry	87,926	91,671
TOYOTA TOTAL	**272,341**	**451,688**
Toyota Avalon	27,513	51,563
Toyota Camry	244,828	382,433
TOTAL CARS	**2,246,481**	**3,776,641**

— = No production. (1) Joint venture between Ford and Mazda. (2) NUMMI (New United Motor Manufacturing, Inc.) was a joint venture between GM and Toyota (1984-2010).

Domestic and Imported Retail Car Sales in the U.S., 1980-2009

Source: Ward's AutoInfoBank, Ward's Automotive Group, Penton Media Inc.

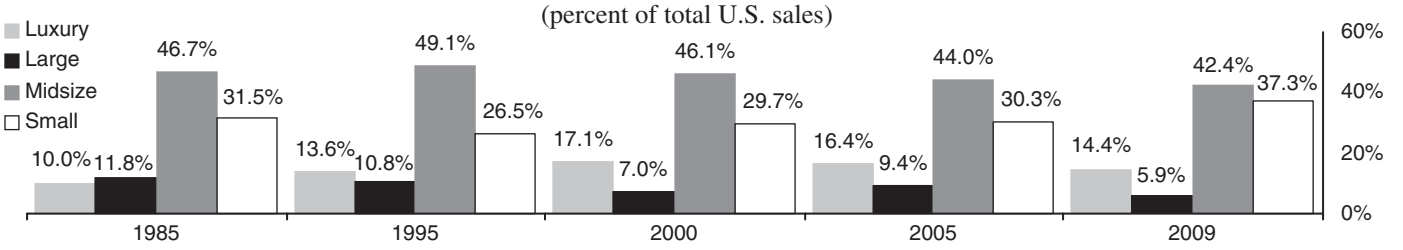
(in number of units)

		Imports					Imports (% total U.S. sales)		
Year	Domestic[1]	Japan	Germany	Other countries[2]	Total	Total U.S. sales	Japan	Germany	Total
1980	6,581,307	1,905,968	305,219	186,700	2,397,887	8,979,194	21.2%	3.3%	26.7%
1981	6,208,760	1,858,896	282,881	185,502	2,327,279	8,536,039	21.8	3.3	27.3
1982	5,758,586	1,801,969	247,080	174,508	2,223,557	7,982,143	22.6	3.0	27.9
1983	6,795,295	1,915,621	279,748	191,403	2,386,772	9,182,067	20.9	3.0	26.0
1984	7,951,523	1,906,206	344,416	188,220	2,438,842	10,390,365	18.3	3.8	23.5
1985	8,204,670	2,170,898	407,684	195,935	2,774,517	10,979,187	19.8	3.7	25.3
1986	8,215,017	2,339,503	431,433	418,286	3,189,222	11,404,239	20.5	3.8	28.0
1987	7,085,279	2,114,224	337,232	655,142	3,106,598	10,191,877	20.7	3.3	30.5
1988	7,543,116	2,022,602	280,097	700,993	3,003,692	10,546,808	19.2	2.7	28.5
1989	7,098,098	1,897,957	246,206	536,256	2,680,419	9,778,517	19.4	2.5	27.4
1990	6,918,869	1,719,384	263,263	401,699	2,384,346	9,303,215	18.5	2.8	25.6
1991	6,161,573	1,500,239	192,713	330,454	2,023,406	8,184,979	18.3	2.4	24.7
1992	6,285,916	1,451,766	200,851	274,580	1,927,197	8,213,113	17.7	2.4	23.5
1993	6,741,667	1,328,445	186,177	261,570	1,776,192	8,517,859	15.6	2.2	20.9
1994	7,255,303	1,239,450	192,275	303,489	1,735,214	8,990,517	13.8	2.1	19.3
1995	7,128,707	981,506	207,482	317,269	1,506,257	8,634,964	11.4	2.4	17.4
1996	7,254,557	726,940	237,009	308,247	1,272,196	8,526,753	8.5	2.8	14.9
1997	6,916,769	726,104	297,028	332,173	1,355,305	8,272,074	8.8	3.6	16.4
1998	6,761,940	691,162	366,724	321,895	1,379,781	8,141,721	8.5	4.5	16.9
1999	6,979,357	757,568	466,870	494,489	1,718,927	8,698,284	8.7	5.4	19.8
2000	6,830,505	862,780	516,614	636,726	2,016,120	8,846,625	9.8	5.8	22.8
2001	6,324,996	836,685	522,659	738,285	2,097,629	8,422,625	9.9	6.2	24.9
2002	5,877,645	930,253	546,654	748,677	2,225,584	8,103,229	11.5	6.7	27.5
2003	5,527,430	830,355	543,823	708,873	2,083,051	7,610,481	10.9	7.1	27.4
2004	5,396,090	810,004	541,940	797,115	2,149,059	7,545,149	10.7	7.2	28.5
2005	5,533,020	922,934	534,286	729,313	2,186,533	7,719,553	12.0	6.9	28.3
2006	5,476,090	1,154,455	560,726	629,583	2,344,764	7,820,854	14.8	7.2	30.0
2007	5,253,350	1,183,144	567,287	614,632	2,365,063	7,618,413	15.5	7.4	31.0
2008	4,535,098	1,141,768	506,736	629,767	2,278,271	6,813,369	16.8	7.4	33.4
2009	3,619,187	829,496	407,487	600,076	1,837,059	5,456,246	15.2	7.5	33.7

(1) Includes cars manufactured in Canada and Mexico. (2) Australia, Belgium, Brazil, Hungary, Portugal, South Korea, Sweden, UK.

U.S. Retail Car Sales by Vehicle Size and Type, 1985-2009

Source: Ward's AutoInfoBank, Ward's Automotive Group, Penton Media Inc.
(percent of total U.S. sales)



Top-Selling Passenger Cars in the U.S., 2006-09

Source: Ward's Automotive Group, Penton Media Inc.
(ranked by number of vehicles sold)

Rank, car	2009 sales	Rank, car	2009 sales	Rank, car	2009 sales
1. Toyota Camry	356,824	8. Chevrolet Malibu	161,568	15. Mazda3	96,466
2. Toyota Corolla/Matrix	296,874	9. Ford Focus	160,433	16. BMW 3 Series	90,960
3. Honda Accord	287,492	10. Toyota Prius	139,682	17. Pontiac G6	87,171
4. Honda Civic	259,722	11. Hyundai Sonata	120,028	18. Subaru Legacy	86,330
5. Nissan Altima	203,568	12. Volkswagen Jetta	108,427	19. Nissan Versa	82,906
6. Ford Fusion	180,671	13. Chevrolet Cobalt	104,724	20. Nissan Sentra	82,706
7. Chevrolet Impala	165,565	14. Hyundai Elantra	103,269		
Rank, car	**2008 sales**	**Rank, car**	**2007 sales**	**Rank, car**	**2006 sales**
1. Toyota Camry	436,617	1. Toyota Camry	473,108	1. Toyota Camry	448,445
2. Honda Accord	372,789	2. Honda Accord	392,231	2. Toyota Corolla/Matrix	387,388
3. Toyota Corolla/Matrix	351,007	3. Toyota Corolla/Matrix	371,390	3. Honda Accord	354,441
4. Honda Civic	339,289	4. Honda Civic	331,095	4. Honda Civic	316,638
5. Nissan Altima	269,668	5. Chevrolet Impala	311,128	5. Chevrolet Impala	289,868
6. Chevrolet Impala	265,840	6. Nissan Altima	284,762	6. Nissan Altima	232,457
7. Ford Focus	195,823	7. Chevrolet Cobalt	200,620	7. Chevrolet Cobalt	211,449
8. Chevrolet Cobalt	188,045	8. Toyota Prius	181,221	8. Ford Focus	177,006
9. Chevrolet Malibu	178,253	9. Ford Focus	173,213	9. Ford Taurus	174,803
10. Toyota Prius	158,884	10. Pontiac G6	150,001	10. Ford Mustang	166,530

Top-Selling Light Trucks in the U.S., 2007-09

Source: Ward's Automotive Group, Penton Media Inc.
(ranked by number of vehicles sold)

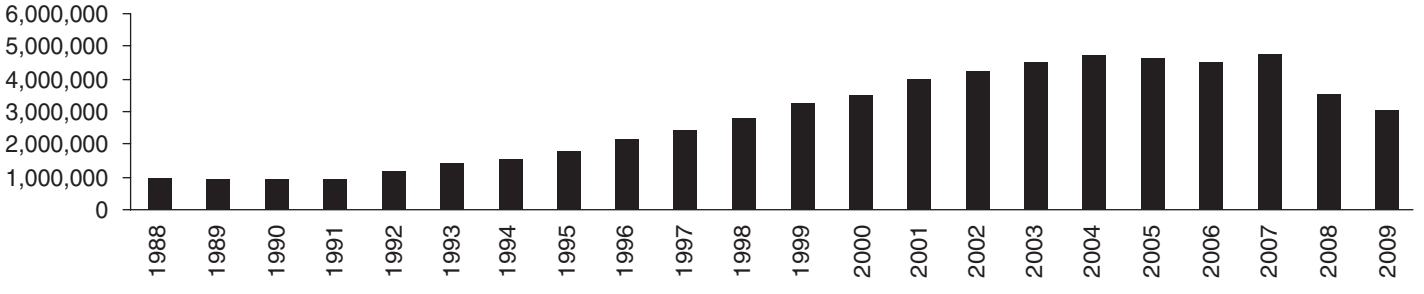
Rank, truck	2009 sales	Rank, truck	2008 sales	Rank, truck	2007 sales
1. Ford F-Series	392,112	1. Ford F-Series	476,469	1. Ford F-Series	633,949
2. Chevrolet Silverado	316,544	2. Chevrolet Silverado	465,065	2. Chevrolet Silverado	618,257
3. Honda CR-V	191,214	3. Dodge Ram Pickup	240,454	3. Dodge Ram Pickup	357,707
4. Ram Pickup	173,066	4. Honda CR-V	197,279	4. Honda CR-V	219,160
5. Ford Escape	173,044	5. GMC Sierra	168,544	5. GMC Sierra	208,243
6. Toyota RAV4	149,088	6. Ford Escape	156,544	6. Toyota Tundra	196,555
7. GMC Sierra	111,842	7. Toyota Tacoma	144,655	7. Dodge Caravan	176,150
8. Toyota Tacoma	111,824	8. Toyota Tundra	137,249	8. Toyota Tacoma	173,238
9. Honda Odyssey	100,133	9. Toyota RAV4	137,020	9. Honda Odyssey	173,046
10. Lexus RX	93,379	10. Honda Odyssey	135,493	10. Toyota RAV4	172,752

Sport Utility and Cross Utility Vehicle Sales in the U.S., 1988-2009

Source: Ward's AutoInfoBank, Ward's Automotive Group, Penton Media Inc.

In 1988, 960,852 sport utility vehicles (SUVs)—a term that includes cross utility vehicles, or crossovers, which are generally smaller and get better gas mileage than traditional SUVs—were sold in the U.S. That number accounted for slightly more than 6% of all light vehicles (i.e., cars, SUVs, minivans, vans, pickup trucks, and trucks under 14,000 lbs) sold that year.

Excluding cross utility vehicles, SUV sales slowed considerably beginning in the mid-2000s after years of consistent growth, with a 74.9% decrease between 2004 (2,781,457 sold) and 2009 (697,921 sold). Over that same period of time, crossover vehicle sales increased, up 22.5% from 1,906,953 sales in 2004 to 2,335,455 sales in 2009.



Most Popular Colors, by Vehicle Type, 2009

Source: Ward's Automotive Group, Penton Media Inc.; Du Pont Automotive Products; for 2009 model year

Luxury cars		Full size/intermediate cars		Compact/sports cars		Light trucks	
Color	**Percent**	**Color**	**Percent**	**Color**	**Percent**	**Color**	**Percent**
Black/black effect	35%	Silver	19%	Silver	19%	White/white pearl	26%
White/white pearl	16	Gray	16	Black/black effect	17	Black/black effect	17
Gray	14	White/white pearl	15	Gray	17	Blue	13
Silver	13	Black/black effect	14	Blue	15	Silver	12
Red	10	Blue	12	Red	12	Red	11
Blue	6	Red	11	White/white pearl	12	Gray	9
Beige/brown	5	Beige/brown	7	Beige/brown	4	Beige/brown	5
Yellow/gold	1	Green	4	Yellow/gold	2	Green	3
Green	<1	Yellow/gold	2	Green	2	Yellow/gold	3
Other	<1	Other	1	Other	1	Other	1

U.S. Light-Duty Vehicle Fuel Efficiency, 1975-2009

Source: Natl. Vehicle and Fuel Emissions Laboratory, Office of Transportation and Air Quality, U.S. Environmental Protection Agency

Cars and light-duty trucks (SUVs, minivans, passenger vans, and pickup trucks) showed significant fuel-efficiency improvements from 1975 through 1987, when the fuel economy for both reached a high of 22 miles per gallon (mpg). After 1987, the fuel economy value entered a long-term decline, reaching 19.3 mpg in 2004 before the trend reversed itself. Since 2005, fuel economy has increased. Most of this increase has been due to higher truck fuel economy.

In Dec. 2006, the EPA changed its method of calculating adjusted real-world fuel economy values due to changed driving habits, including more aggressive driving and increased air conditioning use, among other factors. Data from 1986 on were revised under this method. Comparing laboratory 55/45 fuel economy values, however, shows an all-time high was reached in 2009.

Sales of light-duty trucks, which in recent years have had an average fuel efficiency 5-7 mpg less than cars, accounted for only 19% of the market in 1975 but have been at about 50% since 2002. This increase has been a major factor in the leveling off in the fuel efficiency of the average light-duty vehicle. But technological innovations have helped to boost fuel efficiency in recent years.

Year[1]	Cars (mpg[2])	Light-duty trucks (mpg[2])	All light-duty vehicles (mpg[2])	Year[1]	Cars (mpg[2])	Light-duty trucks (mpg[2])	All light-duty vehicles (mpg[2])
1975	13.5	11.6	13.1	2001	23.0	16.7	19.6
1980	20.0	15.8	19.2	2002	23.1	16.7	19.4
1985	23.0	17.5	21.3	2003	23.2	16.9	19.6
1990	23.3	17.4	21.2	2004	23.1	16.7	19.3
1995	23.4	17.0	20.5	2005	23.5	17.2	19.9
1996	23.3	17.2	20.4	2006	23.3	17.5	20.1
1997	23.4	17.0	20.1	2007	24.1	17.7	20.6
1998	23.4	17.1	20.1	2008	24.3	18.2	21.0
1999	23.0	16.7	19.7	2009	24.5	18.4	21.1
2000	22.9	16.9	19.8				

(1) Because of changes in methodology, mpg figures before 1986 are not entirely comparable with later values. (2) Adjusted composite (city and highway fuel efficiency combined in a 55%/45% ratio) values reflecting real-world use.

Registered Cars in the U.S., 1900-2008[1]

Source: Office of Highway Policy Information, Federal Highway Administration, U.S. Dept. of Transportation

(includes automobiles for public and private use)

Year	Reg. cars	Year	Reg. cars	Year	Reg. cars	Year	Reg. cars	Year	Reg. cars
1900	8,000	1940	27,465,826	1980	121,600,843	1995	128,386,775	2002	135,920,677
1905	77,400	1945	25,796,985	1985	127,885,193	1996	129,728,311	2003	135,669,897
1910	458,377	1950	40,339,077	1990	133,700,497	1997	129,748,704	2004	136,430,651
1915	2,332,426	1955	52,144,739	1991	128,299,601	1998	131,838,538	2005	136,568,083
1920	8,131,522	1960	61,671,390	1992	126,581,148	1999	132,432,044	2006	135,399,945
1925	17,481,001	1965	75,257,588	1993	127,327,189	2000	133,621,420	2007	135,932,930
1930	23,034,753	1970	89,243,557	1994	127,883,469	2001	137,633,467	2008	137,079,843
1935	22,567,827	1975	106,705,934						

(1) There were no publicly owned vehicles before 1925; statistics also exclude military vehicles for all years. Alaska and Hawaii data included since 1960.

Licensed Drivers, by Age and Sex, 1980-2008

Source: Office of Highway Policy Information, Federal Highway Administration, U.S. Dept. of Transportation

(numbers in thousands)

	1980			1990			2008			
Age	Male	Female	Total[1]	Male	Female	Total[1]	Male	Female	Total[1]	% total drivers[2]
Under 16	**52**	**41**	**93**	**23**	**20**	**43**	**169**	**165**	**334**	**0.2%**
16	1,001	822	1,823	769	674	1,443	667	661	1,329	0.6
17	1,530	1,260	2,790	1,136	996	2,132	1,104	1,068	2,172	1.0
18	1,763	1,484	3,247	1,378	1,217	2,595	14,904	1,404	2,894	1.4
19	1,900	1,643	3,542	1,608	1,429	3,037	1,659	1,566	3,225	1.5
19 and under	**6,246**	**5,249**	**11,496**	**4,913**	**4,336**	**9,249**	**5,089**	**4,865**	**9,954**	**4.8**
20	1,930	1,706	3,636	1,691	1,538	3,229	1,699	1,643	3,342	1.6
21	1,961	1,772	3,733	1,694	1,555	3,249	1,717	1,684	3,401	1.6
22	1,998	1,813	3,811	1,701	1,561	3,262	1,741	1,708	3,449	1.7
23	2,062	1,876	3,938	1,767	1,631	3,398	1,785	1,764	3,548	1.7
24	2,047	1,868	3,915	1,951	1,807	3,758	17,725	1,764	3,536	1.7
20-24	9,998	9,034	19,032	8,804	8,093	16,897	87,135	8,562	17,276	8.3
25-29	9,865	9,060	18,925	10.239	9,656	19,895	91,865	9,233	18,419	8.8
30-34	9,010	8,359	17,369	10,507	10,071	20,578	8,894	8,859	17,753	8.5
35-39	7,113	6,583	13,696	9,684	9,371	19,055	9,673	9,584	19,257	9.2
40-44	5,828	5,306	11,134	8,610	8,295	16,905	9,927	9,841	19,768	9.5
45-49	5,311	4,765	10,076	6,642	6,378	13,020	10,619	10,669	21,288	10.2
50-54	5,351	4,739	10,090	5,376	5,108	10,484	10,060	10,189	20,249	9.7
55-59	5,198	4,572	9,770	4,855	4,583	9,438	8,736	8,901	17,636	8.5
60-64	4,439	3,793	8,232	4,738	4,497	9,235	7,190	7,293	14,483	7.0
65-69	3,631	2,949	6,580	4,266	4,109	8,375	5,268	5,403	10,671	5.1
70-74	NA	NA	NA	NA	NA	NA	3,842	4,006	7,848	3.8
75-79	NA	NA	NA	NA	NA	NA	2,940	3,190	6,130	2.9
80-84	NA	NA	NA	NA	NA	NA	2,043	2,359	4,402	2.1
85 and over	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**1,439**	**1,748**	**3,187**	**1.5**
Total	**77,187**	**68,108**	**145,295**	**85,792**	**81,223**	**167,015**	**103,618**	**104,702**	**208,321**	**100.0**

NA = Not available. (1) Figures may not add up to totals due to rounding.

Selected Motor Vehicle Statistics

Source: Federal Highway Admin., U.S. Dept. of Transportation; Insurance Inst. for Highway Safety; American Petroleum Inst.

Driver's license age requirements, state gas tax, and safety belt use laws (incl. laws passed, but not in effect) as of 2010. Other figures are for 2008.

STATE	Driver's license age requirements		State gas tax (cents/ gal.)	Safety belt use law[6]	Licensed drivers		Reg. motor vehicles per 1,000 pop.	Fuel use per reg. vehicle (gallons)	Annual miles driven		
	Learner's permit	Regular[1]			Per 1,000 total resident pop.	Per reg. motor vehicle			Per gal. used	Per reg. vehicle	Per lic. driver
Alabama	15	17	16.0	P	805	0.80	1,015	710	17.66	12,538	15,799
Alaska	14	16y, 6m	8.0	P	733	0.74	1,007	774	9.10	7,043	9,669
Arizona	15y, 6m	16y, 6m	18.0	S	664	1.00	673	809	17.41	14,092	14,280
Arkansas	14	18	21.5	P	720	1.02	715	1,008	16.12	16,249	16,136
California	15y, 6m	17	18.0	P	645	0.72	911	538	18.17	9,775	13,811
Colorado	15	17	22.0	S(a)	730	2.29	328	1,659	17.83	29,576	13,273
Connecticut	16	18[2]	25.0	P	824	0.94	884	579	17.73	10,258	11,007
Delaware	16	17[2]	23.0	P	747	0.76	994	590	17.53	10,344	13,769
Dist. of Columbia	16	18[3]	23.5	P	631	1.76	378	638	25.29	16,135	9,662
Florida	15	18	4.0	P	766	0.87	898	593	20.36	12,065	14,153
Georgia	15	18[2]	7.5	P	646	0.74	885	712	17.87	12,726	17,428
Hawaii	15y, 6m	17[2]	17.0	P	687	0.95	734	534	20.34	10,871	11,617
Idaho	14y, 6m	16[2]	25.0	S	681	0.80	865	687	16.84	11,569	14,688
Illinois	15	18[2]	19.0	P	640	0.85	759	651	16.64	10,831	12,841
Indiana	15y, 6m	18[2]	18.0	P	870	0.97	917	755	16.08	12,137	12,787
Iowa	14	17[2]	21.0	P	663	0.59	1,143	663	13.50	8,952	15,436
Kansas	14	16y, 6m	24.0	S(a)	722	0.84	874	732	16.58	12,140	14,702
Kentucky	16	17[2]	21.1	P	687	0.82	844	823	16.02	13,189	16,208
Louisiana	15	17[2]	20.0	P	680	0.77	902	719	15.77	11,332	15,040
Maine	15	16y, 6m[2]	29.5	P	764	0.96	816	824	16.44	13,550	14,471
Maryland	15y, 9m	18[3]	23.5	P	672	0.85	803	736	16.52	12,159	14,531
Massachusetts	16	18[2]	21.0	S	719	0.89	820	598	17.10	10,229	11,661
Michigan	14y, 9m	17[2]	19.0	P	712	0.91	794	685	18.71	12,815	14,305
Minnesota	15	16y, 6m[2]	27.1	P	611	0.67	916	689	17.61	12,124	18,179
Mississippi	15	16y, 6m	18.0	P	659	0.97	692	1,116	19.25	21,481	22,581
Missouri	15	17y, 11m	17.0	S(a)	710	0.87	823	864	16.23	14,031	16,268
Montana	14y, 6m	16[2]	27.0	S	764	0.82	958	795	14.67	11,664	14,631
Nebraska	15	17	26.8	S	755	0.79	985	710	15.37	10,913	14,238
Nevada	15y, 6m	18[2]	23.0	S	646	1.21	545	1,037	14.14	14,663	12,380
New Hampshire	15y, 6m	17y, 1m	18.0	None	784	0.86	923	674	15.94	10,742	12,646
New Jersey	16	18	10.5	P	666	0.95	719	830	14.20	11,787	12,734
New Mexico	15	16y, 6m[2]	17.0	P	688	0.89	791	892	18.77	16,741	19,249
New York	16	18[2,4]	8.0	P	579	1.04	569	636	19.00	12,092	11,882
North Carolina	15	16y, 6m[2]	29.9	P(b)	700	1.05	678	926	17.57	16,277	15,752
North Dakota	14	16	23.0	S	737	0.67	1,118	782	13.93	10,903	16,532
Ohio	15y, 6m	18[2]	28.0	S	693	0.74	952	603	16.43	9,906	13,602
Oklahoma	15y, 6m	17[4]	16.0	P	632	0.72	904	834	17.66	14,733	21,070
Oregon	15	17[2]	24.0	P	754	0.94	819	661	16.31	10,776	11,718
Pennsylvania	16	18[4]	12.0	S	695	0.84	833	620	16.77	10,404	12,473
Rhode Island	16	17y, 6m[2]	32.0	S(a,c)	712	0.95	756	591	17.45	10,306	10,940
South Carolina	15	16y, 6m	16.0	P	711	0.90	804	903	15.23	13,762	15,570
South Dakota	14	16	22.0	S	743	0.67	1,128	692	14.31	9,903	15,044
Tennessee	15	17	20.0	P	716	0.89	820	800	17.04	13,626	15,609
Texas	15	18[4]	20.0	P	632	0.87	748	888	14.57	12,927	15,310
Utah	15	17[5]	24.5	S(a,c)	617	0.70	891	624	17.06	10,651	15,394
Vermont	15	16y, 6m[2]	19.0	S	872	0.95	936	675	18.63	12,575	13,491
Virginia	15y, 6m	18[2]	17.5	S	682	0.82	840	765	16.48	12,608	15,521
Washington	15	17[2]	37.5	P	756	0.84	913	556	16.70	9,291	11,215
West Virginia	15	17	20.5	S	750	1.00	773	752	19.71	14,817	15,265
Wisconsin	15y, 6m	16y, 9m[2]	30.9	P	724	0.83	888	652	17.63	11,495	14,098
Wyoming	15	16y, 6m[2]	13.0	S	759	0.63	1,247	1,121	12.69	14,227	23,355
U.S. AVERAGE			**18.5**		**685**	**0.85**	**816**	**706**	**16.98**	**11,982**	**14,274**

Note: Most states have graduated licensing systems that phase in full driving privileges. During the learner's stage, driving generally is not permitted without adult supervision. In an intermediate stage, young licensees may be allowed to drive unsupervised only under certain conditions. (1) Min. age at which all restrictions may be lifted on private passenger car operation. (2) Applicants under a specified age (typically between 17 and 19) must complete driver education. Some states allow applicants to substitute home training, state-sponsored traffic school, or a number of hrs. of supervised driving for driver ed. (3) Learner's stage mandatory for all license applicants regardless of age. (4) Minimum age for an unrestricted driver's license may be lower if the applicant has completed driver education. Unsupervised driving in New York City prohibited for all drivers under 18. (5) Driver ed. required regardless of age. (6) P = officer may stop vehicle for violation (primary); S = officer may issue seat belt citation only when vehicle is stopped for another moving violation (secondary). (a) Primary enforcement for children under a specified age. (b) Secondary enforcement for rear seat occupants. (c) Primary enforcement for driver.

Handheld Phone and Texting Device Laws for Drivers, 2010

Source: Insurance Institute for Highway Safety; as of July 2010

State	Handheld ban	Texting ban	Enforcement	State	Handheld ban	Texting ban	Enforcement
AL	No	(1)	P	MT	No	No	NA
AK	No	Yes	P	NE	No	Yes	S
AZ	No	No	P	NV	No	No	NA
AR	(2)	Yes	(3)	NH	No	Yes	P
CA	Yes	Yes	P[4]	NJ	Yes	Yes	P
CO	No	Yes	P	NM	No	No	NA
CT	Yes	Yes	P	NY	Yes	Yes	(12)
DC	Yes	Yes	P	NC	No	Yes	P
DE	Yes[5]	Yes[5]	P	ND	No	No	NA
FL	No	No	NA	OH	No	No	NA
GA	No	Yes	P	OK	(10)	(13)	P
HI	No	No	NA	OR	Yes	Yes	P
ID	No	No	NA	PA	No	No	NA
IL	(6)	Yes	P	RI	No	Yes	P
IN	No	(7)	P	SC	No	No	NA
IA	No	Yes	(8)	SD	No	No	NA
KS	No	Yes	P	TN	No	Yes	P
KY	No	Yes	P	TX	(14)	(15)	P
LA	(9)	Yes	P	UT	Yes	Yes	(11)
ME	No	(10)	P	VT	No	Yes	P
MD	Yes	Yes	(11)	VA	No	Yes	(16)
MA	No	Yes	P	WA	Yes	Yes	P
MI	No	Yes	P	WV	No	(17)	P
MN	No	Yes	P	WI	No	Yes	P
MS	No	10	P	WY	No	Yes	P
MO	No	(2)	P				

NA = Not available/not applicable. P = Officer may stop vehicle for violation (primary); S = officer may issue citation only when vehicle is stopped for another moving violation (secondary). (1) Drivers age 16 and 17 who have held an intermediate license for fewer than 6 months. (2) Drivers 21 and younger. (3) Primary for texting by all drivers and cell phone use by school bus drivers; secondary for cell phone use by young drivers. (4) Secondary for hands-free cell phone use by young drivers. (5) As of Jan. 2, 2011. (6) Drivers in construction and school speed zones. (7) Drivers younger than 18. (8) Primary for learner's permit and intermediate license holders; secondary for texting. (9) All learner's permit holders and all intermediate license holders are prohibited from driving while using a handheld cell phone, and all drivers younger than 18 are prohibited from using any cell phone. All drivers issued a first driver's license are prohibited from using a cell phone for one year. The cell phone ban is secondary for novice drivers age 18 and older. (10) Learner's permit and intermediate license holders. (11) Secondary; primary for texting. (12) Primary; secondary for texting. (13) Learner's permit holders, intermediate license holders, school bus drivers, and public transit drivers. (14) Drivers in school crossing zones. (15) Bus drivers when a passenger 17 and younger is present, intermediate license holders for first twelve months, and drivers in school crossing zones. (16) Secondary; primary for school bus drivers. (17) Drivers younger than 18 who hold either a learner's permit or an intermediate license.

Tourism Trends

World tourist arrivals increased by 6.4% between 2006 and 2007 and 2.0% between 2007 and 2008, according to the World Tourism Organization's (UNWTO) *Barometer* publication. The number of international tourist arrivals in 2009 was an estimated 880 mil, an decrease of 4.2% from the previous year. Worldwide tourism receipts, as measured in constant U.S. dollars, declined 5.7% from 2008 to 2009, to a value of $852 bil. Europe as a region again commanded the largest share of international tourist arrivals (49%) and receipts (48%) in 2009. Asia and the Pacific posted the second-largest share in each category, with 21% of international tourist arrivals and 24% of receipts worldwide. With 140 mil arrivals, the Americas held a 16% share of the world total. Compared to 2008, Africa was the only region to show an increase in the number of international tourist arrivals (2.9%) in 2009.

Preliminary data for the first four months of 2010 indicated a growth of about 7% in international tourist arrivals, continuing the recovery trend that began in late 2009. Because of the gradually improving global economic situation, as well as the economic benefits of such events as the World Cup in South Africa, the World Exposition in Shanghai, and the Commonwealth Games in India, the UNWTO predicted a growth overall in 2010.

The International Air Transport Association (IATA) reported a 2.5% decrease in actual international passenger traffic (as measured in revenue passenger kilometers) in 2009 but an 6% increase for the first four months of 2010. The IATA forecasted a continued growth in the volume of passenger traffic in 2010. It expected an increase in the global airline industry's net profits in 2010. The price of fuel remains a challenge, having risen from 13% of airline operating costs in 2001 to 23% in 2009, although this is lower than the high of 33% from a year earlier. IATA forecasted that fuel will have accounted for 26% of operating costs in 2010.

World Tourism Receipts, 1990-2009[1]

Source: World Tourism Organization (UNWTO)
(in billions of U.S. dollars)

Year	Receipts	Year	Receipts	Year	Receipts	Year	Receipts	Year	Receipts	Year	Receipts
1990	$264	1994	$356	1998	$445	2001	$466	2004	$634	2007	$857
1991	278	1995	405	1999	458	2002	484	2005	679	2008	942
1992	317	1996	439	2000	478	2003	533	2006	744	2009	852*
1993	323	1997	443								

*Preliminary. (1) Total of all transactions made by or on behalf of visitors for the duration of their visit. Does not include receipts from international passenger transport contracted from companies outside a traveler's country of residence.

Top 10 Countries in Tourism Earnings, 2009

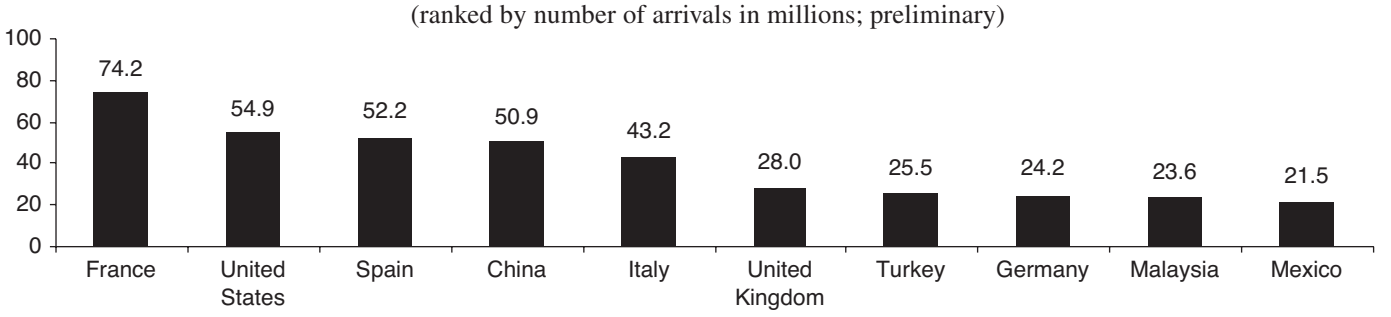
Source: World Tourism Organization (UNWTO)
(in billions of dollars; ranked by receipts from most recent year)

Rank	Country	Receipts[1] 2009*	2008	% change	Rank	Country	Receipts[1] 2009*	2008	% change
1.	United States	$93.9	$110.0	–14.6%	6.	Germany	$34.7	$40.0	–8.5%
2.	Spain	53.2	61.6	–9.0	7.	United Kingdom	30.1	36.0	–1.6
3.	France	49.4	56.6	–7.9	8.	Australia	25.6	24.8	11.2
4.	Italy	40.2	45.7	–7.2	9.	Turkey	21.3	22.0	–3.2
5.	China[2]	39.7	40.8	–2.9	10.	Austria	19.4	21.6	–5.2

*Preliminary. (1) Excluding receipts from international passenger transport contracted from companies outside a traveler's country of residence. (2) Not including Hong Kong, Macao, and Taiwan.

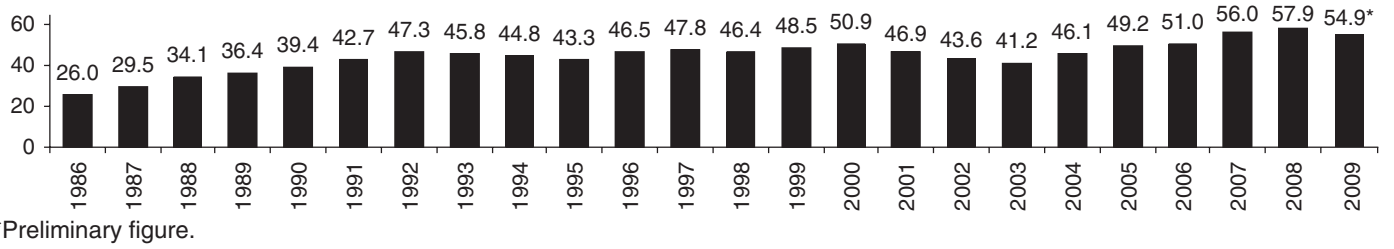
World's Top 10 Tourist Destinations, 2009

Source: World Tourism Organization (UNWTO)
(ranked by number of arrivals in millions; preliminary)



International Travel to the U.S., 1986-2009

Source: Office of Travel and Tourism Industries, Intl. Trade Admin., U.S. Dept. of Commerce; World Tourism Organization
(Visitors in millions; some figures are revised and may differ from other sources.)



*Preliminary figure.

International Visitors to the U.S. by Top Countries of Origin, 2009

Source: Office of Travel and Tourism Industries, Intl. Trade Admin., U.S. Dept. of Commerce
(ranked by number of visitors; excludes cruise travelers)

Country of origin	Visitors	Expenditures (mil)[1]	Expenditures per visitor	Country of origin	Visitors	Expenditures (mil)[1]	Expenditures per visitor
1. Canada	17,964,000	$16,217	$902.75	12. India	549,474	$3,583	$6,520.78
2. Mexico	13,164,000	8,339	633.47	13. Netherlands	547,790	1,848	3,373.56
3. UK	3,899,167	12,130	3,110.92	14. China[2]	524,817	3,496	6,661.37
4. Japan	2,918,268	12,881	4,413.92	15. Venezuela	507,185	2,400	4,732.00
5. Germany	1,686,825	5,598	3,318.66	16. Colombia	424,526	NA	NA
6. France	1,204,490	4,232	3,513.52	17. Ireland	411,203	NA	NA
7. Brazil	892,611	4,249	4,760.19	18. Argentina	356,428	1,648	4,623.65
8. Italy	753,310	2,951	3,917.38	19. Switzerland	355,727	NA	NA
9. South Korea	743,846	2,447	3,289.66	20. Sweden	324,417	NA	NA
10. Australia	723,576	3,307	4,570.36	**All countries**	**54,884,184**	**121,072**	**2,205.95**
11. Spain	596,766	NA	NA				

NA = Not available. (1) Does not include fares received by U.S. air carriers from international visitors for travel between the U.S. and foreign countries and between two foreign points. (2) Not including Hong Kong, Macao, and Taiwan.

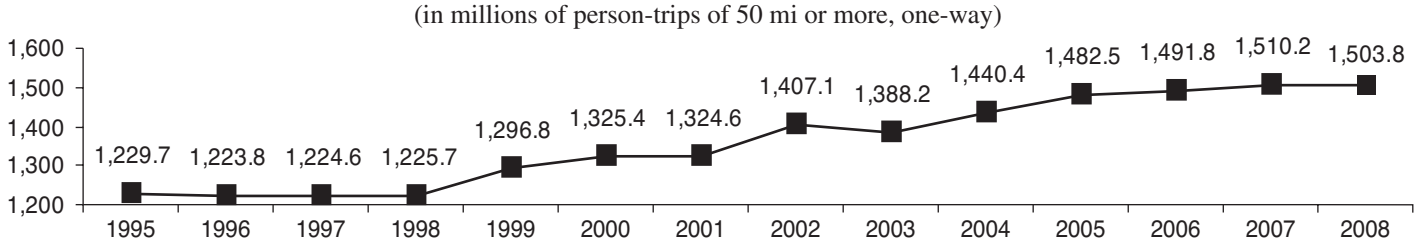
Traveler Spending in the U.S., 1987-2009

Source: Office of Travel and Tourism Industries, Intl. Trade Admin., U.S. Dept. of Commerce; U.S. Travel Assn.
(in billions of dollars)

Year	Traveler spending Domestic	International	Year	Traveler spending Domestic	International	Year	Traveler spending Domestic	International
1987	$235	$31	1995	$360	$63	2003	$496	$65
1988	258	38	1996	385	70	2004	532	75
1989	273	47	1997	406	73	2005	572	82
1990	291	43	1998	425	71	2006	610	86
1991	296	48	1999	458	75	2007	641	97
1992	306	55	2000	503	82	2008	662	110
1993	323	58	2001	484	72	2009	610	94
1994	340	58	2002	478	67			

U.S. Domestic Leisure Travel Volume, 1995-2008[1]

Source: U.S. Travel Assn.
(in millions of person-trips of 50 mi or more, one-way)

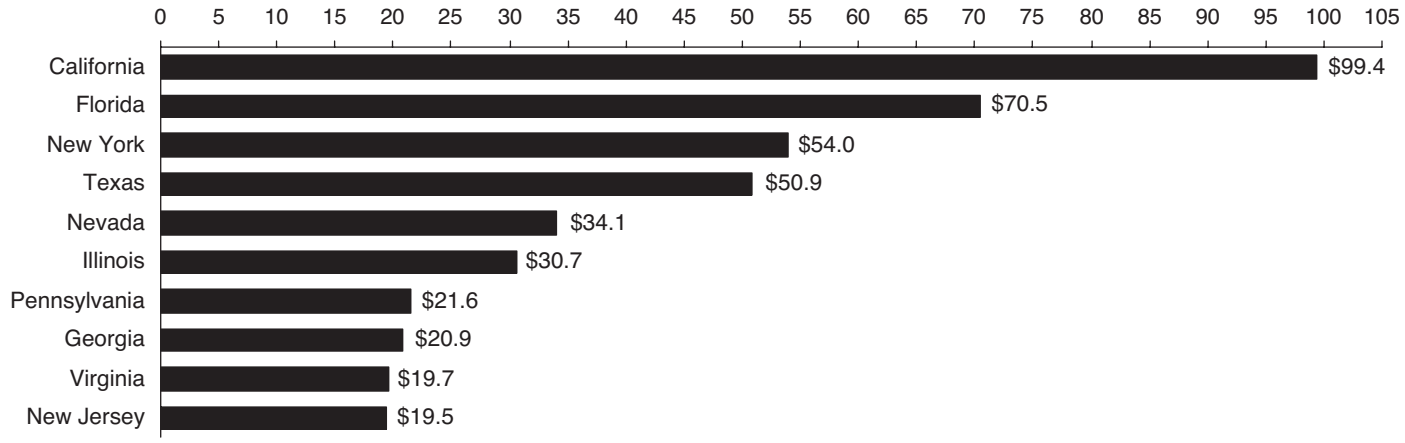


(1) Method of collecting travel data has been revised; data for earlier years have been adjusted to maintain comparability.

Top 10 U.S. States by Traveler Spending, 2008

Source: U.S. Travel Assn.

(domestic and international traveler spending within state, in billions of dollars)



U.S. Resident Travelers Visiting Overseas Destinations, 2009

Source: Survey of Intl. Air Travelers, Office of Travel and Tourism Industries, Intl. Trade Admin., U.S. Dept. of Commerce

Total U.S. resident travelers	**30,300,000**
Males (adults)	52%
Females (adults)	48%
Avg. age of males (yrs.)	44.8
Avg. age of females (yrs.)	42.7
Median annual household income	$99,600
Avg. total trip expend. per visitor (incl. airfare)	$2,708
Avg. expend. outside the U.S. per visitor per day	$72
Median number of nights	10.0

Region of residence	**% of travelers**
Middle Atlantic	39%
South Atlantic (incl. Florida, DC metro area)	19
Pacific (incl. California, Washington)	14
New England	8
East North Central (incl. Illinois, Ohio)	7
West South Central (incl. Texas)	5
Mountain	4
West North Central	2
East South Central	2

Main purpose of trip	**% of travelers**
Leisure/recreation/holidays	40%
Visit friends/relatives	37
Business	16
Study/teaching	4
Convention/conference	2
Religion/pilgrimages	2
Health treatment	1

(1) Percentages based on multiple responses.

Occupation	**% of travelers**
Professional/technical	39%
Manager/executive	22
Retired	11
Student	10
Homemaker	5
Clerical/sales	5
Craftsman/factory worker	3
Government/military	3

Leisure/recreational activities[1]	**% of travelers**
Dining in restaurants	82%
Shopping	72
Visit historical places	50
Visit small towns/villages	42
Sightseeing in cities	41
Cultural heritage sights	33
Touring the countryside	32
Water sports/sunbathing	25
Art gallery, museum	24
Nightclub/dancing	21
Guided tours	17
Ethnic heritage sites	13
Concert, play, musical	11
Amusement/theme parks	11
Visit national parks	11

U.S. Resident Travel Abroad, 1997-2009[1]

Source: Office of Travel and Tourism Industries, Intl. Trade Admin., U.S. Dept. of Commerce

(numbers in thousands; regions ranked by most recent numbers)

Region/country[2]	**2009**	**2000**	**1997**
Total outbound[3]	**61,419**	**61,327**	**52,735**
Mexico	19,452	19,285	17,909
Canada	11,667	15,189	13,401
Overseas subtotal[4]	**30,300**	**26,853**	**21,634**
Europe	10,635	13,373	NA
Western Europe	9,848	12,916	NA
United Kingdom	2,727	4,189	3,570
France	1,909	2,927	2,098
Italy	1,848	2,148	1,471
Germany	1,545	2,309	1,796
Spain	1,151	1,262	714

Region/country[2]	**2009**	**2000**	**1997**
Asia	6,333	4,914	NA
Japan	1,515	1,262	1,082
China[5]	1,182	644	476
India	1,061	457	NA
Caribbean	5,696	3,867	NA
Dominican Rep.	1,454	NA	NA
South America	2,818	2,095	NA
Central America	2,060	886	NA
Middle East	1,909	1,370	NA
Eastern Europe	1,303	806	NA
Oceania	818	1,047	NA
Africa	1,061	483	NA

NA = Not available. **Note:** Visitation estimates for Canada and Mexico include all modes of transportation used. Estimates for all other countries are available only for air travel to that country and are based upon data from the airlines who voluntarily provide it. (1) Visits of one or more nights. (2) Only individual countries that received more than 1 mil visitors in 2008 are shown. Region figures include U.S. resident travelers to all countries in region. (3) Travelers to Canada, Mexico, and overseas. (4) Travelers to all countries except Canada and Mexico. (5) Not including Hong Kong, Macao, and Taiwan.

U.S. Airline Safety, Scheduled Commercial Carriers, 1985-2009

Source: National Transportation Safety Board; Federal Aviation Administration, U.S. Dept. of Transportation

Year	Departures (mil)	Fatal accidents	Fatalities[1]	Rate of fatal accidents[2]	Year	Departures (mil)	Fatal accidents	Fatalities[1]	Rate of fatal accidents[2]
1985	6.1	4	197	0.066	2000	11.1	2	89	0.018
1990	7.8	6	39	0.077	2001[3]	10.6	6	531	0.019
1992	7.5	4	33	0.053	2002	10.3	0	0	0.000
1993	7.7	1	1	0.013	2003	10.2	2	22	0.020
1994[3]	7.8	4	239	0.051	2004	10.8	1	13	0.009
1995	8.1	1	160	0.012	2005	10.9	3	22	0.027
1996	7.9	3	342	0.038	2006	10.6	2	50	0.019
1997	9.9	3	3	0.030	2007	10.7	0	0	—
1998	10.5	1	1	0.009	2008	10.3	0	0	—
1999	10.9	2	12	0.018	2009*	10.2	1	50	0.010

*Preliminary. (1) Includes deaths that occurred on the ground as a result of an accident, except for fatalities resulting from the Sept. 11, 2001, terrorist attacks. (2) Per 100,000 departures. (3) An illegal act, such as suicide or sabotage, is counted among fatal accidents and fatalities for this year but was not used in the calculation of accident rates.

U.S. Scheduled Airline Traffic, 2000-09

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(in millions, except where otherwise noted)

	2000	2002	2004	2005	2006	2007	2008	2009
Passengers enplaned	666.2	614.1	702.9	738.3	744.2	769.2	741.4	703.9
Revenue passenger miles[1]	692,757	642,242	733,680	778,563	796,795	829,033	811,440	769,485
Available seat miles[2]	956,950	894,217	971,466	1,002,735	1,005,534	1,037,116	1,020,147	957,198
Cargo revenue (ton miles)[1]	23,888	25,983	27,978	28,036	29,339	29,524	28,383	25,002
% of seating utilized	72.4	71.8	75.5	77.6	79.2	79.9	79.5	80.4
Passenger operating revenue	$93,622	$73,577	$85,646	$93,500	$101,419	$107,011	$111,535	$91,331
Net profit[3]	$2,486	–$11,008	–$7,643	–$5,782	$3,123	$4,998	–$9,464	–$2,528
Total employment[4]	679,967	601,355	569,498	562,467	545,695	560,997	556,920	536,236

(1) One fare-paying passenger or one ton of revenue cargo transported one mile. (2) One seat transported one mile. (3) For all years except 2009, excludes bankruptcy-related charges (reorganization expenses and fresh-start accounting gains). (4) Not in millions. Figures are of avg. full-time equivalents (FTE), i.e., the number of full-time employees that could have been employed if the reported number of hours worked by part-time employees had been worked by full-time employees. In this table, part-time employees are treated as 0.5 FTEs.

Top 25 U.S. Passenger Airlines, 2009

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(in thousands; ranked by number of passengers)

Airline	Passengers[2]	Airline	Passengers[2]	Airline	Passengers[2]	Airline	Passengers[2]
1. Delta	108,610	8. JetBlue	22,378	14. Mesa	10,963	20. Mesaba	6,724
2. Southwest	101,338	9. SkyWest	21,246	15. Pinnacle	10,744	21. Comair	6,315
3. American	85,720	10. American Eagle	16,013	16. Frontier	9,777	22. Spirit	6,089
4. United	56,025	11. Alaska	15,523	17. Republic	9,640	23. Chautauqua	5,960
5. US Airways	50,975	12. ExpressJet	13,277	18. Hawaiian	8,340	24. Air Wisconsin	5,576
6. Continental	43,946	13. Atlantic Southeast	13,170	19. Horizon	6,759	25. Shuttle America	5,219
7. AirTran	23,968						

(1) Domestic and international. Does not include passengers on flights with both origin and destination in a foreign country. (2) US Airways and America West merged in Sept. 2005. In Oct. 2007, US Airways started reporting a combined number for both.

Top North American Airports by Passenger Traffic, 2009

Source: Airports Council International-North America

City/airport name (airport code)	Total passengers[2]
1. Hartsfield-Jackson Atlanta Intl. (ATL)	88,032,086
2. Chicago O'Hare Intl. (ORD)	64,158,343
3. Los Angeles Intl. (LAX)	56,520,843
4. Dallas/Fort Worth Intl. (DFW)	56,030,457
5. Denver Intl. (DEN)	50,167,485
6. New York John F. Kennedy Intl. (JFK)	45,915,069
7. Las Vegas McCarran Intl. (LAS)	40,469,012
8. Houston George Bush Intercontinental (IAH)	40,007,354
9. Phoenix Sky Harbor Intl. (PHX)	37,824,982
10. San Francisco Intl. (SFO)	37,338,942
11. Charlotte Douglas Intl. (CLT)	34,536,666
12. Miami Intl. (MIA)	33,886,025
13. Orlando Intl. (MCO)	33,693,649
14. Newark Liberty Intl. (EWR)	33,399,207
15. Minneapolis-St. Paul Intl. (MSP)	32,378,599
16. Detroit Metro. Wayne Country (DTW)	31,357,388
17. Seattle-Tacoma Intl. (SEA)	31,227,512
18. Philadelphia Intl. (PHL)	30,669,564
19. Toronto Pearson Intl. (YYZ)	30,368,339
20. Boston Logan Intl. (BOS)	25,512,086
21. Washington Dulles Intl. (IAD)	23,073,665
22. New York LaGuardia (LGA)	22,142,336
23. Fort Lauderdale-Hollywood Intl. (FLL)	21,060,144
24. Baltimore/Washington Intl. Thurgood Marshall (BWI)	20,963,048
25. Salt Lake City Intl. (SLC)	20,442,178

Top World Airports by Passenger Traffic, 2009[1]

Source: Airports Council International

City/airport name (airport code)	Total passengers[2]
1. London Heathrow (UK; LHR)	66,037,578
2. Beijing Capital (China; PEK)	65,372,012
3. Tokyo Haneda (Japan; HND)	61,903,656
4. Paris Charles de Gaulle (France; CDG)	57,906,866
5. Frankfurt (Germany; FRA)	50,932,840
6. Madrid-Barajas (Spain; MAD)	48,250,784
7. Hong Kong Intl. (China; HKG)	45,558,807
8. Amsterdam Schiphol (Netherlands; AMS)	43,570,370
9. Dubai Intl. (United Arab Emirates; DXB)	40,901,752
10. Bangkok Intl. Suvarnabhumi (Thailand; BKK)	40,500,224
11. Singapore Changi (Singapore; SIN)	37,203,978
12. Jakarta Soekarno-Hatta Intl. (Indonesia; CGK)	37,143,719
13. Guangzhou Baiyun Intl. (China; CAN)	37,048,712
14. Rome Fiumicino Leonardo da Vinci (Italy; FCO)	33,723,213
15. Sydney (Australia; SYD)	33,451,383
16. Munich (Germany; MUC)	32,681,067
17. London Gatwick (UK; LGW)	32,398,979
18. Tokyo Narita Intl. (Japan; NRT)	32,135,191
19. Shanghai Pudong Intl. (China; PVG)	32,102,549
20. Toronto Pearson Intl. (Canada; YYZ)	30,368,339
21. Istanbul Ataturk (Turkey; IST)	29,854,119
22. Kuala Lumpur Intl. (Malaysia; KUL)	29,682,093
23. Seoul Incheon Intl. (South Korea; ICN)	28,677,161
24. Barcelona (Spain; BCN)	27,301,662
25. Delhi Indira Gandhi Intl. (India; DEL)	25,252,814

(1) Excludes U.S. airports and airports that do not participate in ACI's Airport Traffic Statistics collection. (2) Arriving and departing passengers and direct transit passengers counted once.

Top Travel Websites, 2010

Source: comScore Media Metrix
(ranked by number of visitors)

Website	Visitors (thous.)[1]	% of all travel websites	Website	Visitors (thous.)[1]	% of all travel websites
1. Expedia Inc.	30,059	29.9%	10. Delta Airlines	6,192	6.2
2. TravelAdNetwork	16,213	16.1	11. Hilton Hotels	6,013	6.0
3. Orbitz Worldwide	13,557	13.5	12. InterContinental Hotels Group	5,119	5.1%
4. Priceline.com Incorporated	13,109	13.0	13. American Airlines	5,074	5.0
5. Travelocity	11,237	11.2	14. CheapOair.com	4,904	4.9
6. Southwest Airlines Co.	10,087	10.0	15. AOL Travel	4,795	4.8
7. Yahoo! Travel	9,559	9.5	**Total travel audience[2]**	**100,569**	**100.0**
8. Kayak.com Network	6,582	6.5	**Total Internet audience[2]**	**215,061**	—
9. Marriott	6,514	6.5			

(1) Number of unique users who visited at least once in June 2010. (2) Audience comprises all persons older than 2 years of age, at U.S. home/work/college-university locations.

Number of Days Off Per Year in Selected Countries

Source: *2009 Worldwide Benefit and Employment Guidelines*, Mercer

The figures below represent the amount of paid time off that workers in selected countries are entitled to each year by law. Individual employers may offer additional paid time off beyond the legal guaranteed minimum. Countries may refer to workdays, calendar days, or weeks in their legal mandates.

Country	Paid vacation days	Paid holidays	Total paid days off	Country	Paid vacation days	Paid holidays	Total paid days off	Country	Paid vacation days	Paid holidays	Total paid days off
Brazil	30	11	41	Norway	25	10	35	Ireland	20	9	29
Lithuania	28	13	41	Portugal	22	13	35	Switzerland	20	9[2]	29
Finland	30	10	40	Slovakia	20	15	35	Australia	20	8	28
France	30	10	40	Denmark	25	9	34	Netherlands	20	8	28
Russia	28	12	40	South Korea	19	15	34	Taiwan	15	13	28
Austria	25	13	38	Hungary	23[1]	10	33	India	12	16[2]	28
Greece	25[1]	12	37	South Africa	21	12	33	Hong Kong	14	12	26
United Kingdom	28	8	36	Czech Republic	20	12	32	Singapore	14	11	25
Poland	26	10	36	Italy	20	11	31	China	10	11	21
Sweden	25	11	36	New Zealand	20	11	31	Canada	19[2]	9	19
Spain	22	14	36	Belgium	20	10	30	U.S.	0[3]	10	10
Japan	20	16	36	Germany	20	10[2]	30				

Note: The figures are based on statutory entitlements for an employee working five days a week with 10 years' service at the same employer. (1) Total varies according to age, ranging from 20 to 30. (2) Total varies across states, cantons, municipalities, or provinces. (3) No mandatory requirement. Typical total is 15 days.

Record-Breaking Roller Coasters

Source: UltimateRollercoaster.com; speeds measured in mph, lengths and heights in ft

Steel-Tracked Roller Coasters

Fastest	Roller coaster	Theme park, location
128 mph	Kingda Ka	Six Flags Great Adventure, Jackson, NJ
120	Top Thrill Dragster	Cedar Point, Sandusky, OH
106.8	Dodonpa	Fuji-Q High Land, Fujiyoshida-shi, Japan
100	Tower of Terror	Dreamworld, Gold Coast, Australia
100	Superman the Escape	Six Flags Magic Mountain, Valencia, CA
Tallest		
456 ft	Kingda Ka	Six Flags Great Adventure, Jackson, NJ
420	Top Thrill Dragster	Cedar Point, Sandusky, OH
415	Superman the Escape	Six Flags Magic Mountain, Valencia, CA
377	Tower of Terror	Dreamworld, Gold Coast, Australia
318	Steel Dragon 2000	Nagashima Spa Land, Mie, Japan
Largest drop		
418 ft	Kingda Ka	Six Flags Great Adventure, Jackson, NJ
400	Top Thrill Dragster	Cedar Point, Sandusky, OH
306	Steel Dragon 2000	Nagashima Spa Land, Mie, Japan
300	Millennium Force	Cedar Point, Sandusky, OH
300	Intimidator 305	Kings Dominion, Doswell, VA
Longest		
8,133 ft	Steel Dragon 2000	Nagashima Spa Land, Mie, Japan
7,450	The Ultimate	Lightwater Valley, UK
6,709	Fujiyama	Fuji-Q High Land, Fujiyoshida-shi, Japan
6,595	Millennium Force	Cedar Point, Sandusky, OH
6,072	California Screamin'	Disney's California Adventure, Anaheim, CA
Most inversions		
10	Colossus	Thorpe Park, Surrey, UK
10	10 Inversion Roller Coaster	Chimelong Paradise, Guangzhou, China

Wood-Tracked Roller Coasters

Fastest	Roller coaster	Theme park, location
78.3 mph	Son of Beast	Kings Island, Cincinnati, OH
74.6	Colossos	Heide Park, Soltau, Germany
70	El Toro	Six Flags Great Adventure, Jackson, NJ
67.4	The Voyage	Holiday World & Splashin' Safari, Santa Claus, IN
66.3	The Boss	Six Flags St. Louis, Eureka, MO
Tallest		
218 ft	Son of Beast	Kings Island, Cincinnati, OH
183	T Express	Everland, Yongin, S. Korea
181	El Toro	Six Flags Great Adventure, Jackson, NJ
179	The Rattler	Six Flags Fiesta Texas, San Antonio, TX
173	The Voyage	Holiday World & Splashin' Safari, Santa Claus, IN
Largest drop		
214 ft	Son of Beast	Kings Island, Cincinnati, OH
176	El Toro	Six Flags Great Adventure, Jackson, NJ
159	Colossos	Heide Park, Soltau, Germany
155	Mean Streak	Cedar Point, Sandusky, OH
154	The Voyage	Holiday World & Splashin' Safari, Santa Claus, IN
Longest		
7,400 ft	The Beast	Kings Island, Cincinnati, OH
7,032	Son of Beast	Kings Island, Cincinnati, OH
6,442	The Voyage	Holiday World & Splashin' Safari, Santa Claus, IN
5,427	Mean Streak	Cedar Point, Sandusky, OH
5,384	Shivering Timbers	Michigan's Adventure, Muskegon, MI

Passports, Health Regulations, and Travel Warnings for Foreign Travel

Source: Bureau of Consular Affairs, U.S. Dept. of State; Centers for Disease Control and Prevention (CDC), U.S. Dept. of Health and Human Services; World Health Organization (WHO); Transportation Security Administration (TSA), U.S. Dept. of Homeland Security

Passports, Visas

Passports are issued by the Dept. of State to U.S. citizens and nationals to provide documentation for foreign travel. As of Aug. 2010, the fees for a new passport for persons ages 16 and over total $135; provided certain criteria are met, passports can be renewed for $110.

In July 2008, the U.S. government began issuing passport cards. Travelers arriving by land or sea from Canada, Mexico, the Caribbean (17 nations), and Bermuda may present a passport card to enter the U.S. Passport cards may not be used for air travel, however. The fees for a new passport card for persons ages 16 and over total $55.

A U.S. passport is often sufficient for U.S. citizens to gain admission for a limited stay in another country. Some countries also require a visa before entering. Each country has its own specific guidelines concerning length and purpose of visit, among other considerations. Visitors may need to provide proof of sufficient funds for their intended stay, onward/return tickets, and/or at least 6 months remaining validity on their U.S. passports.

All persons traveling by air outside of the U.S. (excluding direct travel to and from a U.S. territory) are required to present a passport or other valid document upon reentering the U.S.

For up-to-date passport and international travel information, visit the Consular Affairs website (travel.state.gov) or call the National Passport Information Center at 1-877-4USA-PPT (1-877-487-2778).

Health Regulations

Under WHO regulations, first instituted in 1969, member countries agree to abide by resolutions meant to contain the spread of disease. For example, some countries require travelers to provide proof of vaccination against yellow fever before entering.

Detailed information can be found in *Health Information for International Travel*, or the "Yellow Book," published every two years by the CDC. The book is written primarily for health care providers but may be of use to other travelers. The CDC also issues travel notices of outbreaks, health precautions, and health warnings. For current notices and more on travelers' health, visit www.cdc.gov/travel.

WHO publishes a more technical guide, *International Travel and Health*, which can be found online at www.who.int/ith.

Travel Warnings and Alerts

The State Dept. issues travel warnings as recommendations that Americans avoid travel to certain countries. Long-term conditions in such countries may be dangerous or unstable; because of an embassy closure or limited personnel, the U.S. government's ability to assist U.S. citizens is also reduced. As of Aug. 2010, travel warnings were in effect for the following countries: Afghanistan, Algeria, Burundi, Central African Republic, Chad, Colombia, Côte d'Ivoire, Dem. Rep. of the Congo, Eritrea, Georgia, Guinea, Haiti, Iran, Iraq, Israel (incl. West Bank and Gaza), Kenya, Lebanon, Mali, Mauritania, Mexico, Nepal, Niger, Nigeria, Pakistan, Philippines, Saudi Arabia, Somalia, Sudan, Uzbekistan, and Yemen.

The department issues travel alerts when it has concerns about short-term conditions—natural disasters, terrorist attacks, anniversaries of attacks, election-related demonstrations, and regional sporting events, among others—within a country or area. For the latest travel warnings and alerts, see travel.state.gov.

Summary of TSA Regulations

Airplane carry-ons. TSA promotes the "3-1-1" rule regarding carry-on items. Containers with liquids or gels may hold only **3.4** oz or less; these containers should be packed inside a single **1**-quart, clear plastic, zip-top bag; and this **1** bag must be placed in a bin when going through security. Exceptions to the 3-1-1 rule include medication, baby formula and food, and breast milk. Travelers must declare any exceptions at security.

Security checkpoint identification. Adult travelers (18 years of age and over) must present a U.S. federal or state-issued photo ID. The ID must have name, date of birth, sex, expiration date, and a tamper-resistant feature. Acceptable documents: U.S. passport or passport card; foreign government-issued passport; state-issued drivers license; permanent resident card; or U.S. military ID, among others.

Screening process. Travelers may wear loose fitting or religious garments (incl. head coverings) through security. They may be subject to additional screening if clothing could potentially conceal prohibited items. Travelers may request a private area if selected for personal screening. In most cases, travelers will be screened by someone of the same gender.

Disability-related permitted carry-on items:

- Wheelchairs
- Crutches, canes, and walkers
- Personal supplemental oxygen
- Slate and stylus
- Medications and associated supplies
- Service animals

Permitted carry-on items:

- Safety razors (incl. disposable razors)
- Eye drops (amounts greater than 3.4 oz must be declared)
- Nail clippers, tweezers
- Blunt-tipped plastic or metal scissors
- Mobile phones
- Umbrellas (must be inspected at security)
- Common lighters
- Beverages (any size) purchased after security screening
- Musical instruments (one per traveler going through security, though some airlines prohibit musical instruments as carry-ons)

Prohibited carry-on items:

- Knives (except for plastic or round-bladed butter knives), incl. knives that are religious objects
- Baseball bats, golf clubs
- Flares
- Realistic firearm replicas
- Hammers, screwdrivers, wrenches, pliers, and other tools more than 7 in. in length
- Brass knuckles
- Lighter fluid
- Liquid bleach
- Spray paint
- Snow globes

For complete travel information, visit www.tsa.gov/travelers

Road Mileage Between Selected U.S. Cities

	Atlanta	Boston	Chicago	Cincinnati	Cleveland	Dallas	Denver	Des Moines	Detroit	Houston
Atlanta, GA	...	1,037	674	440	672	795	1,398	870	699	789
Boston, MA	1,037	...	963	840	628	1,748	1,949	1,280	695	1,804
Chicago, IL	674	963	...	287	335	917	996	327	266	1,067
Cincinnati, OH	440	840	287	...	244	920	1,164	571	259	1,029
Cleveland, OH	672	628	335	244	...	1,159	1,321	652	170	1,273
Dallas, TX	795	1,748	917	920	1,159	...	781	684	1,143	243
Denver, CO	1,398	1,949	996	1,164	1,321	781	...	669	1,253	1,019
Detroit, MI	699	695	266	259	170	1,143	1,253	584	...	1,265
Houston, TX	789	1,804	1,067	1,029	1,273	243	1,019	905	1,265	...
Indianapolis, IN	493	906	181	106	294	865	1,058	465	278	987
Kansas City, MO	798	1,391	499	591	779	489	600	195	743	710
Los Angeles, CA	2,182	2,979	2,054	2,179	2,367	1,387	1,059	1,727	2,311	1,538
Memphis, TN	371	1,296	530	468	712	452	1,040	599	713	561
Milwaukee, WI	761	1,050	87	374	422	991	1,029	361	353	1,142
Minneapolis, MN	1,068	1,368	405	692	740	936	841	252	671	1,157
New Orleans, LA	479	1,507	912	786	1,030	496	1,273	978	1,045	356
New York, NY	841	206	802	647	473	1,552	1,771	1,119	637	1,608
Omaha, NE	986	1,412	459	693	784	644	537	132	716	865
Philadelphia, PA	741	296	738	567	413	1,452	1,691	1,051	573	1,508
Pittsburgh, PA	687	561	452	287	129	1,204	1,411	763	287	1,313
Portland, OR	2,601	3,046	2,083	2,333	2,418	2,009	1,238	1,786	2,349	2,205
St. Louis, MO	541	1,141	289	340	529	630	857	333	513	779
San Francisco, CA	2,496	3,095	2,142	2,362	2,467	1,753	1,235	1,815	2,399	1,912
Seattle, WA	2,618	2,976	2,013	2,300	2,348	2,078	1,307	1,749	2,279	2,274
Tulsa, OK	772	1,537	683	736	925	257	681	443	909	478
Washington, DC	608	429	671	481	346	1,319	1,616	984	506	1,375

	Indianapolis	Kansas City	Los Angeles	Louisville	Memphis	Milwaukee	Minneapolis	New Orleans	New York	Omaha
Atlanta, GA	493	798	2,182	382	371	761	1,068	479	841	986
Boston, MA	906	1,391	2,979	941	1,296	1,050	1,368	1,507	206	1,412
Chicago, IL	181	499	2,054	292	530	87	405	912	802	459
Cincinnati, OH	106	591	2,179	101	468	374	692	786	647	693
Cleveland, OH	294	779	2,367	345	712	422	740	1,030	473	784
Dallas, TX	865	489	1,387	819	452	991	936	496	1,552	644
Denver, CO	1,058	600	1,059	1,120	1,040	1,029	841	1,273	1,771	537
Detroit, MI	278	743	2,311	360	713	353	671	1,045	637	716
Houston, TX	987	710	1,538	928	561	1,142	1,157	356	1,608	865
Indianapolis, IN	...	485	2,073	111	435	268	586	796	713	587
Kansas City, MO	485	...	1,589	520	451	537	447	806	1,198	201
Los Angeles, CA	2,073	1,589	...	2,108	1,817	2,087	1,889	1,883	2,786	1,595
Memphis, TN	435	451	1,817	367	...	612	826	390	1,100	652
Milwaukee, WI	268	537	2,087	379	612	...	332	994	889	493
Minneapolis, MN	586	447	1,889	697	826	332	...	1,214	1,207	357
New Orleans, LA	796	806	1,883	685	390	994	1,214	...	1,311	1,007
New York, NY	713	1,198	2,786	748	1,100	889	1,207	1,311	...	1,251
Omaha, NE	587	201	1,595	687	652	493	357	1,007	1,251	...
Philadelphia, PA	633	1,118	2,706	668	1,000	825	1,143	1,211	100	1,183
Pittsburgh, PA	353	838	2,426	388	752	539	857	1,070	368	895
Portland, OR	2,272	1,809	959	2,320	2,259	2,010	1,678	2,505	2,885	1,654
St. Louis, MO	235	257	1,845	263	285	363	552	673	948	449
San Francisco, CA	2,293	1,835	379	2,349	2,125	2,175	1,940	2,249	2,934	1,683
Seattle, WA	2,194	1,839	1,131	2,305	2,290	1,940	1,608	2,574	2,815	1,638
Tulsa, OK	631	248	1,452	659	401	757	695	647	1,344	387
Washington, DC	558	1,043	2,631	582	867	758	1,076	1,078	233	1,116

	Philadelphia	Pittsburgh	Portland	St. Louis	Salt Lake City	San Francisco	Seattle	Toledo	Tulsa	Wash., DC
Atlanta, GA	741	687	2,601	541	1,878	2,496	2,618	640	772	608
Boston, MA	296	561	3,046	1,141	2,343	3,095	2,976	739	1,537	429
Chicago, IL	738	452	2,083	289	1,390	2,142	2,013	232	683	671
Cincinnati, OH	567	287	2,333	340	1,610	2,362	2,300	200	736	481
Cleveland, OH	413	129	2,418	529	1,715	2,467	2,348	111	925	346
Dallas, TX	1,452	1,204	2,009	630	1,242	1,753	2,078	1,084	257	1,319
Denver, CO	1,691	1,411	1,238	857	504	1,235	1,307	1,218	681	1,616
Detroit, MI	576	287	2,349	513	1,647	2,399	2,279	59	909	506
Houston, TX	1,508	1,313	2,205	779	1,438	1,912	2,274	1,206	478	1,375
Indianapolis, IN	633	353	2,272	235	1,504	2,293	2,194	219	631	558
Kansas City, MO	1,118	838	1,809	257	1,086	1,835	1,839	687	248	1,043
Los Angeles, CA	2,706	2,426	959	1,845	715	379	1,131	2,276	1,452	2,631
Memphis, TN	1,000	752	2,259	285	1,535	2,125	2,290	654	401	867
Milwaukee, WI	825	539	2,010	363	1,423	2,175	1,940	319	757	758
Minneapolis, MN	1,143	857	1,678	552	1,186	1,940	1,608	637	695	1,076
New Orleans, LA	1,211	1,070	2,505	673	1,738	2,249	2,574	986	647	1,078
New York, NY	100	368	2,885	948	2,182	2,934	2,815	578	1,344	233
Omaha, NE	1,183	895	1,654	449	931	1,683	1,638	681	387	1,116
Philadelphia, PA	...	288	2,821	868	2,114	2,866	2,751	514	1,264	133
Pittsburgh, PA	288	...	2,535	588	1,826	2,578	2,465	228	984	221
Portland, OR	2,821	2,535	...	2,060	767	636	172	2,315	1,913	2,754
St. Louis, MO	868	588	2,060	...	1,337	2,089	2,081	454	396	793
San Francisco, CA	2,866	2,578	636	2,089	752	...	808	2,364	1,760	2,799
Seattle, WA	2,751	2,465	172	2,081	836	808	...	2,245	1,982	2,684
Tulsa, OK	1,264	984	1,913	396	1,172	1,760	1,982	850	...	1,189
Washington, DC	133	221	2,754	793	2,047	2,799	2,684	447	1,189	...

Air Distances Between Selected World Cities in Statute Miles

Point-to-point measurements are usually from City Hall.

	Bangkok	Beijing	Berlin	Cairo	Cape Town	Caracas	Chicago	Hong Kong	Honolulu	Lima
Bangkok	...	2,046	5,352	4,523	6,300	10,555	8,570	1,077	6,609	12,244
Beijing	2,046	...	4,584	4,698	8,044	8,950	6,604	1,217	5,077	10,349
Berlin	5,352	4,584	...	1,797	5,961	5,238	4,414	5,443	7,320	6,896
Cairo	4,523	4,698	1,797	...	4,480	6,342	6,141	5,066	8,848	7,726
Cape Town	6,300	8,044	5,961	4,480	...	6,366	8,491	7,376	11,535	6,072
Caracas	10,555	8,950	5,238	6,342	6,366	...	2,495	10,165	6,021	1,707
Chicago	8,570	6,604	4,414	6,141	8,491	2,495	...	7,797	4,256	3,775
Hong Kong	1,077	1,217	5,443	5,066	7,376	10,165	7,797	...	5,556	11,418
Honolulu	6,609	5,077	7,320	8,848	11,535	6,021	4,256	5,556	...	5,947
London	5,944	5,074	583	2,185	5,989	4,655	3,958	5,990	7,240	6,316
Los Angeles	7,637	6,250	5,782	7,520	9,969	3,632	1,745	7,240	2,557	4,171
Madrid	6,337	5,745	1,165	2,087	5,308	4,346	4,189	6,558	7,872	5,907
Melbourne	4,568	5,643	9,918	8,675	6,425	9,717	9,673	4,595	5,505	8,059
Mexico City	9,793	7,753	6,056	7,700	8,519	2,234	1,690	8,788	3,789	2,639
Montreal	8,338	6,519	3,740	5,427	7,922	2,438	745	7,736	4,918	3,970
Moscow	4,389	3,607	1,006	1,803	6,279	6,177	4,987	4,437	7,047	7,862
New York	8,669	6,844	3,979	5,619	7,803	2,120	714	8,060	4,969	3,639
Paris	5,877	5,120	548	1,998	5,786	4,732	4,143	5,990	7,449	6,370
Rio de Janeiro	9,994	10,768	6,209	6,143	3,781	2,804	5,282	11,009	8,288	2,342
Rome	5,494	5,063	737	1,326	5,231	5,195	4,824	5,774	8,040	6,750
San Francisco	7,931	5,918	5,672	7,466	10,248	3,902	1,859	6,905	2,398	4,518
Singapore	883	2,771	6,164	5,137	6,008	11,402	9,372	1,605	6,726	11,689
Stockholm	5,089	4,133	528	2,096	6,423	5,471	4,331	5,063	6,875	7,166
Tokyo	2,865	1,307	5,557	5,958	9,154	8,808	6,314	1,791	3,859	9,631
Warsaw	5,033	4,325	322	1,619	5,935	5,559	4,679	5,147	7,366	7,215
Washington, DC	8,807	6,942	4,181	5,822	7,895	2,047	596	8,155	4,838	3,509

	London	Los Angeles	Madrid	Mel-bourne	Mexico City	Montreal	Moscow	New Delhi	New York	Paris
Bangkok	5,944	7,637	6,337	4,568	9,793	8,338	4,389	1,813	8,669	5,877
Beijing	5,074	6,250	5,745	5,643	7,753	6,519	3,607	2,353	6,844	5,120
Berlin	583	5,782	1,165	9,918	6,056	3,740	1,006	3,598	3,979	548
Cairo	2,185	7,520	2,087	8,675	7,700	5,427	1,803	2,758	5,619	1,998
Cape Town	5,989	9,969	5,308	6,425	8,519	7,922	6,279	5,769	7,803	5,786
Caracas	4,655	3,632	4,346	9,717	2,234	2,438	6,177	8,833	2,120	4,732
Chicago	3,958	1,745	4,189	9,673	1,690	745	4,987	7,486	714	4,143
Hong Kong	5,990	7,240	6,558	4,595	8,788	7,736	4,437	2,339	8,060	5,990
Honolulu	7,240	2,557	7,872	5,505	3,789	4,918	7,047	7,412	4,969	7,449
London	...	5,439	785	10,500	5,558	3,254	1,564	4,181	3,469	214
Los Angeles	5,439	...	5,848	7,931	1,542	2,427	6,068	7,011	2,451	5,601
Madrid	785	5,848	...	10,758	5,643	3,448	2,147	4,530	3,593	655
Melbourne	10,500	7,931	10,758	...	8,426	10,395	8,950	6,329	10,359	10,430
Mexico City	5,558	1,542	5,643	8,426	...	2,317	6,676	9,120	2,090	5,725
Montreal	3,254	2,427	3,448	10,395	2,317	...	4,401	7,012	331	3,432
Moscow	1,564	6,068	2,147	8,950	6,676	4,401	...	2,698	4,683	1,554
New York	3,469	2,451	3,593	10,359	2,090	331	4,683	7,318	...	3,636
Paris	214	5,601	655	10,430	5,725	3,432	1,554	4,102	3,636	...
Rio de Janeiro	5,750	6,330	5,045	8,226	4,764	5,078	7,170	8,753	4,801	5,684
Rome	895	6,326	851	9,929	6,377	4,104	1,483	3,684	4,293	690
San Francisco	5,367	347	5,803	7,856	1,887	2,543	5,885	7,691	2,572	5,577
Singapore	6,747	8,767	7,080	3,759	10,327	9,203	5,228	2,571	9,534	6,673
Stockholm	942	5,454	1,653	9,630	6,012	3,714	716	3,414	3,986	1,003
Tokyo	5,959	5,470	6,706	5,062	7,035	6,471	4,660	3,638	6,757	6,053
Warsaw	905	5,922	1,427	9,598	6,337	4,022	721	3,277	4,270	852
Washington, DC	3,674	2,300	3,792	10,180	1,885	489	4,876	7,500	205	3,840

	Rio de Janeiro	Rome	San Francisco	Singa-pore	Stock-holm	Tehran	Tokyo	Vienna	Warsaw	Wash., DC
Bangkok	9,994	5,494	7,931	883	5,089	3,391	2,865	5,252	5,033	8,807
Beijing	10,768	5,063	5,918	2,771	4,133	3,490	1,307	4,648	4,325	6,942
Berlin	6,209	737	5,672	6,164	528	2,185	5,557	326	322	4,181
Cairo	6,143	1,326	7,466	5,137	2,096	1,234	5,958	1,481	1,619	5,822
Cape Town	3,781	5,231	10,248	6,008	6,423	5,241	9,154	5,656	5,935	7,895
Caracas	2,804	5,195	3,902	11,402	5,471	7,320	8,808	5,372	5,559	2,047
Chicago	5,282	4,824	1,859	9,372	4,331	6,502	6,314	4,698	4,679	596
Hong Kong	11,009	5,774	6,905	1,605	5,063	3,843	1,791	5,431	5,147	8,155
Honolulu	8,288	8,040	2,398	6,726	6,875	8,070	3,859	7,632	7,366	4,838
London	5,750	895	5,367	6,747	942	2,743	5,959	771	905	3,674
Los Angeles	6,330	6,326	347	8,767	5,454	7,682	5,470	6,108	5,922	2,300
Madrid	5,045	851	5,803	7,080	1,653	2,978	6,706	1,128	1,427	3,792
Melbourne	8,226	9,929	7,856	3,759	9,630	7,826	5,062	9,790	9,598	10,180
Mexico City	4,764	6,377	1,887	10,327	6,012	8,184	7,035	6,320	6,337	1,885
Montreal	5,078	4,104	2,543	9,203	3,714	5,880	6,471	4,009	4,022	489
Moscow	7,170	1,483	5,885	5,228	716	1,532	4,660	1,043	721	4,876
New York	4,801	4,293	2,572	9,534	3,986	6,141	6,757	4,234	4,270	205
Paris	5,684	690	5,577	6,673	1,003	2,625	6,053	645	852	3,840
Rio de Janeiro	...	5,707	6,613	9,785	6,683	7,374	11,532	6,127	6,455	4,779
Rome	5,707	...	6,259	6,229	1,245	2,127	6,142	477	820	4,497
San Francisco	6,613	6,259	...	8,448	5,399	7,362	5,150	5,994	5,854	2,441
Singapore	9,785	6,229	8,448	...	5,936	4,103	3,300	6,035	5,843	9,662
Stockholm	6,683	1,245	5,399	5,936	...	2,173	5,053	780	494	4,183
Tokyo	11,532	6,142	5,150	3,300	5,053	4,775	...	5,689	5,347	6,791
Warsaw	6,455	820	5,854	5,843	494	1,879	5,689	347	...	4,472
Washington, DC	4,779	4,497	2,441	9,662	4,183	6,341	6,791	4,438	4,472	...

AGRICULTURE

Number and Acreage of Farms by State, 2000, 2009

Source: National Agricultural Statistics Service, U.S. Dept. of Agriculture

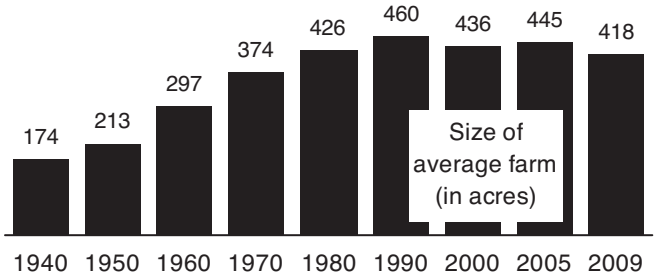
State	No. of farms (thous.) 2009	No. of farms (thous.) 2000[1]	Acreage in farms (mil) 2009	Acreage in farms (mil) 2000	Acreage per farm 2009	Acreage per farm 2000	State	No. of farms (thous.) 2009	No. of farms (thous.) 2000[1]	Acreage in farms (mil) 2009	Acreage in farms (mil) 2000	Acreage per farm 2009	Acreage per farm 2000
AL	48.5	47.0	9.0	9.0	186	191	NE	47.2	46.1	45.6	46.1	966	887
AK	0.7	0.6	0.9	0.9	1,294	1,569	NV	3.1	3.1	5.9	6.4	1,916	2,065
AZ	15.5	10.7	26.1	26.9	1,684	2,518	NH	4.2	3.3	0.5	0.4	113	133
AR	49.1	48.0	13.6	14.6	277	304	NJ	10.3	9.7	0.7	0.8	71	86
CA	81.5	83.1	25.4	28.0	312	337	NM	20.5	18.0	43.0	44.9	2,098	2,494
CO	36.2	30.0	31.3	31.6	865	1,060	NY	36.6	37.5	7.1	7.7	194	205
CT	4.9	4.2	0.4	0.4	82	86	NC	52.4	55.5	8.6	9.2	164	166
DE	2.5	2.6	0.5	0.6	198	215	ND	32.0	30.8	39.6	39.4	1,238	1,279
FL	47.5	44.0	9.3	10.4	195	238	OH	74.9	79.0	13.8	14.8	184	187
GA	47.6	49.1	10.3	10.9	216	223	OK	86.5	84.5	35.1	33.8	406	401
HI	7.5	5.5	1.1	1.4	149	251	OR	38.6	40.0	16.4	17.3	425	433
ID	25.5	24.5	11.4	11.9	447	486	PA	63.2	59.0	7.8	7.7	123	130
IL	75.8	77.0	26.7	27.5	352	357	PR[2]	10.4	NA	0.5	NA	43	NA
IN	61.5	63.4	14.8	15.2	241	240	RI	1.2	0.8	0.1	0.1	57	75
IA	92.6	94.0	30.8	32.5	333	346	SC	27.0	24.2	4.9	4.9	181	203
KS	65.5	64.5	46.2	47.5	705	736	SD	31.5	32.4	43.7	44.0	1,387	1,358
KY	85.5	90.0	14.0	13.7	164	152	TN	78.7	88.0	10.9	11.8	139	134
LA	30.0	29.0	8.1	8.0	268	277	TX	247.5	228.3	130.4	130.9	527	573
ME	8.1	7.1	1.4	1.4	167	190	UT	16.6	15.5	11.1	11.6	669	747
MD	12.8	12.4	2.1	2.1	160	172	VT	7.0	6.6	1.2	1.3	174	192
MA	7.7	6.1	0.5	0.5	68	89	VA	47.0	48.5	8.0	8.7	170	180
MI	54.8	53.0	10.0	10.2	182	192	WA	39.5	37.0	14.8	15.6	375	420
MN	81.0	81.0	26.9	27.9	332	344	WV	23.2	20.8	3.7	3.6	159	173
MS	42.3	42.0	11.1	11.2	261	266	WI	78.0	77.5	15.2	16.0	195	206
MO	108.0	109.0	29.1	30.2	269	277	WY	11.0	9.2	30.2	34.5	2,745	3,750
MT	29.8	27.8	60.8	59.3	2,040	2,133	**U.S.[3]**	**2,200.0**	**2,166.8**	**919.8**	**945.1**	**418**	**436**

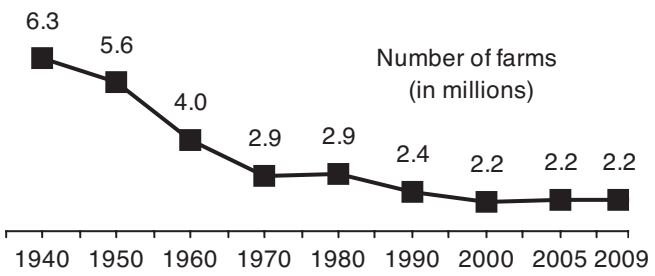
NA = Not available. (1) Some figures for 2000 are revised. (2) Puerto Rico not incl. in U.S. total. (3) Totals may be different due to rounding.

U.S. Farms, Number and Average Size, 1940-2009

Source: National Agricultural Statistics Service, U.S. Dept. of Agriculture

The number of farms in the United States in 2009 was estimated at 2.2 million, about 90 fewer than in 2008. Total land in farms decreased 110,000 acres from 2008, to 919.8 million acres. The average farm size in 2009 was 418 acres, unchanged from the previous year. The continuing decline in the number of farms and land being farmed reflected consolidation in farming operations and the use of agricultural land for other purposes.





U.S. Federal Food Assistance Programs, 1990-2009

Source: Food and Nutrition Service (FNS), U.S. Dept. of Agriculture

(in millions of dollars)

Program[1]	1990	1995	2000	2003	2004	2005	2006	2007	2008	2009
Supplemental Nutrition Assistance Program (SNAP)[2]	$15,491	$24,620	$17,054	$23,816	$27,098	$31,073	$32,912	$33,193	$37,657	$53,630
Puerto Rico nutrition asst.[3]	937	1,131	1,268	1,395	1,413	1,495	1,518	1,551	1,623	2,001
Natl. school lunch[4]	3,834	5,160	6,149	7,189	7,626	8,031	8,191	8,741	9,318	9,992
School breakfast[4,5]	596	1,048	1,393	1,652	1,776	1,927	2,043	2,164	2,366	2,582
WIC (Women, Infants, and Children)[6]	2,122	3,440	3,982	4,524	4,887	4,994	5,077	5,416	6,191	6,478
Summer food service[7]	164	237	267	257	263	267	276	290	326	348
Child/adult care[8]	813	1,464	1,683	1,926	2,020	2,111	2,152	2,237	2,403	2,535
Special milk[9]	19	17	15	14	14	16	16	14	15	14
Nutrition for the elderly (NSIP)[10]	142	148	137	3	4	4	3	3	2	2
Food distrib. to Indian reserv.[11]	66	65	76	75	78	76	76	81	96	100
Commodity supp. food prog.[11]	85	99	98	122	145	156	131	142	161	155
Food dist. to charitable inst.[12]	104	64	2	6	10	4	3	0	0	0
Emergency food assistance[13]	334	135	225	456	420	373	300	255	283	616
Total[14]	**$24,707**	**$37,628**	**$32,317**	**$41,565**	**$45,891**	**$50,673**	**$52,868**	**$54,254**	**$60,625**	**$78,995**

(1) Data are for fiscal years ending Sept. 30. All 2009 data are preliminary; all data subject to revision by the FNS. (2) Formerly known as the Food Stamp Program. Includes benefits and admin. expenses. (3) Provides benefits analogous to SNAP. (4) Data are 9-month averages (summer months excluded). (5) Costs are cash payments (federal reimbursements to states). (6) Includes food benefits, nutrition services and admin. funds, Farmers' Market Nutrition Program, infrastructure, breastfeeding promotion and peer counseling, program evaluation, and technical assistance. (7) Includes cash payments, commodity costs, and admin. expenditures. Similar services provided by Natl. School Lunch and Breakfast programs. (8) Includes cash payments, entitlement and bonus commodities, cash-in-lieu of commodities, sponsor admin. costs, start-up costs, and audits. (9) Costs are cash payments. (10) For years 2003 and on, program was administered by the Agency on Aging; Food and Nutrition Service costs limited to value of commodities distributed. (11) Includes commodity distribution costs and admin. expenses. (12) Includes summer camps. (13) Food made available to hunger relief orgs. such as food banks and soup kitchens. (14) Totals may not add because of rounding and administrative costs not shown.

U.S. Cost of Food, 2009

Source: Center for Nutrition Policy and Promotion, U.S. Dept. of Agriculture

	Weekly cost[1]				Monthly cost[1]			
	Thrifty plan	Low-cost plan	Mod.-cost plan	Liberal plan	Thrifty plan	Low-cost plan	Mod.-cost plan	Liberal plan
Individual child, age[2]								
1 year	$19.80	$26.30	$30.20	$36.40	$86.00	$114.20	$130.80	$157.70
2-3 years	21.50	26.90	32.70	39.70	93.00	116.50	141.60	172.00
4-5 years	22.20	28.10	34.80	42.40	96.10	122.00	150.80	183.80
6-8 years	28.30	38.30	47.30	55.70	122.80	166.10	205.10	241.50
9-11 years	32.50	42.60	55.00	64.20	140.90	184.60	238.30	278.10
Individual male, age[2]								
12-13 years	34.60	48.70	60.70	71.50	150.00	210.90	263.00	309.60
14-18 years	35.60	50.10	62.90	71.90	154.40	217.00	272.40	311.70
19-50 years	38.40	49.50	62.10	76.10	166.30	214.50	268.90	329.90
51-70 years	35.10	46.80	57.50	69.70	151.90	202.90	249.10	301.90
71+ years	35.30	46.30	57.70	71.00	153.10	200.80	249.90	307.50
Individual female, age[2]								
12-13 years	34.80	42.20	50.90	61.70	150.80	182.90	220.60	267.50
14-18 years	34.30	42.50	51.50	63.20	148.50	184.20	223.20	273.70
19-50 years	34.10	43.00	53.10	68.00	147.90	186.20	230.30	294.80
51-70 years	33.70	41.90	52.10	62.10	146.10	181.40	225.60	269.10
71+ years	33.30	41.50	51.70	62.30	144.20	179.80	224.00	269.90
2-person family[3], age								
19-50 years	79.80	101.70	126.70	158.60	345.60	440.80	549.10	687.30
51-70 years	75.70	97.60	120.50	145.00	327.80	422.70	522.10	628.10
4-person family[3,4] 2 children, ages								
2-3 and 4-5 years	116.20	147.50	182.70	226.30	503.30	639.20	791.60	980.60
6-8 and 9-11 years	133.40	173.40	217.50	264.10	577.90	751.40	942.50	1,144.40

Note: The Food Plans represent a nutritious diet at 4 different cost levels. The nutritional bases of the Food Plans are the 1997-2005 Dietary Reference Intakes, 2005 Dietary Guidelines for Americans, and 2005 MyPyramid food intake recommendations. In addition to cost, differences among plans are in specific foods and quantities of foods. Another basis of the Food Plans is that all meals and snacks are prepared at home. For specific foods and quantities of foods in the Food Plans, see *Thrifty Food Plan, 2006* and *The Low-Cost, Moderate-Cost, and Liberal Food Plans, 2007* from the source. All 4 food plans are based on 2001-02 data and updated to current dollars by using the Consumer Price Index for specific food items. (1) All costs are rounded to nearest 10 cents. (2) The costs given are for individuals in 4-person families. (3) Ten percent added for family size adjustment. (4) 4-person family is defined as couple, age 19-50 years, and two children.

U.S. Annual Per Capita Consumption of Selected Foods, 1970-2008

Source: Economic Research Service, U.S. Dept. of Agriculture
(fruits and vegetables in pounds; beverages in gallons)

	1970	1990	2008	% change, 1970-2008
Fresh fruit	**96.2**	**111.0**	**120.4**	**25.2%**
Apples	16.3	18.8	15.5	–4.9
Avocados	0.4	1.3	3.7	825.0
Bananas	17.4	24.3	25.1	44.3
Cherries	0.5	0.4	0.9	80.0
Grapes	2.6	7.1	7.8	200.0
Melons	19.6	22.3	23.6	20.4
Grapefruit	8.0	4.3	3.1	–61.3
Oranges	15.7	12.0	9.6	–38.9
Peaches/nectarines	5.5	5.3	4.8	–12.7
Pears	1.8	3.1	3.0	66.7
Pineapples	0.7	1.9	4.8	585.7
Plums/prunes	1.4	1.5	0.9	–35.7
Strawberries	1.6	3.0	5.9	268.8
Canned vegetables	**100.6**	**110.3**	**95.2**	**–5.4**
Carrots	2.1	1.2	1.0	–52.4
Green peas	3.2	1.9	1.1	–65.6
Snap beans	4.7	3.7	3.3	–29.8
Sweet corn	14.3	10.9	6.7	–53.1
Tomatoes	62.1	75.3	67.2	8.2
Frozen vegetables	**43.8**	**66.8**	**73.1**	**66.9**
Broccoli	1.0	2.2	2.7	170.0
Carrots	1.4	2.3	1.6	14.3
Green peas	1.9	2.2	1.8	–5.3
Potatoes	28.5	46.4	51.9	82.1
Sweet corn	5.8	8.6	8.4	44.8

NA = Not available.

	1970	1990	2008	% change, 1970-2008
Fresh vegetables	**154.3**	**176.4**	**187.7**	**21.6%**
Bell peppers	2.0	5.4	9.1	355.0
Broccoli	0.5	3.1	5.5	1,000.0
Cabbage	8.1	7.8	7.6	–6.2
Carrots	5.8	8.0	7.8	34.5
Cauliflower	0.7	2.0	1.4	100.0
Celery	6.8	6.7	5.8	–14.7
Cucumbers	2.6	4.3	6.2	138.5
Garlic	0.4	1.1	2.2	450.0
Head lettuce	20.8	25.8	15.7	–24.5
Mushrooms	0.3	1.9	2.3	666.7
Onions	9.5	14.2	18.0	89.5
Potatoes	59.3	44.9	35.2	–40.6
Snap beans	1.5	1.0	2.0	33.3
Squash	1.2	3.2	3.8	216.7
Sweet corn	7.2	6.2	8.5	18.1
Tomatoes	10.3	13.2	15.7	52.4
Beverages				
Coffee	33.4	26.8	24.2	–27.5
Bottled water	NA	8.8	NA	NA
Carbonated soft drinks	24.3	46.2	NA	NA
Regular	22.2	35.6	NA	NA
Diet	2.1	10.7	NA	NA
Fruit juice	5.5	7.0	6.9	25.5
Beer	18.5	23.9	21.7	17.3
Wine	1.3	2.0	2.5	92.3
Distilled spirits	1.8	1.5	1.4	–22.2

U.S. Meat Production and Consumption, 1940-2010

Source: Economic Research Service, U.S. Dept. of Agriculture
(in millions of pounds)

Year	Beef		Veal		Lamb and mutton		Pork		All red meats[1]		All poultry	
	Prod.	Cons.	Prod.	Cons.	Prod.	Cons.	Prod.	Cons.	Prod.	Cons.	Prod.	Cons.
1940	7,175	7,257	981	981	876	873	10,044	9,701	19,076	18,812	NA	NA
1950	9,534	9,529	1,230	1,206	597	596	10,714	10,390	22,075	21,721	3,174	3,097
1960	14,728	15,465	1,109	1,118	769	857	13,905	14,057	30,511	31,497	6,310	6,168
1970	21,684	23,451	588	613	551	669	14,699	14,957	37,522	39,689	10,193	9,981
1980	21,643	23,560	400	420	318	351	16,617	16,838	38,978	41,170	14,173	13,525
1990	22,743	24,030	327	325	363	397	15,354	16,025	38,787	40,778	23,468	22,152
1995	25,222	25,534	319	319	285	346	17,849	17,768	43,675	43,967	30,393	25,944
2000	26,888	27,338	225	225	234	354	18,952	18,643	46,299	46,560	36,073	30,508
2005	26,787	27,754	165	164	191	355	20,705	19,112	45,848	47,385	40,935	34,947
2006	26,256	28,137	156	155	190	356	21,074	19,048	47,675	47,696	41,231	35,544
2007	26,523	28,144	145	144	188	384	21,962	19,763	48,817	48,435	42,117	35,667
2008	26,663	27,302	152	150	180	343	23,367	19,415	50,361	47,210	43,235	35,379
2009	25,965	26,904	147	147	177	338	22,999	19,839	49,274	47,227	41,673	34,116
2010*	25,506	26,088	144	146	171	335	22,122	18,686	47,928	45,255	42,413	35,593

*Preliminary. NA = Not available. (1) Numbers may not add up to total because of rounding.

U.S. Annual Per Capita Consumption of Meat and Dairy, 1910-2008

Source: Economic Research Service, U.S. Dept. of Agriculture
(in pounds per capita, unless otherwise noted)

Meat	1910	1930	1950	1970	1990	2008	% change, 1910-2008
Beef	48.5	33.7	44.6	79.6	63.9	61.2	26.2%
Fish/shellfish	11.2	10.2	11.9	11.7	14.9	16.0	42.9
Pork	38.2	41.1	43.0	48.1	46.4	46.0	20.4
Chicken	11.0	11.1	14.3	27.4	42.4	58.8	434.5
Red meat	96.0	83.6	95.8	131.9	112.2	108.3	12.8
Dairy							
Butter	18.4	17.6	10.9	5.4	4.0	5.0	–72.8
American cheese	2.5	3.2	5.5	7.0	11.1	13.0	420.0
Other cheese	1.4	1.5	2.2	4.4	13.5	19.4	1,285.7
Skim/lower fat milk (gallons)	7.1	5.0	3.0	5.8	15.2	14.6	105.6
Whole milk (gallons)	25.2	28.2	34.3	25.5	10.5	6.1	–75.8
Ice cream	1.9	9.7	17.4	17.8	15.8	13.9	631.6

U.S. Organic Farmland and Animals, 1995-2008

Source: Economic Research Service, U.S. Dept. of Agriculture

Crop	Organic acreage[1]							% change, 2000-08	Total U.S. farmland[2]
	1995	2000	2002	2003	2004	2005	2008		
Grains									
Corn	32,650	77,912	96,270	105,574	99,111	130,672	194,637	149.8%	93,600,000
Wheat	120,820	206,474	217,611	234,221	214,244	293,824	415,902	101.4	60,433,000
Oats	13,250	29,771	53,459	46,074	42,616	46,465	57,374	92.7	3,760,000
Barley	17,150	41,904	34,031	30,265	26,629	39,271	46,954	12.1	4,020,000
Rice	8,400	26,870	22,381	20,152	22,173	26,428	49,638	84.7	2,761,000
Beans									
Soybeans	47,200	136,071	126,540	122,403	114,239	122,217	125,621	–7.7	63,631,000
Dry beans	NA	14,010	2,430	9,836	7,642	10,561	16,465	17.5	1,526,900
Dry peas & lentils	5,900	10,144	7,476	16,188	15,893	17,757	16,987	67.5	571,000
Hay and silage	84,100	231,207	267,827	327,538	356,590	411,342	793,442	243.2	61,625,000
All vegetables	NA	62,342	69,887	78,905	86,822	98,525	177,049	184.0	2,045,020
All fruits	NA	43,481	60,693	77,989	80,707	97,277	121,066	178.4	3,839,300
Other crops									
Cotton	32,850	15,027	10,551	9,875	9,213	9,537	15,377	2.3	10,830,300
Peanuts	NA	2,085	5,134	5,698	9,514	11,940	16,776	704.6	1,230,000
Potatoes	NA	5,433	6,593	6,569	7,300	6,581	8,273	52.3	1,148,800
Trees for maple syrup	10,200	11,965	1,121	1,514	13,357	12,247	31,340	161.9	NA
Fallow land	NA	57,688	64,668	83,003	116,582	198,650	194,428	237.0	37,968,749
Total cropland	**638,500**	**1,218,905**	**1,299,632**	**1,451,601**	**1,452,353**	**1,723,271**	**2,655,382**	**117.8**	**370,653,755**
Total pasture and rangeland	**276,300**	**557,167**	**625,902**	**745,273**	**1,592,756**	**2,331,158**	**2,160,577**	**287.8**	**473,212,960**
Total farmland	**914,800**	**1,776,073**	**1,925,534**	**2,196,874**	**3,045,109**	**4,054,429**	**4,815,959**	**171.2**	**843,866,715**

Animal	Number of organic animals[1]							% change, 2000-08	Total U.S. animals
	1995	2000	2002	2003	2004	2005	2008		
Total livestock	**NA**	**56,028**	**108,362**	**124,346**	**157,253**	**196,506**	**475,829**	**749.3%**	**167,512,858**
Beef cows	NA	13,829	23,384	27,285	36,662	36,113	63,680	360.5	32,834,801
Milk cows	NA	38,196	67,207	74,435	74,840	87,082	249,766	553.9	9,266,574
Other cows[3]	NA	NA	10,103	11,501	36,598	58,822	144,817	NA	54,246,483
Hogs and pigs	NA	1,724	2,753	6,564	4,883	10,018	10,111	486.5	65,110,000
Sheep and lambs	NA	2,279	4,915	4,561	4,270	4,471	7,455	227.1	6,055,000
Total poultry	**NA**	**3,159,050**	**6,270,181**	**8,780,152**	**7,304,566**	**13,757,270**	**15,518,075**	**391.2**	**9,632,362,000**
Layer hens	NA	1,113,746	1,052,272	1,591,181	1,787,901	2,415,056	5,538,011	397.2	377,492,000
Broilers	NA	1,924,807	3,032,189	6,301,014	4,769,104	10,405,879	9,015,984	368.4	8,882,000,000
Turkeys	NA	9,138	305,605	217,353	164,292	144,086	398,531	4,261.2	262,460,000
Other/unclassified	**NA**	**111,359**	**1,880,115**	**670,604**	**583,269**	**792,249**	**565,549**	**407.9**	**110,410,000**

NA = Not available. (1) Based on information from USDA-accredited state and private organic certifiers. (2) Total organic and nonorganic land used for agricultural purposes. (3) Includes breeding stock, replacement heifers, and unclassified cows.

Production of Principal U.S. Crops, 1990-2009

Source: National Agricultural Statistics Service, U.S. Dept. of Agriculture

Year	Corn for grain (1,000 bu)	Oats (1,000 bu)	Barley (1,000 bu)	Sorghum for grain (1,000 bu)	All wheat (1,000 bu)	Rye (1,000 bu)	Flaxseed (1,000 bu)	Cotton (upland) (1,000 b)	Cottonseed (1,000 t)
1990	7,934,028	357,654	422,196	573,303	2,729,778	10,176	3,812	15,505.4	5,968.5
1995	7,373,876	162,027	359,562	460,373	2,182,591	10,064	2,211	17,532.2	6,848.7
1996	9,293,435	155,273	395,751	802,974	2,285,133	9,016	1,602	18,413.5	7,143.5
1997	9,206,832	167,246	359,878	633,545	2,481,466	8,132	2,420	18,245.0	6,934.6
1998	9,758,685	165,981	352,125	519,933	2,547,321	12,161	6,708	13,475.9	5,365.4
1999	9,430,612	146,193	280,292	595,166	2,299,010	11,038	7,864	16,293.7	6,354.0
2000	9,915,051	149,545	318,728	470,526	2,232,460	8,386	10,730	16,799.2	6,435.6
2001	9,506,840	117,024	249,420	514,524	1,957,043	6,971	11,455	19,602.4	7,452.2
2002	8,966,787	116,002	226,906	360,713	1,605,878	6,488	11,863	16,530.3	6,183.9
2003	10,089,222	144,383	278,283	411,237	2,344,760	8,634	10,516	17,822.9	6,664.6
2004	11,807,086	115,695	279,743	453,654	2,158,245	8,255	10,368	22,505.1	8,242.1
2005	11,114,082	114,878	211,896	392,933	2,104,690	7,537	19,695	23,259.7	8,172.1
2006	10,534,868	93,638	180,165	277,538	1,812,036	7,193	11,019	20,822.4	7,347.9
2007	13,037,875	90,430	210,110	497,445	2,051,088	6,311	5,896	18,355.1	6,588.7
2008[1]	12,091,648	89,135	240,193	472,342	2,499,164	7,979	5,716	12,384.5	4,300.3
2009	13,151,062	93,081	227,323	382,983	2,216,171	6,993	7,423	12,011.0	4,178.0

Year	Tobacco (1,000 lb)	All hay (1,000 t)	Beans, dry edible (1,000 cwt)	Peas, dry edible (1,000 cwt)	Peanuts[2] (1,000 lb)	Soybeans[3] (1,000 bu)	Potatoes (1,000 cwt)	Sweet potatoes (1,000 cwt)
1990	1,626,380	146,212	32,379	2,372	3,602,770	1,925,947	402,110	12,594
1995	1,268,538	154,166	30,812	4,765	4,247,455	2,176,814	443,606	12,906
1996	1,517,334	149,457	27,960	2,671	3,661,205	2,382,364	498,633	13,456
1997	1,787,399	152,536	29,370	5,752	3,539,380	2,688,750	467,091	13,327
1998	1,479,867	151,780	30,418	5,934	3,963,440	2,741,014	475,771	12,382
1999	1,292,692	159,707	33,085	4,773	3,829,490	2,653,758	478,216	12,234
2000	1,052,999	151,921	26,409	3,474	3,265,505	2,757,810	513,621	13,794
2001	991,223	156,764	19,583	3,763	4,276,704	2,890,682	437,888	14,637
2002	871,122	149,467	30,312	4,727	3,321,040	2,756,147	458,171	12,799
2003	802,560	157,585	22,492	5,202	4,144,150	2,453,665	457,814	15,891
2004	881,973	158,247	17,788	11,419	4,288,200	3,123,686	456,041	16,112
2005	645,015	151,017	26,772	14,003	4,869,860	3,063,237	423,926	15,730
2006	727,347	142,336	24,247	13,203	3,464,250	3,188,247	441,348	16,248
2007	787,653	146,901	25,586	16,287	3,672,250	2,667,117	444,875	18,070
2008[1]	800,504	146,270	25,558	12,270	5,162,400	2,967,007	415,055	18,443
2009	823,290	147,442	25,360	17,137	3,688,350	3,361,028	431,425	19,647

Year	Rice (1,000 cwt)	Sugarcane (1,000 t)	Sugar beets (1,000 t)	Pecans[4] (1,000 lb)	Apples (1,000 t)	Grapes (1,000 t)	Peaches (1,000 t)	Oranges[5] (1,000 bx)	Grapefruit[5] (1,000 bx)
1990	156,088	28,136	27,513	205,000	4,828	5,660	1,121	184,415	49,300
1995	173,871	30,944	27,954	268,000	5,293	5,922	1,150	263,605	71,050
1996	171,321	29,462	26,680	209,500	5,196	5,554	1,058	263,890	66,200
1997	182,992	31,709	29,886	335,000	5,162	7,291	1,312	292,620	70,200
1998	184,443	32,743	32,499	146,400	5,823	5,820	1,190	315,525	63,150
1999	206,027	35,299	33,420	406,100	5,316	6,236	1,252	224,580	61,200
2000	190,872	36,114	32,541	209,850	5,291	7,688	1,276	299,760	66,980
2001	215,270	34,587	25,764	338,500	4,712	6,569	1,204	280,935	59,750
2002	210,960	35,553	27,707	172,900	4,262	7,339	1,268	283,760	58,660
2003	199,897	33,858	30,710	282,100	4,397	6,664	1,260	267,040	50,080
2004	232,362	29,013	30,021	185,800	5,220	6,240	1,307	294,620	52,540
2005	223,235	26,606	27,433	280,250	4,853	7,814	1,185	216,500	25,640
2006	193,736	29,564	34,064	207,300	4,912	6,378	1,010	210,750	30,600
2007	198,388	29,969	31,834	387,305	4,545	7,057	1,127	177,280	39,900
2008[1]	203,733	27,603	26,881	194,080	4,817	7,319	1,135	234,376	37,900
2009	219,850	30,265	29,519	291,830	4,958	7,295	1,104	212,609	32,825

Note: Some 2009 figures are preliminary estimates. (1) Some totals revised. (2) Harvested for nuts. (3) Harvested for beans. (4) Utilized production only. (5) Crop year ending in year cited.

Livestock on Farms in the U.S., 1900-2010

Source: National Agricultural Statistics Service, U.S. Dept. of Agriculture

(in thousands)

Year (on Jan. 1)	All cattle[1]	Milk cows	Sheep and lambs	Hogs and pigs[2]	Year (on Jan. 1)	All cattle[1]	Milk cows	Sheep and lambs	Hogs and pigs[2]
1900.	59,739	16,544	48,105	51,055	1990.	95,816	10,015	11,358	53,788
1910.	58,993	19,450	50,239	48,072	1995.	102,755	9,487	8,886	57,150
1920.	70,400	21,455	40,743	60,159	2000.	98,199	9,183	7,036	59,335
1930.	61,003	23,032	51,565	55,705	2001.	97,298	9,172	6,908	59,110
1940.	68,309	24,940	52,107	61,165	2002.	96,723	9,106	6,623	59,722
1950.	77,963	23,853	29,826	58,937	2003.	96,100	9,142	6,321	59,554
1955.	96,592	23,462	31,582	50,474	2004.	94,888	8,990	6,105	60,444
1960.	96,236	19,527	33,170	59,026	2005.	95,838	9,005	6,135	60,975
1965.	109,000	16,981	25,127	56,106	2006.	96,702	9,063	6,230	61,449
1970.	112,369	12,091	20,423	57,046	2007.	97,003	9,132	6,165	62,490
1975.	132,028	11,220	14,515	54,693	2008.	96,035	9,257	5,950	66,963
1980.	111,242	10,758	12,699	67,318	2009.	94,521	9,333	5,747	66,768
1985.	109,582	10,777	10,716	54,073	2010.	93,701	9,081	5,630	65,327

(1) From 1970, includes milk cows and heifers that have calved. (2) As of Dec. 1 of preceding year.

Animal Products: Average Prices Received by U.S. Farmers, 1940-2009

Source: National Agricultural Statistics Service, U.S. Dept. of Agriculture

Figures below represent dollars per 100 lb for hogs, beef cattle, veal calves, sheep, lamb, and milk (wholesale); dollars per head for milk cows; cents per lb for chickens, broilers, turkeys, and wool; cents per dozen for eggs; weighted calendar year prices for livestock and livestock products other than wool. For 1943-63, wool prices were weighted on marketing year basis. The marketing year was changed in 1964 from a calendar year to a Dec.-Nov. basis for hogs, chickens, broilers, and eggs.

Year	Broilers	Calves (veal)	Cattle (beef)	Chickens (excl. broilers)	Eggs	Hogs	Lambs	Milk cows	Milk	Sheep	Turkeys	Wool
1940	17.3	8.83	7.56	13.0	18.0	5.39	8.10	61	1.82	3.95	15.2	28.4
1950	27.4	26.30	23.30	22.2	36.3	18.00	25.10	198	3.89	11.60	32.8	62.1
1960	16.9	22.90	20.40	12.2	36.1	15.30	17.90	223	4.21	5.61	25.4	42.0
1970	13.6	34.50	27.10	9.1	39.1	22.70	26.40	332	5.71	7.51	22.6	35.4
1975	26.3	27.20	32.20	9.9	54.5	46.10	42.10	412	8.75	11.30	34.8	44.8
1980	27.7	76.80	62.40	11.0	56.3	38.00	63.60	1,190	13.05	21.30	41.3	88.1
1985	30.1	62.10	53.70	14.8	57.1	44.00	67.70	860	12.76	23.90	49.1	63.3
1990	32.6	95.60	74.60	9.3	70.9	53.70	55.50	1,160	13.74	23.20	39.4	80.0
1995	34.4	73.10	61.80	6.5	62.4	40.50	78.20	1,130	12.78	28.00	41.6	104.0
2000	33.6	104.00	68.60	5.7	61.8	42.30	79.80	1,340	12.40	34.30	40.7	33.0
2001	39.3	106.00	71.30	4.5	62.2	44.30	66.90	1,500	15.04	34.60	39.0	36.0
2002	30.5	96.40	66.50	4.8	58.9	33.40	73.80	1,600	12.18	27.90	36.5	53.0
2003	34.6	102.00	79.70	4.9	73.2	37.20	94.40	1,340	12.55	34.90	36.1	73.0
2004	44.6	119.00	85.80	5.8	71.4	49.30	101.00	1,580	16.13	38.80	42.0	80.0
2005	43.6	135.00	89.70	6.5	54.0	50.20	110.00	1,770	15.19	45.10	44.9	71.0
2006	36.3	133.00	87.20	5.8	58.2	46.00	95.50	1,730	12.96	35.20	47.9	68.0
2007	43.6	119.00	89.90	5.6	88.5	46.60	98.50	1,830	19.21	31.00	52.3	87.0
2008[1]	45.8	110.00	89.10	6.6	109.0	47.00	99.60	1,950	18.45	27.20	56.5	99.0
2009	45.7	103.00	80.30	7.2	81.7	41.70	99.60	1,390	12.93	32.50	50.0	NA

NA = Not available. (1) Some prices revised.

Crops: Average Prices Received by U.S. Farmers, 1940-2009

Source: National Agricultural Statistics Service, U.S. Dept. of Agriculture

Figures below represent cents per lb for cotton, apples, and peanuts; dollars per bushel for oats, wheat, corn, barley, and soybeans; dollars per 100 lb for rice, sorghum, and potatoes; dollars per ton for cottonseed and baled hay; weighted crop year prices. The marketing year is described as follows: apples, June-May; wheat, oats, barley, hay, and potatoes, July-June; cotton, rice, peanuts, and cottonseed, Aug.-July; soybeans, Sept.-Aug.; and corn and sorghum grain, Oct.-Sept.

Year	Apples	Barley	Corn	Cotton-seed	Cotton (upland)*	Hay	Oats	Peanuts	Pota-toes	Rice	Sor-ghum	Soy-beans	Wheat
1940	NA	0.39	0.62	21.70	9.8	9.78	0.30	3.7	0.85	1.80	0.87	0.89	0.67
1950	NA	1.19	1.52	86.60	39.9	21.10	0.79	10.9	1.50	5.09	1.88	2.47	2.00
1960	2.7	0.84	1.00	42.50	30.1	21.70	0.60	10.0	2.00	4.55	1.49	2.13	1.74
1970	6.5	0.97	1.33	56.40	21.9	26.10	0.62	12.8	2.21	5.17	2.04	2.85	1.33
1975	8.8	2.42	2.54	97.00	51.1	52.10	1.45	19.0	4.48	8.35	4.21	4.92	3.55
1980	12.1	2.86	3.11	129.00	74.4	71.00	1.79	25.1	6.55	12.80	5.25	7.57	3.91
1985	17.3	1.98	2.23	66.00	56.8	67.60	1.23	24.4	3.92	6.53	3.45	5.05	3.08
1990	20.9	2.14	2.28	121.00	67.1	80.60	1.14	34.7	6.08	6.68	3.79	5.74	2.61
1995	24.0	2.89	3.24	106.00	75.4	82.20	1.67	29.3	6.77	9.15	5.69	6.72	4.55
2000	17.8	2.11	1.85	105.00	49.8	84.60	1.10	27.4	5.08	5.61	3.37	4.54	2.62
2001	22.9	2.22	1.97	90.50	29.8	96.50	1.59	23.4	6.99	4.25	4.25	4.38	2.78
2002	25.6	2.72	2.32	101.00	44.5	92.40	1.81	18.2	6.69	4.49	4.14	5.53	3.56
2003	29.4	2.83	2.42	117.00	61.8	85.50	1.48	19.3	5.89	8.08	4.26	7.34	3.40
2004	21.8	2.48	2.06	107.00	41.6	92.00	1.48	18.9	5.67	7.33	3.19	5.74	3.40
2005	24.4	2.53	2.00	96.00	47.7	98.20	1.63	17.3	7.06	7.65	3.33	5.66	3.42
2006	31.7	2.85	3.04	111.00	46.5	110.00	1.87	17.7	7.33	9.96	5.88	6.43	4.26
2007[1]	28.8	4.02	4.20	162.00	59.3	128.00	2.63	20.5	7.51	12.80	7.28	10.10	6.48
2008[1]	23.2	5.37	4.06	223.00	47.8	152.00	3.15	23.0	8.42	16.80	5.72	9.97	6.78
2009[2]	22.8	4.40	3.70	159.00	60.5	111.00	2.10	23.0	8.00	14.30	5.90	9.45	4.85

*Beginning in 1964, 480-lb net weight bales. NA = Not available. (1) Some prices revised. (2) Preliminary.

Value of U.S. Agricultural Exports and Imports, 1978-2009

Source: Economic Research Service, U.S. Dept. of Agriculture
(in billions of dollars, unless otherwise noted)

Year[1]	Agric. trade surplus	Agric. exports	% of all exports	Agric. imports	% of all imports	Year[1]	Agric. trade surplus	Agric. exports	% of all exports	Agric. imports	% of all imports
1978.	$13.4	$27.3	21%	$13.9	8%	1994.	$19.2	$46.2	10%	$27.0	4%
1979.	15.8	32.0	19	16.2	8	1995.	26.0	56.3	10	30.3	4
1980.	23.2	40.5	19	17.3	7	1996.	26.8	60.3	10	33.5	4
1981.	26.4	43.8	19	17.3	7	1997.	21.0	57.2	9	36.1	4
1982.	23.6	39.1	18	15.5	6	1998.	14.9	51.8	8	36.9	4
1983.	18.5	34.8	18	16.3	7	1999.	10.7	48.4	8	37.7	4
1984.	19.1	38.0	18	18.9	6	2000.	12.2	51.2	7	39.0	3
1985.	11.5	31.2	15	19.7	6	2001.	14.3	53.7	8	39.4	4
1986.	5.4	26.3	13	20.9	6	2002.	11.2	53.1	8	41.9	4
1987.	7.2	27.9	12	20.7	5	2003.	10.3	56.0	9	45.7	4
1988.	14.3	35.3	12	21.0	5	2004.	9.7	62.4	9	52.7	4
1989.	18.1	39.7	12	21.6	5	2005.	4.8	62.5	8	57.7	4
1990.	16.6	39.5	11	22.9	5	2006.	4.7	68.7	8	64.0	3
1991.	16.4	39.3	10	22.9	5	2007.	12.1	82.2	8	70.1	4
1992.	18.3	43.1	10	24.8	5	2008.	36.0	115.3	10	79.3	4
1993.	17.7	42.9	10	25.1	4	2009.	23.2	96.6	10	73.4	5

(1) Fiscal year (Oct.-Sept.).

World Meat Production, 2000, 2009

Source: UN Food and Agriculture Organization; in thousands of metric tons; ranked by top producers in 2009

Top beef producers				Top pork producers				Top poultry producers			
Rank	**Country**	**2000**	**2009**	**Rank**	**Country**	**2000**	**2009**	**Rank**	**Country**	**2000**	**2009**
1.	U.S.	12,298	11,891	1.	China	40,752	49,879	1.	U.S.	16,416	18,953
2.	Brazil	6,579	9,024	2.	U.S.	8,597	10,442	2.	China	12,689	16,438
3.	China	5,156	6,425	3.	Germany	3,982	5,277	3.	Brazil	6,125	10,385
4.	Argentina	2,718	2,830	4.	Spain	2,905	3,291	4.	Mexico	1,868	2,633
5.	India	2,237	2,313	5.	Brazil	2,600	2,924	5.	Russia	775	2,360
6.	Australia	1,988	2,148	6.	Vietnam	1,409	2,553	6.	France	2,220	1,720
7.	Russia	1,894	1,741	7.	Russia	1,569	2,169	7.	Iran	815	1,682
8.	Mexico	1,409	1,667	8.	France	2,312	2,004	8.	UK	1,513	1,652
9.	France	1,528	1,467	9.	Poland	1,923	1,735	9.	Indonesia	818	1,435
10.	Pakistan	886	1,441	10.	Philippines	1,213	1,710	10.	Japan	1,195	1,394
11.	Canada	1,263	1,288	11.	Italy	1,479	1,588	11.	Germany	801	1,316
12.	Germany	1,304	1,193	12.	Denmark	1,625	1,585	12.	Turkey	661	1,308
13.	Italy	1,153	1,057	13.	Japan	1,256	1,310	13.	Canada	1,065	1,212
14.	Colombia	745	936	14.	Netherlands	1,623	1,275	14.	Spain	987	1,205
15.	UK	705	850	15.	Mexico	1,030	1,163	15.	Argentina	1,000	1,204
16.	South Africa	625	777	16.	Belgium	1,042	1,082	16.	Poland	589	1,155
17.	New Zealand	572	637	17.	Thailand	475	756	17.	Italy	1,092	1,154
18.	Uzbekistan	390	623	18.	UK	899	720	18.	Thailand	1,194	1,105
19.	Egypt	544	608	19.	Indonesia	413	637	19.	Malaysia	714	1,042
20.	Spain	651	598	20.	Austria	620	540	20.	Colombia	504	1,020
21.	Uruguay	453	588	21.	Serbia	—	528	21.	South Africa	821	981
22.	Japan	530	517	22.	Ukraine	676	527	22.	Peru	542	964
23.	Ireland	577	514	23.	Chile	261	514	23.	Ukraine	193	894
24.	Venezuela	429	483	24.	India	466	481	24.	Australia	643	880
25.	Ukraine	754	454	25.	Romania	502	471	25.	Netherlands	766	834
Africa		4,318	5,191	Africa		771	1,143	Africa		2,982	3,821
Asia		13,026	15,703	Asia		47,788	59,755	Asia		22,480	31,120
Europe		11,777	10,880	Europe		25,379	26,006	Europe		11,885	15,721
North America		13,561	13,179	North America		10,237	12,383	North America		17,480	20,165
Oceania		2,581	2,805	Oceania		489	461	Oceania		767	1,039
South America		11,846	15,058	South America		3,774	4,668	South America		9,741	15,466
World total		**65,146**	**59,100**	**World total**		**89,787**	**106,069**	**World total**		**68,198**	**91,308**

World Corn, Rice, and Wheat Production, 2000, 2009

Source: UN Food and Agriculture Organization; in millions of metric tons; ranked by top producers in 2009

Top corn producers				Top rice producers				Top wheat producers			
Rank	**Country**	**2000**	**2009**	**Rank**	**Country**	**2000**	**2009**	**Rank**	**Country**	**2000**	**2009**
1.	U.S.	251.9	333.0	1.	China	189.8	197.3	1.	China	99.6	115.0
2.	China	106.2	163.1	2.	India	127.5	131.3	2.	India	76.4	80.7
3.	Brazil	31.9	51.2	3.	Indonesia	51.9	64.4	3.	Russia	34.5	61.7
4.	Mexico	17.6	20.2	4.	Bangladesh	37.6	45.1	4.	U.S.	60.6	60.3
5.	Indonesia	9.7	17.6	5.	Vietnam	32.5	38.9	5.	France	37.4	38.3
6.	India	12.0	17.3	6.	Thailand	25.8	31.5	6.	Canada	26.5	26.5
7.	France	16.0	15.3	7.	Philippines	12.4	16.3	7.	Germany	21.6	25.2
8.	Argentina	16.8	13.1	8.	Brazil	11.1	12.6	8.	Pakistan	21.1	24.0
9.	South Africa	11.4	12.1	9.	Japan	11.9	10.6	9.	Australia	22.1	21.7
10.	Ukraine	3.8	10.5	10.	Pakistan	7.2	10.3	10.	Ukraine	10.2	20.9
11.	Canada	7.0	9.6	11.	U.S.	8.7	10.0	11.	Turkey	21.0	20.6
12.	Romania	4.9	8.0	12.	Cambodia	4.0	7.6	12.	Kazakhstan	9.1	17.1
13.	Italy	10.1	7.9	13.	Egypt	6.0	7.5	13.	UK	16.7	14.4
14.	Hungary	5.0	7.5	14.	Nepal	4.2	4.5	14.	Iran	8.1	13.5
15.	Philippines	4.5	7.0	15.	Sri Lanka	2.9	3.7	15.	Poland	8.5	9.8
16.	Egypt	6.5	6.8	16.	Laos	2.2	3.1	16.	Egypt	6.6	8.5
17.	Serbia	0.0	6.4	17.	Peru	1.9	3.0	17.	Argentina	16.1	7.6
18.	Thailand	4.5	4.6		Colombia	2.7	3.0	18.	Uzbekistan	3.5	6.6
19.	Germany	3.3	4.5	19.	Malaysia	2.1	2.5	19.	Italy	7.5	6.3
20.	Vietnam	2.0	4.4	20.	Iran	2.0	2.3	20.	Denmark	4.7	6.0
21.	Turkey	2.3	4.3	21.	Mali	0.7	2.0	21.	Romania	4.5	5.2
22.	Russia	1.5	4.0	22.	Ecuador	1.2	1.6	22.	Afghanistan	1.5	5.1
23.	Ethiopia	2.7	3.9	23.	Italy	1.2	1.5	23.	Brazil	1.7	5.0
24.	Pakistan	1.6	3.5	24.	Argentina	0.9	1.3	24.	Spain	7.3	4.8
	Spain	4.0	3.5		Uruguay	1.2	1.3	25.	Hungary	3.7	4.4
Africa		44.3	56.7	Africa		17.5	24.4	Africa		14.3	22.1
Asia		149.1	233.6	Asia		545.5	611.7	Asia		254.5	301.0
Europe		63.5	84.0	Europe		3.2	4.1	Europe		183.6	228.7
North America		258.8	342.6	North America		8.7	10.0	North America		87.2	86.8
Oceania		0.6	0.6	Oceania		1.1	0.3	Oceania		22.4	22.1
South America		55.4	75.6	South America		20.9	25.6	South America		20.2	17.1
World total		**592.5**	**817.1**	**World total**		**599.4**	**678.7**	**World total**		**585.7**	**681.9**

Note: North America comprises Bermuda, Canada, Greenland, Saint Pierre and Miquelon, and the U.S.

Crop Consumption Per Capita, Selected Nations, 1980-2007

Source: UN Food and Agriculture Organization

(in kg per capita per year)

	Corn				Rice				Wheat			
Country	**1980**	**1990**	**2007**	**% change, 1980-2007**	**1980**	**1990**	**2007**	**% change, 1980-2007**	**1980**	**1990**	**2007**	**% change, 1980-2007**
Australia	2	4	5	150.0%	8	8	10	25.0%	81	70	70	–13.6%
Bangladesh	0	0	6	NA	132	148	160	21.2	26	20	15	–42.3
Brazil	22	22	25	13.6	39	41	33	–15.4	50	44	53	6.0
Cambodia	11	7	16	45.5	133	155	152	14.3	4	0	3	–25.0
Canada	4	3	19	375.0	3	5	9	200.0	76	78	89	17.1
Chad	5	4	12	140.0	6	10	6	0.0	2	4	10	400.0
China	5	4	7	40.0	77	84	77	0.0	60	80	67	11.7
Congo Republic	5	3	5	0.0	2	4	24	1,100.0	33	38	49	48.5
Cuba	0	0	33	NA	51	48	64	25.5	78	74	51	–34.6
Egypt	49	56	54	10.2	27	30	37	37.0	131	147	137	4.6
France	2	13	12	500.0	4	4	5	25.0	95	92	100	5.3
Germany	3	7	13	333.3	2	2	4	100.0	69	68	82	18.8
India	8	8	6	–25.0	64	79	71	10.9	45	42	60	33.3
Indonesia	23	29	28	21.7	124	132	125	0.8	10	9	22	120.0
Iran	1	1	2	100.0	29	30	29	0.0	152	163	152	0.0
Israel	11	23	22	100.0	6	8	10	66.7	137	123	114	–16.8
Italy	5	3	4	–20.0	5	5	6	20.0	173	148	146	–15.6
Japan	14	19	12	–14.3	73	65	57	–21.9	44	43	45	2.3
Kenya	114	84	80	–29.8	2	1	8	300.0	20	18	26	30.0
Korea, North	43	56	42	–2.3	72	69	77	6.9	32	22	18	–43.8
Korea, South	2	13	14	600.0	138	97	76	–44.9	49	48	51	4.1
Mexico	120	128	123	2.5	5	4	6	20.0	43	43	36	–16.3
New Zealand	1	3	2	100.0	2	4	9	350.0	78	69	75	–3.8
Nigeria	6	32	25	316.7	14	20	21	50.0	15	3	21	40.0
Pakistan	6	6	7	16.7	22	14	14	–36.4	110	123	106	–3.6
Philippines	22	19	7	–68.2	95	93	129	35.8	17	20	19	11.8
Rwanda	14	15	13	–7.1	2	1	6	200.0	2	3	7	250.0
Saudi Arabia	12	13	22	83.3	34	18	31	–8.8	90	104	94	4.4
South Africa	120	108	104	–13.3	4	8	20	400.0	56	57	60	7.1
Spain	1	1	2	100.0	6	6	7	16.7	98	93	87	–11.2
Thailand	5	5	8	60.0	141	117	103	–27.0	4	6	15	275.0
Turkey	8	20	20	150.0	3	6	9	200.0	200	215	191	–4.5
United Arab Emirates	1	1	1	0.0	34	40	42	23.5	318	494	204	–35.8
United Kingdom	3	3	3	0.0	2	2	6	200.0	82	82	97	18.3
United States	8	13	13	62.5	4	7	8	100.0	70	81	85	21.4
Uruguay	23	28	27	17.4	8	10	19	137.5	105	96	123	17.1
Venezuela	75	54	58	–22.7	21	13	20	–4.8	50	51	52	4.0
Vietnam	7	7	11	57.1	132	150	166	25.8	17	3	15	–11.8
Africa	37	40	41	10.8	14	16	20	42.9	45	45	46	2.2
Asia	8	9	9	12.5	79	84	78	–1.3	53	61	64	20.8
Central America	109	116	106	–2.8	8	7	11	37.5	38	39	35	–7.9
Europe	3	4	7	133.3	5	4	5	0.0	116	115	108	–6.9
North America	7	12	13	85.7	4	7	8	100.0	71	81	85	19.7
Oceania	2	4	4	100.0	9	10	13	44.4	79	69	71	–10.1
South America	23	23	27	17.4	29	32	29	0.0	58	53	56	–3.4
World per capita consumption	**13**	**15**	**17**	**30.8%**	**50**	**55**	**53**	**6.0%**	**64**	**67**	**66**	**3.1%**

Meat Consumption Per Capita, Selected Nations, 1980-2007

Source: UN Food and Agriculture Organization

(in kg per capita per year)

	Beef				Pork				Poultry			
Country	**1980**	**1990**	**2007**	**% change, 1980-2007**	**1980**	**1990**	**2007**	**% change, 1980-2007**	**1980**	**1990**	**2007**	**% change, 1980-2007**
Australia	53	47	44	–17.0%	15	18	23	53.3%	21	24	40	90.5%
Bangladesh	1	1	1	0.0	0	0	0	NA	1	1	1	0.0
Brazil	23	28	37	60.9	8	7	11	37.5	10	14	32	220.0
Cambodia	2	4	5	150.0	1	6	9	800.0	1	2	2	100.0
Canada	40	36	33	–17.5	35	28	27	–22.9	22	28	37	68.2
Chad	7	12	8	14.3	0	0	0	NA	1	1	0	–100.0
China	0	1	5	NA	12	21	33	175.0	2	3	12	500.0
Congo Republic	4	1	2	–50.0	1	1	3	200.0	2	5	10	400.0
Cuba	15	13	5	–66.7	5	10	18	260.0	9	12	14	55.6
Egypt	7	8	11	57.1	0	0	0	NA	4	5	8	100.0
France	33	33	27	–18.2	37	34	32	–13.5	16	21	21	31.3
Germany	23	22	13	–43.5	61	60	56	–8.2	10	11	16	60.0
India	2	2	2	0.0	0	0	0	NA	0	0	1	NA
Indonesia	2	2	2	0.0	1	3	3	200.0	1	3	6	500.0
Iran	6	6	6	0.0	0	0	0	NA	6	7	20	233.3
Israel	13	14	27	107.7	2	2	3	50.0	35	39	68	94.3
Italy	26	27	24	–7.7	25	32	45	80.0	18	20	16	–11.1
Japan	5	8	9	80.0	13	15	20	53.8	10	14	17	70.0
Kenya	12	9	12	0.0	0	0	0	NA	2	1	1	–50.0
Korea, North	2	2	1	–50.0	10	11	7	–30.0	2	3	2	0.0
Korea, South	3	6	11	266.7	8	13	31	287.5	2	6	13	550.0
Mexico	11	14	18	63.6	18	10	14	–22.2	6	10	29	383.3
New Zealand	57	39	32	–43.9	12	14	23	91.7	10	17	35	250.0

Country	Beef 1980	Beef 1990	Beef 2007	Beef % change, 1980-2007	Pork 1980	Pork 1990	Pork 2007	Pork % change, 1980-2007	Poultry 1980	Poultry 1990	Poultry 2007	Poultry % change, 1980-2007
Nigeria	5	2	2	–60.0%	1	1	1	0.0%	2	2	2	0.0%
Pakistan	5	6	8	60.0	0	0	0	NA	1	1	3	200.0
Philippines	3	2	4	33.3	9	11	19	111.1	5	4	8	60.0
Rwanda	2	2	2	0.0	0	0	1	NA	0	0	0	NA
Saudi Arabia	6	4	6	0.0	0	0	0	NA	24	29	41	70.8
South Africa	20	17	16	–20.0	3	4	4	33.3	8	15	25	212.5
Spain	11	13	15	36.4	31	48	62	100.0	21	23	28	33.3
Thailand	6	6	4	–33.3	6	6	13	116.7	7	9	11	57.1
Turkey	3	7	6	100.0	0	0	0	NA	5	7	14	180.0
United Arab Emirates	14	13	9	–35.7	0	0	0	NA	43	37	61	41.9
United Kingdom	23	21	22	–4.3	26	25	28	7.7	14	19	29	107.1
United States	47	43	41	–12.8	33	28	30	–9.1	26	39	51	96.2
Uruguay	76	47	15	–80.3	9	7	9	0.0	5	7	14	180.0
Venezuela	22	18	21	–4.5	6	5	6	0.0	17	13	29	70.6
Vietnam	2	2	4	100.0	5	11	30	500.0	2	3	7	250.0
Africa	7	6	6	–14.3	1	1	1	0.0	2	3	5	150.0
Asia	2	3	4	100.0	6	10	14	133.3	2	3	8	300.0
Central America	11	13	16	45.5	14	8	11	–21.4	6	9	27	350.0
Europe	24	25	17	–29.2	32	35	36	12.5	12	15	20	66.7
North America	47	43	40	–14.9	33	28	29	–12.1	26	38	49	88.5
Oceania	50	43	40	–20.0	14	17	22	57.1	18	22	37	105.6
South America	28	27	30	7.1	7	6	10	42.9	9	12	27	200.0
World per capita consumption	**11**	**10**	**10**	**–0.1%**	**12**	**13**	**15**	**25.0%**	**6**	**8**	**13**	**116.7%**

Trade in Wheat, Rice, Corn, and Meat, 1997, 2007

Source: UN Food and Agriculture Organization; in thousands of dollars

Wheat exports

Rank	Country	1997	Country	2007
1.	U.S.	$4,181,746	U.S.	$8,344,749
2.	Australia	3,279,041	Canada	4,359,492
3.	Canada	3,156,955	Australia	3,887,832
4.	France	2,369,088	Russia	3,608,763
5.	Argentina	1,346,762	France	3,540,589
6.	Germany	661,947	Argentina	2,015,981
7.	UK	574,907	Kazakhstan	1,170,509
8.	Kazakhstan	430,414	Germany	1,168,131
9.	Syria	190,824	China	480,895
10.	Denmark	163,612	UK	463,602

Wheat imports

Rank	Country	1997	Country	2007
1.	Japan	$1,363,393	Italy	$1,822,396
2.	Italy	1,336,575	Japan	1,632,245
3.	Iran	1,107,780	Egypt	1,566,617
4.	Brazil	974,490	Brazil	1,391,955
5.	Egypt	821,048	Algeria	1,385,843
6.	Indonesia	776,521	Indonesia	1,181,313
7.	Algeria	730,842	Netherlands	1,133,135
8.	S. Korea	593,850	Morocco	1,125,687
9.	China	571,428	Spain	940,432
10.	Spain	509,846	Belgium	938,025

Rice exports

Rank	Country	1997	Country	2007
1.	U.S.	$143,500	U.S.	$409,582
2.	Argentina	26,515	China	28,328
3.	Uruguay	24,401	Paraguay	9,892
4.	Greece	21,827	India	8,908
5.	France	14,794	France	7,290
6.	Italy	7,207	Italy	7,061
7.	Guinea	5,519	Saudi Arabia	4,277
8.	Guyana	3,239	Spain	2,695
9.	Kazakhstan	2,000	Bangladesh	2,378
10.	China	1,926	Thailand	2,157

Rice imports

Rank	Country	1997	Country	2007
1.	Mexico	$108,685	Mexico	$213,530
2.	Brazil	48,953	Costa Rica	60,442
3.	Costa Rica	25,494	Nicaragua	46,469
4.	Italy	21,553	Uzbekistan	32,000
5.	Colombia	12,832	Saudi Arabia	26,701
6.	Portugal	12,001	Guatemala	26,626
7.	Turkey	10,307	El Salvador	21,303
8.	Spain	9,890	Panama	21,276
9.	Bangladesh	8,929	Honduras	20,540
10.	El Salvador	8,504	Bangladesh	11,553

Corn exports

Rank	Country	1997	Country	2007
1.	U.S.	$5,418,929	U.S.	$10,099,898
2.	France	1,391,675	Argentina	2,253,083
3.	Argentina	1,348,385	Brazil	1,918,840
4.	China	858,946	France	1,522,375
5.	South Africa	250,274	Hungary	1,091,173
6.	Hungary	157,270	China	874,301
7.	Germany	76,628	India	592,045
8.	Brazil	52,008	Paraguay	282,742
9.	Zimbabwe	50,522	Chile	232,335
10.	Chile	50,244	Germany	211,985

Corn imports

Rank	Country	1997	Country	2007
1.	Japan	$2,448,789	Japan	$3,842,474
2.	S. Korea	1,251,256	S. Korea	1,825,690
3.	China	843,164	Spain	1,571,184
4.	Malaysia	414,973	Mexico	1,554,320
5.	Spain	400,088	Egypt	940,096
6.	Egypt	385,391	China	928,949
7.	Mexico	379,525	Netherlands	874,117
8.	Netherlands	319,006	Colombia	679,823
9.	UK	294,787	Germany	667,476
10.	Colombia	272,557	Italy	641,582

Meat exports

Rank	Country	1997	Country	2007
1.	U.S.	$6,337,965	Brazil	$10,957,298
2.	Netherlands	4,179,018	U.S.	8,677,125
3.	France	4,084,058	Netherlands	7,812,996
4.	Denmark	4,003,672	Germany	7,505,327
5.	Belgium-Luxembourg	2,795,510	Australia	5,155,497
6.	Australia	2,435,787	Denmark	5,130,285
7.	Germany	1,939,132	France	4,392,806
8.	New Zealand	1,875,730	Belgium	4,002,110
9.	Canada	1,713,546	Canada	3,467,246
10.	China	1,559,715	New Zealand	3,151,710

Meat imports

Rank	Country	1997	Country	2007
1.	Japan	$7,112,986	Japan	$8,366,287
2.	Germany	4,485,297	UK	8,030,083
3.	Italy	3,410,714	Germany	6,948,224
4.	UK	3,348,888	Italy	5,693,121
5.	France	3,000,407	U.S.	5,221,534
6.	U.S.	2,737,860	France	5,073,577
7.	Russian	2,612,321	Russia	4,690,570
8.	China	1,351,230	Netherlands	3,779,813
9.	Netherlands	1,215,460	Mexico	2,552,748
10.	Belgium-Luxembourg	1,033,831	S. Korea	2,004,829

World Capture of Fish, Crustaceans, and Mollusks, 2000-07

Source: UN Food and Agriculture Organization
(in thousands of metric tons; ranked by 2007 captures; total includes nations not shown)

Country	2000	2004	2005	2006	2007	Country	2000	2004	2005	2006	2007
China	14,649	14,465	14,589	14,631	14,659	Myanmar (Burma)	1,093	1,587	1,732	2,007	2,236
Peru	10,657	9,605	9,388	7,017	7,211	Vietnam	1,623	1,879	1,930	1,971	2,121
Indonesia	4,081	4,654	4,709	4,824	4,937	South Korea	1,825	1,575	1,641	1,775	1,858
U.S.	4,718	4,960	4,893	4,852	4,768	Bangladesh	1,004	1,187	1,334	1,436	1,494
Japan	5,055	4,316	4,389	4,345	4,211	Iceland	1,983	1,734	1,665	1,327	1,399
India	3,666	3,391	3,691	3,845	3,953	Malaysia	1,289	1,336	1,214	1,296	1,386
Chile	4,300	4,927	4,329	4,161	3,806	Mexico	1,316	1,259	1,320	1,357	1,340
Russia	3,974	2,942	3,198	3,284	3,454	Taiwan	1,094	980	1,017	967	1,174
Philippines	1,896	2,211	2,270	2,319	2,500	Canada	998	1,173	1,104	1,069	1,006
Thailand	2,997	2,840	2,814	2,699	2,469	**World total**	**93,469**	**92,280**	**92,183**	**89,863**	**90,064**
Norway	2,699	2,524	2,393	2,256	2,379						

World Aquaculture Production, 2000-07

Source: UN Food and Agriculture Organization

	Metric tons (thous.)					Value (mil)				
Country	2000	2004	2005	2006	2007	2000	2004	2005	2006	2007
China	21,522	26,567	28,121	29,857	31,420	$21,292	$26,763	$29,954	$33,299	$39,685
India	1,942	2,795	2,962	3,169	3,355	5,511	3,784	3,758	4,173	4,383
Vietnam	499	1,199	1,437	1,658	2,157	991	2,444	2,931	3,316	4,526
Indonesia	789	1,045	1,197	1,293	1,393	2,246	1,993	1,999	2,255	2,462
Thailand	738	1,260	1,304	1,407	1,390	2,514	1,705	1,740	2,240	2,433
Bangladesh	657	915	882	892	946	1,039	1,363	1,246	1,359	1,523
Norway	491	637	662	712	830	1,385	1,681	2,136	2,749	2,978
Chile	392	665	698	802	830	1,250	2,745	3,108	4,428	5,277
Japan	763	776	746	734	766	3,317	3,205	3,178	3,099	3,173
Philippines	394	512	557	623	710	681	701	794	982	1,234
Egypt	340	472	540	595	636	815	613	792	951	1,193
South Korea	293	406	437	514	606	573	980	1,195	1,419	1,577
Myanmar (Burma)	99	400	485	575	605	781	1,231	1,504	1,774	1,862
U.S.	456	607	513	519	526	843	907	939	985	945
Taiwan	244	318	305	310	316	836	943	969	880	991
Brazil	172	270	258	272	290	264	470	444	469	598
Spain	309	293	219	293	281	329	323	309	356	384
France	267	243	245	238	238	425	665	677	663	757
Italy	214	118	181	173	179	446	371	595	599	757
Malaysia	152	171	176	168	178	254	324	339	340	370
World total[1]	**32,416**	**41,890**	**44,282**	**47,322**	**50,329**	**$47,597**	**$59,903**	**$66,167**	**$75,083**	**$87,013**

Note: Does not include aquatic plants or marine mammals. (1) Includes nations not shown.

U.S. Commercial Landings of Fish and Shellfish, 1990-2009

Source: Natl. Marine Fisheries Service, Natl. Oceanic and Atmospheric Admin., U.S. Dept. of Commerce

	Landings for human food		Landings for industrial purposes[1]		Total	
Year	Weight (mil lbs)	Value (mil)	Weight (mil lbs)	Value (mil)	Weight (mil lbs)	Value (mil)
1990	7,041	$3,366	2,363	$156	9,404	$3,522
1991	7,031	3,169	2,453	139	9,484	3,308
1992	7,618	3,531	2,019	147	9,637	3,678
1993	8,214	3,317	2,253	154	10,467	3,471
1994	7,936	3,751	2,525	95	10,461	3,846
1995	7,667	3,625	2,121	145	9,788	3,770
1996	7,474	3,355	2,091	132	9,565	3,487
1997	7,244	3,285	2,598	163	9,842	3,448
1998	7,173	3,009	2,021	119	9,194	3,128
1999	6,832	3,265	2,507	202	9,339	3,467
2000	6,912	3,398	2,157	152	9,069	3,550
2001	7,314	3,074	2,178	154	9,492	3,228
2002	7,205	2,940	2,192	152	9,397	3,092
2003	7,521	3,185	1,986	157	9,507	3,347
2004	7,794	3,611	1,889	145	9,683	3,756
2005	7,997	3,825	1,710	117	9,707	3,942
2006	7,842	3,911	1,641	113	9,483	4,024
2007	7,490	4,015	1,819	177	9,309	4,192
2008	6,633	4,231	1,692	152	8,325	4,383
2009[2]	6,035	3,724	1,833	158	7,867	3,882

Note: Does not include products of aquaculture, except oysters and clams. Statistics on landings are shown in round (live) weight for all items except univalve and bivalve mollusks such as clams, oysters, and scallops, which are shown in weight of meats (excluding the shell). (1) Processed into meal, oil, solubles, and shell products or used as bait or animal food. (2) Preliminary.

U.S. Domestic Landings, by Region, 2005, 2009

Source: Natl. Marine Fisheries Service, Natl. Oceanic and Atmospheric Admin., U.S. Dept. of Commerce

	2005[1,2]		2009[1,3]	
Region	Weight (thous. lbs)	Value (thous.)	Weight (thous. lbs)	Value (thous.)
New England	684,090	$971,663	645,601	$783,871
Middle Atlantic	199,937	221,505	200,032	201,475
Chesapeake	508,953	218,933	473,333	221,727
South Atlantic	122,422	125,117	112,907	148,664
Gulf	1,196,355	620,987	1,419,747	614,543
Pacific Coast incl. Alaska	6,950,647	1,700,927	4,971,543	1,824,070
Great Lakes	16,732	12,434	17,264	16,626
Hawaii	28,139	70,811	26,906	71,202
Total	**9,707,275**	**$3,942,376**	**7,867,333**	**$3,882,178**

(1) Landings reported in round (live) weight for all items except univalve and bivalve mollusks (e.g., clams, oysters, scallops), which are reported in weight of meats (excluding shell). (2) Revised. (3) Preliminary.

EMPLOYMENT

Employment and Unemployment in the U.S., 1900-2009

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

(civilian labor force, persons 16 years of age and older; annual averages; in thousands)

Year[1]	Employed	Unemployed Number	Unemployed Rate	Year[1]	Employed	Unemployed Number	Unemployed Rate	Year[1]	Employed	Unemployed Number	Unemployed Rate
1900[2] . . .	26,956	1,420	5.0%	1986	109,597	8,237	7.0%	1998[5] . . .	131,463	6,210	4.5%
1910[2] . . .	34,599	2,150	5.9	1987	112,440	7,425	6.2	1999[6] . . .	133,488	5,880	4.2
1920[2] . . .	39,208	2,132	5.2	1988	114,968	6,701	5.5	2000[7] . . .	136,891	5,692	4.0
1930[2] . . .	44,183	4,340	8.9	1989	117,342	6,528	5.3	2001	136,933	6,801	4.7
1940[2] . . .	47,520	8,120	14.6	1990[3] . . .	118,793	7,047	5.6	2002	136,485	8,378	5.8
1950	58,918	3,288	5.0	1991	117,718	8,628	6.8	2003	137,736	8,774	6.0
1955	62,170	2,852	4.4	1992	118,492	9,613	7.5	2004	139,252	8,149	5.5
1960	65,778	3,852	5.5	1993	120,259	8,940	6.9	2005	141,730	7,591	5.1
1965	71,088	3,366	4.5	1994[4] . . .	123,060	7,996	6.1	2006	144,427	7,001	4.6
1970	78,678	4,093	4.9	1995	124,900	7,404	5.6	2007	146,047	7,078	4.6
1975	85,846	7,929	8.5	1996	126,708	7,236	5.4	2008	145,362	8,924	5.8
1980	99,303	7,637	7.1	1997[5] . . .	129,558	6,739	4.9	2009	139,877	14,265	9.3
1985	107,150	8,312	7.2								

(1) **Other unemployment rates (1905-45)**, 14 years of age and older: **1905**, 4.3; **1915**, 8.5; **1925**, 3.2; **1935**, 20.3; **1936**, 16.9; **1937**, 14.3; **1938**, 19.0; **1939**, 17.2; **1945**, 1.9. (2) Persons 14 years of age and older. (3) Beginning in 1990, data incorporate 1990 census-based population controls, adjusted for estimated undercount. (4) Beginning in 1994, not strictly comparable with prior years because of major redesign of the survey used. (5) From 1997 on, not strictly comparable with 1994-96 because of revisions in population controls used in household survey. (6) From 1999 on, not strictly comparable with earlier years because of further revisions in population controls used in household survey. (7) From 2000 on, not strictly comparable with earlier years because of revisions to the controls used in the survey.

Unemployment Insurance Data, by State, 2009

Source: Employment and Training Admin., U.S. Dept. of Labor; state programs only

State	Unemployment rate	Monetarily eligible claimants	Number of first payments	Number of final payments	Initial claims	Benefits paid	Average weekly benefit	Employers subject to state law
AL	10.1%	238,400	195,672	83,432	460,640	$628,124,805	$208	88,631
AK	8.0	57,810	34,157	20,806	102,284	158,231,435	235	17,290
AZ	9.1	304,322	242,508	131,350	418,711	961,487,449	220	131,391
AR	7.3	158,256	141,925	66,863	341,295	596,944,596	282	68,659
CA	11.4	2,199,954	1,778,757	1,066,905	3,839,198	10,769,257,239	311	1,208,655
CO	7.7	226,109	186,153	103,182	268,122	1,062,136,697	361	154,814
CT	8.2	268,425	231,431	102,423	335,156	1,241,315,278	340	98,245
DC	10.2	35,401	34,259	19,273	25,833	201,555,677	303	28,300
DE	8.1	47,341	36,218	20,152	72,503	199,010,301	262	26,299
FL	10.5	908,184	680,061	468,595	1,327,496	2,916,853,328	238	474,380
GA	9.6	525,386	409,873	237,433	1,025,764	1,657,492,084	283	213,565
HI	6.8	60,558	50,721	22,743	130,888	374,180,697	423	31,294
ID	8.0	110,794	92,187	46,796	191,026	383,159,395	275	49,986
IL	10.1	629,038	661,955	348,987	1,221,195	4,289,128,428	328	302,146
IN	10.1	400,852	354,471	215,551	685,040	1,763,106,371	307	130,979
IA	6.0	201,939	165,030	63,657	401,554	770,408,687	320	72,231
KS	6.7	141,960	123,178	63,547	291,951	650,656,965	354	71,575
KY	10.5	243,346	191,181	80,622	519,872	1,041,754,778	308	85,129
LA	6.8	180,070	136,503	51,284	247,315	511,258,091	231	103,988
ME	8.0	71,316	55,232	25,294	113,127	245,191,020	282	41,672
MD	7.0	244,725	187,148	93,347	416,300	1,032,613,373	311	140,063
MA	8.4	404,828	352,631	191,724	569,381	2,596,045,031	419	188,750
MI	13.6	690,935	652,819	162,986	1,311,370	3,635,539,557	309	209,283
MN	8.0	328,237	252,468	134,061	451,108	1,601,349,548	360	134,791
MS	9.6	133,325	102,315	47,765	203,908	342,425,421	196	56,157
MO	9.3	331,997	241,057	121,161	671,042	1,098,682,276	256	137,732
MT	6.2	59,712	41,524	21,588	97,161	203,995,275	270	37,243
NE	4.6	78,402	60,656	29,714	117,427	207,744,014	249	48,208
NV	11.8	207,802	181,563	110,770	339,816	1,093,521,792	317	58,950
NH	6.3	71,004	57,473	20,605	111,700	257,193,692	283	40,663
NJ	9.2	513,231	469,715	284,292	747,467	3,467,869,925	396	238,087
NM	7.2	91,644	62,746	36,031	108,285	349,514,135	300	45,776
NY	8.4	1,119,333	803,525	424,295	1,541,992	4,594,151,734	315	493,438
NC	10.6	621,839	544,491	310,305	1,263,634	2,504,726,842	307	200,770
ND	4.3	28,650	22,013	8,152	42,039	96,487,557	311	20,503
OH	10.2	556,098	503,921	247,778	1,148,834	2,843,202,079	321	228,244
OK	6.4	113,417	107,524	50,869	238,924	556,964,609	295	82,773
OR	11.1	311,856	260,274	140,625	637,417	1,544,979,557	313	110,933
PA	8.1	839,838	782,870	355,542	1,886,444	4,582,763,958	352	286,669
PR	15.0	129,774	132,368	62,067	208,172	304,175,659	115	73,244
RI	11.2	65,968	55,512	34,632	109,500	406,896,837	383	33,307
SC	11.7	293,178	224,111	126,887	519,104	910,924,287	250	99,438
SD	4.8	21,774	17,428	3,922	34,567	63,571,286	254	25,606
TN	10.5	327,558	279,980	153,091	611,422	1,062,183,384	226	114,533
TX	7.6	918,998	713,662	374,253	1,221,040	3,729,510,363	325	451,825
UT	6.6	123,658	98,998	49,180	160,457	474,639,487	321	69,494
VA	6.7	313,456	229,868	116,585	501,950	1,046,994,565	304	189,603
VI	NA	4,012	3,489	2,029	4,770	19,326,148	327	3,408
VT	6.9	41,478	38,373	13,325	61,533	183,452,744	306	22,075
WA	8.9	432,155	345,913	154,773	753,328	2,517,204,286	402	201,559
WV	7.9	93,259	77,262	26,510	118,004	333,836,153	272	36,012
WI	8.5	497,044	447,970	170,298	1,113,764	1,865,387,497	288	130,858
WY	6.4	55,122	28,772	12,241	46,487	161,531,961	347	21,884
U.S.	**9.3**	**17,073,768**	**14,181,911**	**7,330,298**	**29,387,317**	**76,110,658,353**	**310**	**7,631,104**

Unemployed Persons in the U.S. by Industry and Duration of Unemployment, 2009

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

Occupation	Number of unemployed persons (thous.)					Weeks of Unemployment	
	Total	Less than 5 weeks	5 to 14 weeks	15 to 26 weeks	27 weeks and over	Average (mean) duration	Median duration
Management, professional, and related occupations	2,531	535	665	491	840	25.7	16.0
Management, business, and financial operations occupations	1,105	201	273	226	404	27.0	18.4
Professional and related occupations	1,427	334	393	265	436	24.6	14.1
Service occupations	2,605	638	724	493	750	22.8	13.6
Sales and office occupations	3,143	641	828	608	1,067	25.8	16.4
Sales and related occupations	1,501	324	399	281	497	24.7	15.6
Office and administrative support occupations	1,642	317	429	326	570	26.7	17.1
Natural resources, construction, and maintenance occupations	2,464	573	667	500	724	22.9	14.4
Farming, fishing, and forestry occupations	179	48	59	36	37	18.7	11.6
Construction and extraction occupations	1,825	432	499	367	527	22.5	14.1
Installation, maintenance, and repair occupations	459	93	109	97	160	26.4	17.7
Production, transportation, and material moving occupations	2,453	519	632	489	814	24.9	16.3
Production occupations	1,322	268	326	270	458	25.6	17.3
Transportation and material moving occupations	1,131	251	306	218	356	24.1	14.9
Industry[1]							
Agriculture and related industries	206	52	63	43	48	20.6	12.6
Mining, quarrying, and oil and gas extraction	92	20	28	21	23	19.9	13.7
Construction	1,797	406	484	377	530	22.4	14.8
Manufacturing	1,905	368	478	402	657	25.9	17.5
Durable goods	1,287	254	331	273	428	25.1	16.9
Nondurable goods	618	114	147	128	229	27.6	18.9
Wholesale and retail trade	1,862	390	510	355	607	25.2	15.5
Transportation and utilities	563	119	155	110	180	24.6	15.4
Information	304	60	74	55	115	28.1	18.2
Financial activities	613	107	150	124	232	28.5	19.1
Professional and business services	1,555	332	412	301	510	24.4	15.7
Education and health services	1,444	352	400	259	432	23.7	13.6
Leisure and hospitality	1,594	392	447	310	445	21.9	13.5
Other services	480	114	122	84	161	25.8	15.2
Public administration	204	46	51	42	66	26.4	16.0
No previous work experience	1,035	255	307	189	285	23.6	12.9

(1) Includes wage and salary workers only.

Persons Not in the U.S. Labor Force, 2009

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

The Labor Dept.'s unemployment rate, based on its household survey, shows the number of people out of work as a percentage of U.S. adults age 16 and older in the labor force. That rate excludes, however, the millions of adults considered not to be in the labor force.

(in thousands)

	Total	Age			Sex	
		16 to 24 years	25 to 54 years	55 years and over	Men	Women
Total not in the labor force	**81,659**	**16,207**	**21,823**	**43,629**	**32,013**	**49,646**
Do not want a job now[1]	75,765	14,263	19,199	42,303	29,234	46,531
Want a job[1]	5,894	1,944	2,624	1,325	2,779	3,115
Did not search for work in previous year	3,075	960	1,241	874	1,344	1,731
Searched for work in previous year[2]	2,818	983	1,383	452	1,435	1,384
Not available to work now	592	275	256	61	251	341
Available to work now	2,226	708	1,127	391	1,184	1,043
Reason not currently looking						
Discouragement over job prospects[3]	778	200	427	151	485	293
Reasons other than discouragement	1,449	509	699	240	699	749
Family responsibilities	209	38	131	41	50	159
In school or training	306	234	65	7	163	144
Ill health or disability	136	19	68	49	70	66
Other[4]	798	219	435	144	417	381

(1) Includes some persons who were not asked if they want a job. (2) Persons who had a job in the prior 12 months must have searched since the end of that job. (3) Includes believes no work available, could not find work, lacks necessary schooling or training, employer thinks too young or old, and other types of discrimination. (4) Includes those who did not actively look for work in the prior 4 weeks for such reasons as child care and transportation problems, as well as a small number for whom reason for nonparticipation was not ascertained.

U.S. Displaced Workers, 2010

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

	Total (thous.)	Percent distribution by reason of job loss		
		Plant or company closed down or moved	Insufficient work	Position or shift abolished
Total, 20 years of age and over	**6,938**	**30.6%**	**42.8%**	**26.6%**
20 to 24 years	227	35.9	52.6	11.5
25 to 54 years	4,923	30.4	43.8	25.8
55 to 64 years	1,395	32.5	38.6	28.9
65 years and over	392	23.7	39.9	36.4
Men	4,183	29.8	47.9	22.3
Women	2,754	31.8	35.1	33.1
White	5,716	29.7	42.9	27.3
Black	761	33.9	41.7	24.4
Asian	294	34.0	44.4	21.6
Hispanic or Latino	993	32.4	57.0	10.6

Note: As of Jan. 2010. Displaced workers are persons 20 years or older who lost or left jobs they had held for at least 3 years. Workers in this table were displaced between Jan. 2007 and Dec. 2009. Hispanic/Latino persons may be of any race.

U.S. Unemployment Rates by Selected Characteristics, 1995-2010[1]

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

	1995	2000	2004	2005	2006	2007	2008	2009 Jan.	2009 June	2009 Yr.	2010 Jan.	2010 June
Total (all civilian workers)	**5.6%**	**4.0%**	**5.5%**	**5.1%**	**4.6%**	**4.6%**	**5.8%**	**8.5%**	**9.7%**	**9.3%**	**10.6%**	**9.6%**
Men, 20 years and older	4.8	3.3	5.0	4.4	4.0	4.1	5.4	9.1	9.5	9.6	11.6	9.4
Women, 20 years and older	4.9	3.6	4.9	4.6	4.1	4.0	4.9	6.6	7.9	7.5	8.0	8.0
Both sexes, 16 to 19 years	17.3	13.1	17.0	16.6	15.4	15.7	18.7	21.4	27.8	24.3	26.9	29.0
White	4.9	3.5	4.8	4.4	4.0	4.1	5.2	7.8	8.8	8.5	9.6	8.7
Black	10.4	7.6	10.4	10.0	8.9	8.3	10.1	13.4	15.3	14.8	17.3	15.6
Asian	—	3.6	4.4	4.0	3.0	3.2	4.0	6.2	8.2	7.3	8.4	7.7
Hispanic (of any race)	9.3	5.7	7.0	6.0	5.2	5.6	7.6	11.0	12.1	12.1	13.9	12.3
Married men, spouse present	3.3	—	—	—	—	—	3.4	5.1	6.9	6.6	6.6	6.8
Married women, spouse present	3.9	—	—	—	—	—	3.6	4.8	5.6	5.5	5.8	5.9
Women who maintain families	8.0	5.9	8.0	7.8	7.1	6.5	8.0	10.3	11.7	11.5	12.3	12.1
Occupation												
Management, professional, and related	2.4	1.8	2.7	2.3	2.1	2.1	2.7	4.1	5.0	4.6	5.0	4.9
Service	7.5	5.2	6.6	6.4	5.9	5.9	6.7	9.1	10.2	9.6	11.4	9.6
Sales and office	5.0	3.8	5.2	4.8	4.4	4.3	5.3	7.5	8.6	8.5	9.5	9.0
Nat. resources, constr., and maintenance	—	5.3	7.3	6.5	6.0	6.3	8.8	15.5	14.2	15.6	19.9	15.0
Prod., trans., material moving	—	5.1	7.2	6.5	5.8	5.8	7.6	12.9	13.9	13.3	15.2	12.0
Industry												
Nonagricultural, private wage, and salary workers	5.8	4.1	5.7	5.2	4.7	4.7	5.9	9.0	10.0	9.8	11.1	9.7
Mining	5.2	4.4	3.9	3.1	3.2	3.4	3.1	7.0	13.6	11.6	9.1	8.2
Construction	11.5	6.2	8.4	7.4	6.7	7.4	10.6	18.2	17.4	19.0	24.7	20.1
Manufacturing	4.9	3.5	5.7	4.9	4.2	4.3	5.8	10.9	12.6	12.1	13.0	9.9
Durable goods	4.4	3.2	5.5	4.6	3.9	4.2	5.6	11.2	13.9	12.9	14.1	10.4
Nondurable goods	5.7	4.0	5.9	5.3	4.8	4.5	6.0	10.3	10.5	10.6	11.1	9.1
Wholesale and retail trade	6.5	4.3	5.8	5.4	4.9	4.7	5.9	8.7	9.1	9.0	10.5	9.3
Transportation and utilities	4.5	3.4	4.4	4.1	4.0	3.9	5.1	8.4	8.4	8.9	11.3	7.2
Information	—	3.2	5.7	5.0	3.7	3.6	5.0	7.4	11.1	9.2	10.0	8.8
Financial activities	3.3	2.4	3.6	2.9	2.7	3.0	3.9	6.0	5.5	6.4	6.6	6.9
Professional and business services	—	4.8	6.8	6.2	5.6	5.3	6.5	10.4	11.3	10.8	11.1	10.3
Education and health services	—	2.5	3.4	3.4	3.0	3.0	3.5	3.8	6.1	5.3	5.5	6.2
Leisure and hospitality	—	6.6	8.3	7.8	7.3	7.4	8.6	11.5	12.1	11.7	14.2	12.3
Other services	8.4	3.9	5.3	4.8	4.7	3.9	5.3	7.1	8.4	7.5	10.0	8.5
Agriculture and related	11.1	9.0	9.9	8.3	7.2	6.3	9.2	18.7	12.3	14.3	21.3	11.7
Government	2.9	2.1	2.7	2.6	2.3	2.3	2.4	3.0	4.4	3.6	4.3	4.4
Self-employed and unpaid family workers	—	2.1	2.8	2.7	2.7	2.8	3.6	6.5	4.4	5.5	7.2	5.0

— = Not available. (1) All monthly rates unadjusted, except for married men and women, which are seasonally adjusted.

Employed Persons in the U.S. by Occupation and Sex, 2008-09

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

(persons 16 or older; in thousands)

	Total		Men		Women	
	2008	2009	2008	2009	2008	2009
Total	**145,362**	**139,877**	**77,486**	**73,670**	**67,876**	**66,208**
Management, professional, and related occupations	**52,761**	**52,219**	**25,948**	**25,385**	**26,813**	**26,833**
Management, business, and financial operations occupations	22,059	21,529	12,647	12,330	9,412	9,199
Management occupations	15,852	15,447	9,925	9,674	5,926	5,773
Business and financial operations occupations	6,207	6,082	2,721	2,655	3,486	3,426
Professional and related occupations	30,702	30,690	13,301	13,056	17,401	17,634
Computer and mathematical occupations	3,676	3,481	2,765	2,618	911	863
Architecture and engineering occupations	2,931	2,740	2,536	2,363	395	377
Life, physical, and social science occupations	1,307	1,328	704	707	603	621
Community and social services occupations	2,293	2,341	909	868	1,383	1,474
Legal occupations	1,671	1,710	803	859	867	851
Education, training, and library occupations	8,605	8,627	2,234	2,221	6,371	6,407
Arts, design, entertainment, sports, and media occupations	2,820	2,724	1,471	1,453	1,349	1,271
Healthcare practitioner and technical occupations	7,399	7,738	1,878	1,968	5,521	5,770
Service occupations	**24,451**	**24,598**	**10,471**	**10,521**	**13,980**	**14,077**
Healthcare support occupations	3,212	3,309	359	350	2,853	2,959
Protective service occupations	3,047	3,164	2,352	2,457	695	707
Food preparation and serving related occupations	7,824	7,733	3,443	3,422	4,381	4,310
Building and grounds cleaning and maintenance occupations	5,445	5,349	3,254	3,186	2,192	2,163
Personal care and service occupations	4,923	5,043	1,064	1,106	3,859	3,937
Sales and office occupations	**35,544**	**33,787**	**13,067**	**12,498**	**22,477**	**21,289**
Sales and related occupations	16,295	15,641	8,221	7,880	8,073	7,761
Office and administrative support occupations	19,249	18,146	4,845	4,618	14,404	13,527
Natural resources, construction, and maintenance occupations	**14,806**	**13,323**	**14,181**	**12,735**	**626**	**587**
Farming, fishing, and forestry occupations	988	926	780	736	208	190
Construction and extraction occupations	8,667	7,439	8,448	7,248	219	191
Installation, maintenance, and repair occupations	5,152	4,957	4,953	4,751	199	206
Production, transportation, and material moving occupations	**17,800**	**15,951**	**13,820**	**12,530**	**3,980**	**3,421**
Production occupations	8,973	7,654	6,313	5,502	2,661	2,152
Transportation and material moving occupations	8,827	8,297	7,507	7,028	1,319	1,269

Note: Updated population controls are introduced annually with the release of Jan. data. Numbers may not add up to totals because of independent rounding.

Projected Openings for Selected High-Paying Occupations, 2008-18

Source: Employment Projections Program, Bureau of Labor Statistics, U.S. Dept. of Labor

Job openings shown below represent the average number expected each year for workers in the U.S. who are entering these occupations for the first time.

Occupation	Annual avg. job openings[1]	Median annual earnings[2]	Occupation	Annual avg. job openings[1]	Median annual earnings[2]
Registered nurses	103,900	$62,450	Sales representatives[4]	45,790	$51,330
Elementary school teachers[3]	59,650	49,330	First-line retail superv. or mgrs.	45,010	35,310
Truck drivers, heavy and tractor-trailer	55,460	37,270	Exec. secretaries, admin. assistants.	41,920	40,030
Postsecondary teachers	55,290	58,830	Secondary school teachers[3]	41,240	51,180
Gen. and operations mgrs.	50,220	91,570	Lic. practical and voc. nurses	39,130	39,030
Accountants and auditors	49,750	59,430	Gen. maintenance and repair workers	35,750	33,710
First-line office superv. or mgrs.	48,900	45,790	Carpenters	32,540	38,940
Bookkeeping, accounting, & auditing clerks	46,040	32,510			

(1) As a result of growth and net replacement needs. (2) Median earnings are for 2008. (3) Except special and vocational education. (4) Wholesale and manufacturing, except technical and scientific products.

Top-Paying U.S. Counties by Average Weekly Wage, 2009

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

County	Avg. weekly wage	% change 4th qtr., 2008-09	County	Avg. weekly wage	% change 4th qtr., 2008-09
New York, NY	$1,878	1.1%	San Mateo, CA	$1,477	2.6%
Santa Clara, CA	1,699	8.2	Morris, NJ	1,429	4.7
Washington, DC	1,614	2.7	Somerset, NJ	1,413	–6.2
Fairfield, CT	1,607	0.7	Alexandria City, VA.	1,376	4.8
Arlington, VA.	1,594	5.8	Middlesex, MA	1,344	3.5
Suffolk, MA	1,565	–0.3	Montgomery, MD	1,294	6.2
San Francisco, CA	1,539	3.1	Westchester, NY.	1,288	4.4
Fairfax, VA	1,489	5.2	**United States**	**942**	**2.5**

Note: Figures shown are for 4th quarter, 2009. Horry County, SC, recorded the lowest average weekly earnings among the 334 largest counties, with an average weekly wage of $584 in the 4th quarter of 2009. It was followed by: Hidalgo County, TX, and Cameron County, TX ($598); Webb County, TX ($619); Yakima County, WA ($640); and San Juan, PR ($653). The top 15 were derived from a list of the 334 largest U.S. counties, which comprise 71.4% of total covered workers. Data include all workers covered by state and federal unemployment insurance programs.

Federal Minimum Hourly Wage Rates Since 1950

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

	Nonfarm workers					Nonfarm workers			
Effective date	Under laws prior to 1966[1]	Percent of avg. earnings[2]	Under 1966 and later provis.[3]	Farm workers[4]	Effective date	Under laws prior to 1966[1]	Percent of avg. earnings[2]	Under 1966 and later provis.[3]	Farm workers[4]
Jan. 25, 1950	$0.75	54%	NA	NA	Jan. 1, 1977	(5)	(5)	$2.30	$2.20
Mar. 1, 1956	1.00	52	NA	NA	Jan. 1, 1978	$2.65	44%	2.65	2.65
Sept. 3, 1961	1.15	50	NA	NA	Jan. 1, 1979	2.90	45	2.90	2.90
Sept. 3, 1963	1.25	51	NA	NA	Jan. 1, 1980	3.10	43	3.10	3.10
Feb. 1, 1967	1.40	50	$1.00	$1.00	Jan. 1, 1981	3.35	42	3.35	3.35
Feb. 1, 1968	1.60	54	1.15	1.15	Apr. 1, 1990	3.80[6]	35	3.80	3.80[6]
Feb. 1, 1969	(5)	(5)	1.30	1.30	Apr. 1, 1991	4.25[6]	38	4.25	4.25[6]
Feb. 1, 1970	(5)	(5)	1.45	(5)	Oct. 1, 1996	4.75[7]	37	4.75	4.75[7]
Feb. 1, 1971	(5)	(5)	1.60	(5)	Sept. 1, 1997	5.15[7]	39	5.15	5.15[7]
May 1, 1974	2.00	46	1.90	1.60	July 24, 2007	5.85[7]	NA	5.85	5.85[7]
Jan. 1, 1975	2.10	45	2.00	1.80	July 24, 2008	6.55[7]	NA	6.55	6.55[7]
Jan. 1, 1976	2.30	46	2.20	2.00	July 24, 2009	7.25[7]	NA	7.25	7.25[7]

NA = Not applicable. (1) Applies to workers covered prior to 1961 amendments and, after Sept. 1965, to workers covered by 1961 amendments. Rates set by 1961 amendments were: Sept. 1961, $1.00; Sept. 1964, $1.15; and Sept. 1965, $1.25. (2) Percent of gross average hourly earnings of production workers in manufacturing. (3) Applies to workers newly covered by amendments of 1966, 1974, and 1977, and Title IX of education amendments of 1972. (4) Included in coverage as of 1966, 1974, and 1977 amendments. (5) No change in rate. (6) Training wage for workers age 16-19 in first 6 months of first job: Apr. 1, 1990, $3.35; Apr. 1, 1991, $3.62. The training wage expired Mar. 31, 1993. (7) Under 1996 legislation, a subminimum training wage of $4.25 an hour was established for employees under 20 years of age during their first 90 consecutive calendar days of employment with an employer. For workers receiving gratuities, the minimum wage remained $2.13 per hour.

Fatal Occupational Injuries, 2009

Source: Census of Fatal Occupational Injuries, Bureau of Labor Statistics, U.S. Dept. of Labor, in cooperation with other agencies

	Fatalities			Fatalities	
	Number	%		Number	%
Total	**4,340**	**100%**	**Contact with objects and equipment**	**734**	**17%**
Transportation incidents	**1,682**	**39**	Struck by object or equipment	414	10
Highway	882	20	Struck by falling object or equipment	272	6
Collision bet. vehicles, mobile equipment	421	10	Struck by flying object or equipment	40	1
Vehicle struck object on side of road	222	5	Caught in or compressed by equipment or objects	232	5
Noncollision	218	5	Caught in running equipment or machinery	112	3
Jack-knifed or overturned	183	4	Caught in or crushed in collapsing materials	80	2
Nonhighway (farm, industrial premises)	260	6	**Falls**	**617**	**14**
Overturned	134	3	**Exposure to harmful substances or environments**	**390**	**9**
Worker struck by vehicle	265	6	Contact with electric current	168	4
Railway accident	33	1	Contact with overhead power lines	63	1
Water vehicle accident	82	2	Contact with temperature extremes	39	1
Aircraft accident	156	4	Exposure to caustic, noxious, or allergenic substances	119	3
Assaults and violent acts	**788**	**18**	Inhalation of substance	42	1
Homicides	521	12	Oxygen deficiency	62	1
Shooting	420	10	Drowning, submersion	51	1
Stabbing	48	1	**Fires and explosions**	**113**	**3**
Self-inflicted injuries	237	5			

Note: Totals for categories may include subcategories not shown separately. Percentages based on incidence rate per total fatalities.

U.S. Occupational Injuries or Illnesses, by Industry, 2008

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

(percent distribution)

		Goods producing			Service providing					
	Private industry[1,2]	Natural resources, mining[1,2,3]	Construction	Manufacturing	Trade, trans., utilities[3]	Info.	Financial	Prof., business	Educ., health	Leisure, hospitality
Total (1,078,140 cases)	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Nature of injury or illness										
Sprains, strains, tears	38.6%	31.7%	33.2%	33.6%	41.4%	42.3%	35.4%	35.2%	48.7%	32.8%
Bruises, contusions	8.7	10.3	6.5	8.2	9.7	7.0	8.7	7.8	9.3	8.6
Cuts, lacerations	8.1	8.7	11.0	10.8	7.7	4.8	5.2	7.5	2.6	13.1
Punctures	1.2	1.6	3.2	1.6	0.9	0.4	0.4	0.9	0.6	0.5
Fractures	8.3	13.0	11.2	8.9	7.8	7.6	11.7	9.2	5.9	7.2
Heat burns	1.4	0.8	0.9	1.8	1.1	0.3	0.6	0.5	0.8	5.5
Carpal tunnel syndrome	0.9	0.3	0.3	2.3	0.5	2.1	3.3	0.8	0.5	0.8
Tendonitis	0.4	0.2	0.2	0.7	0.3	0.6	0.2	0.4	0.4	0.5
Chemical burns	0.5	0.7	0.6	0.9	0.3	0.1	0.2	0.7	0.3	0.8
Amputations	0.6	1.8	0.5	1.6	0.4	0.4	0.5	0.4	0.1	0.4
Multiple traumatic injuries	4.1	4.1	4.0	3.8	3.8	6.1	4.6	5.1	4.0	4.1
Part of body affected by the injury or illness										
Head	6.8%	8.5%	8.3%	7.6%	6.5%	4.7%	6.6%	7.1%	5.0%	6.3%
Eye	2.5	3.8	4.6	4.2	1.9	1.4	2.3	1.8	1.4	1.7
Neck	1.5	1.5	1.3	1.0	1.6	1.9	1.7	1.6	2.1	0.7
Trunk	34.0	27.6	31.8	31.1	36.3	31.5	35.7	29.4	39.6	29.2
Shoulder	6.9	5.5	4.9	7.5	7.9	7.8	6.2	5.2	6.9	6.5
Back	20.6	14.9	19.7	16.2	21.6	19.3	20.9	17.9	27.1	18.2
Upper extremities	22.6	25.2	22.8	32.8	20.3	19.3	18.3	21.0	15.8	29.6
Arm	4.5	4.8	3.9	5.2	4.9	4.2	3.9	4.2	4.1	4.7
Wrist	4.3	2.3	3.3	5.8	3.7	5.1	5.8	4.2	4.2	5.5
Hand, except finger	3.9	3.8	4.7	5.0	3.5	3.2	1.6	3.6	2.2	6.0
Finger	8.8	12.4	9.9	15.3	7.3	5.5	6.2	7.8	4.1	12.2
Lower extremities	22.3	26.1	25.4	18.8	23.6	26.5	19.8	24.1	20.2	22.1
Knee	8.5	9.1	9.4	6.8	8.6	11.2	7.2	9.2	9.0	8.4
Ankle	5.1	4.8	5.9	3.7	5.1	7.1	4.5	6.1	5.1	6.3
Foot, except toe	3.6	3.7	4.5	3.5	4.2	3.5	4.4	3.5	2.2	2.8
Toe	1.0	1.2	1.1	1.1	1.2	0.4	1.9	0.5	0.7	0.7
Body systems	1.5	1.2	1.3	1.0	1.0	1.5	3.4	2.7	1.8	1.9
Multiple parts	10.4	9.3	8.6	7.1	9.8	13.8	12.8	12.7	14.6	9.4
Source of injury or illness										
Chemicals and chemical products	1.4%	3.2%	1.4%	2.2%	0.9%	0.6%	1.1%	1.4%	1.5%	1.5%
Containers	12.1	6.9	4.6	11.9	19.9	8.1	8.2	10.9	5.5	14.1
Furniture and fixtures	3.9	0.6	1.9	2.6	3.9	4.0	7.0	3.1	5.4	6.8
Machinery	6.0	8.4	6.2	12.5	5.1	5.9	6.3	4.4	2.0	5.2
Parts and materials	9.9	14.5	23.2	17.7	9.0	5.9	7.6	6.1	1.3	1.9
Floors, walkways, ground surfaces	20.2	18.8	19.1	13.6	18.2	26.7	26.6	24.9	24.3	26.0
Tools, instruments, and equipment	6.7	7.7	11.6	7.7	4.8	8.0	5.8	5.7	4.8	9.1
Vehicles	8.5	9.9	5.5	5.4	13.8	9.7	8.5	10.0	4.6	4.0
Person, injured or ill worker	14.5	8.6	13.8	16.6	14.0	20.1	16.7	14.1	13.9	13.9
Worker motion or position	13.9	8.1	13.2	16.2	13.3	19.7	16.2	12.9	13.4	13.3
Person, other than injured or ill worker	5.7	—	0.2	0.2	0.7	0.6	2.6	2.3	29.4	2.1
Health-care patient	4.6	—	—	—	<0.1	—	0.3	0.7	26.3	0.1
Event or exposure leading to injury or illness										
Contact with objects and equipment	27.1%	40.3%	35.7%	36.6%	27.2%	20.4%	19.9%	23.5%	13.4%	28.2%
Struck by object	14.2	22.0	21.0	16.6	14.4	8.7	11.6	11.5	7.0	16.4
Struck against object	6.5	7.6	7.7	7.1	6.9	6.6	3.3	6.5	4.2	7.6
Caught in equipment or object	4.5	8.8	3.6	10.5	4.1	4.1	3.3	3.9	1.5	2.8
Fall to lower level	6.3	8.5	12.9	4.2	5.7	9.7	6.6	8.3	4.2	4.6
Fall on same level	14.6	9.0	7.6	10.5	13.1	17.7	21.8	17.2	20.3	22.1
Slip, trip, loss of balance–without fall	3.3	1.8	3.2	2.5	3.1	3.8	2.7	3.3	4.0	4.7
Overexertion	23.3	15.2	17.7	22.0	26.3	17.4	18.6	17.1	32.2	15.7
Overexertion in lifting	12.1	6.7	9.2	11.1	14.5	7.9	10.7	9.5	14.3	9.4

Note: Dashes (—) indicate data are not available. Because of rounding and classifications not shown, percentages may not add up to 100. All injuries and illnesses reported involved days away from work. (1) Excludes farms with fewer than 11 employees. (2) Data conforming to OSHA definitions for mining operators in coal, metal, and nonmetal mining are provided by the Mine Safety and Health Administration, U.S. Dept. of Labor. Independent mining contractors are excluded from the coal, metal, and nonmetal industries. Data for mining include establishments not governed by Mine Safety and Health Administration rules, such as those in oil and gas extraction. (3) Data for employers in railroad transportation are provided by the Federal Railroad Administration, U.S. Dept. of Transportation.

Civilian Employment of the Federal Government, 2009

Source: Statistical Analysis and Services Division, U.S. Office of Personnel Management
(monthly payroll in thousands of dollars; as of July 2009)

	ALL AREAS		UNITED STATES		WASH., DC[1]		OVERSEAS	
	Employment	Payroll	Employment	Payroll	Employment	Payroll	Employment	Payroll
TOTAL, ALL AGENCIES[2,3]	**2,822,561**	**$14,680,389**	**2,734,014**	**$14,190,652**	**354,589**	**$2,956,479**	**88,547**	**$489,737**
Legislative Branch[2,3]	**29,933**	**182,900**	**29,927**	**182,836**	**28,812**	**173,812**	**6**	**64**
Congress[3]	17,531	97,439	17,531	97,439	17,531	97,439	—	—
U.S. Senate[3]	6,820	38,200	6,820	38,200	6,820	38,200	—	—
House of Representatives[3]	10,711	59,239	10,711	59,239	10,711	59,239	—	—
Architect of the Capitol[3]	2,212	11,404	2,212	11,404	2,212	11,404	—	—
Congressional Budget Ofc.[3]	238	3,152	238	3,152	238	3,152	—	—
Govt. Accountability Ofc.[3]	3,191	28,564	3,191	28,564	2,308	20,701	—	—
Govt. Printing Ofc.[3]	2,378	13,882	2,378	13,882	2,188	12,936	—	—
Library of Congress[3]	3,871	24,700	3,865	24,636	3,831	24,465	6	64
U.S. Tax Court[3]	223	1,631	223	1,631	223	1,631	—	—
Judicial Branch[3]	**33,754**	**187,679**	**33,385**	**185,884**	**2,815**	**18,911**	**369**	**1,795**
Supreme Court[3]	483	2,484	483	2,484	483	2,484	—	—
U.S. Courts[3]	33,271	185,195	32,902	183,400	2,332	16,427	369	1,795
Executive Branch[2,3]	**2,758,874**	**14,309,810**	**2,670,702**	**13,821,932**	**322,962**	**2,763,756**	**88,172**	**487,878**
Exec. Ofc. of the President	1,788	13,834	1,775	13,729	1,775	13,729	13	105
White House Office	427	2,495	427	2,495	427	2,495	—	—
Ofc. of Vice President	21	172	21	172	21	172	—	—
Ofc. of Mgmt. and Budget	546	4,827	546	4,827	546	4,827	—	—
Ofc. of Administration	233	1,660	233	1,660	233	1,660	—	—
Council Economic Advisors	26	175	26	175	26	175	—	—
Council Environmental Quality	23	153	23	153	23	153	—	—
Ofc. of Policy Development	27	207	27	207	27	207	—	—
National Security Council	57	414	57	414	57	414	—	—
Ofc. of Natl. Drug Control Policy	85	750	85	750	85	750	—	—
Ofc. of U.S. Trade Rep.	230	2,100	217	1,995	217	1,995	13	105
Executive Departments	1,880,134	10,120,361	1,797,899	9,663,801	259,298	2,295,753	82,235	456,560
State	37,482	941,053	15,338	698,356	12,552	665,837	22,144	242,697
Treasury	112,358	619,103	111,663	615,984	15,281	121,778	695	3,119
Defense, total	734,065	2,652,278	686,843	2,511,616	71,986	288,423	47,222	140,662
Defense, mil. function	709,063	2,584,706	661,894	2,444,117	71,249	286,552	47,169	140,589
Defense, civ. function[3]	25,002	67,572	24,949	67,499	737	1,871	53	73
Dept. of the Army	281,123	777,244	260,403	717,948	21,867	46,852	20,720	59,296
Army, mil. function	256,122	709,673	235,455	650,450	21,131	44,982	20,667	59,223
Army, civil function	25,001	67,571	24,948	67,498	736	1,870	53	73
Corps of Engineers	24,932	67,396	24,879	67,323	667	1,695	53	73
Dept. of the Navy	190,021	769,445	182,453	738,534	26,637	107,860	7,568	30,911
Dept. of the Air Force	163,205	660,218	156,727	634,036	5,422	21,918	6,478	26,182
Defense Logist. Agency[3]	24,269	93,931	23,669	89,381	2,163	11,452	600	4,550
Other defense activities	75,447	351,440	63,591	331,717	15,897	100,341	11,856	19,723
Justice	112,412	749,185	110,372	734,747	24,666	190,455	2,040	14,438
Interior	79,968	375,390	79,601	374,073	7,900	51,496	367	1,317
Agriculture	108,202	531,864	107,299	526,931	11,046	79,154	903	4,933
Commerce	51,130	290,547	50,736	287,682	23,787	175,744	394	2,865
Labor	16,550	110,473	16,512	110,254	5,931	44,954	38	219
Health and Human Services	66,868	455,532	66,555	453,112	30,993	237,612	318	2,420
Housing and Urban Dev.	9,956	72,287	9,877	71,750	3,581	27,559	79	537
Transportation	57,017	448,439	56,691	446,382	9,492	81,232	326	2,057
Energy	16,040	128,325	16,019	128,110	5,580	48,837	21	215
Education	4,085	31,884	4,078	31,838	3,026	24,093	7	46
Veterans Affairs	294,486	1,693,125	290,485	1,674,337	8,349	65,167	4,001	18,788
Homeland Security	179,515	1,020,876	175,830	998,629	25,128	193,412	3,685	22,247
Independent agencies[2,3]	**876,952**	**4,175,615**	**871,028**	**4,144,402**	**61,889**	**454,274**	**5,924**	**31,213**
Bd. of Govt., Fed. Rsrv. Sys.[3]	1,873	13,535	1,873	13,535	1,873	13,535	—	—
Environmental Protect. Agcy.	18,662	138,316	18,601	137,941	5,486	36,062	61	375
Equal Employ. Opp. Comm.	2,283	14,799	2,274	14,753	478	3,842	9	46
Federal Communic. Comm.	1,847	16,012	1,845	15,993	1,561	13,811	2	19
Federal Deposit Ins. Corp.	6,246	78,461	6,224	78,259	1,644	24,000	22	202
Federal Trade Comm.[3]	1,131	8,533	1,131	8,533	976	7,287	—	—
General Svcs. Admin.	12,408	83,088	12,357	82,797	4,294	32,233	51	291
Natl. Aero. and Space Admin.	18,539	152,858	18,527	152,739	4,093	35,956	12	119
Natl. Fdn. Arts and Humanities[3]	400	3,299	400	3,299	399	3,294	—	—
Natl. Science Foundation	1,466	12,278	1,461	12,229	1,458	12,203	5	49
Nuclear Regulatory Comm.	4,180	35,218	4,178	35,195	3,012	26,239	2	23
Ofc. Personnel Management	5,319	28,577	5,305	28,552	1,718	11,845	14	25
Peace Corps	987	5,874	640	3,986	524	3,457	347	1,888
Securities and Exch. Comm.	3,813	40,166	3,813	40,166	2,250	23,543	—	—
Small Business Adm.	3,805	24,040	3,774	23,870	1,001	7,783	31	170
Smithsonian Inst.[3]	5,028	30,329	5,006	30,150	4,631	27,841	22	179
Social Security Admin.	67,929	371,605	67,494	369,667	1,720	11,178	435	1,938
Tennessee Valley Authority	12,157	92,592	12,157	92,592	5	59	—	—
U.S. Postal Service.	688,582	2,881,868	685,296	2,866,083	13,305	67,184	3,286	15,785

— = Not applicable. (1) Metropolitan statistical area. (2) Totals include agencies not listed. (3) Denotes figures that are preliminary or are based in whole or part on figures for the previous month.

U.S. Median Weekly Earnings, 2010

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

Age, race, or ethnicity	Total		Men		Women	
	Number of workers (thous.)	Median weekly earnings	Number of workers (thous.)	Median weekly earnings	Number of workers (thous.)	Median weekly earnings
All workers, by age						
16 years and over	99,798	$740	55,235	$810	44,562	$672
16 to 24 years	8,550	430	4,765	442	3,784	417
16 to 19 years	1,119	346	659	356	459	333
20 to 24 years	7,431	450	4,106	461	3,325	435
25 years and over	91,248	774	50,470	861	40,778	704
25 to 54 years	73,348	767	40,905	843	32,443	701
25 to 34 years	24,085	675	13,600	704	10,485	641
35 to 44 years	23,983	816	13,645	904	10,338	731
45 to 54 years	25,279	839	13,660	948	11,619	731
55 years and over	17,901	821	9,565	937	8,335	712
55 to 64 years	15,142	842	7,987	953	7,155	730
65 years and over	2,758	681	1,578	796	1,180	599
White[1]						
16 years and over	80,890	756	45,771	838	35,119	682
16 to 24 years	7,015	436	3,976	449	3,039	421
25 years and over	73,874	798	41,795	888	32,079	715
25 to 54 years	58,780	785	33,590	869	25,191	711
55 years and over	15,094	848	8,206	968	6,888	729
Black[1]						
16 years and over	11,659	607	5,431	632	6,228	585
16 to 24 years	1,001	402	472	409	529	396
25 years and over	10,658	631	4,959	657	5,699	604
25 to 54 years	8,884	629	4,168	655	4,716	600
55 years and over	1,774	638	792	678	983	617
Asian[1]						
16 years and over	5,032	873	2,836	901	2,196	854
16 to 24 years	292	459	166	423	126	623
25 years and over	4,740	910	2,670	951	2,070	876
25 to 54 years	3,997	937	2,230	999	1,767	886
55 years and over	744	768	440	768	303	767
Hispanic[2]						
16 years and over	14,908	529	9,275	542	5,633	514
16 to 24 years	1,666	401	1,068	403	599	395
25 years and over	13,242	561	8,207	577	5,035	535
25 to 54 years	11,669	559	7,302	574	4,367	533
55 years and over	1,573	575	906	592	667	545
Occupation						
Managerial, professional, and related	38,759	1,050	18,920	1,229	19,838	920
Management, business, and financial	15,501	1,141	8,484	1,334	7,017	958
Professional and related	23,257	999	10,436	1,164	12,821	902
Service	14,870	486	7,709	533	7,161	433
Sales and office	23,406	623	8,802	720	14,604	595
Sales and related	9,080	662	4,947	826	4,133	521
Office and administrative support	14,326	612	3,856	616	10,470	611
Natural resources, construction, and maintenance	10,120	712	9,712	722	408	540
Farming, fishing, and forestry	777	410	610	425	167	372
Construction and extraction	5,141	694	5,035	698	106	587
Installation, maintenance, and repair	4,202	791	4,066	795	135	697
Production, transportation, and material moving	12,644	612	10,092	656	2,551	465
Production	6,639	608	4,910	673	1,729	469
Transportation and material moving	6,005	618	5,182	643	822	451

Note: Not seasonally adjusted; figures are for median usual weekly earnings of full-time wage and salary workers for 2nd quarter 2010. (1) Persons who selected this race group only; persons who selected more than one race group are not included. (2) May be of any race.

Average Hours and Earnings of U.S. Production Workers, 1969-2009

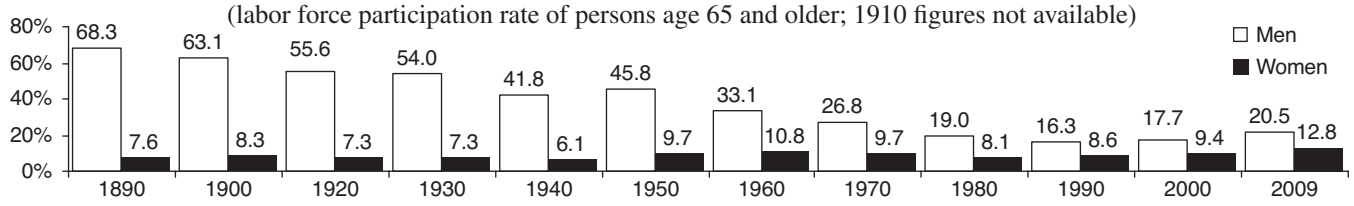
Source: Bureau of Labor Statistics, U.S. Dept. of Labor
(annual averages)

	Weekly hours	Hourly earnings	Weekly earnings		Weekly hours	Hourly earnings	Weekly earnings		Weekly hours	Hourly earnings	Weekly earnings
1969	37.5	$3.22	$120.75	1983	34.9	$8.20	$286.18	1997	34.5	$12.51	$431.86
1970	37.0	3.40	125.80	1984	35.1	8.49	298.00	1998	34.5	13.01	448.56
1971	36.8	3.63	133.58	1985	34.9	8.74	305.03	1999	34.3	13.49	463.15
1972	36.9	3.90	143.91	1986	34.7	8.93	309.87	2000	34.3	14.02	481.01
1973	36.9	4.14	152.77	1987	34.7	9.14	317.16	2001	34.0	14.54	493.79
1974	36.4	4.43	161.25	1988	34.6	9.44	326.62	2002	33.9	14.97	506.75
1975	36.0	4.73	170.28	1989	34.5	9.80	338.10	2003	33.7	15.37	518.06
1976	36.1	5.06	182.67	1990	34.3	10.20	349.75	2004	33.7	15.69	529.09
1977	35.9	5.44	195.30	1991	34.1	10.52	358.51	2005	33.8	16.13	544.33
1978	35.8	5.88	210.50	1992	34.2	10.77	368.25	2006	33.9	16.76	567.87
1979	35.6	6.34	225.70	1993	34.3	11.05	378.89	2007	33.9	17.43	590.04
1980	35.2	6.85	241.12	1994	34.5	11.34	391.22	2008	33.6	18.08	607.95
1981	35.2	7.44	261.89	1995	34.3	11.65	400.07	2009	33.1	18.62	617.11
1982	34.7	7.87	273.09	1996	34.3	12.04	413.28				

Note: Data refer to production workers in natural resources, mining and manufacturing, construction workers, and non-supervisory workers in the service industries. Figures may be revised.

Elderly in U.S. Labor Force, 1890-2009

Source: Bureau of the Census, U.S. Dept. of Commerce
(labor force participation rate of persons age 65 and older; 1910 figures not available)



Median Weekly Earnings of Wage and Salary Workers in the U.S., by Union Affiliation, 1996, 2009

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

	1996				2009			
Sex and age	**Total**	**Members of unions[1]**	**Represented by unions[2]**	**Non-union**	**Total**	**Members of unions[1]**	**Represented by unions[2]**	**Non-union**
Total, 16 years and older	**$490**	**$615**	**$610**	**$462**	**$739**	**$908**	**$901**	**$710**
16 to 24 years	298	371	362	294	442	598	586	433
25 years and older	520	625	621	498	774	922	916	749
25 to 34 years	463	554	548	447	678	834	827	653
35 to 44 years	559	636	632	530	817	941	936	789
45 to 54 years	594	687	686	552	838	959	952	807
55 to 64 years	535	620	616	505	841	958	957	800
65 years and older	384	510	510	367	684	837	831	662
Men, 16 years and older	**557**	**653**	**651**	**520**	**819**	**957**	**953**	**786**
16 to 24 years	307	375	369	303	458	614	605	447
25 years and older	599	669	668	580	873	972	969	846
25 to 34 years	499	591	587	485	715	868	862	692
35 to 44 years	632	683	683	617	916	995	992	899
45 to 54 years	698	718	721	682	967	1,012	1,009	952
55 to 64 years	643	667	664	633	965	988	990	956
65 years and older	477	589	593	424	791	871	883	771
Women, 16 years and older	**418**	**549**	**543**	**398**	**657**	**840**	**833**	**628**
16 to 24 years	284	358	339	280	424	568	548	420
25 years and older	444	560	555	420	687	851	845	659
25 to 34 years	415	497	495	405	634	800	791	614
35 to 44 years	463	561	556	439	709	859	857	683
45 to 54 years	481	620	616	445	712	870	860	680
55 to 64 years	420	524	523	395	727	909	905	688
65 years and older	334	417	413	321	602	727	728	585

Note: Data refer to the sole or principal job of full-time workers. Excluded are self-employed workers regardless of whether or not their businesses are incorporated. (1) Including members of an employee association similar to a union. (2) Including members of a labor union or employee association similar to a union, and others whose jobs are covered by a union or an employee-association contract.

Work Stoppages (Strikes and Lockouts) in the U.S., 1950-2009

Source: Bureau of Labor Statistics, U.S. Dept. of Labor; involving 1,000 workers or more

Year	Number[1]	Workers (thous.)	Days idle (thous.)	Year	Number[1]	Workers (thous.)	Days idle (thous.)	Year	Number[1]	Workers (thous.)	Days idle (thous.)
1950	424	1,698	30,390	1984	62	376	8,499	1997	29	339	4,497
1955	363	2,055	21,180	1985	54	324	7,079	1998	34	387	5,116
1960	222	896	13,260	1986	69	533	11,861	1999	17	73	1,996
1965	268	999	15,140	1987	46	174	4,481	2000	39	394	20,419
1970	381	2,468	52,761	1988	40	118	4,381	2001	29	99	1,151
1975	235	965	17,563	1989	51	452	16,996	2002	19	46	660
1976	231	1,519	23,962	1990	44	185	5,926	2003	14	129	4,091
1977	298	1,212	21,258	1991	40	392	4,584	2004	17	171	3,344
1978	219	1,006	23,774	1992	35	364	3,989	2005	22	100	1,736
1979	235	1,021	20,409	1993	35	182	3,981	2006	20	70	2,688
1980	187	795	20,844	1994	45	322	5,020	2007	21	189	1,265
1981	145	729	16,908	1995	31	192	5,771	2008	15	72	1,954
1982	96	656	9,061	1996	37	273	4,889	2009	5	13	124
1983	81	909	17,461								

(1) Numbers cover stoppages that began in the year indicated. Workers are counted more than once if they are involved in more than 1 stoppage during the year. For work stoppages ongoing at the end of a calendar year, days idle include only the days for the calendar year.

U.S. Union Membership, 1993-2009

Source: Bureau of Labor Statistics, U.S. Dept. of Labor
(numbers in thousands)

Year	Total employed[1]	% in unions	Union members[2]	Year	Total employed[1]	% in unions	Union members[2]	Year	Total employed[1]	% in unions	Union members[2]
1930	29,424	11.6%	3,401	1965	60,815	28.4%	17,299	2000	120,786	13.5%	16,258
1935	27,053	13.2	3,584	1970	70,920	27.3	19,381	2005[3]	125,889	12.5	15,685
1940	32,376	26.9	8,717	1975	76,945	25.5	19,611	2006[3]	128,237	12.0	15,359
1945	40,394	35.5	14,322	1980	90,564	21.9	19,843	2007[3]	129,767	12.1	15,670
1950	45,222	31.5	14,267	1985	94,521	18.0	16,996	2008[3]	129,377	12.4	16,098
1955	50,675	33.2	16,802	1990	103,905	16.1	16,740	2009[3]	124,490	12.3	15,327
1960	54,234	31.4	17,049	1995	110,038	14.9	16,360				

(1) Does not include agricultural employment; from 1985 on, does not include self-employed or unemployed persons. (2) From 1930 to 1980, includes dues-paying members of traditional trade unions, regardless of employment status; after that includes employed only. From 1985 on, includes members of employee associations that engage in collective bargaining with employers. (3) Data reflect revised population controls used in the household survey.

ENERGY

U.S. Energy Overview, 1960-2009

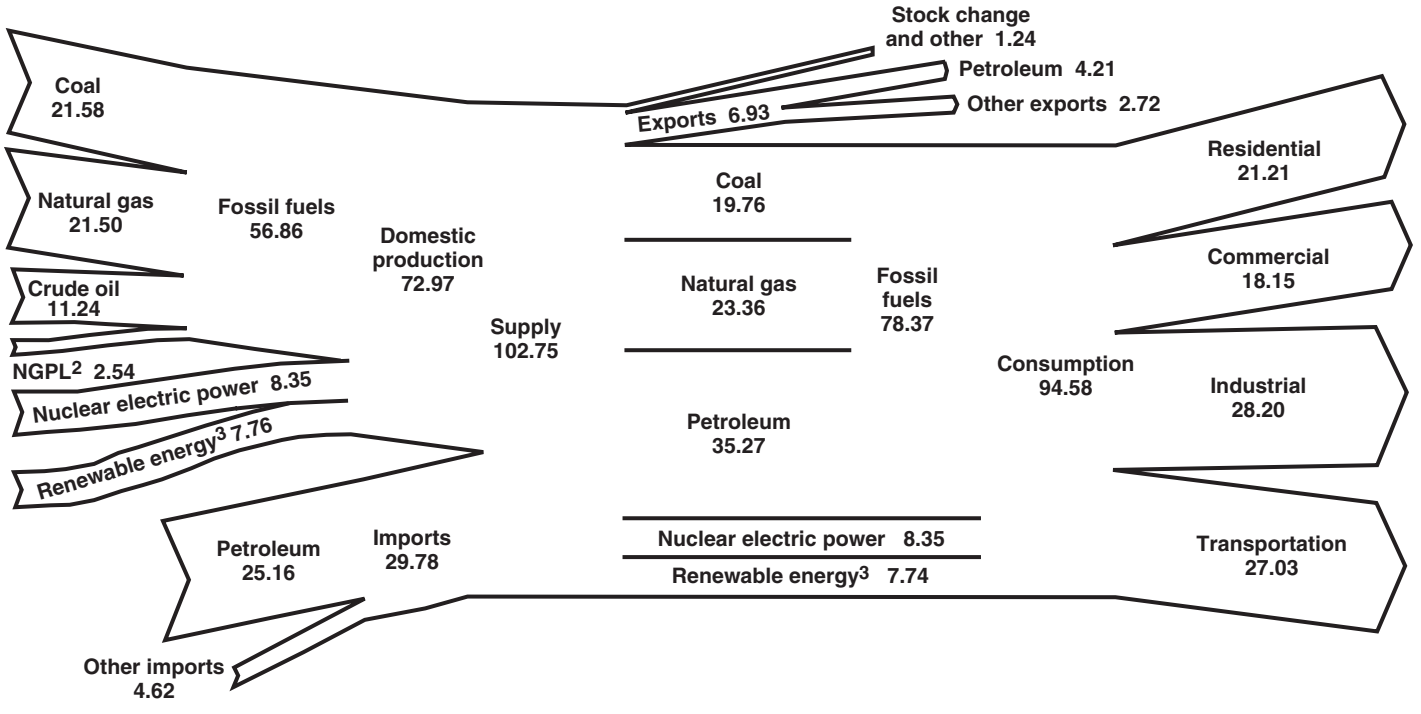
Source: *Annual Energy Review 2009*, Energy Information Administration (EIA), U.S. Dept. of Energy; in quadrillion Btu

	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2009[P]
Production	**42.80**	**50.68**	**63.50**	**61.36**	**67.23**	**67.80**	**70.87**	**71.32**	**71.49**	**69.59**	**72.97**
Fossil fuels	39.87	47.23	59.19	54.73	59.01	57.54	58.56	57.54	57.37	55.04	56.86
Coal[1]	10.82	13.06	14.61	14.99	18.60	19.33	22.49	22.13	22.74	23.19	21.58
Natural gas (dry)	12.66	15.78	21.67	19.64	19.91	16.98	18.33	19.08	19.66	18.56	21.50
Crude oil[2]	14.93	16.52	20.40	17.73	18.25	18.99	15.57	13.89	12.36	10.96	11.24
Natural gas plant liquids (NGPL)	1.46	1.88	2.51	2.37	2.25	2.24	2.17	2.44	2.61	2.33	2.54
Nuclear electric power	0.01	0.04	0.24	1.90	2.74	4.08	6.10	7.08	7.86	8.16	8.35
Renewable energy	2.93	3.40	4.08	4.72	5.49	6.18	6.21	6.70	6.26	6.39	7.76
Conventional hydroelectric power[3]	1.61	2.06	2.63	3.15	2.90	2.97	3.05	3.21	2.81	2.70	2.68
Biomass[4]	1.32	1.33	1.43	1.50	2.48	3.02	2.74	3.10	3.01	3.10	3.90
Geothermal energy	(*)	(*)	0.01	0.07	0.11	0.20	0.34	0.29	0.32	0.34	0.37
Solar	NA	NA	NA	NA	NA	(*)	0.06	0.07	0.07	0.07	0.11
Wind	NA	NA	NA	NA	NA	(*)	0.03	0.03	0.06	0.18	0.70
Imports	**4.19**	**5.89**	**8.34**	**14.03**	**15.80**	**11.78**	**18.82**	**22.26**	**28.97**	**34.71**	**29.78**
Coal	0.01	(*)	(*)	0.02	0.03	0.05	0.07	0.24	0.31	0.76	0.57
Natural gas	0.16	0.47	0.85	0.98	1.01	0.95	1.55	2.90	3.87	4.45	3.84
All crude oil and petroleum prods.[5]	4.00	5.40	7.47	12.95	14.66	10.61	17.12	18.88	24.53	29.25	25.16
Electricity[6]	0.02	0.01	0.02	0.04	0.09	0.16	0.06	0.15	0.17	0.15	0.18
Fuel ethanol and biodiesel	NA	NA	NA	NA	NA	NA	NA	(*)	(*)	0.01	0.26
Exports	**1.48**	**1.83**	**2.63**	**2.32**	**3.69**	**4.20**	**4.75**	**4.51**	**4.01**	**4.56**	**6.93**
Coal	1.02	1.38	1.94	1.76	2.42	2.44	2.77	2.32	1.53	1.27	1.52
Natural gas	0.01	0.03	0.07	0.07	0.05	0.06	0.09	0.16	0.25	0.74	1.08
All crude oil and petroleum prods.[5]	0.43	0.39	0.55	0.44	1.16	1.66	1.82	1.99	2.15	2.44	4.21
Electricity[6]	(*)	0.01	0.01	0.02	0.01	0.02	0.06	0.01	0.05	0.07	0.06
Consumption	**45.09**	**54.02**	**67.84**	**72.00**	**78.12**	**76.49**	**84.65**	**91.17**	**98.97**	**100.45**	**94.58**
Fossil fuels	42.14	50.58	63.52	65.35	69.83	66.09	72.33	77.26	84.73	85.79	78.37
Coal	9.84	11.58	12.26	12.66	15.42	17.48	19.17	20.09	22.58	22.80	19.76
Coal coke net imports	–0.01	–0.02	–0.06	0.01	–0.04	–0.01	0.00	0.06	0.07	0.04	–0.02
Natural gas[7]	12.39	15.77	21.80	19.95	20.24	17.70	19.60	22.67	23.82	22.56	23.36
Petroleum[8]	19.92	23.25	29.52	32.73	34.20	30.92	33.55	34.44	38.26	40.39	35.27
Nuclear electric power	0.01	0.04	0.24	1.90	2.74	4.08	6.10	7.08	7.86	8.16	8.35
Renewable energy	2.93	3.40	4.08	4.72	5.49	6.18	6.21	6.71	6.26	6.41	7.74
Conventional hydroelectric power[3]	1.61	2.06	2.63	3.15	2.90	2.97	3.05	3.21	2.81	2.70	2.68
Biomass[4]	1.32	1.33	1.43	1.50	2.48	3.02	2.74	3.10	3.01	3.12	3.88
Geothermal energy	(*)	(*)	0.01	0.07	0.11	0.20	0.34	0.29	0.32	0.34	0.37
Solar	NA	NA	NA	NA	NA	(*)	0.06	0.07	0.07	0.07	0.11
Wind	NA	NA	NA	NA	NA	(*)	0.03	0.03	0.06	0.18	0.70

NA = Not available. P = preliminary. (*) = Less than 0.005 quadrillion Btu. **Note:** Some figures have been revised. Some numbers may not add up to totals because of rounding. (1) Incl. waste coal supplied beginning in 1989 and refuse recovery beginning in 2001. (2) Incl. lease condensate. (3) Starting in 1990, pumped storage is removed and expanded coverage of industrial use of hydroelectric power is included. (4) Category known as "wood, waste, and alcohol" for years prior to 2000. Includes wood, waste, and alcohol fuels (ethanol blended into motor gasoline). Ethanol is included in both Petroleum and Biomass categories, but is only counted once in totals. (5) Incl. imports of crude oil for the Strategic Petroleum Reserve, which began in 1977. (6) Small amts. of electricity transmitted across borders with Canada and Mexico. (7) Incl. supplemental gaseous fuels. (8) Petroleum products supplied, incl. natural gas plant liquids and crude oil burned as fuel.

U.S. Energy Flow, 2009

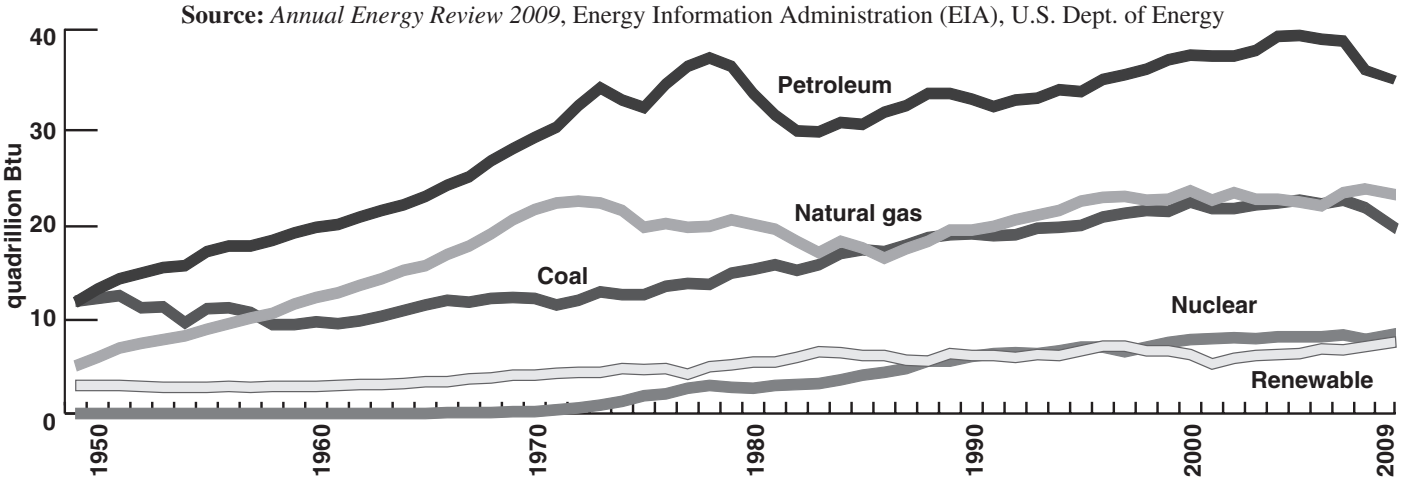
Source: *Annual Energy Review 2009*, Energy Information Administration (EIA), U.S. Dept. of Energy; in quadrillion Btu[1]



Note: Some numbers totals may not add up to totals because of rounding. (1) Preliminary figures. (2) Natural Gas Plant Liquids. (3) Conventional hydroelectric power; wood, waste, and ethanol blended into gasoline; geothermal; solar; and wind power.

U.S. Energy Consumption by Source, 1949-2009

Source: *Annual Energy Review 2009*, Energy Information Administration (EIA), U.S. Dept. of Energy



World's Largest Energy Producers and Consumers, 1980-2007

Source: *International Energy Statistics*, Energy Information Administration (EIA), U.S. Dept. of Energy

(primary energy in quadrillion Btu, ranked by top producers/consumers in 2007)

Production	**1980**	**1985**	**1990**	**1995**	**2000**	**2005**	**2007**	**% change, 1980-2007**
1. United States	67.233	67.800	70.873	71.321	71.490	69.626	71.504	6.4%
2. China	18.122	24.303	29.385	35.045	34.200	64.447	70.796	290.7
3. Russia	NA	NA	NA	41.418	43.002	52.133	53.971	NA
4. Saudi Arabia	22.434	8.642	15.920	20.659	21.593	25.508	23.807	6.1
5. Canada	10.276	12.020	13.404	16.830	18.124	18.941	19.422	89.0
6. India	3.101	5.266	6.821	9.484	9.832	11.759	13.048	320.7
7. Iran	3.944	5.587	7.670	9.347	10.400	13.013	12.994	229.5
8. Australia	3.263	4.888	6.169	7.436	9.677	11.084	11.881	264.1
9. Indonesia	4.227	4.201	5.313	6.971	7.734	8.657	10.930	158.6
10. Norway	2.929	3.771	5.804	8.347	10.270	10.656	9.941	239.4
Total world production	**287.579**	**307.108**	**350.015**	**363.509**	**394.351**	**459.173**	**475.146**	**65.2%**

Consumption	**1980**	**1985**	**1990**	**1995**	**2000**	**2005**	**2007**	**% change, 1980-2007**
1. United States	78.122	76.493	84.654	91.174	98.975	100.485	101.554	30.0%
2. China	17.287	22.006	26.999	34.756	36.352	68.245	77.808	350.1
3. Russia	NA	NA	NA	27.941	27.219	29.520	30.355	NA
4. Japan	15.210	15.698	18.723	21.000	22.433	22.796	22.473	47.8
5. India	4.041	5.914	7.879	11.443	13.462	16.321	19.094	372.5
6. Germany[1]	14.872	14.874	14.832	14.326	14.261	14.400	14.166	–4.7
7. Canada	9.695	10.152	10.998	12.216	12.951	14.238	13.753	41.9
8. France	8.389	8.350	9.126	10.052	10.850	11.347	11.206	33.6
9. Brazil	4.022	4.593	5.751	7.017	8.526	9.346	10.130	151.9
10. South Korea	1.758	2.305	3.842	6.361	7.839	9.226	9.647	448.6
Total world consumption	**283.282**	**308.357**	**347.690**	**364.958**	**396.584**	**461.958**	**483.597**	**70.7%**

NA = Not available. (1) Data for Germany in 1990 and preceding years represent sum of figures for East and West Germany and may not be directly comparable to later years.

Gasoline Retail Prices in Selected Countries, 1990-2009

Source: *Annual Energy Review 2009*, Energy Information Administration (EIA), U.S. Dept. of Energy

(average price in dollars per gallon, including taxes)

	Regular unleaded									**Premium unleaded**						
Year	**Australia**	**Canada**	**China**	**Germany**	**Japan**	**Mexico**	**S. Korea**	**Taiwan**	**U.S.**	**France**	**Italy**	**S. Africa**	**Spain**	**Thailand**	**UK**	**U.S.**
1990	NA	$1.86	NA	$2.65	$3.16	$1.00	$2.05	$2.49	$1.16	$3.63	$4.59	NA	NA	NA	$2.82	$1.35
1991	$1.96	1.92	NA	2.90	3.46	1.30	2.49	2.39	1.14	3.45	4.50	NA	NA	NA	3.01	1.32
1992	1.89	1.73	NA	3.27	3.58	1.50	2.65	2.42	1.13	3.56	4.53	NA	$3.50	$1.35	3.06	1.32
1993	1.73	1.57	NA	3.07	4.16	1.56	2.88	2.27	1.11	3.41	3.68	NA	3.01	1.26	2.84	1.30
1994	1.84	1.45	NA	3.52	4.36	1.48	2.87	2.14	1.11	3.59	3.70	NA	2.99	1.21	2.98	1.31
1995	1.95	1.53	NA	3.96	4.43	1.11	2.93	2.23	1.15	4.26	4.00	NA	3.24	1.25	3.21	1.34
1996	2.12	1.61	NA	3.94	3.64	1.25	3.18	2.15	1.23	4.41	4.39	NA	3.32	1.49	3.34	1.41
1997	2.05	1.62	NA	3.53	3.26	1.47	3.34	2.23	1.23	4.00	4.07	$1.72	3.01	1.27	3.83	1.42
1998	1.63	1.38	NA	3.34	2.82	1.49	3.03	1.86	1.06	3.87	3.84	1.51	2.80	1.09	4.06	1.25
1999	1.72	1.52	NA	3.42	3.27	1.79	3.80	1.86	1.17	3.85	3.87	1.55	2.82	1.22	4.29	1.36
2000	1.94	1.86	NA	3.45	3.65	2.01	4.18	2.15	1.51	3.80	3.77	1.78	2.86	1.38	4.58	1.69
2001	1.71	1.72	$1.22	3.40	3.27	2.20	3.75	2.02	1.46	3.51	3.57	1.59	2.73	1.33	4.13	1.66
2002	1.76	1.69	1.21	3.67	3.15	2.24	3.84	1.93	1.36	3.62	3.74	1.41	2.90	1.35	4.16	1.56
2003	2.20	1.99	1.33	4.59	3.47	2.04	4.12	2.16	1.59	4.35	4.53	1.91	3.49	1.52	4.70	1.78
2004	2.72	2.37	1.48	5.24	3.93	2.03	4.51	2.46	1.88	4.99	5.29	2.58	4.09	1.76	5.56	2.07
2005	3.23	2.89	1.70	5.66	4.28	2.22	5.28	2.76	2.30	5.46	5.74	3.05	4.49	2.25	5.97	2.49
2006	3.54	3.26	2.11	6.03	4.47	2.31	5.92	3.05	2.59	5.88	6.10	3.42	4.84	2.76	6.36	2.81
2007	3.85	3.59	2.29	6.88	4.49	2.40	6.21	3.20	2.80	6.60	6.73	3.64	5.36	3.20	7.15	3.03
2008	4.45	4.08	3.11	7.75	5.74	2.45	5.83	3.53	3.27	7.51	7.63	4.13	6.13	4.01	7.42	3.52
2009	3.79	3.14	3.26	NA	4.85	2.12	4.69	3.01	2.35	6.36	6.47	NA	5.28	4.13	5.87	2.61

NA = Not available. **Note:** Some countries report only premium averages and some do not sell unleaded regular gasoline.

Gasoline Retail Prices, U.S. City Average, 1973-2010

Source: Bureau of Labor Statistics, U.S. Dept. of Labor; Energy Information Administration (EIA), U.S. Dept. of Energy

(in cents per gallon, including taxes; constant dollar is price for all types in the July 2010 dollar)

Year	Leaded regular	Unleaded regular	Unleaded premium	All types[1]	All types (2010 dollars)[1]	Year	Leaded regular	Unleaded regular	Unleaded premium	All types[1]	All types (2010 dollars)[1]
1973	38.8	NA	NA	NA	190.3	1992	NA	112.7	131.6	119.0	168.5
1974	53.2	NA	NA	NA	231.4	1993	NA	110.8	130.2	117.3	161.1
1975	56.7	NA	NA	NA	231.5	1994	NA	111.2	130.5	117.4	157.7
1976	59.0	61.4	NA	NA	227.5	1995	NA	114.7	133.6	120.5	158.3
1977	62.2	65.6	NA	NA	222.7	1996	NA	123.1	141.3	128.8	166.4
1978	62.6	67.0	NA	65.2	210.3	1997	NA	123.4	141.6	129.1	162.7
1979	85.7	90.3	NA	88.2	257.8	1998	NA	105.9	125.0	111.5	137.4
1980	119.1	124.5	NA	122.1	328.9	1999	NA	116.5	135.7	122.1	148.2
1981[2]	131.1	137.8	147.0	135.3	329.9	2000	NA	151.0	169.3	156.3	187.8
1982	122.2	129.6	141.5	128.1	283.9	2001	NA	146.1	165.7	153.1	175.3
1983	115.7	124.1	138.3	122.5	263.2	2002	NA	135.8	157.8	144.1	162.2
1984	112.9	121.2	136.6	119.8	246.4	2003	NA	159.1	177.7	163.8	184.4
1985	111.5	120.2	134.0	119.6	235.7	2004	NA	188.0	206.8	192.3	213.0
1986	85.7	92.7	108.5	93.1	176.5	2005	NA	229.5	249.1	233.8	252.8
1987	89.7	94.8	109.3	95.7	174.6	2006	NA	258.9	280.5	263.5	278.1
1988	89.9	94.6	110.7	96.3	167.2	2007	NA	280.1	303.3	284.9	294.6
1989	99.8	102.1	119.7	106.0	172.9	2008	NA	326.6	351.9	331.7	329.1
1990	114.9	116.4	134.9	121.7	187.8	2009	NA	235.0	260.7	240.1	238.3
1991	NA	114.0	132.1	119.6	176.3	2010 (June)[3]	NA	273.6	300.0	278.3	275.8

Note: Until unleaded gas became available in 1976, leaded was the only type used in automobiles. Average retail prices (in cents per gallon) for selected years preceding those in the table above were as follows: 1950: 27; 1955: 29; 1960: 31; 1965: 31; 1970: 36. Covers 56 urban areas (1974-77), 85 urban areas for 1978 and after. NA = Not applicable. (1) Also includes types of motor gasoline not shown separately. (2) In Sept. 1981, the Bureau of Labor Statistics changed the weights in the calculation of average motor gasoline prices. Starting in Sept. 1981, gasohol is included in average for all types, and unleaded premium is weighted more heavily.

Energy Consumption, Total and Per Capita, by State, 2008

Source: *State Energy Data Report 2008*, Energy Information Administration (EIA), U.S. Dept. of Energy

Total Consumption

Rank, state	Trillion Btu	Rank, state	Trillion Btu
1. Texas	11,552.2	27. Maryland	1,446.9
2. California	8,381.5	28. Iowa	1,414.4
3. Florida	4,447.4	29. Mississippi	1,185.6
4. Illinois	4,088.7	30. Kansas	1,135.6
5. New York	3,988.1	31. Arkansas	1,124.7
6. Ohio	3,987.0	32. Oregon	1,104.7
7. Pennsylvania	3,899.7	33. West Virginia	830.8
8. Louisiana	3,487.5	34. Connecticut	809.9
9. Georgia	3,015.4	35. Utah	799.4
10. Michigan	2,918.3	36. Nebraska	781.9
11. Indiana	2,857.4	37. Nevada	750.1
12. North Carolina	2,702.2	38. New Mexico	693.3
13. New Jersey	2,637.1	39. Alaska	650.8
14. Virginia	2,513.7	40. Wyoming	541.6
15. Tennessee	2,261.1	41. Idaho	529.3
16. Alabama	2,065.0	42. Maine	469.3
17. Washington	2,050.2	43. North Dakota	440.9
18. Kentucky	1,982.8	44. Montana	434.3
19. Minnesota	1,979.1	45. South Dakota	350.2
20. Missouri	1,937.0	46. New Hampshire	311.3
21. Wisconsin	1,862.4	47. Delaware	295.3
22. South Carolina	1,659.5	48. Hawaii	283.8
23. Oklahoma	1,603.4	49. Rhode Island	220.1
24. Arizona	1,552.8	50. Wash., DC	180.4
25. Colorado	1,498.1	51. Vermont	154.4
26. Massachusetts	1,475.0	**U.S.**	**99,382.1**

Consumption per Capita

Rank, state	Million Btu	Rank, state	Million Btu
1. Wyoming	1,016.1	27. Missouri	325.2
2. Alaska	945.7	28. Virginia	322.5
3. Louisiana	783.4	29. Illinois	318.4
4. North Dakota	687.4	30. Washington	312.2
5. Texas	475.3	31. Georgia	310.9
6. Iowa	472.4	32. Pennsylvania	310.3
7. Kentucky	462.4	33. Washington, DC	305.7
8. West Virginia	457.8	34. New Jersey	304.4
9. Montana	448.7	35. Colorado	303.6
10. Indiana	447.3	36. Utah	293.1
11. Alabama	441.5	37. North Carolina	292.2
12. Oklahoma	440.0	38. Oregon	292.0
13. Nebraska	438.8	39. Michigan	291.8
14. South Dakota	435.3	40. Nevada	286.7
15. Kansas	406.0	41. Maryland	255.7
16. Mississippi	403.2	42. Vermont	248.7
17. Arkansas	392.2	43. Florida	241.4
18. Minnesota	378.4	44. Arizona	238.9
19. South Carolina	368.5	45. New Hampshire	235.5
20. Tennessee	362.3	46. Connecticut	231.2
21. Maine	355.6	47. California	229.1
22. New Mexico	349.0	48. Massachusetts	225.4
23. Idaho	346.5	49. Hawaii	220.4
24. Ohio	345.9	50. Rhode Island	208.9
25. Delaware	337.0	51. New York	204.9
26. Wisconsin	330.9	**U.S.**	**326.5**

Note: U.S. total includes 40.8 tril Btu in coal coke imports not allocated to states.

U.S. Production of Crude Oil by State, 2009

Source: *Petroleum Supply Annual 2009*, Energy Information Administration (EIA), U.S. Dept. of Energy

(in thousand barrels)

Rank, state	Total	Rank, state	Total	Rank, state	Total	Rank, state	Total
1. Texas	403,797	9. Kansas	39,464	17. Ohio	5,834	25. Florida	696
2. Alaska	235,500	10. Colorado	28,324	18. Arkansas	5,781	26. Nevada	455
3. California	207,094	11. Montana	27,692	19. Pennsylvania	3,541	27. New York	339
4. North Dakota	79,736	12. Mississippi	23,232	20. Kentucky	2,609	28. Tennessee	268
5. Louisiana	69,002	13. Utah	22,927	21. Nebraska	2,239	29. Missouri	94
6. Oklahoma	67,018	14. Illinois	9,099	22. West Virginia	1,864	30. Arizona	46
7. New Mexico	61,146	15. Alabama	7,189	23. Indiana	1,804	31. Virginia	14
8. Wyoming	51,333	16. Michigan	5,900	24. South Dakota	1,658	**U.S. total[1]**	**1,956,596**

(1) Includes 590,902 thousand barrels of federal offshore production and 43,550 thousand barrels of offshore production by individual states (Alaska, 23,770 thousand; California, 13,340 thousand; Louisiana, 5,543 thousand; and Texas, 897 thousand).

U.S. Petroleum Trade, 1976-2010

Source: *Monthly Energy Review* (July 2010), Energy Information Administration (EIA), U.S. Dept. of Energy
(in thousands of barrels per day; average for the year)

Year	Imports from Persian Gulf[1]	Total imports	Total exports	Net imports[2]	Petroleum products supplied[3]	Year	Imports from Persian Gulf[1]	Total imports	Total exports	Net imports[2]	Petroleum products supplied[3]
1976 . . .	1,840	7,313	223	7,090	17,461	1994 . . .	1,728	8,996	942	8,054	17,718
1977 . . .	2,448	8,807	243	8,565	18,431	1995 . . .	1,573	8,835	949	7,886	17,725
1978 . . .	2,219	8,363	362	8,002	18,847	1996 . . .	1,604	9,478	981	8,498	18,309
1979 . . .	2,069	8,456	471	7,985	18,513	1997 . . .	1,755	10,162	1,003	9,158	18,620
1980 . . .	1,519	6,909	544	6,365	17,056	1998 . . .	2,136	10,708	945	9,764	18,917
1981 . . .	1,219	5,996	595	5,401	16,058	1999 . . .	2,464	10,852	940	9,912	19,519
1982 . . .	696	5,113	815	4,298	15,296	2000 . . .	2,488	11,459	1,040	10,419	19,701
1983 . . .	442	5,051	739	4,312	15,231	2001 . . .	2,761	11,871	971	10,900	19,649
1984 . . .	506	5,437	722	4,715	15,726	2002 . . .	2,269	11,530	984	10,546	19,761
1985 . . .	311	5,067	781	4,286	15,726	2003 . . .	2,501	12,264	1,027	11,238	20,034
1986 . . .	912	6,224	785	5,439	16,281	2004 . . .	2,493	13,145	1,048	12,097	20,731
1987 . . .	1,077	6,678	764	5,914	16,665	2005 . . .	2,334	13,714	1,165	12,549	20,802
1988 . . .	1,541	7,402	815	6,587	17,283	2006 . . .	2,211	13,707	1,317	12,390	20,687
1989 . . .	1,861	8,061	859	7,202	17,325	2007 . . .	2,163	13,468	1,433	12,036	20,680
1990 . . .	1,966	8,018	857	7,161	16,988	2008 . . .	2,370	12,915	1,802	11,114	19,498
1991 . . .	1,845	7,627	1,001	6,626	16,714	2009 . . .	1,701	11,726	2,026	9,700	18,686
1992 . . .	1,778	7,888	950	6,938	17,033	2010[4] . .	NA	11,790	2,017	9,772	19,063
1993 . . .	1,782	8,620	1,003	7,618	17,237						

Note: Beginning in Oct. 1977, imports for the Strategic Petroleum Reserves are included. U.S. exports include shipments to U.S. territories; imports include receipts from U.S. territories. Numbers may not add up to totals because of rounding. Some figures are revised. NA = Not available. (1) Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone between Kuwait and Saudi Arabia. (2) Net imports are total imports minus total exports. (3) Includes domestic production and imports minus change in stocks, refinery imports, and exports. (4) Annualized 6-month average, for Jan.-June 2010. Based on estimated figures.

World Crude Oil and Natural Gas Reserves, 2008-09

Source: *International Energy Annual 2009*; *Oil and Gas Journal (OGJ)*, Dec. 2008; *World Oil (WO)*, Sept. 2008;
Energy Information Administration (EIA), U.S. Dept. of Energy

Region/country	Crude oil (bil barrels) *OGJ*	Crude oil (bil barrels) *WO*	Natural gas (tril cubic feet) *OGJ*	Natural gas (tril cubic feet) *WO*
North America	**209.9**	**57.5**	**308.7**	**314.0**
Canada	178.1	25.2	57.9	58.3
Mexico	10.5	11.1	13.2	18.1
United States	21.3	21.3	237.7	237.7
Central and South America	**122.7**	**104.8**	**266.5**	**247.0**
Argentina	2.6	2.7	15.6	16.5
Bolivia	0.5	0.5	26.5	28.0
Brazil	12.6	12.5	12.9	12.9
Chile	0.2	0.0	3.5	1.0
Colombia	1.4	1.5	3.7	6.7
Cuba	0.1	0.7	2.5	0.8
Ecuador	4.7	4.8	0.3	0.3
Peru	0.4	0.4	11.8	12.0
Trinidad and Tobago	0.7	0.6	18.8	16.7
Venezuela	99.4	81.0	170.9	152.0
Europe	**13.7**	**13.8**	**169.1**	**169.0**
Austria	0.1	0.1	0.6	1.1
Croatia	0.1	0.1	1.1	1.1
Denmark	1.1	1.1	2.2	2.6
Germany	0.3	0.2	6.2	5.2
Hungary	0.0	0.1	0.3	0.6
Italy	0.4	0.4	3.3	3.0
Netherlands	0.1	0.2	50.0	48.8
Norway	6.7	6.7	81.7	81.7
Poland	0.1	0.2	5.8	4.7
Romania	0.6	0.5	2.2	4.2
Serbia	0.1	NA	1.7	NA
United Kingdom	3.4	3.6	12.1	14.0
Middle East	**746.0**	**727.3**	**2,591.7**	**2,570.2**
Bahrain	0.1	NA	3.3	NA
Iran	136.2	137.0	991.6	985.0
Iraq	115.0	126.0	111.9	91.0
Kuwait	104.0	99.4	63.4	66.3
Oman	5.5	5.7	30.0	32.0
Qatar	15.2	20.0	891.9	903.2
Saudi Arabia	266.7	264.8	258.5	254.0
Syria	2.5	2.9	8.5	12.1
United Arab Emirates	97.8	68.1	214.4	196.3
Yemen	3.0	2.7	16.9	16.8
Eurasia	**98.9**	**126.0**	**1,993.8**	**2,104.0**
Azerbaijan	7.0	NA	30.0	NA
Kazakhstan	30.0	NA	85.0	NA
Russia	60.0	76.0	1,680.0	1,654.0
Turkmenistan	0.6	NA	94.0	NA
Ukraine	0.4	NA	39.0	NA
Uzbekistan	0.6	NA	65.0	NA
Africa	**117.1**	**114.7**	**494.1**	**504.2**
Algeria	12.2	11.9	159.0	160.0
Angola	9.0	9.5	9.5	5.7
Cameroon	0.2	NA	4.8	NA
Congo Republic	1.6	1.9	3.2	4.0
Egypt	3.7	3.7	58.5	68.5
Equatorial Guinea	1.1	1.7	1.3	3.4
Gabon	2.0	3.2	1.0	2.5
Libya	43.7	36.5	54.4	52.8
Mozambique	0.0	0.0	4.5	0.0
Nigeria	36.2	37.2	184.2	184.5
Sudan	5.0	6.7	3.0	4.0
Tunisia	0.4	0.6	2.3	3.5
Asia and Oceania	**34.0**	**40.0**	**430.4**	**527.6**
Afghanistan	0.0	NA	1.8	NA
Australia	1.5	4.2	30.0	151.9
Bangladesh	0.0	NA	5.0	NA
Brunei	1.1	1.1	13.8	11.0
China	16.0	18.1	80.0	61.8
India	5.6	4.0	38.0	31.8
Indonesia	4.0	4.5	106.0	92.0
Japan	0.0	NA	0.7	NA
Malaysia	4.0	5.5	83.0	88.0
Myanmar (Burma)	0.1	0.2	10.0	15.0
New Zealand	0.1	0.1	1.2	2.0
Pakistan	0.3	0.3	31.3	29.8
Papua New Guinea	0.1	0.2	8.0	14.7
Philippines	0.1	0.1	3.5	1.6
Thailand	0.4	0.4	11.2	11.2
Vietnam	0.6	1.3	6.8	8.2
World	**1,342.2**	**1,184.2**	**6,254.4**	**6,436.0**

NA = Not reported separately; amounts included in totals. **Note:** Numbers may not add up to totals because of rounding. Some countries omitted for lack of appreciable reserves. Data for Kuwait and Saudi Arabia include onehalf of the reserves in the Neutral Zone between Kuwait and Saudi Arabia. All reserve figures except those for the former USSR and natural gas reserves in Canada are proved reserves. Former USSR and Canadian natural gas figures include amounts understood as proved, and some probable reserves. Totals may include small amounts not listed. (1) The discrepancy in Canda's proven oil reserves is due to the approximately 175 bil barrels contained in Alberta's oil sands, which would require 350 tril cubic feet of natural gas to liberate.

U.S. Crude Oil Imports by Selected Country, 1990-2009

Source: *Petroleum Supply Annual*, Energy Information Administration (EIA), U.S. Dept. of Energy

(in thousands of barrels per day; ranked by 2009 imports)

Although the United States has become increasingly dependent on foreign oil, imports declined dramatically in 2009, especially imports from OPEC nations like Iraq, Nigeria, and Saudi Arabia. Imports from OPEC nations were down by more than a million barrels per day in 2009, reducing total imports by nearly 800,000 barrels per day. OPEC countries, especially in the Persian Gulf region, have a significant production advantage because of the relatively low cost of developing their oil resources. But non-OPEC countries have also increased their oil production. Canada dominated this growth in the early 1970s, the North Sea and Mexico became major producers in the 1980s, and more recent production increases have come from oil supplies in West Africa and the former Soviet Union. Sanctions do not permit the U.S. to import oil from Iran.

Country	2009	2008	2007	2006	2005	2004	2003	2000	1995	1990
Canada	1,899	1,956	1,888	1,802	1,633	1,616	1,549	1,348	1,040	643
Mexico	1,092	1,187	1,409	1,577	1,556	1,598	1,569	1,313	1,027	689
Saudi Arabia#	980	1,503	1,447	1,423	1,445	1,495	1,726	1,523	1,260	1,195
Venezuela#	951	1,039	1,148	1,142	1,241	1,297	1,183	1,223	1,151	666
Nigeria#	776	922	1,084	1,037	1,077	1,078	832	875	621	784
Iraq#	449	627	484	553	527	655	481	620	0	514
Angola#[1]	448	504	498	513	456	306	363	295	360	236
Brazil	295	231	165	133	94	51	50	5	0	0
Algeria#	281	312	443	362	228	215	112	1	27	63
Colombia	251	178	137	141	156	142	166	308	207	140
Russia[2]	230	116	112	108	199	158	151	7	14	1
Ecuador[3]	181	214	198	272	276	232	139	125	96	38
Kuwait#	180	206	175	179	227	241	208	261	213	79
United Kingdom	103	78	101	130	224	238	359	291	341	155
Equatorial Guinea	89	74	55	57	68	66	59	61	NA	NA
Azerbaijan	75	73	57	27	NA	NA	NA	0	NA	NA
Chad	65	102	77	95	74	57	3	NA	NA	NA
Congo Republic	64	67	63	27	25	8	27	42	20	NA
Gabon[4]	63	58	63	60	127	142	131	143	229	64
Libya#	61	68	84	66	44	18	NA	0	0	0
Norway	58	30	56	98	119	143	181	302	258	96
Argentina	53	29	33	29	56	59	54	53	44	NA
Vietnam	27	29	31	42	31	25	25	9	1	NA
Australia	11	33	2	5	10	21	27	49	16	47
Non-OPEC imports	**4,658**	**4,369**	**4,643**	**5,335**	**5,310**	**5,046**	**5,087**	**4,526**	**3,660**	**NA**
OPEC imports	**4,355**	**5,415**	**5,388**	**4,783**	**4,816**	**5,042**	**4,578**	**4,544**	**3,570**	**3,514**
TOTAL	**9,013**	**9,783**	**10,031**	**10,118**	**10,126**	**10,088**	**9,665**	**9,071**	**7,230**	**5,894**

= OPEC member. NA = Not available. (1) Angola became a member of OPEC as of Jan. 1, 2007; imports from Angola are not included in OPEC totals from before that year. (2) May include oil from USSR states before 1992. (3) Ecuador suspended its OPEC membership from Dec. 1992-Nov. 2007. Ecuador's imports between 1993 and 2007, inclusive, appear in non-OPEC totals. (4) Gabon withdrew from OPEC Dec. 31, 1994. Imports after Jan. 1, 1995, appear in non-OPEC totals.

U.S. Coal Production and Consumption, 1950-2009

Source: *Annual Energy Review 2009*, Energy Information Administration (EIA), U.S. Dept. of Energy

(in short tons)

	Coal production[1]			Coal consumption				
Year	Surface mining	Underground mining	Total production	Residential	Commercial	Industrial	Electric power[2]	Total consumption
1950	139,388,000	421,000,000	560,388,000	51,562,350	63,020,650	224,637,000	91,870,770	494,101,770
1960	141,745,000	292,584,000	434,329,000	24,159,320	16,788,680	177,402,000	176,685,359	398,081,359
1970	272,131,000	340,530,000	612,661,000	9,023,840	7,090,160	186,637,000	320,181,708	523,230,708
1975	361,174,000	293,467,000	654,641,000	2,823,000	6,587,000	147,244,000	405,962,432	562,640,432
1980	492,192,000	337,508,000	829,700,000	1,354,920	5,097,080	127,004,000	569,273,735	702,729,735
1985	532,838,000	350,800,000	883,638,117	1,711,426	6,067,781	116,428,686	693,840,766	818,048,659
1990	604,529,000	424,546,000	1,029,075,527	1,344,774	5,379,096	115,207,053	782,566,645	904,497,568
1995	636,724,750	396,249,022	1,032,973,772	754,871	5,051,832	106,066,596	850,230,475	962,103,774
2000	699,952,835	373,658,726	1,073,611,561	453,949	3,672,864	94,147,215	985,820,847	1,084,094,875
2005	762,886,599	368,611,500	1,131,498,099	377,528	4,341,573	83,773,950	1,037,484,561	1,125,977,612
2006	803,727,844	359,021,815	1,162,749,659	290,389	2,936,157	82,429,188	1,026,636,031	1,112,291,765
2007	794,854,411	351,789,934	1,146,635,345	352,607	3,173,460	79,330,575	1,045,141,487	1,127,998,129
2008	814,729,298	357,079,371	1,171,808,669	350,582	3,155,236	76,462,536	1,040,580,089	1,120,548,443
2009[E]	741,104,703	331,647,084	1,072,751,787	320,993	2,888,935	60,677,739	936,535,972	1,000,423,639

E = Estimated or based on preliminary figures. Figures rounded at source beginning in 2008. (1) A small amount of refuse recovery has been included in coal production figures since 2001. (2) Electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

World Nuclear Power Summary, 2010

Source: *Nuclear Power Reactors in the World*, International Atomic Energy Agency; as of Dec. 31, 2009

Country	Reactors in operation: No. of units	Reactors in operation: Total MW(e)	Reactors under construction: No. of units	Reactors under construction: Total MW(e)	Nuclear electricity supplied in 2009: TW(e).h[1]	Nuclear electricity supplied in 2009: % of nation's total	Total operating experience[2]: Years	Total operating experience[2]: Months
Argentina	2	935	1	692	7.6	7.0%	62	7
Armenia	1	375	—	—	2.3	45.0	35	8
Belgium	7	5,902	—	—	45.0	51.7	233	7
Brazil	2	1,884	—	—	12.2	2.9	37	3
Bulgaria	2	1,906	2	1,906	14.2	35.9	147	3
Canada	18	12,569	—	—	85.1	14.8	582	2
China	11	8,438	20	19,920	65.7	1.9	99	3
Czech Republic	6	3,678	—	—	25.7	33.8	110	10
Finland	4	2,696	1	1,600	22.6	32.9	123	4
France	59	63,260	1	1,600	391.8	75.2	1,700	2
Germany	17	20,480	—	—	127.7	26.1	751	5
Hungary	4	1,889	—	—	14.3	43.0	98	2
India	18	3,987	5	2,708	14.8	2.2	318	5
Iran	—	—	1	915	—	—	—	—
Japan	54	46,823	1	1,325	263.1	28.9	1,440	8
Korea, South	20	17,705	6	6,520	141.1	34.8	339	7
Lithuania	0	0	—	—	10.0	76.2	43	6
Mexico	2	1,300	—	—	10.1	4.8	35	11
Netherlands	1	487	—	—	4.0	3.7	65	0
Pakistan	2	425	1	300	2.6	2.7	47	10
Romania	2	1,300	—	—	10.8	20.6	15	11
Russia	31	21,743	9	6,996	152.8	17.8	994	7
Slovakia	4	1,762	2	782	13.1	53.5	132	7
Slovenia	1	666	—	—	5.5	37.8	28	3
South Africa	2	1,800	—	—	11.6	4.8	50	3
Spain	8	7,450	—	—	50.6	17.5	269	6
Sweden	10	9,036	—	—	50.0	37.4	372	6
Switzerland	5	3,238	—	—	26.3	39.5	173	10
Taiwan	6	4,980	2	2,600	39.9	20.7	170	1
Ukraine	15	13,107	2	1,900	78.0	48.6	368	6
United Kingdom	19	10,137	—	—	62.9	17.9	1,457	8
United States	104	100,747	1	1,165	796.9	20.2	3,499	11
Total	**437**	**370,705**	**55**	**50,929**	**2,558.1**	**—**	**13,913**	**—**

MW(e) = Megawatt electricity. — = Not applicable. (1) 1 terawatt-hour [TW(e).h] = 10^6 megawatt-hour [MW(e).h]. For an average power plant, 1 TW(e).h = 0.39 megatons of coal equivalent (input) and 0.23 megatons of oil equivalent (input). (2) Cumulative total reactor-operating years through Dec. 31, 2009. Total also includes operating experience of shutdown plants for countries not listed here: Italy (81 years) and Kazakhstan (25 years, 10 months).

Nations Most Reliant on Nuclear Energy, 2009

Source: *Nuclear Share in Electricity Generation*, International Atomic Energy Agency

(nuclear electricity generation as % of total electricity generated)

	Country	%		Country	%		Country	%		Country	%
1.	Lithuania	76.2	9.	Slovenia	37.9	17.	Romania	20.6	24.	South Africa	4.8
2.	France	75.2	10.	Sweden	37.4	18.	United States	20.2	25.	Mexico	4.8
3.	Slovakia	53.5	11.	Bulgaria	35.9	19.	United Kingdom	17.9	26.	Netherlands	3.7
4.	Belgium	51.7	12.	South Korea	34.8	20.	Russia	17.8	27.	Brazil	2.9
5.	Ukraine	48.6	13.	Czech Republic	33.8	21.	Spain	17.5	28.	Pakistan	2.7
6.	Armenia	45.0	14.	Finland	32.9	22.	Canada	14.8	29.	India	2.2
7.	Hungary	43.0	15.	Japan	29.2	23.	Argentina	7.0	30.	China	1.9
8.	Switzerland	39.5	16.	Germany	28.6						

U.S. Nuclear Reactors and Power Plant Operations, 1955-2009

Source: *Annual Energy Review 2009*, Energy Information Administration (EIA), U.S. Dept. of Energy

Years	Number of reactor units: Ordered[1]	Cancelled	Construction permits[2]	Low-power licensed[3]	Full-power licensed[4]	Shutdown[5]	Operable units[6]	Capacity factor[6,7] (percent)	Nuclear electricity generation (billion net KW-hrs)[6]	Nuclear share of domestic electricity generation (percent)[6]
1955-59	14	0	8	2	2	0	2	NA	0.2	NA
1960-64	7	0	12	13	12	1	13	NA	3.3	0.3%
1965-69	81	0	50	8	9	5	17	NA	13.9	1.0
1970-74	143	16	59	41	41	3	55	47.8%	114.0	6.1
1975-79	13	43	48	17	17	3	69	58.4	255.2	11.3
1980-84	0	54	0	24	19	1	87	56.3	327.6	13.5
1985-89	0	7	0	24	28	4	111	62.2	529.4	17.8
1990-94	0	15	0	49	58	9	109	73.8	640.4	19.7
1995-99	0	2	0	1	1	6	104	85.3	728.3	19.7
2000-04	0	0	0	0	0	0	104	90.1	788.5	19.9
2005-09	0	0	0	0	0	0	104	90.5	798.7	20.2
Total	**259**	**124**	**177**	**132**	**132**	**28**				

NA = Not applicable. **Note:** Revised permit/license procedures eliminate the historical categories shown. According to Senate testimony, the Nuclear Regulatory Commission anticipates 16 or more new "combined license applications" over the next few years—the first of which was submitted Sept. 25, 2007—which may amount to 25 or more new reactor units. (1) Order placed by a utility or government agency for a nuclear steam supply system. (2) Numbers show permits issued in a given period, not extant permits. (3) Licenses granted to conduct testing. (4) Licenses granted for full power operation. (5) Permanently ceased operation. (6) As of the last year of designated period. (7) The ratio of electric energy produced to the amount that could be produced at continuous full power operation.

Renewable Energy Sources

Source: U.S. Department of Energy

Concern over the environmental impact of burning fossil fuels has helped spur interest in alternative fuels that are less polluting. And since the supply of fossil fuels is finite and diminishing, there is interest in "renewable" sources that do not deplete existing supplies. However, renewable energy sources still make up only a small share of U.S. domestic energy production (a little over 10% in 2009). The major reason for this is their relatively higher cost (in some cases two to four times that of power obtained from traditional fuels). The following are the major renewable energy sources available.

Biomass is plant-derived material usable as a renewable energy source, including wood energy crops such as hybrid poplars and willow trees, agricultural crops including soybeans and corn, and animal and other wastes. Biomass is one of the two most common energy sources in the U.S. today along with hydropower. Forms of biomass such as wood can be burned to produce heat and generate electricity. Agricultural crops can be chemically converted into fuels such as ethanol and biodiesel; these are the only known renewable liquid energy sources, and may one day replace petroleum and fossil-fuel produced diesel. But bringing ethanol and biodiesel into wide use would require more energy-efficient methods of production and transportation. Overall, biomass fuels are much cleaner-burning than fossil fuels, though biomass fuels still produce carbon dioxide and other pollutants.

Geothermal energy is generated from heat inside of Earth. This form of energy is both clean and renewable. The technology has caught on in countries with substantial geothermal activity such as Iceland, where it accounted for 54% of primary energy use. In the U.S. the best sources for geothermal power are in the West, where there are many underground lakes of heated water; however, large-scale access would require drilling. A major goal in this field is to find a way to harness energy directly from magma (molten rock material), which has great potential because of its high temperature.

Hydrogen is the third most abundant element on Earth. It does not naturally occur on Earth as a pure gas or liquid, but is always combined with other elements (such as with oxygen to form water or carbon to form methane). For energy use it is produced from hydrocarbons using heat, bacteria or algae through photosynthesis, or by using sunlight or electricity to split water into hydrogen and oxygen. Hydrogen batteries, or fuel cells, are already used by NASA on the space shuttle. In a fuel cell, electrons are released from the hydrogen atoms in a chemical reaction and flow through an external circuit as electricity. The protons then combine with oxygen (and some of the electrons in the electric current) to make heat and water suitable for drinking. Fuel cells do not run down, but work as long as hydrogen is supplied. Some experts think hydrogen will be the power source of the future. However, an infrastructure would need to be created for safe and cost-effective transportation and storage of hydrogen.

Hydropower, or hydroelectric power, is generated by water flowing through turbines. Along with biomass fuels, it is one of the two most common renewable energy sources in the U.S. today. A dam on a river is a common hydropower producer. No harmful greenhouse gases are produced, but the dams needed to generate the power can harm river ecosystems. Researchers are working on turbine technologies that may maximize use of hydropower and reduce adverse environmental effects.

Ocean energy is generated in two ways. Thermal ocean energy uses the heat that the ocean absorbs from the sun to power generators, and sometimes drinkable desalinated water is a by-product. Mechanical ocean energy is generated by the movement of tides and waves through a turbine. In both cases, power generation is not very efficient with current technology. Much more research is needed to make thermal ocean energy generation a reality. Mechanical ocean energy requires large dams or breakwater-type structures called tidal barrages to be built, which could cause harm to coastal ecosystems.

Solar energy is generated using heat and light from the sun. Solar energy is an increasingly common source of electricity. Photovoltaic (PV) solar cells are made of semiconducting materials that can directly convert sunlight to electricity without any harmful waste product. Solar collectors are made more efficient by using arrays of mirrors to concentrate the sun's rays onto PV panels. Another way of using sunlight is to heat water directly. According to the Dept. of Energy, homes incorporating solar heating designs can save as much as 50% on heating bills. The downside to solar energy is that it depends heavily on a range of factors including location, time of year, and weather.

Wind energy uses wind turbines to produce energy. They are perched on high towers, usually 100 ft or higher, and often placed in large groups ("farms") to generate electricity for towns and cities. On a much smaller scale, stand-alone turbines are sometimes used by farmers and homeowners to generate supplemental electricity. In the past 20 years, government incentives in the form of tax credits to producers and incentives for homeowners have helped lower the price of wind power by 85%, making it a more feasible option. Some people object to wind farms because of their appearance or the noise the turbines make. Wind power raises few other environmental problems, but the turbines can pose a danger to birds. In addition, because weather is involved, consistent generation is a challenge.

Alternative-Fueled Vehicles in Use in the U.S., by Fuel, 1995-2008

Source: Energy Information Administration (EIA), U.S. Dept. of Energy

Fuel	1995	2000	2005	2006	2007	2008	% change, 2000-08
Liquefied petroleum gases (LPG)	172,806	181,994	173,795	164,846	158,254	151,049	–17.0%
Compressed natural gas (CNG)	50,218	100,750	117,699	116,131	114,391	113,973	13.1
Liquefied natural gas (LNG)	603	2,090	2,748	2,798	2,781	3,101	48.4
Methanol, 85 percent (M85)[1]	18,319	10,426	0	0	0	0	–100.0
Ethanol, 85 percent (E85)[1,2]	1,527	87,570	246,363	297,099	364,384	450,327	414.2
Ethanol, 95 percent (E95)[1]	136	4	0	0	0	0	–100.0
Electricity[3]	2,860	11,830	51,398	53,526	55,730	56,901	381.0
Hydrogen	386	0	119	159	223	313	NA
Total[4]	**246,855**	**394,664**	**592,125**	**634,562**	**695,766**	**775,667**	**96.5**

NA = Not available. (1) The remaining portion of 85-percent methanol and both ethanol fuels is gasoline. (2) In 1997, some vehicle manufacturers began including E85-fueling capability in certain model lines of vehicles. For 2008, the EIA estimated that the number of E85 vehicles that are capable of operating on E85, gasoline, or both, is about 7.1 mil. Many are sold and used as traditional gasoline-powered vehicles. In this table, alternative fueled vehicles (AFVs) in use include only those E85 vehicles believed to be intended for use as AFVs (primarily fleet-operated vehicles). (3) Excludes gasoline-electric and diesel-electric hybrids like the Toyota Prius. (4) Includes minute amounts of other fuels.

CRIME

Measuring Crime

The U.S. Dept. of Justice administers two statistical programs to measure trends in crime in the U.S. Because of differences in focus and methodology, their results are not strictly comparable.

The Federal Bureau of Investigation (FBI) conducts the **Uniform Crime Report (UCR)** program, which aims to provide statistics for law enforcement administration, operation, and management. It collects actual counts on the crimes of homicide, forcible rape, robbery, aggravated assault, burglary, larceny-theft, motor vehicle theft, and arson as they are reported to law enforcement authorities. Each year, the program releases a preliminary report in the spring, followed by a more detailed, final report in the fall.

The **National Crime Victimization Survey (NCVS)** is conducted annually by the Bureau of Justice Statistics through interviews with members of a nationally representative sample of households about their experiences with crime. The survey complements the UCR by providing alternative and previously unavailable information, including information about the victims of crime and their offenders (e.g., age, sex, ethnicity, victim-offender relationship) and information on crimes not reported to law enforcement. In contrast to the UCR, the NCVS does not cover homicide, arson, commercial crimes, or crimes against children under age 12.

Further explanation of the UCR and NCVS is available at bjs.ojp.usdoj.gov/content/pub/pdf/ntcm.pdf

Uniform Crime Report, 2009

Source: *Crime in the United States, 2009*, Federal Bureau of Investigation, U.S. Dept. of Justice

In 2009, nearly 18,000 city, county, college and university, state, tribal, and federal agencies—representing more than 307 million people—voluntarily participated in the UCR program.

Although crime tends to rise in hard economic times, the number of reported violent crimes dropped 5.3% between 2008 and 2009, marking the third straight year violent crime declined. The number of property crimes reported was also down, by 4.6% from 2008, making it the seventh year in a row property crime reports declined.

Victims of all property crimes, excluding arson, lost an estimated $15.2 bil in 2009, also down from 2008. Although arson is considered a property crime, it is not included in estimates of totals because of variations in the level of participation by reporting agencies. The FBI estimates that on average, each arson offense did about $17,411 worth of damages.

Additional highlights from the 2009 report:

- Males accounted for 77% of all murder victims whose gender was known. Men committed 90 percent of the murders in which the offender's gender was known.
- Firearms were known to be used in 67% of all murders.
- Of the 7,650 murder victims whose relation to the offender was known, 24.2% were killed by a family member, and about the same percentage were killed by a stranger. The other half were killed by an acquaintance (e.g., friend, neighbor, employee, romantic partner).
- Robberies were down 8.0 percent from 2008 and 2.0 from 2005. The average loss was $1,244.
- The majority of property crimes reported were larceny-thefts (68%). Excluding motor vehicle thefts, 27% of all larceny-thefts involved items taken from motor vehicles (except for accessories), 18% were shoplifting, 11% were from buildings, and 3% were of bikes.

National Crime Victimization Survey, 2009

Source: *Criminal Victimization, 2009*, Bureau of Justice Statistics, U.S. Dept. of Justice

Victimizations of U.S. residents age 12 and over continued to decline to historic lows, according to the NCVS estimates for 2009. The violent crime rate—17.1 victimizations per 1,000 persons—was down even from the 2008 estimate of 19.3, while the property crime rate fell to 127 victimizations per 1,000 households (from 135 in 2008 and 147 in 2007). The biggest declines came in the numbers of rapes or sexual assaults (down 38.7%) and simple theft (down 12.9%). The NCVS does not include figures for murders because published data are based on victim interviews.

Criminal Victimization, 2008-09

Source: *Criminal Victimization, 2009*, Bureau of Justice Statistics, U.S. Dept. of Justice

A crime committed against an individual or single household counts as one **victimization**. Because a personal crime may involve more than one victim, the number of victimizations may be greater than the number of personal crime incidents. In property crimes, the affected household is considered one victim.

Victimization rates measure the frequency with which victimizations occur. Personal crime victimization rates are based on the number of victimizations per 1,000 persons in the total population age 12 and over. Property crime victimization rates are calculated per 1,000 of total households.

	Number of victimizations		Victimization rate		Percent change
Type of crime	**2008**	**2009**	**2008**	**2009**	
All crimes	**21,312,400**	**20,057,180**	**NA**	**NA**	**NA**
Crimes of violence[1]	**4,856,510**	**4,343,450**	**19.3%**	**17.1%**	**–11.2%**
Rape/sexual assault[2]	203,830	125,910	0.8	0.5	–38.7
Robbery	551,830	533,790	2.2	2.1	–4.0
Assault	4,100,850	3,683,750	16.3	14.5	–10.8
Aggravated	839,940	823,340	3.3	3.2	–2.7
Simple	3,260,920	2,860,410	12.9	11.3	–12.9
Personal theft[3]	136,710	133,210	0.5	0.5	–3.3
Property crimes	**16,319,180**	**15,580,510**	**134.7**	**127.4**	**–5.5**
Household burglary	3,188,620	3,134,920	26.3	25.6	–2.6
Motor vehicle theft	795,160	735,770	6.6	6.0	–8.4
Theft	12,335,400	11,709,830	101.8	95.7	–6.0
Total population age 12 and over	**252,242,520**	**254,105,610**			
Total households	**121,141,060**	**122,327,660**			

NA = Not applicable. **Note:** Details may not add up to totals due to rounding. (1) Excludes murder because the NCVS is based on interviews with victims. (2) Includes male as well as female victims and both heterosexual and homosexual rape. (3) Includes pocket picking, completed purse snatching, and attempted purse snatching.

Crime in the U.S., 1989-2009

Source: *Crime in the United States, 2009*, Federal Bureau of Investigation, U.S. Dept. of Justice

In the FBI's Uniform Crime Reporting (UCR) Program, offenses are classified as **violent crimes** if they involve force or the threat of force: murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assault. The following offenses are considered **property crimes**: burglary, larceny-theft, motor vehicle theft, and arson. Arson data is excluded from this table because of variations in the level of participation by reporting agencies. That data is presented separately online at www.fbi.gov/ucr/ucr.htm

		Violent crime					Property crime			
Year(s)	Population[1]	All violent crimes	Murder & nonnegligent manslaughter	Forcible rape[2]	Robbery	Aggravated assault[3]	All property crimes	Burglary	Larceny-theft[4]	Motor vehicle theft
NUMBER OF OFFENSES										
1989	246,819,230	1,646,037	21,500	94,504	578,326	951,707	12,605,412	3,168,170	7,705,872	7,872,442
1990	249,464,396	1,820,127	23,438	102,555	639,271	1,054,863	12,655,486	3,073,909	7,945,670	1,635,907
1995	262,803,276	1,798,792	21,606	97,470	580,509	1,099,207	12,063,935	2,593,784	7,997,710	1,472,441
1996	265,228,572	1,688,540	19,645	96,252	535,594	1,037,049	11,805,323	2,506,400	7,904,685	1,394,238
1997	267,783,607	1,636,096	18,208	96,153	498,534	1,023,201	11,558,475	2,460,526	7,743,760	1,354,189
1998	270,248,003	1,533,887	16,974	93,144	447,186	976,583	10,951,827	2,332,735	7,376,311	1,242,781
1999	272,690,813	1,426,044	15,522	89,411	409,371	911,740	10,208,334	2,100,739	6,955,520	1,152,075
2000	281,421,906	1,425,486	15,586	90,178	408,016	911,706	10,182,584	2,050,992	6,971,590	1,160,002
2001[5]	285,317,559	1,439,480	16,037	90,863	423,557	909,023	10,437,189	2,116,531	7,092,267	1,228,391
2002	287,973,924	1,423,677	16,229	95,235	420,806	891,407	10,455,277	2,151,252	7,057,379	1,246,646
2003	290,788,976	1,383,676	16,528	93,883	414,235	859,030	10,442,862	2,154,834	7,026,802	1,261,226
2004	293,656,842	1,360,088	16,148	95,089	401,470	847,381	10,319,386	2,144,446	6,937,089	1,237,851
2005	296,507,061	1,390,745	16,740	94,347	417,438	862,220	10,174,754	2,155,448	6,783,447	1,235,859
2006	298,754,819	1,435,951	17,318	94,782	449,803	874,048	10,031,359	2,196,304	6,636,615	1,198,440
2007	301,290,332	1,421,990	17,157	91,874	447,155	865,804	9,872,815	2,187,277	6,587,040	1,098,498
2008	304,374,846	1,392,629	16,442	90,479	443,574	842,134	9,775,149	2,228,474	6,588,046	958,629
2009	307,006,550	1,318,398	15,241	88,097	408,217	806,843	9,320,971	2,199,125	6,327,230	794,616
PERCENT CHANGE: NUMBER OF OFFENSES										
2009/2008		–5.3%	–7.3%	–2.6%	–8.0%	–4.2%	–4.6%	–1.3%	–4.0%	–17.1%
2009/2005		–5.2	–9.0	–6.6	–2.2	–6.4	–8.4	2.0	–6.7	–35.7
2009/2000		–7.5	–2.2	–2.3	0.0	–11.5	–8.5	7.2	–9.2	–31.5
RATE PER 100,000 RESIDENTS										
1989		666.9	8.7	38.3	234.3	385.6	5,107.1	1,283.6	3,189.6	634.0
1990		729.6	9.4	41.1	256.3	422.9	5,073.1	1,232.2	3,185.1	655.8
1995		684.5	8.2	37.1	220.9	418.3	4,590.5	987.0	3,043.2	560.3
1996		636.6	7.4	36.3	201.9	391.0	4,451.0	945.0	2,980.3	525.7
1997		611.0	6.8	35.9	186.2	382.1	4,316.3	918.8	2,891.8	505.7
1998		567.6	6.3	34.5	165.5	361.4	4,052.5	863.2	2,729.5	459.9
1999		523.0	5.7	32.8	150.1	334.3	3,743.6	770.4	2,550.7	422.5
2000		506.5	5.5	32.0	145.0	324.0	3,618.3	728.8	2,477.3	412.2
2001		504.5	5.6[5]	31.8	148.5	318.6	3,658.1	741.8	2,485.7	430.5
2002		494.4	5.6	33.1	146.1	309.5	3,630.6	747.0	2,450.7	432.9
2003		475.8	5.7	32.3	142.5	295.4	3,591.2	741.0	2,416.5	433.7
2004		463.2	5.5	32.4	136.7	288.6	3,514.1	730.3	2,362.3	421.5
2005		469.0	5.6	31.8	140.8	290.8	3,431.5	726.9	2,287.8	416.8
2006		480.6	5.8	31.7	150.6	292.6	3,357.7	735.2	2,221.4	401.1
2007		472.0	5.7	30.5	148.4	287.4	3,276.8	726.0	2,186.3	364.6
2008		454.5	5.4	29.7	145.7	276.7	3,211.5	732.1	2,164.5	315.0
2009		429.4	5.0	28.7	133.0	262.8	3,036.1	716.3	2,060.9	258.8
PERCENT CHANGE: RATE PER 100,000 RESIDENTS										
2009/2008		–6.1%	–7.4%	–3.4%	–8.7%	–5.0%	–5.5%	–2.2%	–4.8%	–17.8%
2009/2005		–8.4	–10.7	–9.7	–5.5	–9.6	–11.5	–1.5	–9.9	–37.9
2009/2000		–15.2	–9.1	–10.3	–8.3	–18.9	–16.1	–1.7	–16.8	–37.2

Note: Figures for 2006-08 have been revised from previous reports.

(1) U.S. Census Bureau estimates for July 1 of each year except for 1990 and 2000, which show Apr. 1 decennial census counts. (2) Does not include statutory rape (i.e., rape not involving force) and other offenses of a sexual nature. Also does not include sexual attacks on males, which are considered aggravated assaults or sex offenses, depending on circumstances and extent of injuries. (3) Attack upon another with the intent of doing serious bodily harm; usually accompanied by the use of a weapon or other means likely to produce death or great bodily harm. (4) The unlawful taking of another's property not involving force or fraud (e.g., theft of motor vehicle parts, shoplifting). Excludes crimes such as embezzlement and check fraud. (5) The murder and nonnegligent homicides that occurred as a result of the Sept. 11, 2001, terrorist attacks are not included.

Law Enforcement Civilian Employees and Officers, 2009

Source: *Crime in the United States, 2009*; *Law Enforcement Officers Killed and Assaulted, 2008*; Federal Bureau of Investigation, U.S. Dept. of Justice

As of Oct. 31, 2009, 14,614 city, county, state, college and university, and tribal agencies around the country collectively employed 1,021,456 full-time law enforcement workers. About 69.2% of employees were sworn officers. The FBI's UCR program defines a sworn **law enforcement officer** as a person who ordinarily carries a firearm and badge, has full arrest powers, and is paid from government funds specifically dedicated to law enforcement. Civilians (e.g., clerks, radio dispatchers, correctional officers) made up the remaining 30.8% of law enforcement employees.

Altogether, they provided service to an estimated 289.4 mil people around the country, meaning there were 3.5 full-time law enforcement employees (civilian and sworn officers) and 2.4 sworn officers per 1,000 residents.

California employed the greatest number of full-time law enforcement workers (121,879) of any state. Washington, DC, had the highest rate, with 8.7 full-time law enforcement employees (and 7.5 sworn officers) for every 1,000 residents in its population.

Females made up 61.0% of all full-time civilian law enforcement employees in the U.S. while males made up 88.3% of the nation's sworn officers.

Nationwide, 41 law enforcement officers were killed in the line of duty in 2008, the latest year for which data is available. Of that number, 10 were involved in arrest situations, 8 were performing traffic stops, 7 were killed during tactical situations, and 6 died while investigating suspicious persons or circumstances. Thirty-five of the 41 officers were killed with firearms. The majority of these firearms (25) were handguns. Another 67 officers died accidentally while performing official duties.

U.S. Crime Rates by Region, Geographic Division, and State, 2009

Source: *Crime in the United States, 2009*, Federal Bureau of Investigation, U.S. Dept. of Justice

(per 100,000 population, as estimated by U.S. Census Bureau for July 1 of year)

	Violent crime					Property crime[1]			
	All violent crimes	Murder & nonnegligent manslaughter	Forcible rape[2]	Robbery	Aggravated assault[3]	All property crimes	Burglary	Larceny-theft[4]	Motor vehicle theft
Total U.S.[5,6,7]	**429.4**	**5.0**	**28.7**	**133.0**	**262.8**	**3,036.1**	**716.3**	**2,060.9**	**258.8**
Northeast	**358.3**	**3.8**	**19.6**	**127.4**	**207.5**	**2,123.2**	**407.9**	**1,571.6**	**143.6**
New England	**331.4**	**2.4**	**24.5**	**91.3**	**213.1**	**2,334.3**	**489.2**	**1,677.4**	**167.7**
Connecticut	298.7	3.0	18.5	113.4	163.7	2,335.8	428.4	1,694.9	212.5
Maine	119.8	2.0	28.5	30.3	59.0	2,403.5	510.4	1,815.7	77.4
Massachusetts	457.1	2.6	25.8	112.6	316.0	2,304.0	525.7	1,600.3	178.0
New Hampshire	159.6	0.8	30.2	34.4	94.3	2,161.0	372.0	1,704.1	84.9
Rhode Island	252.6	2.9	27.3	74.6	147.7	2,610.8	545.9	1,837.7	227.2
Vermont	131.4	1.1	19.9	17.9	92.5	2,401.4	555.2	1,774.2	72.1
Middle Atlantic	**367.8**	**4.3**	**17.8**	**140.2**	**205.5**	**2,048.6**	**379.2**	**1,534.3**	**135.1**
New Jersey	311.5	3.7	12.0	133.7	162.2	2,079.7	427.9	1,473.7	178.1
New York	384.7	4.0	13.2	144.0	223.5	1,936.0	321.6	1,502.5	111.9
Pennsylvania	380.5	5.2	29.0	138.9	207.4	2,201.6	434.7	1,625.5	141.4
Midwest[5,6]	**385.8**	**4.6**	**32.6**	**120.8**	**227.8**	**2,901.4**	**676.3**	**2,011.5**	**213.6**
East North Central[5,6]	**404.3**	**5.1**	**32.7**	**140.3**	**226.2**	**2,927.8**	**717.3**	**1,991.8**	**218.8**
Illinois[5,6]	497.2	6.0	30.2	177.6	283.4	2,736.9	603.0	1,927.3	206.6
Indiana	333.2	4.8	25.5	114.5	188.4	3,116.2	761.5	2,138.7	216.1
Michigan	497.0	6.3	45.3	123.7	321.7	2,837.8	760.5	1,782.6	294.7
Ohio	332.1	4.5	34.8	154.1	138.7	3,270.9	902.9	2,169.8	198.3
Wisconsin	257.0	2.5	19.6	85.8	149.1	2,608.2	472.9	1,977.4	157.8
West North Central[6]	**343.4**	**3.3**	**32.5**	**76.2**	**231.4**	**2,840.9**	**582.7**	**2,056.6**	**201.5**
Iowa	279.2	1.1	28.4	39.7	210.0	2,308.7	539.4	1,640.0	129.3
Kansas	400.1	4.2	38.9	63.4	293.6	3,207.8	690.7	2,305.9	211.2
Minnesota[6]	243.9	1.4	34.0	68.7	139.8	2,641.0	484.0	1,995.3	161.8
Missouri	491.8	6.4	26.8	124.5	334.1	3,385.3	731.3	2,362.1	291.9
Nebraska	281.6	2.2	33.1	67.8	178.4	2,761.5	484.3	2,083.5	193.8
North Dakota	200.7	1.5	34.8	16.2	148.1	1,932.8	363.9	1,437.1	131.7
South Dakota	185.6	2.6	54.8	13.7	114.6	1,719.4	305.2	1,314.2	100.1
South[7]	**494.3**	**6.0**	**29.8**	**142.0**	**316.5**	**3,607.4**	**931.1**	**2,411.1**	**265.2**
South Atlantic[7]	**497.6**	**5.8**	**25.9**	**149.2**	**316.8**	**3,500.0**	**886.1**	**2,346.6**	**267.3**
Delaware	636.6	4.6	38.2	188.8	405.0	3,349.6	783.2	2,351.0	215.5
District of Columbia[7]	1,345.9	24.0	25.0	731.9	565.0	4,745.4	616.4	3,206.5	922.5
Florida	612.5	5.5	29.7	166.7	410.6	3,840.8	981.1	2,588.6	271.1
Georgia	426.1	5.8	23.4	148.6	248.3	3,666.6	1,000.7	2,328.7	337.2
Maryland	589.9	7.7	20.3	210.7	351.3	3,200.7	649.7	2,206.7	344.2
North Carolina	404.3	5.3	24.6	126.1	248.4	3,668.1	1,149.5	2,305.2	213.5
South Carolina	670.8	6.3	35.3	125.7	503.4	3,888.6	992.8	2,598.4	297.4
Virginia	226.8	4.4	19.2	79.4	123.9	2,428.8	400.6	1,883.4	144.9
West Virginia	296.5	4.6	23.8	50.4	217.7	2,526.7	656.7	1,719.4	150.6
East South Central	**452.5**	**6.3**	**32.5**	**123.1**	**290.5**	**3,336.3**	**937.8**	**2,193.1**	**205.4**
Alabama	449.8	6.9	31.9	132.9	278.1	3,772.4	1,037.2	2,499.9	235.3
Kentucky	258.7	4.1	35.0	84.1	135.4	2,512.7	688.5	1,683.3	140.9
Mississippi	281.3	6.4	31.8	100.4	142.6	2,953.3	987.9	1,782.5	183.0
Tennessee	667.7	7.3	31.7	153.2	475.5	3,754.1	1,010.9	2,505.4	237.8
West South Central	**510.3**	**6.3**	**35.0**	**139.6**	**329.4**	**3,922.9**	**1,002.0**	**2,628.7**	**292.3**
Arkansas	517.7	6.2	47.3	89.4	374.8	3,773.7	1,203.1	2,359.3	211.2
Louisiana	620.0	11.8	30.3	135.9	442.0	3,794.6	1,029.5	2,504.3	260.8
Oklahoma	501.1	6.2	41.5	90.7	362.7	3,573.8	1,030.0	2,261.7	282.2
Texas	490.9	5.4	33.4	153.5	298.7	4,015.5	969.4	2,737.2	308.9
West	**422.4**	**4.5**	**30.3**	**134.4**	**253.2**	**2,962.5**	**651.8**	**1,930.7**	**380.0**
Mountain	**398.1**	**4.3**	**37.8**	**95.9**	**260.1**	**3,095.0**	**684.4**	**2,103.9**	**306.8**
Arizona	408.3	5.4	32.0	122.8	248.1	3,556.5	809.8	2,352.8	394.0
Colorado	337.8	3.5	44.6	67.4	222.3	2,666.2	530.4	1,887.9	247.9
Idaho	228.4	1.4	35.7	15.8	175.4	1,988.7	424.2	1,471.1	93.3
Montana	253.6	2.9	30.2	22.2	198.5	2,464.0	347.3	1,967.4	149.3
Nevada	702.2	5.9	38.6	227.8	429.8	3,055.6	832.1	1,755.1	468.4
New Mexico	619.0	8.7	52.6	93.1	464.7	3,735.8	1,095.8	2,317.8	322.2
Utah	212.7	1.3	32.5	46.6	132.3	3,275.4	544.4	2,483.0	247.9
Wyoming	228.2	2.4	33.8	14.1	177.9	2,637.3	409.7	2,085.9	141.7
Pacific	**433.3**	**4.6**	**26.9**	**151.6**	**250.2**	**2,903.2**	**637.2**	**1,853.2**	**412.7**
Alaska	633.0	3.1	73.3	93.8	462.7	2,946.0	515.0	2,189.2	241.8
California	472.0	5.3	23.6	173.4	269.7	2,731.5	622.6	1,665.1	443.8
Hawaii	274.8	1.7	30.3	79.8	163.0	3,661.2	708.6	2,580.5	372.1
Oregon	254.7	2.2	30.5	64.3	157.6	2,967.1	506.5	2,202.6	258.0
Washington	331.0	2.7	38.1	100.5	189.7	3,666.9	792.2	2,519.4	355.3
Puerto Rico	**264.5**	**22.5**	**1.6**	**153.6**	**86.7**	**1,410.0**	**466.8**	**770.9**	**172.2**

Note: Offense totals are based on all reporting agencies and estimates for unreported areas. Figures may not add up to totals due to rounding. (1) Data for arson, considered a property crime, are not included in this table. (2) Does not include statutory rape (i.e., rape not involving force) and other offenses of a sexual nature. Also does not include sexual attacks on males, which are considered aggravated assaults or sex offenses, depending on circumstances and extent of injuries. (3) Attack upon another with the intent of doing serious bodily harm; usually accompanied by the use of a weapon or other means likely to produce death or great bodily harm. (4) The unlawful taking of another's property not involving force or fraud (e.g., theft of motor vehicle parts, shoplifting). Excludes crimes such as embezzlement and check fraud. (5) Limited data available for Illinois. (6) Illinois and Minnesota—with the exception of Rockford, IL, and Minneapolis and St. Paul, MN—collect data on forcible rape offenses using methodology not consistent with national UCR guidelines. Forcible rape offenses in the two states, with the exception of the previously mentioned cities, have been estimated for inclusion in this table. (7) Includes offenses reported by National Zoological Park Police and Washington Metro Transit Police.

State and Federal Prison Population; Death Penalty, 2008-09

Source: *Prison Inmates at Midyear 2009*; *Capital Punishment, 2008*; Bureau of Justice Statistics, U.S. Dept. of Justice

As of June 30, 2009, 1,617,478 prisoners—about two-thirds of the nation's incarcerated population—were under the jurisdiction, or legal authority, of federal (12.8%) or state (87.2%) correctional authorities. The prison population increased by 0.4% over the preceding 12 months, which is slower than the 1.9% annual average growth recorded between 2000 and 2008. Jails, which are locally operated and typically hold persons awaiting trial or sentencing as well as those sentenced to one year or less, held most of the remaining inmate population (767,620).

As of mid-2009, the incarceration rate in state and federal prisons for those with sentences of more than one year was 504 per 100,000 U.S. residents, down slightly from 509 in 2008, but still up significantly from 478 at year-end 2000. Among inmates held in custody in prisons or jails, black males were incarcerated at 6.7 times the rate of white males. One in 21 black males was incarcerated in June 2009, compared to one in 141 white males. Black males (841,000) outnumbered white males (693,800) and Hispanic males (442,000) among inmates in prisons and jails. An estimated 94,498 non-U.S. citizens were held in state or federal prisons as of June 2009.

In 2008, 37 persons were executed, while another 82 were removed from death row. Of the 3,207 persons under sentence of death at year-end 2008, 98.2% were male; 56.1% were white, and 41.7% were black. The median age of this population was 43 years.

Another 52 people were executed in 2009, nearly half of them (24) by the state of Texas. Alabama was a distant second with 6 executions in 2009.

	Sentenced prisoners[1]			Death penalty[2]				
							Executed, as of 2008[3]	
Region/jurisdiction	Mid-2008	Mid-2009	% change, mid 2008-mid 2009	Death penalty	Under sentence of death, year-end 2008	Executed, 2008	Since 1930	Since 1977
U.S. total	**1,610,542**	**1,617,478**	**0.4%**	—	**3,207**	**37**	**4,995[4]**	**1,136[4]**
Federal[5]	**201,142**	**206,577**	**2.7**	**Y**	**51**	**0**	**36**	**3**
State	**1,409,400**	**1,410,901**	**0.1**	**37[6]**	**3,156**	**37**	**4,919**	**1,133**
Northeast	**179,093**	**179,371**	**0.2**	—	**234**	**0**	**612**	**4**
Connecticut[7]	21,099	20,503	–2.8	Y	10	0	22	1
Maine	2,246	2,206	–1.8	N	—	—	—	—
Massachusetts	11,662	11,572	–0.8	N	—	—	27	—
New Hampshire	2,827	2,709	–4.2	Y	1	0	1	0
New Jersey	26,490	25,886	–2.3	N	—	—	74	0
New York	62,184	59,778	–3.9	Y	0	0	329	0
Pennsylvania	46,313	50,531	9.1	Y	223	0	155	3
Rhode Island[7]	4,190	3,974	–5.2	N	—	—	—	—
Vermont[7]	2,082	2,212	6.2	N	—	—	4	—
Midwest	**265,652**	**264,897**	**0.3**	—	**270**	**2**	**532**	**129**
Illinois	45,548	45,545	0.0	Y	15	0	102	12
Indiana	27,380	29,529	7.8	Y	13	2	60	19
Iowa[8]	8,778	8,494	–3.2	N	—	—	18	—
Kansas	8,633	8,602	0.4	Y	8	0	15	0
Michigan	50,482	47,184	–6.5	N	—	—	—	—
Minnesota	9,964	10,064	1.0	N	—	—	—	—
Missouri	30,927	30,889	–0.1	Y	50	0	128	66
Nebraska	4,419	4,521	2.3	Y	9	0	7	3
North Dakota	1,450	1,438	–0.8	N	—	—	—	—
Ohio	51,160	51,811	1.3	Y	172	2	200	28
South Dakota	3,358	3,456	2.9	Y	3	0	2	1
Wisconsin	23,553	23,364	–0.8	N	—	—	—	—
South	**647,781**	**650,550**	**0.4**	—	**1,706**	**35**	**3,199**	**933**
Alabama	29,871	31,033	3.9	Y	205	0	173	38
Arkansas	14,552	15,398	5.8	Y	41	0	145	27
Delaware[7]	7,362	7,092	–3.7	Y	20	0	26	14
Florida	100,494	103,423	2.9	Y	390	2	236	66
Georgia[8]	54,016	54,452	0.8	Y	105	3	409	43
Kentucky	21,610	21,447	–0.8	Y	36	1	106	3
Louisiana	38,137	38,921	2.1	Y	84	0	160	27
Maryland	23,293	22,935	–1.5	Y	5	0	73	5
Mississippi	22,764	21,939	–3.6	Y	60	2	164	10
North Carolina	39,042	40,544	3.8	Y	161	0	306	43
Oklahoma	26,155	26,172	0.1	Y	85	2	148	88
South Carolina	25,275	25,052	–0.9	Y	58	3	202	40
Tennessee	26,998	27,323	1.2	Y	87	0	97	4
Texas	173,232	170,159	–1.8	Y	354	18	720	423
Virginia	38,879	38,387	–1.3	Y	15	4	194	102
West Virginia	6,101	6,273	2.8	N	—	—	40	—
West	**316,874**	**316,083**	**–0.2**	—	**946**	**0**	**576**	**67**
Alaska[7]	5,223	5,204	–0.4	N	—	—	—	—
Arizona[8]	38,988	40,492	3.9	Y	119	0	61	23
California	173,320	170,026	–1.9	Y	669	0	305	13
Colorado	23,130	23,316	0.8	Y	2	0	48	1
Hawaii[7]	6,003	5,986	–0.3	N	—	—	—	—
Idaho	7,338	7,283	–0.7	Y	17	0	4	1
Montana	3,592	3,664	2.0	Y	2	0	9	3
Nevada	12,915	12,632	–2.2	Y	81	0	41	12
New Mexico	6,330	6,531	3.2	Y	2	0	9	1
Oregon	14,079	14,412	2.4	Y	35	0	21	2
Utah	6,479	6,467	–0.2	Y	10	0	19	6
Washington	17,404	17,940	3.1	Y	8	0	51	4
Wyoming	2,073	2,130	2.7	Y	1	0	8	1

— = Not available or applicable. (1) Inmates sentenced to more than one year. (2) Figures do not include persons held under Armed Forces jurisdiction with a military death sentence for murder. (3) Military authorities carried out an additional 160 executions between 1930 and 1961. (4) Total executed includes 40 executions performed under the District of Columbia's jurisdiction since 1930. (5) Prisoners sentenced under DC's criminal code are housed in federal facilities. (6) The death penalty is legally authorized by 37 states. (7) Prisons and jails form one integrated system. Data includes total jail and prison population. (8) Sentenced prisoner population based on custody count.

Prison Situation Under Correctional Authorities' Jurisdiction, 2009

Source: *Prison Inmates at Midyear 2009*, Bureau of Justice Statistics, U.S. Dept. of Justice

Largest prison populations		Imprisonment rates of sentenced prisoners		Largest percent increases in prison populations			
Jurisdiction	Number	Jurisdiction	Rate[1]	Jurisdiction	% change, 2008-09	Jurisdiction	% change, 2000-09
U.S. total	**1,617,478**	**U.S. total**	**504**	**U.S. total**	**0.4%**	**U.S. total[2]**	**16.3%**
Federal	**206,577**	**Federal**	**61**	**Federal**	**2.7**	**Federal**	**42.1**
State	**1,410,901**	**State**	**447**	**State**	**0.1**	**State**	**13.2**
1. Texas	170,159	1. Louisiana	866	1. Pennsylvania	9.1	1. West Virginia	62.7
2. California	170,026	2. Mississippi	718	2. Indiana	7.8	2. Minnesota	61.3
3. Florida	103,423	3. Oklahoma	655	3. Vermont[4]	6.2	3. Arizona[3]	52.7
4. New York	59,778	4. Texas	649	4. Arkansas	5.8	4. Indiana	46.7
5. Georgia[3]	54,452	5. Alabama	637	5. Alabama	3.9	5. Florida	45.0
6. Ohio	51,811	6. Arizona[3]	579	6. Arizona[3]	3.9	6. Kentucky	43.8
7. Pennsylvania	50,531	7. Florida	558	7. North Carolina	3.8	7. Colorado	38.5
8. Michigan	47,184	8. Georgia[3]	533	8. New Mexico	3.2	8. Pennsylvania	37.1
9. Illinois	45,545	9. Arkansas	531	9. Washington	3.1	9. Oregon	36.2
10. North Carolina	40,544	10. South Carolina	526	10. South Dakota	2.9	10. North Dakota	33.6

Note: Excludes jail population unless otherwise noted. (1) Prisoners sentenced to more than one year. Rates are per 100,000 population, based upon census population estimates for July 1, 2009. (2) 2000 population as of Dec. 31. (3) Population based on custody count (number of prisoners held in its facilities) as opposed to jurisdiction count (number of prisoners under its legal authority). Some states are unable to provide both counts. (4) Prisons and jails form one integrated system. Data includes total jail and prison population.

Arrests by Race, 2009

Source: *Crime in the United States, 2009*, Federal Bureau of Investigation, U.S. Dept. of Justice

Each instance in which a person is arrested, cited, or summoned for an offense is counted as one arrest. The figures below therefore do not represent the number of individuals arrested but the number of times persons were arrested, assuming an individual may be arrested multiple times in one year. Arrest estimates are based on statistics from law enforcement agencies that reported 12 months of arrest data.

		Number of arrests where arrestee was—				% distrib. for offense charged[1]			
Offense charged	Total	White	Black	Amer. Indian/ Alaska Native	Asian/ Pacific Islander	White	Black	Amer. Indian/ Alaska Native	Asian/ Pacific Islander
PART I OFFENSES[2]									
Violent crime	**456,965**	**268,346**	**177,766**	**5,608**	**5,245**	**58.7%**	**38.9%**	**1.2%**	**1.1%**
Murder and nonnegligent manslaughter	9,739	4,741	4,801	100	97	48.7	49.3	1.0	1.0
Forcible rape	16,362	10,644	5,319	169	230	65.1	32.5	1.0	1.4
Robbery	100,496	43,039	55,742	726	989	42.8	55.5	0.7	1.0
Aggravated assault	330,368	209,922	111,904	4,613	3,929	63.5	33.9	1.4	1.2
Property crime	**1,364,409**	**922,139**	**406,382**	**17,599**	**18,289**	**67.6**	**29.8**	**1.3**	**1.3**
Burglary	234,551	155,994	74,419	2,021	2,117	66.5	31.7	0.9	0.9
Larceny-theft	1,056,473	719,983	306,625	14,646	15,219	68.1	29.0	1.4	1.4
Motor vehicle theft	63,919	39,077	23,184	817	841	61.1	36.3	1.3	1.3
Arson	9,466	7,085	2,154	115	112	74.8	22.8	1.2	1.2
PART II OFFENSES[3]									
Other assaults[4]	1,032,502	672,865	332,435	15,127	12,075	65.2%	32.2%	1.5%	1.2%
Forgery and counterfeiting	67,054	44,730	21,251	345	728	66.7	31.7	0.5	1.1
Fraud	161,233	108,032	50,367	1,315	1,519	67.0	31.2	0.8	0.9
Embezzlement	13,960	9,208	4,429	75	248	66.0	31.7	0.5	1.8
Stolen property: buying, receiving, possessing	82,714	51,953	29,357	662	742	62.8	35.5	0.8	0.9
Vandalism	212,173	157,723	48,746	3,352	2,352	74.3	23.0	1.6	1.1
Weapons: carrying, possessing, etc.	130,503	74,942	53,441	951	1,169	57.4	41.0	0.7	0.9
Prostitution and commercialized vice	56,560	31,699	23,021	427	1,413	56.0	40.7	0.8	2.5
Sex offenses (except forcible rape and prostitution)	60,175	44,240	14,347	715	873	73.5	23.8	1.2	1.5
Drug abuse violations	1,301,629	845,974	437,623	8,588	9,444	65.0	33.6	0.7	0.7
Gambling	8,046	2,290	5,518	27	211	28.5	68.6	0.3	2.6
Offenses against the family and children	87,232	58,068	26,850	1,690	624	66.6	30.8	1.9	0.7
Driving under the influence	1,105,401	954,444	121,594	14,903	14,460	86.3	11.0	1.3	1.3
Liquor laws	444,087	373,189	50,431	14,876	5,591	84.0	11.4	3.3	1.3
Drunkenness	469,958	387,542	71,020	8,552	2,844	82.5	15.1	1.8	0.6
Disorderly conduct	515,689	326,563	176,169	8,783	4,174	63.3	34.2	1.7	0.8
Vagrancy	26,347	14,581	11,031	543	192	55.3	41.9	2.1	0.7
All other offenses (except traffic violations)	2,929,217	1,937,221	911,670	43,880	36,446	66.1	31.1	1.5	1.2
Suspicion[5]	1,513	677	828	1	7	44.7	54.7	0.1	0.5
Curfew and loitering law violations	89,578	54,439	33,207	872	1,060	60.8	37.1	1.0	1.2
Runaways	73,616	48,343	19,670	1,653	3,950	65.7	26.7	2.2	5.4
TOTAL ARRESTS	**10,690,561**	**7,389,208**	**3,027,153**	**150,544**	**123,656**	**69.1**	**28.3**	**1.4**	**1.2**

(1) Percentages may not add up to 100 due to rounding. (2) In the UCR program, serious crimes that occur in all areas of the country and are likely to be reported to police are classified as part I offenses. See Crime in the U.S. table footnotes, p. 128, for offense definitions. (3) Arrest data only is collected for UCR program-designated part II offenses. (4) Simple assaults, where no weapons were used and where the victim did not sustain serious injury (e.g., stalking). (5) Arrested for no specific offense and released without formal charges being placed against a person.

Inmate Population by Gender, Race, Hispanic Origin, and Age, Mid-2009

Source: *Prison Inmates at Midyear 2009*, Bureau of Justice Statistics, U.S. Dept. of Justice

(number of inmates per 100,000 of each group in the U.S. resident population)

	Male					Female			
Age	All races[1]	White	Black	Hispanic	Age	All races[1]	White	Black	Race
18-19	1,529	776	4,403	1,838	18-19	100	70	210	140
20-24	2,939	1,389	8,889	3,937	20-24	261	194	595	329
25-29	3,298	1,569	10,501	3,954	25-29	292	222	733	314
30-34	3,278	1,673	10,995	3,650	30-34	349	260	896	302
35-39	2,915	1,587	10,068	3,090	35-39	361	263	895	300
40-44	2,593	1,475	8,668	2,735	40-44	301	214	730	248
45-49	1,803	972	6,387	2,327	45-49	170	115	405	191
50-54	1,061	568	3,914	1,583	50-54	82	63	155	132
55-59	644	383	2,203	1,159	55-59	40	25	60	86
60-64	349	227	1,134	758	60-64	21	9	49	36
65 or older	127	87	454	243	65 or older	5	3	5	9
Total[2]	**1,398**	**708**	**4,749**	**1,822**	**Total[2]**	**131**	**91**	**333**	**142**

Note: Rates are based on census population estimates for July 1, 2009. Detailed categories exclude persons who reported two or more races. Hispanics may be of any race but are not included in white and black populations here. (1) Includes American Indians, Alaska natives, Asians, Native Hawaiians, other Pacific Islanders, and persons identifying two or more races. (2) Includes persons under age 18.

Hate Crimes by Offense Type, Bias Motivation, 2008

Source: *Hate Crime Statistics, 2008*, Federal Bureau of Investigation, U.S. Dept. of Justice

Hate crimes are defined as crimes in which victims are chosen because of one or more personal characteristics, such as race, ethnicity, or religion. Congress enacted the Hate Crime Statistics Act of 1990, which led to the collection of hate crime data as part of the FBI's Uniform Crime Report (UCR) program beginning in 1992. Not all agencies that participate in the UCR program submit hate crime data, so the data presented is not representative of the nation as a whole.

		Crimes against persons[1]					Crimes against property[2]						
Bias motivation	Total offenses	Aggravated assault	Simple assault	Intimidation	Other[1]	Total crimes against persons	Robbery	Burglary	Larceny-theft	Destruction/ damage/vandalism	Other[2]	Total crimes against property	Total crimes against society[3]
Single-bias incidents	**9,160**	**1,023**	**1,776**	**2,701**	**35**	**5,535**	**145**	**157**	**224**	**2,970**	**111**	**3,607**	**18**
Race	**4,704**	**528**	**884**	**1,587**	**10**	**3,009**	**60**	**81**	**118**	**1,369**	**54**	**1,682**	**13**
Anti-White	812	101	224	200	5	530	24	32	75	129	17	277	5
Anti-Black	3,413	386	581	1,257	5	2,229	33	36	34	1,042	31	1,176	8
Anti-American Indian/ Alaskan native	59	5	20	9	0	34	1	4	5	14	1	25	0
Anti-Asian/Pacific Islander	162	15	38	55	0	108	1	3	1	47	2	54	0
Anti-multiple races, group	258	21	21	66	0	108	1	6	3	137	3	150	0
Religion	**1,606**	**47**	**114**	**311**	**1**	**473**	**8**	**28**	**43**	**1,029**	**25**	**1,133**	**0**
Anti-Jewish	1,055	25	58	201	0	284	4	5	14	742	6	771	0
Anti-Catholic	75	1	3	3	0	7	1	4	8	55	0	68	0
Anti-Protestant	60	3	3	1	0	7	0	4	4	42	3	53	0
Anti-Islamic	123	5	30	48	0	83	1	2	2	30	5	40	0
Anti-other religion	212	9	11	51	0	71	1	10	8	114	8	141	0
Anti-multiple religions, group	67	3	8	7	1	19	1	2	4	39	2	48	0
Anti-atheism/agnosticism/ etc.	14	1	1	0	0	2	0	1	3	7	1	12	0
Sexual orientation	**1,617**	**232**	**501**	**419**	**16**	**1,168**	**50**	**23**	**32**	**324**	**18**	**447**	**2**
Anti-male homosexual	948	152	312	238	5	707	39	8	14	168	11	240	1
Anti-female homosexual	194	22	58	61	6	147	0	4	4	37	2	47	0
Anti-homosexual	415	54	111	110	3	278	10	8	8	108	2	136	1
Anti-heterosexual	33	3	8	7	0	18	1	1	4	8	1	15	0
Anti-bisexual	27	1	12	3	2	18	0	2	2	3	2	9	0
Ethnicity/national origin	**1,148**	**209**	**254**	**367**	**2**	**832**	**25**	**24**	**22**	**233**	**10**	**314**	**2**
Anti-Hispanic	735	158	189	217	1	565	21	10	5	126	6	168	2
Anti-other ethnicity/ national origin	413	51	65	150	1	267	4	14	17	107	4	146	0
Disability	**85**	**7**	**23**	**17**	**6**	**53**	**2**	**1**	**9**	**15**	**4**	**31**	**1**
Anti-physical	28	5	9	8	0	22	0	0	2	3	1	6	0
Anti-mental	57	2	14	9	6	31	2	1	7	12	3	25	1
Multiple-bias incidents[4]	**8**	**2**	**2**	**3**	**0**	**7**	**0**	**1**	**0**	**0**	**0**	**1**	**0**
Total offenses	**9,168**	**1,025**	**1,778**	**2,704**	**35**	**5,542**	**145**	**158**	**224**	**2,970**	**111**	**3,608**	**18**

(1) Includes murder, non-negligent manslaughter, forcible rape, and additional offenses not shown here in details. (2) Includes arson, motor vehicle theft, and additional offenses not shown here in detail. (3) Includes drug or narcotic offenses, gambling and prostitution offenses, and weapon law violations where society as a whole is considered the victim. (4) More than one offense type must occur and at least two offense types must be motivated by different biases to count as a multiple-bias incident.

Notable Assassinations Since 1865

1865—Apr. 14: U.S. Pres. Abraham Lincoln shot by John Wilkes Booth, well-known actor with Confederate sympathies, at Ford's Theater in Washington, DC; died Apr. 15.

1881—Mar. 13: Alexander II of Russia. **July 2:** U.S. Pres. James A. Garfield shot by Charles J. Guiteau, disappointed office seeker, in Washington, DC; died Sept. 19.

1894—June 24: French Pres. Sadi Carnot, by Sante Caserio, Italian anarchist, in Lyon.

1898—Sept. 10: Empress Elizabeth of Austria stabbed by Luigi Luccheni, Italian anarchist.

1900—July 29: Umberto I, king of Italy.

1901—Sept. 6: U.S. Pres. William McKinley shot by Leon Czolgosz, anarchist, in Buffalo, NY; died Sept. 14.

1908—Feb. 1: King Carlos I of Portugal and his son Luis Felipe in Lisbon.

1913—Feb. 23: Mexican Pres. Francisco I. Madero and Vice Pres. José María Pino Suárez. **Mar. 18:** King George of Greece.

1914—June 28: Archduke Francis Ferdinand of Austria-Hungary and his wife shot by Gavrilo Princip, Serb nationalist, in Sarajevo, Bosnia.
1916—Dec. 30: Grigory Rasputin, mystic and court figure, by group of aristocrats.
1918—July 12: Grand Duke Michael of Russia, at Perm. **July 16:** Nicholas II, former (abdicated) czar of Russia; his wife, Czarina Alexandra; their son, Czarevitch Alexis; their daughters, Grand Duchesses Olga, Tatiana, Marie, Anastasia; and 4 members of household executed by Bolsheviks at Ekaterinburg.
1920—May 20: Mexican Pres. Gen. Venustiano Carranza in Tlaxcalantongo.
1922—Aug. 22: Michael Collins, Irish revolutionary, in ambush in West Cork. **Dec. 16:** Polish Pres. Gabriel Narutowicz in Warsaw.
1923—July 20: Gen. Francisco "Pancho" Villa, ex-rebel leader, in Parral, Mexico.
1928—July 17: Gen. Alvaro Obregon, president-elect of Mexico, in San Angel.
1932—May 6: French Pres. Paul Doumer shot by Russian émigré, Pavel Gorgulov, in Paris.
1934—July 25: Austrian Chancellor Engelbert Dollfuss by Nazis, in Vienna.
1935—Sept. 8: Sen. Huey P. Long, former Louisiana governor, shot by Dr. Carl Austin Weiss, son-in-law of political opponent, in Baton Rouge; died Sept. 10.
1940—Aug. 20: Leon Trotsky (Lev Bronstein), exiled Soviet commissar of war, fatally wounded with ice ax by Soviet agent near Mexico City.
1948—Jan. 30: Mohandas K. Gandhi (Mahatma) shot by Nathuram Godse, Hindu fanatic, in New Delhi. **Sept. 17:** Count Folke Bernadotte, UN mediator for Palestine, by Jewish extremists in Jerusalem.
1951—July 20: Jordanian King Abdullah ibn Hussein. **Oct. 16:** Prime Min. Liaquat Ali Khan of Pakistan shot, in Rawalpindi.
1956—Sept. 21: Pres. Anastasio Somoza of Nicaragua shot in Leon; died Sept. 29.
1957—July 26: Guatemalan Pres. Carlos Castillo Armas, in Guatemala City by one of own guards.
1958—July 14: King Faisal of Iraq, Crown Prince Abdullah, and **July 15**, Prem. Nuri as-Said, by rebels in Baghdad.
1959—Sept. 25: Prime Min. Solomon Bandaranaike of Ceylon, by Buddhist monk in Colombo.
1961—Jan. 17: Ex-Prem. Patrice Lumumba of the Congo, in Katanga Province. **May 30:** Dominican dictator Rafael Leonidas Trujillo Molina, nr. Ciudad Trujillo.
1963—June 12: Medgar Evers, NAACP's Mississippi field secretary, shot by Byron De La Beckwith in Jackson, MS. **Nov. 2:** Pres. Ngo Dinh Diem of South Vietnam and his brother, Ngo Dinh Nhu, in military coup. **Nov. 22:** U.S. Pres. John F. Kennedy shot while riding in motorcade through downtown Dallas, TX; accused gunman Lee Harvey Oswald murdered by nightclub owner Jack Ruby while awaiting trial.
1965—Jan. 21: Iranian Prem. Hassan Ali Mansour in Tehran; 4 executed. **Feb. 21:** Malcolm X, black nationalist leader, shot by three men linked to Nation of Islam at New York City rally.
1966—Sept. 6: Prime Min. Hendrik F. Verwoerd of South Africa stabbed to death in parliament at Cape Town.
1968—Apr. 4: Rev. Martin Luther King Jr. fatally shot in Memphis, TN; James Earl Ray convicted of crime. **June 5:** Sen. Robert F. Kennedy (D, NY) shot in Los Angeles; died June 6. Sirhan Sirhan convicted of crime.
1971—Nov. 28: Jordanian Prime Min. Wasfi Tal by Palestinian guerrillas, in Cairo.
1973—Mar. 2: U.S. Amb. Cleo A. Noel Jr., U.S. Charge d'Affaires George C. Moore, and Belgian Charge d'Affaires Guy Eid, by Palestinian guerrillas in Khartoum, Sudan. **Dec. 20:** Spanish Prem. Luis Carrero Blanco in car bombing by Basque separatist group ETA, in Madrid.
1974—Aug. 19: U.S. Amb. to Cyprus, Rodger P. Davies, by sniper's bullet in Nicosia.
1975—Feb. 11: Pres. Richard Ratsimandrava of Madagascar shot in Tananarive. **Mar. 25:** Saudi Arabian King Faisal shot by nephew Prince Musad Abdel Aziz, in Riyadh. **Aug. 15:** Bangladesh Pres. Sheik Mujibur Rahman killed in coup.
1976—Feb. 13: Nigerian head of state, Gen. Murtala Ramat Mohammed, by self-styled "young revolutionaries."
1977—Mar. 16: Kamal Jumblat, Lebanese Druse chieftain, shot near Beirut. **Mar. 18:** Congo Pres. Marien Ngouabi shot in Brazzaville.
1978—May 9: Former Italian Prem. Aldo Moro killed by Red Brigades terrorists who abducted him Mar. 16 in Rome, held him hostage for several weeks. **July 9:** Former Iraqi Prem. Abdul Razak Al-Naif shot in London.
1979—Feb. 14: U.S. Amb. Adolph Dubs shot by Afghan Muslim extremists in Kabul. **Aug. 27:** Lord Mountbatten, WWII hero, and 2 others killed when a bomb exploded on his fishing boat off coast of Co. Sligo, Ireland. IRA claimed responsibility. **Oct. 26:** S. Korean Pres. Park Chung Hee and 6 bodyguards fatally shot by Kim Jae Kyu, head of S. Korean CIA.
1980—Apr. 12: Liberian Pres. William R. Tolbert slain in military coup. **Sept. 17:** Former Nicaraguan Pres. Anastasio Somoza Debayle shot in Paraguay.
1981—Oct. 6: Egyptian Pres. Anwar al-Sadat shot by commandos while reviewing military parade in Cairo; 7 others killed, 28 wounded. 4 convicted as assassins and executed.
1982—Sept. 14: Lebanese Pres.-elect Bashir Gemayel killed by bomb in east Beirut.
1983—Aug. 21: Philippine opposition leader Benigno Aquino Jr. shot by gunman at Manila Intl. Airport.
1984—Oct. 31: Indian Prime Min. Indira Gandhi shot and killed by 2 Sikh bodyguards, in New Delhi.
1986—Feb. 28: Swedish Prem. Olof Palme shot by gunman on Stockholm street.
1987—June 1: Lebanese Prem. Rashid Karami killed when bomb exploded aboard helicopter.
1988—Apr. 16: PLO military chief Khalil Wazir (Abu Jihad) gunned down by Israeli commandos in Tunisia.
1989—Aug. 18: Colombian pres. candidate Luis Carlos Galan killed by Medellín cartel drug traffickers at campaign rally in Bogotá. **Nov. 22:** Lebanese Pres. Rene Moawad killed when bomb exploded next to his motorcade.
1990—Mar. 22: Colombian pres. candidate Bernardo Jaramillo Ossa shot by gunman at airport in Bogotá.
1991—May 21: Former Indian Prime Min. Rajiv Gandhi killed by bomb during election rally in Madras.
1992—June 29: Algerian Pres. Mohammed Boudiaf shot by gunman in Annaba.
1993—May 1: Sri Lankan Pres. Ranasinghe Premadasa killed by bomb in Colombo.
1994—Mar. 23: Mexican pres. candidate Luis Donaldo Colosio Murrieta shot by gunman Mario Aburto Martinez. **Apr. 6:** Burundian Pres. Cyprien Ntaryamira and Rwandan Pres. Juvenal Habyarimana killed with 8 others when their plane was apparently shot down.
1995—Nov. 4: Israeli Prime Min. Yitzhak Rabin shot by Yigal Amir, Jewish extremist, at peace rally in Tel Aviv.
1996—Oct. 2: Andrei Lukanov, former Bulgarian prime min., shot outside home by unidentified gunman.
1998—Feb. 6: Prefect of Corsica, Claude Erigmac, shot in the back by 2 unidentified gunmen while walking to concert. **Apr. 26:** Guatemalan Roman Catholic Bishop Juan Gerardi Conedera, human rights champion, found beaten to death in Guatemala City.
1999—Mar. 23: Paraguayan Vice-Pres. Luis Maria Argaña, ambushed and shot to death along with his driver, by 4 unidentified assailants, in Asunción. **Apr. 9:** Niger Pres. Ibrahim Bare Mainassara ambushed and killed by dissident soldiers. **Oct. 27:** Armenian Prime Min. Vazgen Sarkissian, along with 7 others, shot to death during session of parliament.
2000—Jan. 15: Serbian paramilitary leader Zeljko Raznjatovic (Arkan), with 2 others, shot and killed by unidentified gunman in Belgrade. **June 8:** Brig. Gen. Stephen Saunders, Britain's senior military representative in Greece, fatally shot by 2 men on motorcycle, while driving car in Athens suburb.
2001—Jan. 16: Dem. Rep. of the Congo Pres. Laurent Kabila shot to death by bodyguard at pres. palace in Kinshasa. **June 1:** Nepal's King Birendra, Queen Aiswarya, and 7 other royals fatally shot by Crown Prince Dipendra, who also fatally wounded himself. **Sept. 9:** Afghan Northern Alliance (anti-Taliban) guerrilla leader Ahmed Shah Massoud injured in suicide-attack bombing by 2 people posing as journalists, in N. Afghanistan; died Sept. 15. **Oct. 14:** Abdel Rahman Hamad, a leader of Palestinian militant group Hamas, shot by Israeli military snipers. **Oct. 17:** Israeli tourism min. Rehavam Zeevifatally shot; Popular Front for the Liberation of Palestine claimed responsibility.
2002—Mar. 16: Colombian cleric Isaias Duarte Cancino, critic of Colombian guerrillas and drug traffickers, shot by unidentified gunmen outside of church in Cali. **May 6:** Dutch right-wing politician Pim Fortuyn shot outside radio station in Hilversum. **July 6:** Afghan Vice Pres. Haji Abdul Qadir shot outside his office in Kabul. **July 23:** Salah Sherhada, a founder of armed wing of Hamas, killed with 14 others in air strike on Gaza City by Israeli fighter jet.
2003—Mar. 12: Serbian Prime Min. Zoran Djindjic shot by snipers (paramilitary) outside govt. headquarters in Belgrade. **Apr. 10:** Shiite Muslim cleric Abdul Majid al-Khoei attacked by crowd, hacked to death at Imam Ali mosque, Najaf, Iraq. **Apr. 17:** Sergei Yushenkov, former Russian legislator and Liberal Party head, shot outside apartment in Moscow. **Aug. 29:** Shiite Muslim cleric Bakir al-Hakim killed in car bombing at Imam Ali mosque in Najaf, Iraq. **Sept. 10:** Swedish Foreign Min. Anna Lindh stabbed in Stockholm dept. store; died Sept. 11.
2004—Feb. 13: Former Chechen Pres. Zelimkhan Yandarbiyev killed after car exploded in Qatar. **Mar. 22:** Sheik Ahmed Yassin, spiritual leader of Hamas, by Israeli missile attack in Gaza City. **Apr. 17:** Hamas leader Abdel Aziz Rantisi, by Israeli missile strike in Gaza City. **May 9:** Chechen Pres. Akhmad Kadyrov, by bomb explosion at WWII memorial service in Grozny. **May 17:** Iraqi Gov. Council Pres. Ezzedine Salim, by car bomb explosion at Green Zone checkpoint in Baghdad. **Nov. 2:** Filmmaker Theo van Gogh, critic of Islam and great-grandnephew of painter Vincent van Gogh, shot and stabbed by Muslim militant in Amsterdam.
2005—Jan. 4: Baghdad Gov. Ali al-Haidari gunned down by insurgents in Baghdad, Iraq. **Feb. 14:** Former Lebanese Prime Min. Rafik al-Hariri killed when motorcade bombed in Beirut. **Mar. 8:** Former Chechen pres. Aslan Maskhadov killed in raid by Russian special forces, in village outside Grozny. **July 1:** Sheik Kamaleddding al-Ghuraifi, senior aide to Grand Ayatollah Ali Sistani, shot and killed on way to Friday prayers, in Baghdad.
2006—Feb. 11: Leading Kazakhstan opposition politician Altynbek Sarsenbayev (also known as Sarsenbaiuly) kidnapped, found

murdered outside Almaty. **July 10:** Shamil Basayev, leader of Chechen separatist movement who claimed responsibility for many of Russia's worst terrorist attacks, killed in massive explosion nr. village of Ekazhevo. Chechen rebel website said explosion was accidental, but Russian security director said killing was result of special forces operation. **July 14:** Prominent Shiite Muslim cleric Allama Hassan Turabi killed in suicide bombing at his home in Karachi, Pakistan. **Sept. 14:** Andrei Kozlov, Russian central banker active in reforming industry, shot by unidentified gunmen in Moscow. **Oct. 7:** Anna Politkovskaya, reporter critical of Kremlin's Chechnya policies, fatally shot by unidentified gunman in apartment building in Moscow. **Nov. 21:** Pierre Gemayel, Lebanese cabinet minister opposed to Syria, shot by unknown gunmen while driving through Beirut. **Nov. 23:** Aleksandr Litvinenko, former Russian intelligence agent and critic of Russia's government and security service, died after apparent poisoning by radioactive isotope; another former KGB agent suspected.

2007—June 13: Walid Eido, Lebanese parliament member who was part of anti-Syria coalition, killed by car bomb in Beirut. **Aug. 2:** *Oakland Post* editor Chauncey Bailey, who was investigating financial status of black Muslim organization, shot dead in downtown Oakland, CA. **Sept. 19:** Antoine Ghanem, member of ruling anti-Syria coalition in Lebanese parliament, killed by bomb in parked car nr. Beirut. **Dec. 27:** Benazir Bhutto, former Pakistani prime min. and first female elected leader of a Muslim state, by gunfire and/or bomb as she was leaving political rally for Pakistan People's Party.

2008—Feb. 12: Imad Mughniyeh, top Hezbollah commander, by car bomb in Syria. Mughniyeh had been on FBI's Most Wanted Terrorist list and was believed to have orchestrated the 1983 bombing of U.S. embassy in Beirut, among other terrorist acts. **May 8:** Edgar Eusebio Millán Gómez, Mexico's acting national police chief and opponent of drug cartels, by gunmen outside his home in Mexico City. **Aug. 1:** Brig. gen. and top presidential aide Mohammed Suleiman reportedly shot by sniper nr. Tartus, Syria; Suleiman had been Syria's primary contact with investigators from Intl. Atomic Energy Agency. **Oct. 23:** Ivo Pukanic, owner and editor-in-chief of the Croatian weekly political newspaper *Nacional* was killed in Zagreb when a bomb exploded near his car. The bombing was widely attributed to organized crime groups. **Oct.-Nov.:** A total of 12 police officers, including the state police commanders in two districts of Mexico, are assassinated over a five-day stretch of drug-related violence.

2009—Jan.: Six candidates for elected office are killed in several regions of Iraq shortly before scheduled provincial elections. **Mar. 2:** Heavily armed men launch rocket grenades into the home of Guinea-Bissau's longtime President João Bernardo Vieira and Gen. Batista Tagme Na Waie, killing both men. **Mar. 31:** Sulim Yamadeyev, a former Chechen general and enemy of the Kremlin-installed president, is killed by gunmen in Dubai. **May 31:** Dr. George Tiller, one of the few doctors in Kansas to provide abortions and one of the few in U.S. to perform abortions late in pregnancy, is shot to death in his Wichita church by an anti-abortion protester. **June 12:** Harith al-Obaidi, a Sunni member of Iraq's Parliament, is shot at point-blank range. His aide and three bodyguards are also killed in the attack. **June 13:** Gunmen kill Bashir Aushev, a former vice premier of the Ingushetia region of Russia. **Sept. 2:** A suicide bomber in Mehtar Lam, Afghanistan, kills at least 16 people, including Abdullah Lahgmani, deputy director of the country's National Directorate for Security. **Sept. 27:** Two officials from the Russian republic of Dagestan, Alimsultan Alkhamatov and Alimsultan Atuyev, are shot dead in separate incidents.

2010—Jan. 19: Mahmoud al-Mabhouh, a senior commander for Hamas, is found drugged and suffocated in his Dubai, United Arab Emirates, hotel room. Suspicion immediately falls on Israel's Mossad spy agency. **Aug. 2:** Raza Haider, a member of Pakistan's Parliament, and his bodyguard are shot dead by four gunmen in a Karachi, Pakistan, mosque, unleashing violence that kills at least 78 others.

Notable Assassination Attempts Since 1912

1912—Oct. 14: Former U.S. Pres. Theodore Roosevelt shot and wounded by demented man in Milwaukee, WI.

1933—Feb. 15: In Miami, FL, Joseph Zangara, anarchist, shot at Pres.-elect Franklin D. Roosevelt, but a woman seized his arm; bullet fatally wounded Chicago Mayor Anton J. Cermak, who died Mar. 6.

1944—July 20: Adolf Hitler injured when bomb, planted by a German officer, exploded in his headquarters; 1 aide killed,12 injured.

1950—Nov. 1: In attempt to assassinate Pres. Harry Truman, 2 members of a Puerto Rican nationalist movement—Griselio Torresola and Oscar Collazo—tried to shoot their way into Blair House, across the street from White House. Torresola killed. Pvt. Leslie Coffelt, White House policeman, fatally shot.

1970—Nov. 27: Pope Paul VI unharmed by knife-wielding assailant who attempted to attack him in airport in Manila, Philippines.

1972—May 15: Alabama Gov. George Wallace seriously wounded when shot in Laurel, MD, by Arthur Bremer.

1975—Sept. 5: Pres. Gerald R. Ford unharmed when Secret Service agent grabbed pistol aimed at him by Lynette (Squeaky) Fromme, a follower of cult leader Charles Manson, in Sacramento, CA. **Sept. 22:** Pres. Ford again unharmed when bystander grabbed arm of Sara Jane Moore as she fired upon Ford in San Francisco.

1980—May 29: Civil rights leader Vernon E. Jordan Jr. shot and wounded in Ft. Wayne, IN.

1981—Jan. 16: Irish political activist Bernadette Devlin McAliskey and her husband shot and seriously wounded by 3 members of a Protestant paramilitary group in Co. Tyrone, Ireland. **Mar. 30:** Pres. Ronald Reagan, along with Press Sec. James Brady, Secret Service agent Timothy J. McCarthy, and Washington, DC, policeman Thomas Delahanty shot and seriously wounded by John W. Hinckley Jr. in Washington, DC. **May 13:** Pope John Paul II and 2 bystanders shot and wounded by Mehmet Ali Agca, an escaped Turkish prisoner, in St. Peter's Square, Rome.

1982—May 12: Pope John Paul II wounded by ultra-conservative priest wielding bayonet, in Fatima, Portugal.

1984—Oct. 12: British Prime Min. Margaret Thatcher unharmed when a bomb, said to have been planted by the IRA, exploded at the Grand Hotel in Brighton, England, during a Party conference; 4 died, incl. a member of Parliament.

1986—Sept. 7: Chilean Pres. Gen. Augusto Pinochet Ugarte unharmed after motorcade was attacked by rebels.

1995—June 26: Egyptian Pres. Hosni Mubarak unharmed when gunmen fired on his motorcade in Addis Ababa, Ethiopia; 4 died, incl. 2 Ethiopian police officers.

1997—Feb. 12: Colombian Pres. Ernesto Samper Pizano unharmed when bomb exploded on a runway in Barranquilla as his plane was preparing to land. **Apr. 30:** Tajik Pres. Imamali Rakhmanov injured when a grenade was thrown at him.

1998—Feb. 9: Georgian Pres. Eduard A. Shevardnadze unharmed when gunmen fired on his motorcade in Tbilisi.

2000—Sept. 18: Armed men attempted to assassinate Côte d'Ivoire military leader Gen. Robert Guei in predawn raid.

2002—Apr. 14: Leading Colombian pres. candidate Alvaro Uribe Velez unharmed after bomb exploded under parked bus as his motorcade passed in Barranquilla; 3 bystanders killed. **July 14:** French Pres. Jacques Chirac unharmed after Maxime Brunerie, gunman with ties to neo-Nazi groups, fired at his open-top jeep during a Bastille Day parade in Paris. **Sept. 5:** Afghan Pres. Hamid Karzai unharmed after militant shot at car in Kandahar. **Nov. 25:** Turkmenistan Pres. Saparmurat Niyazov unharmed after gunmen opened fire on his motorcade in Ashgabat.

2003—Dec. 14: Pakistani Pres. Pervez Musharraf unharmed after bomb detonated on bridge in Rawalpindi seconds after his motorcade crossed over.

2004—Mar. 19: Taiwanese Pres. Chen Shui-bian shot while campaigning in motorcade; minor injuries. **July 13:** Separatists bombed motorcade of Sergei Abramov, Chechnya's acting pres. **Sept. 5:** Ukrainian opposition presidential candidate Viktor Yushchenko, who later won office, fell ill after meeting; diagnosed with dioxin poisoning. **Sept. 16:** Rocket fired at helicopter carrying Afghan Pres. Hamid Karzai, near Gardez.

2005—Mar. 15: Kosovo Pres. Ibrahim Rugova survived after bomb damaged the vehicle he was in as his motorcade traveled through Pristina. **July 12:** Lebanon's pro-Syrian defense min. Elias Murr wounded by car explosion in Beirut suburb.

2006—Apr. 12: Pro-democracy activist Edil Baisalov was beaten as he left his office in Bishkek, Kyrgyzstan. He had sought to block the parliamentary candidacy of a reputed crime boss. **Sept. 5:** Lt. Col. Samir Shehade, involved in investigation of 2005 assassination of former Lebanese Prime Min. Rafik al-Hariri, wounded by bomb as he drove in village near Sidon.

2007—June 29: Rockets hit a plane carrying former rebel chief and current Côte d'Ivoire Prime Min. Guillaume Soro, shortly after plane landed in Bouake; Soro unhurt.

2008—Feb. 11: Pres. José Ramos-Horta shot in attack led by fugitive former army official, in Dili, Timor-Leste. Ambush on Prime Min. Xanana Gusmão's motorcade a short time later unsuccessful. **Apr. 27:** Afghan President Hamid Karzai is unharmed after Taliban gunmen fire on a military parade in Kabul where Karzai and other members of Parliament were in attendance.

2009—Jan. 21: Ziad al-Ani, a leader of one of Iraq's main Sunni Arab parties participating in forthcoming provincial elections, survives a car bombing that leaves four dead. **Apr. 30:** After a shootout, Bolivian police kill three men and capture two others who they accused of plotting to assassinate Pres. Evo Morales. **June 22:** Yunus-Bek Yevkurov, president of the Ingushetia region of Russia, is seriously wounded when a suicide bomber in a car packed with explosives crashes into his motorcade. **Sept. 2:** Hamid Saeed Kami, Pakistan's Minister of Religious Affairs, is wounded by two men firing at his car from a motorcycle. **Dec. 3:** Moussa Dadis Camara, leader of Guinea's ruling military junta, is shot in the head by one of his own aides.

2010—May 14: Indonesian National Police announce they broke up a plot by terrorists calling themselves Al Qaeda in Aceh to assassinate President Susilo Bambang Yudhoyono.

Notable U.S. Kidnappings Since 1924

Bobby Franks, 14, in Chicago, **May 21, 1924**, by 2 youths from wealthy families—Richard Loeb, 18, and Nathan Leopold, 19—who killed boy. Demand for $10,000 ignored. Loeb killed in prison; Leopold paroled 1958.

Charles A. Lindbergh Jr., 20 mos. old, nr. Hopewell, NJ, **Mar. 1, 1932**; found dead **May 12**. Ransom of $50,000 paid to man identified as Bruno Richard Hauptmann, 35, paroled German convict who entered U.S. illegally. Hauptmann convicted, electrocuted in Trenton, NJ, prison, Apr. 3, 1936.

William A. Hamm Jr., 39, brewing company pres. in St. Paul, **June 15, 1933**, by Karpis-Barker gang. $100,000 paid. Alvin Karpis given life, paroled in 1969.

Charles F. Urschel, in Oklahoma City, **July 22, 1933**. Released **July 31** after $200,000 paid. George "Machine Gun" Kelly and 5 others sentenced to life.

Brooke L. Hart, 22, in San Jose, CA. Thomas Thurmond and John Holmes arrested after demanding $40,000. When Hart's body was found in San Francisco Bay, **Nov. 26, 1933**, a mob forced its way into county jail and lynched the 2 kidnappers.

June Robles, 6, abducted in Tucson, AZ, **Apr. 25, 1934**. Missing for 19 days after ransom note sent to parents. Found alive in iron cage buried in desert. No arrests ever made.

George Weyerhaeuser, 9, of Weyerhaeuser lumber company, in Tacoma, WA, **May 24, 1935**. Returned home **June 1** after $200,000 paid. Kidnappers given 20 to 60 years.

Charles Mattson, 10, in Tacoma, WA, **Dec. 27, 1936**. Kidnapper initially asked for $28,000 but subsequent communication with parents was confusing. Charles found dead **Jan. 11, 1937**.

Robert C. Greenlease, 6, son of wealthy car dealer, taken from Kansas City, MO, school **Sept. 28, 1953**, held for $600,000. Body was found **Oct. 7**. Bonnie Brown Heady and Carl A. Hall pleaded guilty, were executed.

Peter Weinberger, 32 days old, Westbury, NY, **July 4, 1956**, for $2,000 ransom, not paid. Child found dead, abandoned by kidnapper Angelo John LaMarca, 31, who was convicted, executed.

Lee Crary, 8, in Everett, WA, **Sept. 22, 1957**; $10,000 ransom, not paid. Escaped after 3 days, led police to George E. Collins, who was convicted.

Frank Sinatra Jr., 19, from hotel room in Lake Tahoe, CA, **Dec. 8, 1963**. Released **Dec. 11** after his father paid $240,000 ransom. Three men sentenced to prison.

Barbara Jane Mackle, 20, abducted **Dec. 17, 1968**, from Atlanta, GA, motel; found unharmed 3 days later, buried in a coffin-like box 18 in. underground, after her father paid $500,000 ransom. Gary Steven Krist sentenced to life, Ruth Eisenmann-Schier to 7 years.

Virginia Piper, 49, abducted **July 27, 1972**, from her home in suburban Minneapolis; found unharmed near Duluth 2 days later after husband, retired banker, paid $1 mil ransom, then largest ransom ever reported in U.S.

J. Paul Getty III, 17, grandson of the oil billionaire, disappeared **July 10, 1973**, in Italy. Reported payment of $2.8 mil ransom not made until after Getty's ear was sent to a newspaper with a warning that other parts of his body would be mutilated unless ransom was paid. Getty freed **Dec. 15**; 2 men sentenced to prison.

Patricia "Patty" Hearst, 19, taken from her Berkeley, CA, apartment **Feb. 4, 1974**; "Symbionese Liberation Army" captors demanded her father, publisher Randolph Hearst, give millions to area poor. Patricia implicated in a San Francisco bank holdup, **Apr. 15**. The FBI, **Sept. 18, 1975**, captured her and others; they were indicted on various charges. Patricia convicted of bank robbery, Mar. 20, 1976; released from prison under executive clemency, Feb. 1, 1979. In 1978, William and Emily Harris were sentenced to 10 years to life for the kidnapping; both were paroled in 1983.

J. Reginald Murphy, 40, an editor of *Atlanta Constitution* (GA), kidnapped **Feb. 20, 1974**; freed **Feb. 22** after newspaper paid $700,000 ransom. William A. H. Williams arrested; most of the money recovered.

Jack Teich, Kings Point, NY, steel executive, seized **Nov. 12, 1974**; released **Nov. 19** after payment of $750,000.

Adam Walsh, 6, abducted from a Hollywood, FL, dept. store, **July 27, 1981**. Severed head found 2 weeks later. John Walsh, Adam's father, became active in raising awareness about missing children.

Terry Anderson, 37, Middle East bureau chief for Associated Press, in Beirut, Lebanon, by members of Islamic fundamentalist group Hezbollah on **Mar. 16, 1985**. Freed **Dec. 4, 1991**. Anderson had been held hostage along with **William Buckley**, 55, CIA station chief in Beirut who was kidnapped **Mar. 16, 1984**, and died in captivity.

Jaycee Dugard, 11, kidnapped near her home in South Lake Tahoe, CA, **June 10, 1991**; held for 18 years by Nancy and Philip Garrido, who fathered two girls with Dugard during her captivity. Dugard, along with her 11- and 15-year-old daughters, was reunited with her family **Aug. 27, 2009**, after police arrested the Garridos.

Sidney J. Reso, oil company executive, seized **Apr. 29, 1992**; died **May 3**. Arthur D. Seale—former security official at oil company—and his wife, Irene, arrested June 19. Arthur pleaded guilty, sentenced to life in prison; Irene sentenced to 20-year prison term.

Polly Klaas, 12, Petaluma, CA, abducted at knife point, **Oct. 1, 1993,** during a slumber party at her home. Police arrested Richard Allen Davis on **Nov. 30**; he led them to her body, found **Dec. 4** in wooded area of Cloverdale, CA. Davis found guilty June 18, 1996, and sentenced to death Sept. 26.

Marshall I. Wais, 79, owner of 2 San Francisco steel companies, kidnapped **Nov. 19, 1996**, from his San Francisco home. Released unharmed the same day after $500,000 ransom paid; Thomas William Taylor and Michael K. Robinson arrested same day.

Tionda Z. Bradley, 10, and sister **Diamond Yvette Bradley**, 3, went missing **July 6, 2001**, in Chicago, IL. Note left by Tionda at home stated the 2 girls were going to the store and the playground. Believed kidnapped, case still unsolved.

Daniel Pearl, 38, reporter for *Wall Street Journal*, disappeared **Jan. 23, 2002**, while researching story in Karachi, Pakistan. British-born militant Ahmad Omar Saeed Sheikh **Feb. 14** admitted to organizing the kidnapping and said Pearl was dead. Sheikh and 3 others convicted July 15 of kidnapping and murder by a judge in Hyderabad.

Elizabeth Smart, 14, abducted from her home in Salt Lake City, UT, **June 5, 2002**, allegedly by Brian D. Mitchell, and forced to live with Mitchell and wife Wanda for 9 months in various U.S. cities; found walking down street with captors in Sandy, UT, 15 miles from Smart family home, **Mar. 12, 2003**.

Natalee Holloway, 18, of Birmingham, AL, vanished **May 30, 2005**, on high school graduation trip to Aruba, Netherlands dependency in West Indies. Officials believed she was kidnapped and murdered. Several suspects were detained but later released.

Jill Carroll, 28, freelance journalist, in Baghdad by group called the Revenge Brigade, **Jan. 7, 2006**. She was on assignment for the *Christian Science Monitor* when she was seized. She was released **Mar. 30**; 4 Iraqis arrested in connection with her kidnapping in Aug.

Steve Centanni, 60, a Fox News reporter released **Aug. 26, 2006** (along with a colleague), after being kidnapped and held hostage for 13 days by Palestinian militant group Holy Jihad Brigades. The group had demanded that the U.S. release all Muslims held in its prisons.

Reigh Storrow Mills, 7, abducted **July 27, 2008**, by her father Christian Gerhartsreiter (who used the alias Clark Rockefeller); reunited with her mother **Aug. 2, 2008**, by FBI agents who took Gerhartsreiter into custody.

Felix Batista, 55, who negotiated the release of numerous kidnapping victims in Latin America was abducted in Mexico in early **Dec. 2008**.

Melissa Roxas, 31, a volunteer health worker released **May 24, 2009**, five days after being kidnapped in the Philippines **May 19, 2009**.

David Rohde, 41, a *New York Times* reporter captured by the Taliban in Afghanistan **Nov. 10, 2008**, escaped **June 19, 2009**.

Notable Terrorist Incidents Worldwide Since 1971

Source: U.S. Dept. of State; *Facts On File World News Digest @ Facts.com*; World Almanac research

Selected noteworthy incidents, excluding most assassinations, kidnappings, and military targets. Does not include all incidents in Iraq or Afghanistan, 2001-present; see Chronology of the Year's Events.

1971—Mar. 1: Senate wing of U.S. Capitol Building in Wash., DC, bombed by Weather Underground; no deaths.

1972—July 21: "Bloody Friday." Provisional IRA exploded 20+ bombs across Belfast, N. Ireland; 9 killed, hundreds injured. **Sept. 5:** Members of Palestinian group Black September killed 2 Israeli athletes and seized 9 others at Olympic Village in Munich, W. Germany, during Summer Olympics. 9 hostages, 5 militants, 1 Ger. officer died in botched rescue.

1973—Dec. 17: Palestinian gunmen attacked Rome airport and bombed plane on tarmac; hijacked Lufthansa plane with 5 Italian hostages to Athens, Greece, then to Kuwait; 31 killed in all.

1974—June 17: Houses of Parliament in London, England, bombed by Provisional IRA; 11 injured.

1975—Jan. 27: Puerto Rican FALN nationalists bombed Fraunces Tavern in New York City; 4 killed, 53 injured. **Jan. 29:** U.S. State Dept. building in Wash., DC, bombed by Weather Underground; no deaths.

1976—June 27: Palestinian and Baader-Meinhof militants forced Air France jet to land at Entebbe, Uganda. Israeli army rescued 103 hostages from airport terminal in battle with terrorists and Ugandan troops, July 3-4; 32 killed in all.

1978—Mar. 11: Palestinian militants landed on beach near Haifa, Israel. Shot civilians and hijacked bus with hostages to Tel Aviv. Exploded at roadblock; 43 killed.

1979—Nov. 4: Iranian radicals seized U.S. embassy in Tehran, taking 66 Americans hostage. 52 were held until Jan. 20, 1981. **Nov. 20:** 200 Islamic terrorists seized Grand Mosque in Mecca, Saudi Arabia, and held hundreds of pilgrims hostage. Saudi forces retook mosque Dec. 4; about 250 died.

1980—Feb. 27: Members of leftist guerrilla group April 19 Movement (M-19) seized Dominican Republic embassy in Bogota, Colombia; 80 hostages taken. 18 held until Apr. 27.

1983—April 18: Hezbollah suicide truck bomb at U.S. embassy in Beirut, Lebanon, killed 63. **Oct. 9:** N. Korean agents ambushed a S. Korean govt. delegation in Rangoon, Burma, killing 21. **Oct. 23:** Hezbollah suicide truck bombings of U.S. and French military bases, Beirut, Lebanon; 242 Americans, 58 French killed.

1984—Sept. 20: U.S. embassy annex nr. Beirut, Lebanon, bombed, killing approx. 20.

1985—June 14: Hezbollah members hijacked TWA Flight 847 with 153 passengers and crew to Beirut, Lebanon; 39 held for 17 days; 1 U.S. Navy sailor killed. **June 23:** Air India Flight 182 destroyed by bomb off coast of Ireland; 329 killed. Blamed on Sikh terrorists. **Apr. 12:** Bomb blast at restaurant nr. Air Force base in Torrejon, Spain; 18 killed. **Oct. 7:** Four Palestinians hijacked Italian cruise ship *Achille Lauro*; 1 passenger killed. **Nov. 23:** EgyptAir Flight 648 from Athens to Cairo hijacked to Malta by Palestinian group Abu Nidal; 60 killed in rescue. **Dec. 27:** Palestinian militants opened fire at El-Al airline counters at Rome and Vienna airports; 19 killed.

1986—Apr. 5: Nightclub in Berlin, W. Germany, bombed; 3 killed, incl. 2 U.S. servicemen, 200+ hurt. 3 Libyan embassy workers in Germany convicted in bombing.

1987—Apr. 17: Bomb in Sri Lankan capital killed 100+; blamed on Tamil rebels who, 4 days later, attacked Sinhalese travelers on highway, killing 127. **June 19:** Basque group ETA bombed supermarket garage in Barcelona, Spain; 21 killed, 45 injured. **Nov. 29:** Bomb planted by N. Korean agents exploded on Korean Air Lines Flight 858 over Indian Ocean; 115 killed.

1988—Dec. 21: Pan Am Flight 103 exploded over Lockerbie, Scotland, killing all 259 aboard and 11 on ground; Libya took responsibility for bombing in Aug. 2003.

1989—Sept. 19: French UTA Flight 722 from Congo to Paris destroyed by bomb in midair over Niger; 171 killed. Several Libyan officials convicted in absentia; no official admission.

1992—Mar. 17: Israeli embassy in Buenos Aires, Argentina, bombed; 28 killed, 200+ injured. Hezbollah suspected.

1993—Feb. 26: Truck bomb exploded in World Trade Center garage in New York City; 6 killed. Blast later linked to al- Qaeda. **Mar. 12-19:** At least 11 bombs ripped through Bombay and Calcutta, India; 300+ killed.

1994—Feb. 25: U.S.-born Israeli settler Baruch Goldstein opened fire in mosque in Hebron, West Bank; about 30 Muslim worshippers killed. **July 18:** Buenos Aires Jewish center bombed; 87 killed. Blamed on Hezbollah.

1995—Mar. 20: Twelve killed and over 5,000 injured when Japanese Aum Shinri-kyu cult members released Sarin nerve gas in several Tokyo subway cars. **Apr. 19:** Murrah Federal Building in Oklahoma City bombed, killing 168 and injuring 500+. Timothy McVeigh and Terry Nichols convicted in bombing. McVeigh executed in 2001; Nichols sentenced to life in prison, 1998 on state charges, 2004 on federal charges. **Nov. 13:** U.S. miltary compound in Riyadh, Saudi Arabia, bombed by Islamic Movement of Change; 7 killed.

1996—Jan. 31: Tamil Tigers drove explosives-laden truck into Central Bank in Colombo, Sri Lanka; 90 killed. **June 25:** Bomb-laden fuel truck exploded outside Khobar Towers, a U.S. military complex in Dhahran, Saudi Arabia; killed 19. **June 27:** Bomb exploded at Centennial Olympic Park in Atlanta, GA, during Summer Games; killed 2, injured 100+. Suspect Eric Robert Rudolph arrested in 2003, pleaded guilty; sentenced to life in prison, 2005. **Dec. 3:** Bomb exploded on subway train in Paris; 4 killed, 86 injured. Blamed on Algerian extremists.

1997—Nov. 17: Gamaa al-Islamiya gunmen killed 58 tourists and 4 Egyptians in Valley of the Kings near Luxor, Egypt.

1998—Aug. 7: U.S. embassies in Nairobi, Kenya, and Dar-es-Salaam, Tanzania, bombed; 257 people killed. Al-Qaeda blamed. **Aug. 15:** IRA car bomb exploded outside courthouse in Omagh, N. Ireland; killed 29, injured 300+. **Oct. 18:** National Liberation Army of Colombia blew up Ocensa oil pipeline; about 71 killed, 100+ injured.

1999—Sept. 9-16: Three apt. buildings bombed in Moscow and Volgodonsk, Russia; about 300 killed. Chechen rebels blamed.

2000—Oct. 12: Small boat assisting in docking of U.S.S. *Cole* exploded while alongside it in Aden, Yemen; 17 U.S. sailors killed, 39 injured. Blamed on al-Qaeda.

2001—Sept. 11: 19 al-Qaeda terrorists hijacked 4 U.S. domestic flights, including 2 planes that crashed into World Trade Center towers and 1 into Pentagon. Total dead minus hijackers: 2,973; deadliest attack of terrorism yet on U.S. soil. **Sept.-Nov. 7:** Letters tainted with deadly anthrax bacteria mailed through U.S. postal system killed 5.

2002—Mar. 27: Suicide bombing at hotel in Netanya, Israel, during Passover celebration; 27 killed. **Oct 12:** Resort in Bali, Indonesia, bombed; 202 dead. Jemaah Islamiah blamed. **Oct. 23:** Chechen guerrillas seized theater in Moscow, held 700+ hostages. Russian authorities gassed theater; most guerrillas and about 128 hostages killed. **Nov. 28:** Suicide bombers destroyed Israeli-owned hotel near Mombasa, Kenya; 13 killed. At same time, 2 missiles narrowly missed Israeli plane taking off from Mombasa airport; blamed on al-Qaeda. **Dec. 27:** Chechen rebels plowed truck bomb into pro-Russian gov. headquarters in Grozny, Chechnya; 80 killed, 152 injured.

2003—May 12-13: Al-Qaeda militants detonated car bombs at 3 residential complexes used by Westerners in Riyadh, Saudi Arabia; 34 killed. **May 16:** Five explosions in Casablanca, Morocco; 44 killed, 100+ wounded. Blamed on al-Qaeda. **May 17-19:** Five suicide bombings in Israel; 17 killed. Hamas and al-Aqsa Martyrs brigade blamed. **Aug. 5:** Car bomb hit Marriott hotel in Jakarta, Indonesia; 12 killed, 150 injured. Blamed on Jemaah Islamiah. **Aug. 19:** UN headquarters in Baghdad bombed by truck; 22 killed, incl. UN envoy to Iraq. **Aug. 25:** 2 bombs exploded in taxis in Mumbai (Bombay), India; 46 killed, 100+ injured. Islamic militants suspected. **Oct. 27:** Suicide bombings at Intl. Red Cross and police stations; 40 killed. **Nov. 15:** Two synagogues in Istanbul, Turkey, bombed; 25 killed. **Nov. 20:** British consulate and offices of British bank HSBC bombed in Istanbul, Turkey; 27 killed incl. Br. cons. gen. Blamed on al-Qaeda. **Dec. 5:** Suicide bombing on commuter train in Yessentuki, Russia; 44 killed, 150 injured. Blamed on Chechen rebels.

2004—Feb. 6: Bomb exploded on Moscow subway; 39 killed, 130 injured. Chechen rebels blamed. **Mar. 11:** Al-Qaeda cell bombed 4 commuter trains during morning rush hour in Madrid, Spain; 191 killed, about 1,200 injured. **Apr. 21:** Car bomb destroyed Saudi govt. security building in Riyadh; 4 killed, 148 injured. **May 29:** Al-Qaeda militants stormed foreigner compound in Khobar, Saudi Arabia, taking hostages; 22 killed. **Aug. 24:** Two Russian passenger planes crashed nearly simultaneously in diff. parts of Russia; 90 killed. Blamed on Chechen rebels. **Sept. 1:** Militants seized school in Beslan, in northern Ossetia, Russia; held 1,000+ hostage for 3 days before Russian troops stormed school. About 330 killed, incl. 27 hostage-takers. Blamed on Chechen militants.

2005—July 7: Four bombs exploded on 3 separate subways and a bus in central London, UK; 52 killed, incl. bombers, about 700 injured. **July 21:** Four bombs placed on 3 subways and a bus in London malfunction. **July 23:** Three car bombs explode nr. resorts at Sharm el Sheik, Egypt; about 90 killed. **Aug. 17:** More than 400 small bombs exploded in cities and towns across Bangladesh, killing 2 and injuring at least 125. Jamaat ul-Mujahedeen Bangladesh claimed responsibility. **Aug. 19:** Three rockets fired from Jordan hit cities of Eilat, Israel, and Aqaba, Jordan. One missile flies over a docked U.S. naval ship; 1 death. **Nov. 9:** 3 suicide bombings targeting hotels in Amman, Jordan; killed 56+, injured about 100. Al-Qaeda in Iraq took responsibility.

2006—Apr. 24: Three deadly bombs within 5 minutes struck Egyptian Red Sea resort town of Dahab; 18 killed, 85 injured. Nasser Khamis el-Mallah, supposed "mastermind and leader" of Tawhid wal Jihad (Unity and Holy War), the terrorist cell that launched the attack, reported killed during gun battle in May. **July 11:** 8 explosions struck 7 different trains and 1 station of public commuter rail system in Mumbai, India; 207 killed, 700+ wounded. Lashkar-e-Qahhar (Army of Terror) claimed responsibility.

2007—Feb. 19: Train traveling between New Delhi and border with Pakistan caught fire, 68 killed; Indian ministers blamed Muslim militants for trying to disrupt peace talks between India and Pakistan. **June 30:** In apparent attempt at suicide attack, two men crashed their SUV into the main terminal of Scotland's Glasgow Airport; both also allegedly planted bombs on two cars parked in central London before attacking airport; driver later died of burns sustained in attack. **Dec. 11:** 2 coordinated car bombs went off outside govt. building and UN office building in Algiers, Algeria; 41 killed, incl. 17 UN employees, 170 wounded.

2008—Sept. 20: Suicide bomber in truck set off explosion outside of Marriott Hotel in Islamabad, Pakistan. Hotel was popular among foreigners and wealthy residents and was located nr. prime min.'s house and parliament building; 53 killed, 271 wounded. **Nov. 26-29:** A series of attacks and bombings on luxury hotels and high profile targets in Mumbai, India; 171 killed, 300 injured. Gunmen take dozens of hostages before Mumbai police and Indian National Security Guards secure the buildings. Pakistan officials later arrest 20 suspected militant Islamic extremists in connection with the attacks. **Dec. 5:** A car bomb explodes in the central bazaar in Peshawar, Pakistan; 29 killed, about 90 injured.

2009—Feb. 9: Female suicide bomber at a checkpoint in northern Sri Lanka where government soldiers are fighting rebel troops; 28 killed. **Feb. 20:** Suicide bomber targets Shiite funeral in Dera Ismail Khan, Pakistan; 30 killed, 50+ wounded. **Dec. 25:** Umar Farouk Abdulmutallab, a 23-year-old Nigerian, fails in his attempt to blow up a Northwest Airlines Flight from Amsterdam to Detroit with a bomb in his underpants. **Dec. 29:** A suicide bomber attacks a Shiite procession in Karachi, Pakistan, killing more than 40.

2010—Jan. 1: A Taliban suicide bomber kills more than 100 people on a playground in northwest Pakistan. **Mar. 29:** Two female Chechen separatists suicide bomb two landmark subway stations in Moscow, killing at least 40 people. **May 28:** Six men from the Pakistani Taliban attack two mosques in Lahore, killing 86 and wounding hundreds. **July 9:** Suicide bombers attack a group of tribal elders in Mohmand, Pakistan, killing more than 100. **July 11:** Several bombs explode simultaneously in Kampala, Uganda, killing more than 70 people who had gathered to watch the broadcast of the World Cup final. **July 16:** Sunni militants suicide bomb a mosque in Zahedan, Iran, killing at least 27 and wounding about 270. **Aug. 24:** Somali insurgents kill more than 30 people, including four politicians, at a Mogadishu hotel.

MILITARY AFFAIRS

Chief Commanding Officers of the U.S. Military

Chairman, Joint Chiefs of Staff: Adm. Michael G. Mullen (USN)
Vice Chairman: Gen. James E. "Hoss" Cartwright (USMC)

The **Joint Chiefs of Staff** consists of the Chairman and Vice Chairman of the Joint Chiefs of Staff; the Chief of Staff, U.S. Army; the Chief of Naval Operations; the Chief of Staff, U.S. Air Force; and the Commandant of the Marine Corps. Date of rank is date when the individual achieved his or her current rank. While serving in any of these positions, or as commander of a unified or specified combatant command, basic pay is $19,983.60 per month. Officers hold positions listed as of Oct. 1, 2010.

Army

Chief of Staff	Date of rank
Casey Jr., George W.	Apr. 10, 2007
Other Generals	
Alexander, Keith B.	May 7, 2010
Austin III, Lloyd J.	July 29, 2010
Campbell, Charles C.	Jan. 9, 2007
Chiarelli, Peter	June 4, 2008
Dempsey, Martin	July 23, 2008
Dunwoody, Ann	Nov. 14, 2008
Ham, Carter	July 23, 2008
Odierno, Raymond T.	July 10, 2008
Petraeus, David H.	Feb. 10, 2007
Sharp, Walter	Apr. 29, 2008
Thurman, James D.	Mar. 19, 2010
Ward, William E.	May 3, 2006

Air Force

Chief of Staff	Date of rank
Schwartz, Norton A.	Aug. 12, 2008
Other Generals	
Brady, Roger A.	Jan. 9, 2008
Breedlove, Philip M.	Sept. 10, 2010
Carlson, Bruce	Sept. 1, 2005
Chandler, Carrol H. "Howie"	Nov. 30, 2007
Chilton, Kevin P.	June 26, 2006
Fraser, Douglas M.	June 25, 2009
Fraser III, William M.	Oct. 8, 2008
Hoffman, Donald	Nov. 21, 2008
Johns Jr., Raymond E.	July 31, 2009
Kehler, C. Robert	Oct. 12, 2007
Lorenz, Stephen R.	July 2, 2008
McKinley, Craig R.	Nov. 17, 2008
McNabb, Duncan J.	Dec. 1, 2005
North, Gary L.	Aug. 19, 2009
Renuart Jr., Victor E. "Gene"	Mar. 23, 2007
Rice Jr., Edward A.	May 7, 2010
Shelton, William L.	Sept. 10, 2010
Welsh III, Mark A.	Oct. 28, 2009

Navy

Chief of Naval Operations	Date of rank
Roughead, Gary (surface warfare)	Sept. 29, 2007
Other Admirals	
Donald, Kirkland H. (submariner)	Jan. 1, 2005
Fitzgerald, Mark P. (aviator)	Nov. 30, 2007
Greenert, Jonathan W. (submariner)	Sept. 29, 2007
Harvey Jr., John C. (nuclear propulsion)	July 24, 2009
Keating, Timothy J. (aviator)	Jan. 1, 2005
Olson, Eric T. (special operations)	July 9, 2007
Stavridis, James G. (surface warfare)	Oct. 19, 2006
Walsh, Patrick M. (aviator)	Apr. 2007
Willard, Robert F. (aviator)	Mar. 18, 2005
Winnefeld Jr., James A.	May 7, 2010

Marine Corps

Commandant of the Marine Corps (CMC)	Date of rank
Conway, James T.	Nov. 13, 2006
Other Generals	
Amos, James F.	July 2, 2008
Cartwright, James E.	July 9, 2004
Dunford Jr., Joseph F.	Aug. 4, 2010
Mattis, James N.	Nov. 9, 2007

Coast Guard

Commandant, with rank of Admiral	Date of rank
Papp Jr., Robert J.	Apr. 22, 2010
Vice Commandant, with rank of Vice Admiral	
Pekoske, David P.	Aug. 7, 2009

Unified Combatant Commands Commanders-in-Chief

U.S. European Command, Stuttgart-Vaihingen, Germany: Adm. James Stavridis (USAF)
U.S. Pacific Command, Honolulu, Hawaii: Adm. Robert F. Willard (USN)
U.S. Joint Forces Command, Norfolk, Virginia: Lt. Gen. Keith M. Huber, act. (U.S. Army)
U.S. Special Operations Command, MacDill AFB, Florida: Adm. Eric T. Olson (USN)
U.S. Transportation Command, Scott AFB, Illinois: Gen. Duncan J, McNabb (USAF)
U.S. Central Command, MacDill AFB, Florida: Gen. James N. Mattis (USMC)
U.S. Southern Command, Miami, Florida: Gen. Douglas Fraser (USAF)
U.S. Northern Command, Peterson AFB, Colorado: Adm. James A. Winnefeld, Jr. (USN)
U.S. Strategic Command, Offutt AFB, Nebraska: Gen. Kevin P. Chilton (USAF)
U.S. Africa Command, Kelley Barracks, Stuttgart, Germany: Gen. Carter F. Ham (U.S. Army)

North Atlantic Treaty Organization (NATO) International Commands

NATO Headquarters: Chairman, NATO Military Committee: Adm. Giampaolo Di Paola (Italian Navy)
Strategic Commands:
Allied Command Operations (ACO): Adm. James G. Stavridis (USN), Supreme Allied Commander, Europe
Allied Command Transformation (ACT): Gen. Stéphane Abrial (French Air Force), Supreme Allied Commander Transformation
ACO Subordinate Commands:
Joint Force Command Brunssum (JFC Brunssum): Gen. Egon Ramms (German Army), Commander
Joint Force Command Naples (JFC Naples): Adm. Mark Fitzgerald (USN), Commander
Joint Headquarters Lisbon (JHQ Lisbon): Lt. Gen. Philippe Stoltz (French Army), Commander

Chairmen of the Joint Chiefs of Staff, 1949-2010

Gen. of the Army Omar N. Bradley, USA	8/16/49-8/15/53
Adm. Arthur W. Radford, USN.	8/15/53-8/15/57
Gen. Nathan F. Twining, USAF.	8/15/57-9/30/60
Gen. Lyman L. Lemnitzer, USA.	10/1/60-9/30/62
Gen. Maxwell D. Taylor, USA	10/1/62-7/1/64
Gen. Earle G. Wheeler, USA.	7/3/64-7/2/70
Adm. Thomas H. Moorer, USN	7/2/70-7/1/74
Gen. George S. Brown, USAF.	7/1/74-6/20/78
Gen. David C. Jones, USAF	6/21/78-6/18/82
Gen. John W. Vessey Jr., USA	6/18/82-9/30/85
Adm. William J. Crowe Jr., USN	10/1/85-9/30/89
Gen. Colin L. Powell, USA.	10/1/89-9/30/93
Gen. John M. Shalikashvili, USA.	10/25/93-9/30/97
Gen. Henry H. Shelton, USA.	9/30/97-9/30/01
Gen. Richard B. Myers, USAF.	10/1/01-9/30/05
Gen. Peter Pace, USMC	9/30/05-9/30/07
Adm. Michael G. Mullen, USN.	10/1/07-

Directors of the Central Intelligence Agency

In 1942, Pres. Franklin D. Roosevelt established the Office of Strategic Services (OSS); it was disbanded in 1945. In 1946, Pres. Harry Truman established the Central Intelligence Group (CIG) to operate under the National Intelligence Authority (NIA). A 1947 law replaced the NIA with the National Security Council and the CIG with the Central Intelligence Agency.

Director	Served	Appointed by President
Adm. Sidney W. Souers	1946	Truman
Gen. Hoyt S. Vandenberg	1946-1947	Truman
Adm. Roscoe H. Hillenkoetter	1947-1950	Truman
Gen. Walter Bedell Smith	1950-1953	Truman
Allen W. Dulles	1953-1961	Eisenhower
John A. McCone	1961-1965	Kennedy
Adm. William F. Raborn Jr.	1965-1966	Johnson
Richard Helms	1966-1973	Johnson
James R. Schlesinger	1973	Nixon
William E. Colby	1973-1976	Nixon
George H. W. Bush	1976-1977	Ford
Adm. Stansfield Turner	1977-1981	Carter
William J. Casey	1981-1987	Reagan
William H. Webster	1987-1991	Reagan
Robert M. Gates	1991-1993	Bush
R. James Woolsey.	1993-1995	Clinton
John M. Deutch	1995-1997	Clinton
George J. Tenet.	1997-2004	Clinton
Porter Goss	2004-2006	Bush
Gen. Michael V. Hayden	2006-2009	Bush
Leon E. Panetta.	2009-	Obama

Military Units, U.S. Army and Air Force

ARMY UNITS. Squad: In infantry usually 8-16 enlisted personnel under a staff sergeant. **Platoon:** In infantry 2-4 squads under a lieutenant. **Company:** Headquarters section and 3-5 platoons under a captain. (Company-size unit in the artillery is a battery; in the cavalry, a troop.) **Battalion:** Hdqts. and 4-6 companies under a lieutenant colonel. (Battalion-size unit in the cavalry is a squadron.) **Brigade:** Hdqts. and 2-5 battalions under a colonel. (Brigade-size unit in the cavalry and rangers is a regiment; in the special forces, a group.) **Division:** Hdqts. and 3 brigades with artillery, combat support, and combat service support units under a major general. **Corps:** Two or more divisions with corps troops under a lieutenant general. **Army:** Hdqts. and 2 or more corps with operational and support responsibilities under a general.

AIR FORCE UNITS. Flight: Numerically designated flights are the lowest level unit in the Air Force. They are used primarily where there is a need for small mission elements to be incorporated into an organized unit. **Squadron:** The basic unit. Designates specific operational or support capability like mission units in operational commands. **Group:** A flexible unit composed of 2 or more squadrons whose functions may be operational, support, or administrative in nature. **Wing:** A primary group with supporting groups on a distinct mission with significant scope such as combat, flying training, or airlift. **Numbered Air Forces:** Normally an operationally oriented agency, the numbered air force is designed for the control of subordinate units with the same mission and/or geographical location. **Major Command:** A major subdivision of the Air Force with full staff that manages a major segment of the USAF mission. Major Command is composed of 3 or more numbered air forces.

Active Duty U.S. Military Personnel Strengths Worldwide, 2010

Source: U.S. Dept. of Defense
(as of Mar. 31, 2010)

TOTAL WORLDWIDE[1]	**1,428,868**
U.S. TERRITORIES & SPEC. LOCATIONS	
U.S., 48 contiguous states	937,998
Alaska	20,308
Hawaii	37,637
Guam	3,009
Puerto Rico	185
Transients	45,433
Afloat	83,219
Regional total[2]	**1,127,796**
OTHER WESTERN HEMISPHERE	
Canada	131
Colombia	73
Cuba (Guantánamo)	895
Haiti	92
Honduras	411
Afloat	11
Regional total[2]	**2,044**
EUROPE	
Belgium	1,278
Germany	52,332
Greece	370
Greenland	135
Italy	9,677
Netherlands	495
Portugal	717
Spain	1,270
Turkey	1,581
United Kingdom	9,239
Afloat	2,094
Regional total[2]	**79,675**
SUB-SAHARAN AFRICA	
Djibouti	1,210
Regional total[2]	**1,577**
FORMER SOVIET UNION	
Total	**127**
EAST ASIA & PACIFIC	
Australia	129
Japan	35,562
Korea, South	NA
Philippines	279
Singapore	122
Thailand	197
Afloat	10,842
Regional total[2]	**47,339**
NORTH AFRICA, NEAR EAST, & SOUTH ASIA*	
Afghanistan[3]	87,300
Bahrain	1,379
Diego Garcia	262
Egypt	265
Iraq[3]	140,100
Qatar	479
Saudi Arabia	262
United Arab Emirates	104
Afloat	2,819
Regional total[2,4]	**5,826**

NA = Not available. *Special Forces personnel involved in Operation Enduring Freedom in Afghanistan not reported by Dept. of Defense. (1) Total worldwide also includes undistributed personnel. (2) Most countries and areas with fewer than 100 assigned U.S. military members not listed; regional totals include personnel stationed in those countries and areas not shown. (3) Rounded strengths for Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) deployment; includes troops in surrounding areas and deployed Reserve/National Guard. (4) Excludes troops deployed for OEF/OIF.

U.S. Army Personnel on Active Duty[1]

Source: Dept. of the Army, U.S. Dept. of Defense
(as of mid-year, except where noted)

Date	Total strength[2]	Commissioned officers			Warrant officers		Enlisted personnel		
		Total	Male	Female[3]	Male[4]	Female	Total	Male	Female
1940	267,767	17,563	16,624	939	763	—	249,441	249,441	—
1942	3,074,184	203,137	190,662	12,475	3,285	—	2,867,762	2,867,762	—
1943	6,993,102	557,657	521,435	36,222	21,919	—	6,413,526	6,358,200	55,325
1944	7,992,868	740,077	692,351	47,726	36,893	10	7,215,888	7,144,601	71,287
1945	8,266,373	835,403	772,511	62,892	56,216	44	7,374,710	7,283,930	90,780
1946	1,889,690	257,300	240,658	16,642	9,826	18	1,622,546	1,605,847	16,699
1950	591,487	67,784	63,375	4,409	4,760	22	518,921	512,370	6,551
1955	1,107,606	111,347	106,196	5,151	10,552	48	985,659	977,943	7,716
1960	871,348	91,056	86,832	4,224	10,141	39	770,112	761,833	8,279
1965	967,049	101,812	98,029	3,783	10,285	23	854,929	846,409	8,520
1970	1,319,735	143,704	138,469	5,235	23,005	13	1,153,013	1,141,537	11,476
1975	781,316	89,756	85,184	4,572	13,214	22	678,324	640,621	37,703
1980 (Sept. 30)	772,661	85,339	77,843	7,496	13,265	113	673,944	612,593	61,351
1985 (Sept. 30)	776,244	94,103	83,563	10,540	15,296	288	666,557	598,639	67,918
1990 (Mar. 31)	746,220	91,330	79,520	11,810	15,177	470	639,713	567,015	72,698
1995	521,036	72,646	62,250	10,396	12,053	599	435,807	377,832	57,975
2000	471,633	66,344	56,391	9,953	10,608	781	393,900	333,947	59,953
2002	485,536	66,446	55,715	10,731	10,900	812	404,363	341,794	62,569
2003 (Sept. 30)	499,301	68,198	56,980	11,218	11,273	854	414,769	351,921	62,848
2004 (Sept. 30)	499,543	68,640	57,245	11,395	11,414	914	414,438	354,043	60,395
2005 (Sept. 30)	492,728	69,174	57,675	11,499	11,506	976	406,923	346,194	57,354
2006 (Sept. 30)	505,402	68,742	57,318	11,424	11,931	1,035	419,353	361,528	57,825
2007 (Sept. 30)	522,017	70,657	58,854	11,803	13,844	1,160	433,109	374,989	58,120
2008 (Sept. 30)	539,170	72,650	60,357	12,293	13,428	1,246	451,846	392,163	59,683
2009 (Sept. 30)	553,044	75,337	63,146	12,191	13,815	1,348	457,980	398,579	59,401
2010	566,065	78,540	NA	NA	15,519	NA	467,260	NA	NA

NA = Not available. (1) Represents strength of active Army, including Philippine Scouts (1940-46), ret. Regular Army personnel on extended active duty, and National Guard and Reserve personnel on extended active duty; excl. U.S. Military Academy cadets, contract surgeons, and National Guard and Reserve personnel not on extended active duty. (2) Includes categories not listed, e.g. West Point Cadets. Data for 1940-46 include personnel in the Army Air Forces and its predecessors (Air Service and Air Corps). (3) Includes Army Nurse Corps for all years, Women's Army Corps (1942-78), Medical Specialists Corps (1949 and subsequent years). (4) Act of Congress approved Apr. 27, 1926, directed the appointment as warrant officers of field clerks still in active service. Includes flight officers as follows: 1943, 5,700; 1944, 13,615; 1945, 31,117; 1946, 2,580.

U.S. Navy Personnel on Active Duty

Source: U.S. Dept. of Defense
(as of mid-year, except where noted)

Date	Officers	Nurses	Enlisted	Officer candidates	Total[1]	Date	Officers	Nurses	Enlisted	Officer candidates	Total[1]
1940	13,162	442	144,824	2,569	160,997	1998 (Sept.)	55,007	—	326,196	—	381,203
1945	320,293	11,086	2,988,207	61,231	3,380,817	1999	55,726	—	322,372	—	378,098
1950	42,687	1,964	331,860	5,037	381,538	2000 (Oct.)	53,698	—	320,212	—	373,910
1960	67,456	2,103	544,040	4,385	617,984	2005	54,039	—	305,368	—	363,858
1970	78,488	2,273	605,899	6,000	692,660	2006	53,209	—	295,773	—	353,496
1980[2]	63,100	—	464,100	—	527,200	2007 (Sept.)	51,385	—	281,772	—	337,547
1990 (Sept.)	74,429	—	530,133	—	604,562	2008	52,184	—	276,346	—	331,785
1995 (May)	61,075	—	402,626	—	463,701	2009	52,233	—	274,858	—	331,637
1996	60,013	—	376,595	—	436,608	2010	53,071	—	273,609	—	330,065
1997	57,341	—	340,616	—	397,957						

(1) May include categories not shown, e.g., midshipmen. (2) Starting in 1980, "Nurses" are included with "Officers," and "Officer candidates" are included with "Enlisted."

U.S. Air Force Personnel on Active Duty

Source: U.S. Dept. of Defense
(as of mid-year)

Year[1]	Strength	Year[1]	Strength	Year[1]	Strength	Year[1]	Strength	Year[1]	Strength	Year[1]	Strength
1918	195,023	1943	2,197,114	1970	791,078	1992	470,315	1997	378,681	2006	352,620
1920	9,050	1944	2,372,292	1980	557,969	1993	444,351	1998	363,479	2007	340,596
1930	13,531	1945	2,282,259	1986	608,200	1994	426,327	1999	357,929	2008	328,771
1940	51,165	1950	411,277	1990	535,233	1995	400,051	2000	357,777	2009	334,009
1941	152,125	1960	814,213	1991	510,432	1996	389,400	2005	358,705	2010	337,505
1942	764,415										

(1) Prior to 1947, data are for U.S. Army Air Corps and Air Service of the Signal Corps.

U.S. Marine Corps Personnel on Active Duty

Source: U.S. Dept. of Defense
(as of mid-year)

Year	Officers	Enlisted	Total	Year	Officers	Enlisted	Total	Year	Officers	Enlisted	Total
1940	1,800	26,545	28,345	1993	18,878	161,205	180,083	2000	17,897	154,744	172,641
1945	37,067	437,613	474,680	1994	18,430	159,949	178,379	2005	19,118	159,113	178,231
1950	7,254	67,025	74,279	1995	18,017	153,929	171,946	2006	19,218	159,705	178,923
1960	16,203	154,418	170,621	1996	18,146	154,141	172,287	2007	19,456	162,085	181,541
1970	24,941	234,796	259,737	1997	18,089	154,240	172,329	2008	20,137	172,903	193,040
1980	18,198	170,271	188,469	1998	17,984	154,648	172,632	2009	21,031	183,243	204,274
1990	19,958	176,694	196,652	1999	17,892	155,250	173,142	2010	21,680	179,446	201,126

U.S. Coast Guard Personnel on Active Duty

Source: U.S. Dept. of Defense
(as of mid-year)

Year	Total	Officers	Cadets	Enlisted	Year	Total	Officers	Cadets	Enlisted
1970	37,689	5,512	653	31,524	2005	40,814	7,908	1,006	31,900
1980	39,381	6,463	877	32,041	2006	40,639	8,032	1,004	32,001
1985	38,595	6,775	733	31,087	2007	41,265	8,231	720	32,314
1990	37,308	6,475	820	29,860	2008	42,424	8,282	1,005	33,137
1995	36,731	7,489	841	28,401	2009	43,514	8,497	993	34,024
2000	35,712	7,154	863	27,695	2010	43,135	8,678	744	33,713

Women in the U.S. Armed Forces

Source: U.S. Dept. of Defense; U.S. Census Bureau; Women In Military Service For America Memorial Foundation

Women in the Army, Navy, Air Force, Marines, and Coast Guard are fully integrated with male personnel. All enlisted jobs were open to women when the draft ended June 30, 1973. Admission to service academies began in 1976. Under rules instituted in 1993, women were allowed to fly combat aircraft and serve aboard warships. By the mid-1990s, 80% of all jobs and more than 90% of all career fields had been opened to women. The first woman achieved the rank of four-star general in 2009. In Apr. 2010, the Navy announced that women would be placed on submarine crews by Jan. 2012. Women remained restricted from service in ground combat units.

(women on active duty as of Sept. 30 in year shown.)

Women Active Duty Troops, 2009

Service	% women
Army	13.5
Navy	15.5
Marines	6.4
Air Force	19.5
Coast Guard	12.5

Women on Active Duty, All Services, 1973-2009

Year	% women	Year	% women
1973	2.5	1997	13.6
1975	4.6	2000	14.4
1981	8.9	2005	14.6
1987	10.2	2009	14.3
1993	11.6		

African American Service in U.S. Wars

Source: U.S. Dept. of Defense; U.S. Census Bureau

American Revolution. About 5,000 served in the Continental Army, mostly in integrated units, some in all-black combat units.
Civil War. Some 180,000 served in 163 units of the Union Army's U.S. Colored Troops, 200,000 worked in service units—10% of the Union Army in all; about 37,000 died, 31,000 wounded.
World War I. 350,000-400,000 served in the armed forces, 100,000 in France. Some 40,000 fought.
World War II. Some 1 mil served in the armed forces—8% of all troops—mostly in Army service units; all-black fighter and bomber AAF units and infantry divisions gave distinguished service.
Korean War. More than 600,000 served in the military; 3,075 lost their lives in combat. By 1954, armed forces were completely desegregated.
Vietnam War. 274,937 served in the armed forces (1965-74)—9.8% of all troops; 7,243 were killed in combat.
Persian Gulf War. About 104,000 served in the Kuwaiti theater—20% of all U.S. troops. 66 died in combat.
Operation Enduring Freedom. 90 military deaths and 417 wounded in Afghanistan and other locations (as of July 31, 2010).
Iraq War. 428 military deaths and 2,681 wounded (as of July 31, 2010).

Monthly Military Pay Scale[1]

Source: U.S. Dept. of Defense

(effective Jan. 1, 2010; salaries rounded to nearest dollar.)

	Cumulative Years of Service														
	<2	2	3	4	6	8	10	12	14	16	18	20	22	24	26
Commissioned officers															
O-10[2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15,188	15,262	15,580	16,133
O-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13,284	13,475	13,751	14,234
O-8	9,399	9,707	9,911	9,968	10,223	10,649	10,748	11,153	11,269	11,617	12,121	12,586	12,897	12,897	12,897
O-7	7,810	8,173	8,341	8,474	8,716	8,954	9,230	9,506	9,782	10,649	11,381	11,381	11,381	11,381	11,439
O-6	5,789	6,359	6,777	6,777	6,803	7,094	7,133	7,133	7,538	8,255	8,675	9,096	9,335	9,577	10,047
O-5	4,826	5,436	5,813	5,883	6,118	6,259	6,568	6,794	7,087	7,535	7,748	7,959	8,198	8,198	8,198
O-4	4,164	4,820	5,141	5,213	5,512	5,832	6,230	6,541	6,757	6,880	6,952	6,952	6,952	6,952	6,952
O-3	3,661	4,150	4,479	4,883	5,117	5,374	5,540	5,813	5,956	5,956	5,956	5,956	5,956	5,956	5,956
O-2	3,163	3,602	4,149	4,289	4,377	4,377	4,377	4,377	4,377	4,377	4,377	4,377	4,377	4,377	4,377
O-1	2,746	2,858	3,454	3,454	3,454	3,454	3,454	3,454	3,454	3,454	3,454	3,454	3,454	3,454	3,454
Commissioned officers with over 4 years' active duty service as enlisted member or warrant officer															
O-3[3]	NA	NA	NA	4,883	5,117	5,374	5,540	5,813	6,044	6,176	6,356	6,356	6,356	6,356	6,356
O-2[3]	NA	NA	NA	4,289	4,377	4,517	4,752	4,934	5,069	5,069	5,069	5,069	5,069	5,069	5,069
O-1[3]	NA	NA	NA	3,454	3,689	3,825	3,965	4,102	4,289	4,289	4,289	4,289	4,289	4,289	4,289
Warrant officers															
W-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6,727	7,068	7,322	7,604
W-4	3,783	4,070	4,187	4,301	4,499	4,695	4,893	5,192	5,453	5,702	5,906	6,104	6,396	6,635	6,909
W-3	3,455	3,599	3,746	3,795	3,950	4,254	4,571	4,720	4,893	5,071	5,390	5,607	5,736	5,873	6,060
W-2	3,057	3,346	3,435	3,497	3,695	4,003	4,155	4,306	4,490	4,633	4,763	4,919	5,021	5,103	5,103
W-1	2,684	2,972	3,050	3,214	3,408	3,694	3,828	4,014	4,198	4,342	4,475	4,637	4,637	4,637	4,637
Enlisted members															
E-9[4]	NA	NA	NA	NA	NA	NA	4,571	4,674	4,805	4,958	5,113	5,362	5,571	5,792	6,130
E-8	NA	NA	NA	NA	NA	3,742	3,907	4,010	4,133	4,265	4,505	4,627	4,834	4,949	5,231
E-7	2,601	2,839	2,948	3,092	3,204	3,397	3,506	3,699	3,860	3,969	4,086	4,131	4,283	4,364	4,675
E-6	2,250	2,475	2,585	2,691	2,801	3,051	3,148	3,336	3,394	3,436	3,485	3,485	3,485	3,485	3,485
E-5	2,061	2,199	2,306	2,414	2,584	2,762	2,907	2,925	2,925	2,925	2,925	2,925	2,925	2,925	2,925
E-4	1,890	1,986	2,094	2,200	2,294	2,294	2,294	2,294	2,294	2,294	2,294	2,294	2,294	2,294	2,294
E-3	1,706	1,813	1,923	1,923	1,923	1,923	1,923	1,923	1,923	1,923	1,923	1,923	1,923	1,923	1,923
E-2	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622	1,622
E-1[5]	1,447	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA = Not applicable. **Notes:** In 2007, the military pay scale was expanded to 40 years. **Over 30 years—**O-10: 16,939; O-9: 14,946; O-8: 13,219; O-7: 11,668; O-6: 10,248; W-5: 7,984; W-4: 7,047; E-9: 6,436; E-8: 5,336. **Over 34 years—**O-10: 17,786; O-9: 15,693; O-8: 13,550; W-5: 8,383; E-9: 6,758. **Over 38 years—**O-10: 18,675; O-9: 16,478; W-5: 8,803; E-9: 7,097. (1) Basic pay for an O-7 to O-10 is limited by Level II of the Executive Schedule which is $14,975.10. Basic pay for O-6 and below is limited by Level V of the Executive Schedule which is $12,141.60. (2) While serving as Chairman, Joint Chief of Staff/Vice Chairman, Joint Chief of Staff, Chief of Navy Operations, Commandant of the Marine Corps, Army/Air Force Chief of Staff, Commander of a unified or specified combatant command, basic pay is $19,983.60. *(See note 1 above)*. (3) Applicable to O-1 to O-3 with at least 4 years and 1 day of active duty or more than 1460 points as a warrant and/or enlisted member. See Department of Defense Financial Management Regulations for more detailed explanation on who is eligible for this special basic pay rate. (4) For the Master Chief Petty Officer of the Navy, Chief Master Sergeant of the AF, Sergeant Major of the Army or Marine Corps or Senior Enlisted Advisor of the JCS, basic pay is $7,386.30. Combat Zone Tax Exclusion for O-1 and above is based on this basic pay rate plus Hostile Fire Pay/Imminent Danger Pay which is $225.00. (5) Applicable to E-1 with 4 months or more of active duty. Basic pay for an E-1 with less than 4 months of active duty is $1,338.60.

Outlays for Individual Payments to Veterans, 1940-2011

Source: White House Office of Management and Budget

(in millions of dollars)

Year	Total	Compensation	Pensions	Hospital, medical	Education	Insurance & burial	Year	Total	Compensation	Pensions	Hospital, medical	Education	Insurance & burial
1940 . . .	$578	$244	$185	$69	—	$80	2003 . . .	$55,792	$24,696	$3,229	$24,487	$2,049	$1,331
1950 . . .	8,827	1,533	476	764	$2,739	3,315	2004 . . .	55,021	26,297	3,334	21,590	2,408	1,392
1960 . . .	5,355	2,049	1,263	931	392	720	2005 . . .	62,206	30,877	3,663	23,073	3,224	1,369
1970 . . .	8,808	2,980	2,255	1,723	1,002	848	2006 . . .	63,658	30,991	3,547	24,445	3,325	1,350
1980 . . .	20,927	7,446	3,585	6,290	2,418	1,188	2007 . . .	69,740	31,055	3,376	30,537	3,427	1,345
1990 . . .	28,545	10,735	3,594	12,021	795	1,400	2008 . . .	76,113	36,256	3,790	31,096	3,607	1,364
1995 . . .	36,822	14,842	3,024	16,196	1,386	1,374	2009* . .	85,501	40,399	4,161	35,264	4,308	1,369
2000 . . .	46,086	20,775	2,969	19,343	1,636	1,363	2010* . .	111,217	57,233	4,369	38,536	9,651	1,428
2001 . . .	45,435	18,579	2,760	20,966	1,783	1,347	2011* . .	110,527	51,997	4,974	41,195	10,992	1,369
2002 . . .	$50,969	$22,418	$3,166	$22,384	$1,681	$1,320							

*Estimate. **Note:** Compensation is service-connected; pension is not.

U.S. Veteran Population, 2010

Source: U.S. Dept. of Veterans Affairs

(population projection, in thousands, as of Sept. 30, 2010)

TOTAL VETERANS IN CIVILIAN LIFE[1]	**22,658.1**
Total wartime veterans[2]	**16,854.4**
Total Gulf War[3]	5,725.5
Gulf War with no prior wartime service	5,373.1
Gulf War with service in Vietnam era	347.0
Gulf War, with service in Vietnam and Korea	4.8
Gulf War with service in Vietnam, Korea, and WWII	0.6
Total Vietnam era[3]	7,526.2
Vietnam era with no prior wartime service	6,924.8
Vietnam era with service in Korean conflict	181.9
Vietnam era with service in Korea and WWII	67.1
Total Korean conflict[3]	2,448.5
Korean conflict with no prior wartime service	2,041.6
Korean conflict with service in WWII	152.4
Total World War II[3]	1,981.2
WWII only	1,761.1
Total peacetime veterans[4]	**5,803.7**
Post Gulf War	11.4
Service between Vietnam era and Gulf War only	3,411.3
Service between Korean conflict and Vietnam era only	2,265.6
Pre-Korean conflict without service in WWII	115.4

Note: Figures are for U.S. veterans worldwide. (1) Includes those who served on active duty in Army, Navy, Air Force, Marines, Coast Guard, uniformed Public Health Service and NOAA, and reservists called to federal active duty. Excludes those dishonorably discharged, those whose only active duty was training, and those currently on active duty. (2) Veterans serving in more than one period are counted only once in total. (3) Total includes veterans who also served in previous periods. (4) Veterans with both wartime and peacetime service are counted only as "wartime veterans."

Nations with Largest Armed Forces, by Active-Duty Troop Strength

Source: *The Military Balance 2010*, International Institute for Strategic Studies, published by Routledge Journals, Taylor & Francis, UK
(As of Nov. 2009, except defense expenditure, which is for 2008.)

	Troop strength				Navy		Combat aircraft	
	Active troops (thousands)	Reserve troops (thousands)	Defense expend. ($ bil)	Tanks (MBT) (army only)	Cruisers/ frigates/ destroyers	Sub-marines	FGA (air force only)	Fighters (air force only)
China	2,285	510	60,187	6,550+	52F/28D	65	283	1,100+
United States	1,580	865	696,268	5,850	22C/21F/56D*	71	2,650 tactical	
India	1,325	1,155	31,540	4,047+	12F/8D*	16	536	96
North Korea	1,106	4,700	—	3,500+	3F	63	152	388
Russia	1,027	20,000	40,484	23,000	5C/14F/14D*	66	807	725
South Korea	687	4,500	24,182	2,750	9F/10F	13	467 FGA/FTR	
Pakistan	617	0	4,422	2,461+	7F	8	104	233
Iraq	578	0	—	149+	0	0	0	0
Iran	523	350	9,595	1,613+	4F	10+	168+	133
Turkey	511	379	13,531	4,503	23F	14	339	87
Egypt	469	479	4,562	3,723	10F	4	238	165
Vietnam	455	5,000	2,907	1,315	5F	2	64	140
Myanmar	406	0	—	150	0	0	22	58
France	353	70	67,185	637	20F/11D*	9	88	74
Brazil	328	1,340	26,254	219+	10F*	5	229	67
Syria	325	314	1,941	4,950	2F	0	289	150+
Thailand	306	200	4,294	333	10F*	0	87 FGA/FTR	
Indonesia	302	400	5,108	0	7F	2	49	25
Italy	293	42	30,934	320	12F/4D*	6	138	52
Taiwan	290	1,657	10,495	926+	22F/4D	4	150	291
Colombia	285	62	9,546	0	0	4	31	0
Mexico	268	40	4,346	0	6F	0	0	10
Germany	251	162	46,943	1,385	15F	12	156	114
Saudi Arabia	234	0	38,223	910	7F	0	159	121
Japan	230	42	46,044	880	8F/44D	16	0	250
Eritrea	202	120	—	270	0	0	0	23
Morocco	196	150	2,977	580	3F	0	0	66
Israel	177	565	14,772	3,501	0	3	267	168
United Kingdom	175	199	60,794	386	17F/6D*	12	168	40
Greece	157	238	10,141	1,688	14F	8	198	25

— = Not available. MBT = Main battle tank. FGA = Fighter, ground attack. FTR = Fighter. *Denotes navies with aircraft carriers, as follows: United States 11, United Kingdom 2, France 2, Italy 2, India 1, Russia 1, Brazil 1, Thailand 1.

Budget for Global War on Terror Operations, 2001-10

Source: Congressional Research Service
(in billions of dollars)

	2001/02[1]	2003	2004	2005	2006	2007	2008	2009	2010	Total
Total: All missions	**$33.8**	**$81.2**	**$94.1**	**$107.6**	**$121.4**	**$170.9**	**$185.7**	**$155.1**	**$135.6**	**$1,085.5**
Dept. of Defense	33.0	77.4	72.4	102.6	116.8	164.9	179.2	148.3	128.8	1,023.5
Foreign aid and diplomacy[2]	0.8	3.7	21.7	4.8	4.3	5.0	5.4	5.3	4.8	55.9
Veterans Affairs medical	0.0	0.0	0.0	0.2	0.4	1.0	1.0	1.5	2.0	6.1
Op. Iraqi Freedom[3]	**0.0**	**53.0**	**75.9**	**85.5**	**101.6**	**131.2**	**142.1**	**95.5**	**62.8**	**747.6**
Dept. of Defense	0.0	50.0	56.4	83.4	98.1	127.2	138.5	92.0	59.6	705.2
Foreign aid and diplomacy[2]	0.0	3.0	19.5	2.0	3.2	3.2	2.7	2.2	1.6	37.4
Veterans Affairs medical	0.0	0.0	0.0	0.2	0.4	0.9	0.9	1.2	1.5	5.1
Op. Enduring Freedom[4]	**20.8**	**14.7**	**14.5**	**20.0**	**19.0**	**39.2**	**43.5**	**59.5**	**72.7**	**303.8**
Dept. of Defense	20.0	14.0	12.4	17.2	17.9	37.2	40.6	56.1	69.1	284.3
Foreign aid and diplomacy[2]	0.8	0.7	2.2	2.8	1.1	1.9	2.7	3.1	3.2	18.5
Veterans Affairs medical	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.5	1.0
Op. Noble Eagle[5]	**13.0**	**8.0**	**3.7**	**2.1**	**0.8**	**0.5**	**0.1**	**0.1**	**0.1**	**28.5**
Dept. of Defense unallocated	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5

(1) FY01 and FY02 funds combined because most were obligated in FY02 after the 9/11 attacks at the end of FY01. (2) Foreign aid and diplomacy figures include monies for reconstruction, development and humanitarian aid, embassy operations, counternarcotics, initial training of the Afghan and Iraqi army, foreign military sales credits, and Economic Support Funds. (3) Began in the fall of 2002 with the buildup of troops for the Mar. 2003 invasion of Iraq and continues with counterinsurgency and stability operations. (4) Covering Afghanistan and other ongoing Global War on Terror (GWOT) operations, ranging from the Philippines to Djibouti, that began immediately after the 9/11 attacks. (5) Dept. of Defense funds that rebuilt the Pentagon, provide higher security at U.S. military bases, and other homeland security, including combat air patrol.

Leading Purchasers of U.S. Defense Articles and Services

Source: Congressional Research Service
(in current U.S. dollars)

Worldwide Deliveries[1]							
2001-04				2005-08			
1. Egypt	$5.2 billion	6. Japan	$2.1 billion	1. Saudi Arabia	$11.2 billion	6. Iraq	$3.5 billion
2. Saudi Arabia	4.1 billion	7. U.K.	1.9 billion	2. U.A.E.	10.0 billion	7. South Korea	3.1 billion
3. Poland	4.0 billion	8. Kuwait	1.7 billion	3. Australia	6.4 billion	8. Japan	3.0 billion
4. Israel	3.2 billion	9. Greece	1.4 billion	4. Egypt	5.2 billion	9. Israel	2.7 billion
5. South Korea	2.9 billion	10. Italy	1.2 billion	5. Pakistan	4.5 billion	10. Morocco	2.5 billion

(1) Total dollar value of all U.S. defense articles and services actually delivered to top 10 purchasers worldwide. Figures include government-to-government sales through the Foreign Military Sales (FMS) system (which accounts for the overwhelming majority of U.S. conventional arms deliveries) concluded in calendar years listed, as well as commercially licensed exports concluded in pertinent fiscal years.

U.S. Foreign Military Financing Worldwide, Select Countries

Source: Defense Security Cooperation Agency, U.S. Dept. of Defense
(in thousands of U.S. dollars)

	2008	2002-07
Africa	**$6,757**	**$140,275**
Djibouti	1,983	33,606
Near East & S. Asia	**4,298,120**	**26,385,995**
Afghanistan	—	1,051,877
Bahrain	3,968	192,620
Egypt	1,289,470	7,760,480
Israel	2,380,560	14,073,046
Jordan	298,380	1,628,937
Lebanon	6,943	34,463
Morocco	3,625	58,143
Oman	4,712	178,044
Pakistan	297,570	1,266,060
Tunisia	8,345	46,332
Yemen	3,952	65,370
E. Asia & Pacific	**43,495**	**256,861**
Philippines	27,757	213,220
Europe	**$93,429**	**$1,224,822**
Bosnia and Herzegovina	3,292	48,990
Bulgaria	6,584	62,419
Czech Republic	2,845	56,923
Georgia	9,000	107,884
Poland	26,980	207,548
Romania	11,097	83,549
Turkey	6,817	163,160
Ukraine	6,036	37,866
Americas	**64,143**	**487,750**
Colombia	52,570	389,350
El Salvador	5,631	27,593
World total	**4,505,945**	**28,495,703**

Note: Grants extended to foreign governments in a fiscal year to pay for military equipment and services. May be from DOD or, for specific countries, negotiated directly with U.S. commercial suppliers with DOD approval.

Defense Contracts, 2010

Source: U.S. Dept. of Defense
(in millions of U.S. dollars)

Listed are the 50 companies or organizations receiving the largest dollar volume of prime contract awards from the U.S. Dept. of Defense during fiscal year 2010.

Rank	Contractor Name	Contracts awarded[1]	% of total
1.	Lockheed Martin Corp.	$17,226.0	8.0%
2.	The Boeing Co.	11,009.3	5.1
3.	General Dynamics Corp.	9,999.8	4.6
4.	Northrop Grumman Corp.	9,844.5	4.6
5.	Raytheon Co.	8,910.4	4.1
6.	Oshkosh Corp.	4,546.7	2.1
7.	United Technologies Corp.	4,208.3	1.9
8.	L-3 Communications Holdings, Inc.	3,982.5	1.8
9.	BAE Systems PLC	3,382.9	1.6
10.	Humana Inc.	2,790.6	1.3
11.	KBR, Inc.	2,679.9	1.2
12.	SAIC, Inc.	2,583.8	1.2
13.	Health Net, Inc.	2,437.6	1.1
14.	Bell Boeing Joint Project Office	2,344.1	1.1
15.	TriWest Healthcare Alliance Corp.	2,305.7	1.1
16.	Bechtel Group, Inc.	1,923.1	0.9
17.	Abu Dhabi National Oil Co. for Distribution	1,895.2	0.9
18.	Computer Sciences Corp.	1,871.3	0.9
19.	General Electric Co.	1,858.6	0.9
20.	Dyncorp International Inc.	1,631.9	0.8
21.	Navistar International Corp.	1,501.5	0.7
22.	Harris Corp.	1,497.4	0.7
23.	ITT Corp.	1,486.8	0.7
24.	Government of Canada	1,454.0	0.7
25.	URS Corp.	1,428.5	0.7
26.	Evergreen International Airlines	1,362.4	0.6
27.	Supreme Group Holding SARL	$1,337.8	0.6%
28.	Booz Allen Hamilton Inc.	1,293.5	0.6
29.	FedEx Corp.	1,183.6	0.5
30.	General Atomic Technologies Corp.	1,151.0	0.5
31.	CACI International Inc.	1,106.6	0.5
32.	Miscellaneous Foreign Contractors	1,103.2	0.5
33.	Textron Inc.	1,053.3	0.5
34.	BP PLC	936.5	0.4
35.	The Public Warehousing Co. (K.S.C.)	895.3	0.4
36.	Finmeccanica Spa	841.4	0.4
37.	Fluor Corp.	839.8	0.4
38.	Northrop Grumman Corp.	820.9	0.4
39.	Rockwell Collins, Inc.	808.6	0.4
40.	AmerisourceBergen Corp.	788.9	0.4
41.	Alliant Techsystems Inc.	775.6	0.4
42.	Equilon Enterprises LLC	748.0	0.3
43.	Government of the United States	734.6	0.3
44.	The Mitre Corp.	726.1	0.3
45.	Jacobs Engineering Group Inc.	712.9	0.3
46.	The Aerospace Corp.	704.4	0.3
47.	Honeywell International Inc.	693.6	0.3
48.	McKesson Corp.	681.8	0.3
49.	Massachusetts Institute of Technology	645.8	0.3
50.	ManTech International Corp.	636.4	0.3
Other		88,779.7	
Total		**216,162.0**	

(1) Amounts include contracts awarded to subsidiaries of each company.

Arms Transfer Agreements with the World, by Supplier, 2002-09

Source: Congressional Research Service
(in millions of current U.S. dollars)

Supplier	2002	2003	2004	2005	2006	2007	2008	2009	2002-09
United States	$12,914	$14,447	$12,670	$12,773	$15,955	$24,387	$37,186	$22,610	$152,942
Russia	5,600	4,300	8,200	8,200	14,700	10,600	5,400	10,400	67,400
France	600	2,800	2,900	5,900	7,700	2,000	3,100	7,400	32,400
United Kingdom	800	3,000	4,200	2,900	4,200	9,800	200	1,500	26,600
China	400	600	1,000	2,900	1,500	2,400	2,100	1,700	12,600
Germany	1,100	700	4,000	2,000	1,600	1,900	3,100	3,700	18,100
Italy	400	600	400	1,500	1,200	1,300	3,700	2,700	11,800
All other European	4,500	2,200	5,400	7,600	5,900	5,300	4,100	4,500	39,500
All others	2,100	1,900	3,300	1,800	3,400	2,300	2,500	3,000	20,300
Total	**28,414**	**30,547**	**42,070**	**45,573**	**56,155**	**59,987**	**61,386**	**57,510**	**381,642**

Note: All data are for the calendar year given except for U.S. MAP (Military Assistance Program), IMET (International Military Education, and Training), and Excess Defense Article data, which are included for the particular fiscal year. All amounts given include the values of all categories of weapons, spare parts, construction, all associated services, military assistance, excess defense articles, and training programs. Statistics for foreign countries are based upon estimated selling prices. All foreign data are rounded to the nearest $100 million.

Personal Salutes and Honors

The U.S. **national salute**, 21 guns, is also the salute to a national flag. U.S. independence is commemorated by the salute to the Union—one gun for each state—fired at noon July 4, at all military posts provided with suitable artillery.

A 21-gun salute on arrival and departure, with 4 ruffles and flourishes, is rendered to the **president** of the United States, to a former president, and to a president-elect. The national anthem or "Hail to the Chief," as appropriate, is played for the president, and the national anthem for the others. A 21-gun salute on arrival and departure, with 4 ruffles and flourishes, also is rendered to the **sovereign or chief of state of a foreign country** or a member of a reigning royal family, and the national anthem of his or her country is played. The music is considered an inseparable part of the salute and immediately follows the ruffles and flourishes without pause. For the Honors March, generals receive the "General's March," admirals receive the "Flag Officer's March," and all others receive the 32-bar medley of "The Stars and Stripes Forever."

GRADE, TITLE, OR OFFICE	SALUTE (IN GUNS) Arriving	Leaving	Ruffles and flourishes	Music
Vice President of U.S.	19	—	4	Hail, Columbia
Speaker of the House	19	—	4	Honors March
U.S. or foreign ambassador in country to which accredited	19	—	4	Nat. anthem of official
Premier or prime minister	19	—	4	Nat. anthem of official
Secretary of Defense, Army, Navy, or Air Force	19	19	4	Honors March
Other cabinet members, Senate president pro tempore, governor, or chief justice of U.S.	19	—	4	Honors March
Chairman, Joint Chiefs of Staff	19	19	4	Honors March
Army chief of staff, chief of naval operations, Air Force chief of staff, Marine commandant	19	19	4	Honors March
General of the Army, general of the Air Force, fleet admiral	19	19	4	Honors March
Generals, admirals	17	17	4	Honors March
Assistant secretaries of Defense, Army, Navy, or Air Force	17	17	4	Honors March
Chair of a committee of Congress	17	—	4	Honors March

OTHER SALUTES (on arrival only, with Honors March) include 17 guns, with 3 ruffles and flourishes, for U.S. ambassadors returning to the U.S. on official business; 15 guns, with 3 ruffles and flourishes, for U.S. envoys or ministers, foreign envoys or ministers accredited to the U.S., and lieutenant generals or vice admirals; 13 guns, with 2 ruffles and flourishes, for a major general or rear admiral (upper half) and for U.S. ministers resident and ministers resident accredited to the U.S.; 11 guns, with 1 ruffle and flourish, for a brigadier general or rear admiral (lower half) and for U.S. chargés d'affaires and like officials accredited to the U.S.; 11 guns, no ruffles and flourishes, for consuls general accredited to the U.S.

U.S. Military Awards

The Medal of Honor

Source: Congressional Medal of Honor Society; Army, U.S. Dept. of Defense

The Medal of Honor is the highest military award for bravery that can be given to any individual in the United States. The first Army Medals were awarded on Mar. 25, 1863; the first Navy Medals went to sailors and Marines on Apr. 3, 1863.

On Dec. 21, 1861, Pres. Abraham Lincoln signed a bill to create the Navy Medal of Honor. Lincoln, on July 14, 1862, approved a resolution providing for the presentation of Medals of Honor to enlisted men of the Army and Voluntary Forces, making it a law. The law was amended on Mar. 3, 1863, to extend its provisions to include officers as well as enlisted men.

The Medal of Honor is awarded in the name of Congress to a person who, while a member of the armed forces, distinguishes himself or herself conspicuously by gallantry and intrepidity at the risk of life above and beyond the call of duty while engaged in an action against any enemy of the United States; while engaged in military operations involving conflict with an opposing foreign force; or while serving with friendly foreign forces engaged in an armed conflict against an opposing armed force in which the United States is not a belligerent party.

The deed performed must have been one of personal bravery or self-sacrifice so conspicuous as to clearly distinguish the individual above his or her comrades and must have involved risk of life. Incontestable proof of the performance of service is required, and each recommendation for award of this decoration is considered on the standard of extraordinary merit.

Prior to World War I, the 2,625 Army Medal of Honor awards up to that time were reviewed to determine which past awards met new stringent criteria. The Army removed 911 names from the list, most of them former members of a volunteer infantry group during the Civil War who had been induced to extend their enlistments when they were promised the medal. However, in 1977 a medal was restored to Dr. Mary Walker, and in 1989 medals were restored to Buffalo Bill Cody and 7 other Indian scouts.

Medals of Honor were awarded posthumously for actions during the Battle of Mogadishu (Somalia), Oct. 3, 1993, to Army Master Sgt. Gary I. Gordon and to Sgt. First Class Randall D. Shughart. Both received the medal for voluntarily guarding a helicopter crash site and its downed crew while under heavy enemy fire until relief could arrive.

Seven African American soldiers were awarded Medals of Honor for service in World War II (6 of them posthumously) in Jan. 1997. Previously, no black soldier had received the medal for World War II service; an Army inquiry begun in 1993 concluded that the prevailing political climate and Army practices of the time had prevented proper recognition of heroism on the part of black soldiers in that war. In June 2002, 22 Asian Americans received the award for World War II service.

As of Oct. 1, 2009, four Medals of Honor had been awarded for actions in Operation Iraqi Freedom. On Apr. 4, 2003, Army Sgt. First Class Paul R. Smith was mortally wounded while holding an exposed position, near Baghdad International Airport, against enemy attack. On Apr. 14, 2004, Marine Cpl. Jason L. Dunham was mortally wounded at Karbala when he covered a live grenade with his helmet and body to protect his fellow Marines. On Sept. 29, 2006, Navy Petty Officer Second Class (SEAL) Michael A. Monsoor was mortally wounded at Ar Ramadi when he threw himself onto a grenade, saving the lives of two teammates. The most recent recipient was Army Private First Class Ross A. McGinnis, whose posthumous award was presented June 5, 2008. While manning a machine gun in northern Baghdad on Dec. 4, 2006, an insurgent threw a grenade into his vehicle. He covered the grenade with his body and was mortally wounded while saving his four crew members from serious injury.

Two Medals of Honor had been awarded for actions in Afghanistan. On June 28, 2005, Navy Lt. Michael P. Murphy's SEAL team came under attack by Taliban fighters. Heavily outnumbered and with all four team members wounded, Lt. Murphy left cover to radio for help and was shot in the back. One of his men survived the attack. On June 21, 2006, Army Sgt. First Class Jared C. Monti and his patrol were ambushed. Monti repeatedly tried to rescue a wounded soldier despite overwhelming gunfire and his men being outnumbered by more than 3 to 1. Monti was killed by a grenade on his third attempt. His heroism inspired his comrades to fend off the enemy.

Other Selected Awards

Source: U.S. Army Institute of Heraldry; Navy Department Awards Web Service; Air Force Personnel Center

Distinguished Service Cross

Established in Congress July 9, 1918, on recommendation of Gen. John J. "Black Jack" Pershing, and awarded for extraordinary heroism not justifying the award of a Medal of Honor. The act or acts of heroism must have been so notable and have involved risk of life so extraordinary as to set the individual apart from his or her comrades.

Silver Star

An earlier version of this award, the Citation Star, was established by Congress on July 19, 1918, and retroactively awarded to soldiers for "gallantry in action," back to the Spanish-American War. The Silver Star medal replaced the Citation Star in 1932 and is awarded for gallantry in action which, while of a lesser degree than that required for award of the Distinguished Service Cross, must nevertheless have been performed with marked distinction.

Legion of Merit

Established by Congress on July 20, 1942, and awarded to individuals who have distinguished themselves by exceptionally meritorious conduct in the performance of outstanding services. There are different designs depending on the level of command of the award recipient.

Distinguished Flying Cross

Established by Congress July 2, 1926, and awarded for heroism or extraordinary achievement while participating in aerial flight. Awards are made only to recognize single acts of heroism or extraordinary achievement, not sustained operational activities against an armed enemy. Initial awards were given to persons who made record breaking long-distance and endurance flights or who set altitude records. The first DFC was awarded to Cpt. Charles A. Lindbergh on May 31, 1927, and DFCs were awarded retroactively to Orville and Wilbur Wright.

Soldier's Medal

Established by Congress July 2, 1926, to recognize acts of heroism not involving actual conflict with an enemy. The same degree of heroism is required as for the award of the Distinguished Flying Cross. The performance must have involved personal hazard or danger and the voluntary risk of life under conditions not involving conflict with an armed enemy. Awards are not made solely on the basis of having saved a life.

Bronze Star

Established by Executive Order Feb. 4, 1944, largely to raise the morale of ground troops in WWII, on the recommendation of Gen. George C. Marshall. It is awarded to any person who, while serving in any capacity in or with the U.S. military, distinguishes himself or herself by heroic or meritorious achievement or service, not involving participation in aerial flight.

Purple Heart

The original Purple Heart, designated as the Badge of Military Merit, was established by Gen. George Washington on Aug. 7, 1782. Following the American Revolution, the badge fell into disuse until 1932, the 200th anniversary of Washington's birth. During WWII, the Order of the Purple Heart was awarded for both wounds received in action and for meritorious service; following the introduction of the Legion of Merit, it was awarded only for combat wounds. Today, the Purple Heart is awarded to any member of an armed force who, while serving with the U.S. Armed Services, has been wounded or killed, or who has died or may hereafter die after being wounded in action against an enemy of the U.S. or in an armed conflict in which the U.S. or friendly foreign forces are engaged; as the result of an act of any hostile foreign force; as a result of an international terrorist attack against the U.S. or a friendly foreign nation; as a result of military operations outside the U.S. as part of a peacekeeping force. Wounds must be inflicted by weapon fire while directly engaged in armed conflict, regardless of the fire causing the wound; or while held as a prisoner of war or while being taken captive.

Air Medal

Authorized by Pres. Roosevelt on May 11, 1942, and awarded for heroism or meritorious achievement while participating in aerial flight. Awards may be made to recognize single acts of merit or heroism, or for meritorious service. Awards are not made to individuals who use air transportation solely for the purpose of moving from point to point in a combat zone.

Army Commendation

Established Dec. 18, 1945, and awarded for heroism, meritorious achievement, or meritorious service. It may also be awarded to a member of the Armed Forces of a friendly foreign nation who distinguishes him or herself by an act of heroism, extraordinary achievement, or meritorious service which has been of mutual benefit to a friendly nation and the United States.

U.S. Military Awards in Selected Wars and Conflicts

Source: U.S. Army Human Resources Command, U.S. Dept. of Defense

Award	Civil War	WWI	WWII	Korea	Vietnam	Gulf War	OEF[1]	OIF[2]
Medal of Honor	1,522	124	464	133	246	0	2	4
Distinguished Service Cross	NA	6,430	4,434	724	848	0	5	15
Silver Star	NA	(3)	73,654	10,061	21,634	75	194	407
Legion of Merit	NA	NA	20,273	(3)	10,356	158	28	122
Distinguished Flying Cross	NA	NA	126,318	(3)	21,697	108	102	116
Soldier's Medal	NA	NA	12,485	581	5,402	43	28	111
Bronze Star (total)[4]	NA	NA	395,380	30,359	719,968	27,967	28,185	99,876
Purple Heart	NA	NA	(3)	(3)	220,516	504	3,666	21,257
Air Medal (total)[4]	NA	NA	1,166,471	0	1,039,124	6,399	8,126	18,761
Army Commendation (total)[4]	NA	NA	0	0	837,037	81,979	54,049	348,636

NA = Not available/not applicable. (1) Operation Enduring Freedom (primarily Afghanistan). (2) Operation Iraqi Freedom. (3) Numbers for the individual decorations shown on these charts represent only those awards that were properly processed and reported to Headquarters, Dept. of the Army. The actual number of individual decorations awarded under combat conditions, when award approval authority is delegated to field commanders, cannot be stated with absolute certainty. These charts reflect the current statistics recorded by the Military Awards Branch, as of June 30, 2010. (4) Includes awards for valor/heroism and for meritorious service or achievement.

The Federal Service Academies

U.S. Military Academy, West Point, NY. Founded 1802. Awards BS degree and Army commission for a 5-year service obligation. For admissions information, write USMA Admissions, Bldg. 606, USMA, West Point, NY 10996. www.usma.edu

U.S. Naval Academy, Annapolis, MD. Founded 1845. Awards BS degree and Navy or Marine Corps commission for a 5-year service obligation. For admissions information, write Candidate Guidance Office, United States Naval Academy, 117 Decatur Rd., Annapolis, MD 21402-5018. www.usna.edu

U.S. Air Force Academy, Colorado Springs, CO. Founded 1954. Awards BS degree and Air Force commission for a 6-year service obligation. For admissions information, write HQ USAFA/RRS, 2304 Cadet Dr., Ste. 200, USAF Academy, CO 80840-5025. www.usafa.edu

U.S. Coast Guard Academy, New London, CT. Founded 1876. Awards BS degree and Coast Guard commission for a 5-year service obligation. For admissions information, write Director of Admissions, U.S. Coast Guard Academy, 31 Mohegan Ave., New London, CT 06320-8103. www.cga.edu

U.S. Merchant Marine Academy, Kings Point, NY. Founded 1943. Awards BS degree, a license as a deck, engineer, or dual officer, and a U.S. Naval Reserve commission. Service obligations vary according to options taken by the graduate. For admissions information, write Admissions Office, U.S. Merchant Marine Academy, 300 Steamboat Rd., Kings Point, NY 11024-1699. www.usmma.edu

Casualties in Principal Wars of the U.S.

Source: U.S. Dept. of Defense, U.S. Coast Guard

Data prior to World War I are based on incomplete records in many cases. Casualty data are confined to dead and wounded personnel and, therefore, exclude personnel captured or missing in action who were subsequently returned to military control. Dash (—) indicates information is not available. off. = officers.

	Branch of service	Number serving	CASUALTIES Battle deaths	Other deaths	Wounds not mortal[7]	Total[13]
Revolutionary War	**Total**	—	**4,435**	**—**	**6,188**	**10,623**
1775-83	Army	184,000	4,044	—	6,004	10,048
	Navy	to	342	—	114	456
	Marines	250,000[11]	49	—	70	119
War of 1812	**Total**	**286,730[8]**	**2,260**	**—**	**4,505**	**6,765**
1812-15	Army	—	1,950	—	4,000	5,950
	Navy	—	265	—	439	704
	Marines	—	45	—	66	111
Mexican War	**Total**	**78,718[8]**	**1,733**	**11,550**	**4,152**	**17,435**
1846-48	Army	—	1,721	11,550	4,102	17,373
	Navy	—	1	—	3	4
	Marines	—	11	—	47	58
	Coast Guard[12]	71 off.	—	—	—	—
Civil War						
Union forces	**Total**	**2,213,363**	**140,414**	**224,097**	**281,881**	**646,392**
1861-65	Army	2,128,948[8]	138,154	221,374	280,040	639,568
	Navy	—	2,112	2,411	1,710	6,233
	Marines	(in Navy total)	148	312	131	591
	Coast Guard[12]	219 off.	1	—	—	1
Confederate forces	**Total**	**—**	**74,524**	**59,297**	**—**	**133,821**
(estimate)[1]	Army	600,000	—	—	—	—
	Navy	to	—	—	—	—
	Marines	1,500,000	—	—	—	—
Spanish-American War	**Total**	**306,760**	**385**	**2,061**	**1,662**	**4,108**
1898	Army[3]	280,564	369	2,061	1,594	4,024
	Navy	22,875	10	—	47	57
	Marines	3,321	6	—	21	27
	Coast Guard[12]	660	0	—	—	—
World War I	**Total**	**4,734,991**	**53,402**	**63,114**	**204,002**	**320,518**
Apr. 6, 1917-Nov. 11, 1918	Army[4]	4,057,101	50,510	55,868	193,663	300,041
	Navy	599,051	431	6,856	819	8,106
	Marines	78,839	2,461	390	9,520	12,371
	Coast Guard	8,835	111	81	—	192
World War II	**Total**	**16,112,566**	**291,557**	**113,842**	**670,846**	**1,076,245**
Dec. 7, 1941-Dec. 31, 1946[2]	Army[5]	11,260,000	234,874	83,400	565,861	884,135
	Navy[6]	4,183,466	36,950	25,664	37,778	100,392
	Marines	669,100	19,733	4,778	67,207	91,718
	Coast Guard	241,093	574	1,343	—	1,917
Korean War[9]	**Total**	**5,720,000**	**33,739**	**2,835**	**103,284**	**139,858**
June 25, 1950-July 27, 1953	Army	2,834,000	27,731	2,125	77,596	107,452
	Navy	1,177,000	503	154	1,576	2,233
	Marines	424,000	4,267	242	23,744	28,253
	Air Force	1,285,000	1,238	314	368	1,920
	Coast Guard	44,143	—	—	—	—
Vietnam War[10]	**Total**	**8,744,000**	**47,434**	**10,786**	**153,303**	**211,523**
Aug. 4, 1964-Jan. 27, 1973	Army	4,368,000	30,963	7,261	96,802	135,026
	Navy	1,842,000	1,631	935	4,178	6,744
	Marines	794,000	13,095	1,749	51,392	66,236
	Air Force	1,740,000	1,745	841	931	3,517
	Coast Guard	8,000	7	2	60	69
Persian Gulf War	**Total**	**2,225,000**	**148**	**235**	**467**	**850**
1991	Army	782,000	98	126	354	578
	Navy	669,000	6	50	12	68
	Marines	213,000	24	44	92	160
	Air Force	561,000	20	15	9	44
	Coast Guard	400	—	—	—	—
Iraq War[14]	**Total**	**269,363[15]**	**3,482**	**925**	**31,926**	**36,333**
Mar. 19, 2003-Aug. 21, 2010	Army	99,664[15]	2,537	694	22,214	25,445
	Navy	61,018[15]	65	38	637	740
	Marines	66,166[15]	851	171	8,627	9,649
	Air Force	42,515[15]	29	22	448	499
	Coast Guard	1,250[15]	1	—	—	1

Note: As of Oct. 12, 2010, there have been 1,008 battle deaths, 309 non-hostile deaths, and 8,706 wounded in Op. Enduring Freedom, mostly in Afghanistan and the Persian Gulf area. (1) From the final report of the Provost Marshal General, 1863-66. Authoritative statistics for the Confederate forces are not available. In addition, an estimated 26,000-31,000 Confederate personnel died in Union prisons. (2) Data are for Dec. 1, 1941, through Dec. 31, 1946, when hostilities were officially terminated by presidential proclamation; few battle deaths or wounds not mortal were incurred after Japanese acceptance of Allied peace terms on Aug. 14, 1945. Numbers serving Dec. 1, 1941-Aug. 31, 1945, were: Total—14,903,213; Army—10,420,000; Navy—3,883,520; Marine Corps—599,693. (3) Number serving covers the period Apr. 21-Aug. 13, 1898, while dead and wounded data are for the period May 1-Aug. 31, 1898. Active hostilities ceased on Aug. 13, 1898, but ratifications of the treaty of peace were not exchanged between the U.S. and Spain until Apr. 11, 1899. (4) Includes Army Air Forces battle deaths and wounds not mortal, as well as casualties suffered by American forces in northern Russia to Aug. 25, 1919, and in Siberia to Apr. 1, 1920. Other deaths covered the period Apr. 1, 1917-Dec. 31, 1918. (5) Includes Army Air Forces. (6) Battle deaths and wounds not mortal include casualties incurred in Oct. 1941 due to hostile action. (7) Marine Corps data for Iraq War, World War II, the Spanish-American War, and prior wars represent the number of individuals wounded, whereas all other data in this column represent the total number (incidence) of wounds. (8) As reported by Commissioner of Pensions in his Annual Report for Fiscal Year 1903. (9) As a result of an ongoing Dept. of Defense review of available Korean War casualty record information, updates to previously reported figures for battle deaths and other deaths are reflected in this table. (10) Number serving covers the period Aug. 5, 1964-Jan. 27, 1973 (date of cease-fire). Includes casualties incurred in Mayaguez incident. Wounds not mortal exclude 150,341 persons not requiring hospital care. (11) Estimated. (12) Actually the U.S. Revenue Cutter Services, predecessor to the U.S. Coast Guard. (13) Totals do not include categories for which no data are listed. (14) Military deaths during the invasion phase, which ended Apr. 30, 2003, totaled 115 combat-related and 23 other. (15) Number serving figures for the Iraq War are current as of Mar. 31, 2003, and do not include numbers of troops deployed since then.

U.S. Army, Navy, Air Force, Marine Corps, and Coast Guard Insignia

Source: Dept. of the Army, Dept. of the Navy, Dept. of the Air Force, U.S. Dept. of Defense, U.S. Coast Guard, U.S. Dept. of Homeland Security

Army

General of the Armies—Gen. John J. Pershing (1860-1948), the only person to have held this rank while living, was authorized to prescribe his own insignia but never wore in excess of four stars. The rank originally was established posthumously by Congress for George Washington in 1799, and he was promoted to the rank by joint resolution of Congress, approved by Pres. Gerald Ford, Oct. 19, 1976.

General of the Army—Five silver stars fastened together in a circle and the coat of arms of the United States in gold color metal with shield and crest enameled. Reserved for wartime use only.

Rank	Insignia
General of the Army*	Five silver stars
General	Four silver stars
Lieutenant General	Three silver stars
Major General	Two silver stars
Brigadier General	One silver star
Colonel	Silver eagle
Lieutenant Colonel	Silver oak leaf
Major	Gold oak leaf
Captain	Two silver bars
First Lieutenant	One silver bar
Second Lieutenant	One gold bar

Warrant Officers

Grade Five—Silver bar with enamel black line.
Grade Four—Silver bar with 4 enamel black squares.
Grade Three—Silver bar with 3 enamel black squares.
Grade Two—Silver bar with 2 enamel black squares.
Grade One—Silver bar with 1 enamel black square.

Noncommissioned Officers

Sergeant Major of the Army (E-9)—Three chevrons above 3 arcs, with a U.S. Coat of Arms centered on the chevrons, flanked by 2 stars—one star on each side of the eagle. Also wears distinctive red and white shield collar insignia.

Command Sergeant Major (E-9)—Three chevrons above 3 arcs with a 5-pointed star with a wreath around the star between the chevrons and arcs.

Sergeant Major (E-9)—Three chevrons above 3 arcs with a 5-pointed star between the chevrons and arcs.

First Sergeant (E-8)—Three chevrons above 3 arcs with a lozenge between the chevrons and arcs.

Master Sergeant (E-8)—Three chevrons above 3 arcs.

Sergeant First Class (E-7)—Three chevrons above 2 arcs.

Staff Sergeant (E-6)—Three chevrons above 1 arc.

Sergeant (E-5)—Three chevrons.

Corporal (E-4)—Two chevrons.

Specialists

Specialist (E-4)—Eagle device only.

Other Enlisted

Private First Class (E-3)—One chevron above 1 arc.

Private (E-2)—One chevron.

Private (E-1)—None.*

*Rank reserved for wartime use only.

Air Force

Insignia for Air Force officers are identical to those of the Army. Insignia for enlisted personnel are worn on both sleeves and consist of a star and an appropriate number of rockers. Chevrons appear above 5 rockers for the top 3 noncommissioned officer ranks, as follows (in ascending order): Master Sergeant, 1 chevron; Senior Master Sergeant, 2 chevrons; and Chief Master Sergeant, 3 chevrons. The insignia of the Chief Master Sergeant of the Air Force has 3 chevrons and a wreath around the star design. General of the Air Force is reserved for wartime use only.

Navy

The following stripes are worn on the lower sleeves of the Service Dress Blue uniform. They are of gold embroidery.

Rank	Insignia
Fleet Admiral*	1 two inch with 4 one-half inch
Admiral	1 two inch with 3 one-half inch
Vice Admiral	1 two inch with 2 one-half inch
Rear Admiral (upper half)	1 two inch with 1 one-half inch
Rear Admiral (lower half)	1 two inch
Captain	4 one-half inch
Commander	3 one-half inch
Lieutenant Commander	2 one-half inch with 1 one-quarter inch between
Lieutenant	2 one-half inch
Lieutenant (j.g.)	1 one-half inch with one-quarter inch above
Ensign	1 one-half inch
Warrant Officer W-4	½" stripe with 1 break
Warrant Officer W-3	½" stripe with 2 breaks, 2" apart
Warrant Officer W-2	½" stripe with 3 breaks, 2" apart

Enlisted personnel (noncommissioned petty officers)—A rating badge worn on the upper left sleeve, consisting of a spread eagle, appropriate number of chevrons, and centered specialty mark.

*Rank reserved for wartime use only.

Marine Corps

Marine Corps' distinctive cap and collar ornament is the Marine Corps Emblem—a combination of the American eagle, a globe, and an anchor. Marine Corps and Army officer insignia are similar. Marine Corps enlisted insignia, although basically similar to the Army's, feature crossed rifles beneath the chevrons. Marine Corps enlisted rank insignia are as follows:

Sergeant Major of the Marine Corps (E-9)—Same as Sergeant Major (below) but with Marine Corps emblem in the center with a 5-pointed star on both sides of the emblem.

Sergeant Major (E-9)—Three chevrons above 4 rockers with a 5-pointed star in the center.

Master Gunnery Sergeant (E-9)—Three chevrons above 4 rockers with a bursting bomb insignia in the center.

First Sergeant (E-8)—Three chevrons above 3 rockers with a diamond in the middle.

Master Sergeant (E-8)—Three chevrons above 3 rockers with crossed rifles in the middle.

Gunnery Sergeant (E-7)—Three chevrons above 2 rockers with crossed rifles in the middle.

Staff Sergeant (E-6)—Three chevrons above 1 rocker with crossed rifles in the middle.

Sergeant (E-5)—Three chevrons above crossed rifles.

Corporal (E-4)—Two chevrons above crossed rifles.

Lance Corporal (E-3)—One chevron above crossed rifles.

Private First Class (E-2)—One chevron.

Private (E-1)—None.

Coast Guard

Coast Guard insignia follow Navy custom, with certain minor changes such as the officer cap insignia. The Coast Guard shield is worn on both sleeves of officers and on the right sleeve of all enlisted personnel.

For Further Information on the U.S. Armed Forces

Additional information on all the U.S. Armed Forces branches, as well as many other related organizations, can be accessed through **DefenseLINK**, the official Internet site of the Dept. of Defense: www.defenselink.mil

Army—Office of the Chief of Public Affairs, Attn: Media Relations Division—MRD, 1500 Army Pentagon, Washington, DC 20310-1500. **Website:** www.army.mil

Navy—Chief of Information, 1200 Navy Pentagon, Washington, DC 20350-1200. **Website:** www.navy.mil

Air Force—Office of Public Affairs, 1690 Air Force Pentagon, Washington, DC 20330-1690. **Website:** www.af.mil

Marine Corps—Marine Corps Headquarters, Division of Public Affairs, U.S. Marine Corps, Washington, DC 20380-1775. **Website:** www.usmc.mil

Coast Guard—Commandant (G-IPA-2), U.S. Coast Guard Headquarters, 2100 Second St. SW, Washington, DC 20593. **Website:** www.uscg.mil

Timeline of Major Wars Since 1066

Norman Conquest
1066-71

William I, duke of Normandy, landed on the English coast near Hastings on Sept. 28, 1066, and defeated Harold II, Saxon king of England, at Battle of Hastings Oct. 14. William crowned king Dec. 25 in Westminster Abbey. Most revolts were suppressed by 1071. **Conquest linked England's interests with those of the continent and led to its rise as a powerful monarchy.**

Crusades
1095-1270/1291

Military expeditions undertaken by **Western European Christians** usually at the behest of the **papacy**, to recover **Jerusalem** and other Biblical places of pilgrimage from **Muslim** control; in the long term, stimulated trade and flow of ideas between East and West. Pope Urban II called Nov. 27, 1095, for the **First Crusade**; Crusaders took Jerusalem on July 15, 1099, massacred inhabitants, and founded four temporary states: Antioch, Edessa, Jerusalem, and Tripoli. The failed **Second Crusade** was prompted by Muslims' capture of Edessa in 1144. Jerusalem was captured by Ayyubid sultan Saladin on Oct. 2, 1187, launching the **Third Crusade**, which involved the Holy Roman emperor, Frederick I (Barbarossa); the French king, Philip II (Augustus); and the English king, Richard I (Lion-Heart), but did not lead to a Crusader victory. The **Fourth Crusade** sacked Constantinople on Apr. 13, 1204. The **Fifth Crusade** began with capture of Damietta in Egypt (1219) but failed at Cairo. A **Sixth Crusade** led to the Treaty of Jaffa in 1229, giving Jerusalem to the Crusaders until 1244, when it was taken by the Khwarizmians, launching a **Seventh Crusade**. The last crusade abruptly ended when its leader, French King Louis IX, died in 1270. The last major Crusader stronghold, Acre (now Akko, Israel), was lost on May 18, 1291.

Hundred Years War
1337-1453

Series of armed conflicts over rival claims to the French throne, broken by a number of truces and peace treaties. Edward III declared self king of France in 1338 and invaded, with victories at Crécy in 1346 and Poitiers in 1356. **Treaty of Brétigny** signed May 8, 1360, but French king Charles V renewed fighting in 1369. Truce from 1396 until **Henry V** of England invaded in 1415 and **defeated French army at Agincourt**, capturing land north of Loire River including Paris. **Treaty of Troyes** in 1420 made Henry VI heir of both thrones. The siege of French stronghold Orléans, lifted in 1429 with help from **Joan of Arc**, turned the tide in favor of the French. **War ended English claims to France, paved the way for French absolute monarchy.**

Wars of the Roses
1455-85

Series of dynastic civil wars in England fought by the **rival houses of Lancaster and York for the throne**. Richard, third duke of York, in conflict with the Lancastrian King **Henry VI**, won victories at St. Albans (1455) and Northampton (1460); Richard died at battle of Wakefield on Dec. 30, 1460, before coronation, leaving his son to become King Edward IV. Henry VI imprisoned in tower of London, 1465. Edward died in 1483; his brother became **Richard III** after usurping throne from Edward V. Henry Tudor defeated Richard III at the Battle of Bosworth Field (1485). As Henry VII, he married Edward's daughter Elizabeth, 1486, **finally uniting the houses**.

Thirty Years War
1618-48

A series of religious and political conflicts involving **most countries of western Europe**; most fighting in Germany, devastating it. Protestants stormed Hapsburg palace in the "Defenestration of Prague" (May 23, 1618). Major conflicts included defeat of King Christian IV of Denmark and Norway by Catholic League (1626); victories by Lutheran King Gustav II Adolph of Sweden at Breitenfeld (1631) and Lützen (1632). France, under cardinal and statesman **Richelieu**, chief minister of King Louis XIII, declared war on the Hapsburgs in May 1635; defeated Austro-Bavarian army (Aug. 3, 1645), leading to Truce of Ulm. **Peace of Westphalia** signed at Münster on Oct. 24, 1648, bringing peace by recognizing the rulers' sovereignty within their lands and their right to determine the religious beliefs of their subjects.

English Civil Wars
1638-60

Series of conflicts between followers of King Charles (Cavaliers) and Parliament (Roundheads), over divine right of king versus Parliament's right to control national finances. Presbyterian Scots, allied with Parliament, rioted and in 1640 occupied the northern counties of England. **Oliver Cromwell**, second in command of Parliament's New Model Army, destroyed the king's army at the Battle of Naseby (June 14, 1645); first civil war ended May 1646 when Charles surrendered to the Scots. Charles later allied with Scots, but was defeated by Cromwell at Preston Aug. 17-19, 1648, and executed Jan. 30, 1649. Parliament abolished monarchy and House of Lords. Cromwell suppressed Irish and Scottish rebellions, was briefly succeeded by son Richard after death (1658); **Charles II restored to the throne** by "The Long Parliament," May 1660.

War of the Spanish Succession
1701-14

War fought by the Grand Alliance (originally England, Netherlands, Denmark, and Austria; later also Portugal), against coalition of France, Spain, and a number of small Italian and German principalities to preserve balance of power after death of Spanish king Charles II. Opened with invasion of Italy, via Venice, by an Austrian army under Prince Eugène of Savoy in May 1701. French forced to withdraw from Netherlands and Italy in 1706 and finally defeated 1709 in bloodiest battle of the war at the French village of Malplaquet. Treaty of Rastatt and Baden signed in 1714; gave **Austria control of Spanish Netherlands and settled peace between Austria and France**.

War of the Austrian Succession
1740-48

Conflict over rival claims for the **hereditary dominions of the Habsburg family**, following death (1740) of Charles VI, Holy Roman emperor and archduke of Austria. An alliance of Bavaria, France, Spain, Sardinia, Prussia, and Saxony fought against Austria, allied with Holland and Great Britain. King Frederick the Great of Prussia captured Silesia from Austria in the First (1740-42) and Second Silesian Wars (1744-45). British king George II defeated French army at Battle of Dettingen am Main (June 27, 1743). French conquered Austrian Netherlands (1745-46). Treaty of Aix-la-Chapelle Oct. 18, 1748, **restored most original borders, and Prussia became a significant force**.

Seven Years War
1756-63

Worldwide conflicts fought for the **control of Germany** and for **supremacy in colonial N America and India**. French defeated British Gen. Edward Braddock on the Monongahela in 1754, leading to formal declaration of **French-Indian War**, May 1756. Frederick II of Prussia invaded Saxony on Aug. 29, 1756; defeated French at Rossbach (1757), Austrians at Leuthen (1757), Russians at Zorndorf (1758). By 1760, British conquered French Canada. Peter III signed armistice with Prussia, 1762. Treaty of Paris signed Feb. 10, 1763; Peace of Hubertusburg Feb. 15, 1763, between Prussia and Austria. **England emerged as leading world naval power.**

American Revolution
1775-83

Conflict between Great Britain and 13 British colonies on the eastern seaboard of North America. George Washington took command of the Continental Army, July 2, 1775, and King George III declared colonies traitors on Aug. 23. **Independence of colonies declared July 4, 1776.** France recognized the colonies' independence Feb. 6, 1778, followed by Spain on June 21, 1779; both pledged support. French fleet drove British fleet under Adm. Thomas Graves from the Chesapeake Bay on Sept. 5, 1781. French and Americans laid siege to Yorktown Sept. 28-Oct. 19, forcing British Gen. Cornwallis to surrender. **Treaty of Paris** (Sept. 3, 1783) recognized U.S. independence.

Wars of French Revolution & Napoleonic Wars
1792-1815

Large-scale wars fought between France and two multinational coalitions. France declared war on the Austrian part of the Holy Roman Empire for aiding King Louis XVI, Apr. 20, 1792. Newly created French Republic declared war on monarchs of Britain and Holland, Feb. 1, 1793, and Spain, Mar. 7. **Napoleon Bonaparte** defeated Austria in N Italy (1796-97), captured Egypt from Britain (1798-99; Battle of the Pyramids, July 21, 1798), and became First Consul after coup d'état of Nov. 9-10, 1799. French Grande Armée later swept through Europe using innovative and aggressive tactics. French navy defeated by British under Adm. Horatio Nelson at **Trafalgar** (Oct. 21, 1805), but Napoleon defeated Austro-Russian forces at Austerlitz (Dec. 2) and controlled most of Europe except Russia and Great Britain by 1808. France suffered its first major defeat by Austria at Aspern-Essling, May 21-22, 1809. **Napoleon invaded Russia**, captured Moscow Sept. 14, 1812, but was forced to flee the bitter Russian winter and abandoned Germany after defeat at Leipzig, Oct. 16-19, 1813. Paris captured by Allied armies Mar. 30-31, 1814. Napoleon exiled to Elba May 4 but returned for "Hundred Days" reign, Mar. 20-June 28, 1815; **final defeat at Waterloo** by British and Prussian troops (June 18). **The Bourbon monarchy was restored under Louis XVIII**, and Britain, Prussia, Russia, and Austria maintained European peace.

Crimean War
1853-56

Conflict between **Russia** and a coalition of **Great Britain, France, Sardinia, and Turkey for influence over Balkans** and the straits between the Black Sea and the Mediterranean. Russia destroyed Turkish fleet at Sinope on Nov. 30, 1853. Britain and France declared war in Mar. 1854 and with Turkish troops defeated Russians at Battle of Alma River on Sept. 20. Lord Lucan of Britain prevented Russia from capturing Balaklava on Oct. 25 ("Charge of the Light Brigade"). Siege of Sevastopol ended when Russia evacuated Sept. 8, 1855. Treaty of Paris signed Mar. 30, 1856; **curbed Russian expansion and loosened European power alignments**.

American Civil War
1861-65

Conflict between the United States (the Union) and 11 secessionist Southern states, organized as the Confederate States of America. Union garrison at Fort Sumter off Charleston, SC, surrendered to Brig. Gen. Pierre Beauregard (Apr. 12-13, 1861). 22,000 Confederates under Beauregard repelled 35,000 Union troops under Gen. Irvin McDowell along Bull Run stream near Manassas, VA (July 21). The *Merrimack* (renamed the *Virginia*) battled the *Monitor* Mar. 9, 1862. In **Battle of Antietam** (Sept. 17), some 12,000 Northerners and 12,700 Southerners were killed or wounded. Pres. Abraham Lincoln announced **Emancipation Proclamation** on Sept. 22. Confederate Gen. Robert E. Lee's forces numbering 75,000 battled 88,000 Union troops under Gen. George Meade at **Gettysburg** July 1-3, 1863, forcing Lee's army back across the Potomac River. Lee surrendered to Ulysses S. Grant at **Appomattox Court House** (Apr. 9, 1865). **The Union was preserved and slavery abolished.**

Franco-Prussian War
1870-71

German states led by Prussia defeated France, seizing Alsace and part of Lorraine. French defeated in several major battles, culminating at **Sedan** Sept. 1, 1870, when Prussian forces decisively defeated the French army and captured emperor Napoleon III. Prussian king crowned William I, emperor of a unified Germany, Jan 18, 1871. **France surrendered** Jan. 28. Final treaty signed May 10; set the stage for later **German imperialistic expansion**.

Spanish-American War
1898

War waged by the U.S. to **liberate Cuba from Spanish rule**. A mysterious explosion, blamed on Spain by American newspapers, sank the U.S. battleship *Maine* in Havana's harbor (Feb. 15, 1898), killing 260. The U.S. called for Spain's withdrawal from Cuba, and Spain declared war (Apr. 24). Rufus Shafter led 17,000 U.S. troops from Daiquirí to Santiago de Cuba, taking **San Juan Hill** with help of the Rough Riders under Teddy Roosevelt. Santiago de Cuba surrendered July 17. The Treaty of Paris (Dec. 10, 1898) provided for the **independence of Cuba**; the cession by Spain to the U.S. of **Puerto Rico, Guam, and for a $20 mil payment, the Philippine Islands**.

World War I
1914-18

Local European war that grew into a global war involving 32 nations: the Allies and the Associated Powers—28 nations including Great Britain, France, Russia, Italy, and the U.S.—versus the Central Powers of Germany, Austria-Hungary, Turkey, and Bulgaria. Archduke Francis Ferdinand assassinated at Sarajevo, Bosnia (June 28, 1914). Germany invaded France through Belgium and the Netherlands; advance on Paris halted by the French under Gen. Joseph Jacques Césaire Joffre at the **First Battle of the Marne**, Sept. 5-12. Germany checked the Russian army at the Battle of Tannenberg, Aug. 26-30. The British suffered 57,470 casualties (19,240 dead) in the opening day of the **First Battle of the Somme** (July 1-Nov. 18, 1916), first of 12 battles that forced Germany back to the Hindenburg Line. **U.S. declared war on Germany Apr. 6, 1917.** Russian involvement ended when Bolshevik party seized power on Nov. 7; signed armistice Dec. 15. German offensive halted by U.S. and French troops at **Second Battle of the Marne** (July 15-Aug. 5, 1918), the turning point of the war. Allied counteroffensive broke the Hindenburg Line, and an armistice was signed Nov. 11.

World War II
1939-45

Global military conflict stemming from European unrest after World War I and Japan's aggressive expansion into Asia and the Pacific.

The War in Europe: The Nazi-Soviet nonaggression pact (Aug. 23, 1939) freed Germany and the Soviet Union to attack Poland in Sept. **Britain and France declared war on Germany** Sept. 3. German forces raced through Europe (Apr.-June 1940), capturing Paris June 14. **Italy declared war on France and Britain** June 10; German-Italian campaigns won the Balkans and N Africa by June 1941. U.S. entered war Dec. 1941. Three million Axis troops invaded Russia June 22, 1941, but Russian counterthrusts stopped the German advance (**Stalingrad**, Aug. 20, 1942-Feb. 2, 1943), and Allies took N Africa (Nov. 8, 1942-May 13, 1943), Italy (July 10, 1943-May 2, 1945). Normandy invaded on **D-Day**, June 6, 1944; Paris liberated Aug. 25. Yalta Conference (Feb. 4-11, 1945) to defeat and split Germany into quarters. Adolf Hitler committed suicide Apr. 30. **Germany surrendered unconditionally** May 7.

The War in the Pacific: Japan invaded China (July 7, 1937), joined alliance with Germany and Italy (Sept. 27, 1940) and signed nonaggression pact with Russia (Apr. 13, 1941); attacked Hawaii's Pearl Harbor, Dec. 7, 1941; U.S. declared war on Japan Dec. 8. **Battle of Midway** (June 4-7, 1942) repulsed the Japanese advance. Marines landed on Guadalcanal Aug. 7. Navy defeated Japanese fleet at **Leyte Gulf**, Oct. 23-26, 1944. B-29 bombing raids on Japan began in Nov. Marines invaded Iwo Jima (Feb. 19-Mar. 16, 1945) with heavy casualties, then Okinawa (Apr. 1-June 21). **U.S. atom bombs dropped** on Hiroshima (Aug. 6) and Nagasaki (Aug. 9) and the Soviet invasion of Manchuria (Aug. 8) **forced Japan to agree, on Aug. 14, to surrender**; formal surrender on Sept. 2.

Korean War
1950-53

Military struggle fought on the Korean Peninsula between the Democratic Peoples' Republic of Korea (N Korea) and the Republic of Korea (S Korea) that developed into an international war involving China allied with N Korea against the U.S. and other nations under the UN flag. DPRK army crossed the 38th parallel and invaded S Korea (June 25, 1950), entering Seoul (June 26). Amphibious assault launched at **Inchon** by Gen. Douglas MacArthur (Sept. 15) helped U.S. forces rout DPRK close to the Yalu River by Nov. 24. Chinese counterattack retook Seoul (Jan. 4, 1951), but forced back to the 38th parallel by Apr. 22. Armistice was signed (July 27, 1953) by the UN, DPRK, and China, but not ROK, **leaving the peninsula partitioned at 38th parallel**.

Vietnam War
1959-75

Struggle primarily in S Vietnam that widened into a war between S Vietnam supported mainly by the U.S. and N Vietnam supported by the USSR and China. Viet Minh, led by Communist leader Ho Chi Minh, formed the Democratic Republic of Vietnam (Sept. 2, 1945). Colonial power France withdrew after fortress at Dien Bien Phu fell (May 8, 1954). Pres. John F. Kennedy pledged U.S. commitment to S Vietnamese independence Dec. 14, 1961. USS *Maddox* destroyer damaged in **Gulf of Tonkin** (Aug. 2, 1964) prompted Congress to increase involvement. Regular bombing of N Vietnam began (Feb. 24, 1965) and the first U.S. combat ground-forces arrived (Mar. 6). North Vietnamese Army siege of **Khe Sanh** (Jan. 21-Apr. 7, 1968) and the **"Tet" offensive** (Jan. 30) aimed to cause insurrection in the south. **My Lai Massacre** by U.S. soldiers against civilians (Mar. 16, 1968) created scandal, fueled U.S. disaffection with war. U.S. forces peaked at 543,400 in Apr. 1969. NVA **"Easter Offensive"** (Mar. 30, 1972) rebuffed, and U.S. responded with aerial bombings in May and Dec. U.S. withdrew after ceasefire, Jan. 1973. **NVA offensive captured Saigon, Apr. 30, 1975, and unified Vietnam under Communist rule.**

Persian Gulf Wars
1991, 2003

Conflicts fought principally between Iraq and the U.S. concerning Iraq's influence in the Middle East and its development of weapons of mass destruction. **First Gulf War:** Iraq under dictator Saddam Hussein invaded Kuwait Aug 2, 1990, and annexed it; UN Security Council ordered Iraqi forces to withdraw by Jan. 15, 1991. Beginning Jan. 17, a multinational force (**Operation Desert Storm**) led by the U.S. bombed military targets in Iraq and Kuwait. A coordinated air-land offensive (**Operation Desert Sabre**, begun Feb. 24) retook Kuwait City Feb. 26, and permanent ceasefire was signed on Apr. 6. Iraq was ordered to pay reparations to Kuwait, reveal locations of biological and chemical weapons, and eliminate weapons of mass destruction. **Second Gulf War:** The U.S. and UK mistakenly asserted that Iraq was still producing WMD and posed an imminent threat. The UN passed Resolution 1441, Nov. 8, 2002, warning Iraq of "serious consequences" if it failed to cooperate fully and unconditionally with UN weapons inspectors. Iraq rejected a Mar. 17, 2003, U.S. ultimatum demanding Hussein and his sons leave Iraq; U.S. launched **Operation Iraqi Freedom** Mar. 19, 2003, with support from UK and other allies, but without full UN Security Council support. Baghdad fell Apr. 9, and major combat operations declared over May 1. Saddam Hussein was captured Dec. 13, but guerrilla opposition to U.S. troops and insurgent violence continued. U.S. combat operations in Iraq formally ended Aug. 31, 2010.

U.S. Health Expenditures, 1960-2007

Source: *Health, United States, 2009,* National Center for Health Statistics, Centers for Disease Control and Prevention

	1960	1970	1980	1990	1995	2000	2005	2006	2007
					Amount in billions				
National health expenditures	**$27.5**	**$74.9**	**$253.4**	**$714.1**	**$1,016.5**	**$1,353.2**	**$1,980.6**	**$2,112.7**	**$2,241.2**
					Percent distribution				
Health services and supplies	**90.6%**	**89.6%**	**92.1%**	**93.4%**	**93.7%**	**93.4%**	**93.4%**	**93.5%**	**93.6%**
Personal health care	84.7	84.0	84.8	85.1	85.0	84.2	83.6	83.6	83.8
Hospital care	33.3	36.8	39.9	35.2	33.5	30.8	30.7	30.7	31.1
Professional services	30.2	27.6	26.5	30.4	31.1	31.5	31.4	31.3	31.3
Physician and clinical services	19.4	18.7	18.6	22.1	21.7	21.3	21.3	21.3	21.4
Other professional services	1.4	1.0	1.4	2.5	2.8	2.9	2.8	2.8	2.8
Dental services	7.1	6.2	5.3	4.4	4.4	4.6	4.4	4.3	4.2
Other personal health care	2.2	1.7	1.3	1.3	2.3	2.7	2.9	3.0	3.0
Nursing home and home health	3.2	5.7	8.2	9.1	10.3	9.3	8.5	8.4	8.5
Home health care[1]	0.2	0.3	0.9	1.8	3.0	2.3	2.4	2.5	2.6
Nursing home care[1]	2.9	5.4	7.3	7.4	7.3	7.0	6.1	5.9	5.9
Retail outlet sales of medical products	18.0	14.0	10.1	10.4	10.0	12.5	13.0	13.1	12.9
Prescription drugs	9.7	7.3	4.8	5.6	6.0	8.9	10.1	10.3	10.1
Other medical products	8.2	6.6	5.4	4.7	4.0	3.6	2.9	2.8	2.8
Government administration and net cost of private health insurance	4.4	3.7	4.8	5.5	5.7	6.0	7.0	7.1	6.9
Government public health activities[2]	1.5	1.9	2.5	2.8	3.0	3.2	2.9	2.9	2.9
Investment	**9.4**	**10.4**	**7.9**	**6.6**	**6.3**	**6.6**	**6.6**	**6.5**	**6.4**
Research[3]	2.5	2.6	2.1	1.8	1.8	1.9	2.0	2.0	1.9
Structures and equipment	6.9	7.8	5.7	4.9	4.5	4.7	4.5	4.5	4.5
					Average annual percent change from previous year shown				
National health expenditures	—	**10.5%**	**13.0%**	**10.9%**	**7.3%**	**5.9%**	**7.9%**	**6.7%**	**6.1%**
Health services and supplies	—	**10.4**	**13.3**	**11.1**	**7.4**	**5.8**	**7.9**	**6.8**	**6.2**
Personal health care	—	10.4	13.1	11.0	7.3	5.7	7.8	6.7	6.4
Hospital care	—	11.6	13.9	9.6	6.3	4.1	7.8	6.9	7.3
Professional services	—	9.5	12.5	12.4	7.9	6.2	7.8	6.4	6.2
Physician and clinical services	—	10.1	12.9	12.8	7.0	5.5	7.9	6.5	6.5
Other professional services	—	6.6	17.1	17.5	9.5	6.5	7.5	4.8	5.6
Dental services	—	9.1	11.1	9.0	7.1	6.9	6.9	4.7	5.2
Other personal health care	—	7.3	10.1	11.4	19.2	10.0	8.9	9.8	5.9
Nursing home and home health	—	17.2	17.2	12.1	9.9	3.8	6.0	5.8	6.7
Home health care[1]	—	14.5	26.9	18.1	19.4	0.0	9.5	10.3	11.3
Nursing home care[1]	—	17.4	16.4	11.0	7.1	5.2	4.8	4.0	4.8
Retail outlet sales of medical products	—	7.8	9.4	11.2	6.6	10.8	8.7	7.4	4.6
Prescription drugs	—	7.5	8.2	12.8	8.6	14.7	10.6	8.6	4.9
Other medical products	—	8.1	10.6	9.5	4.0	3.9	3.3	3.2	3.7
Government administration and net cost of private health insurance	—	8.6	16.0	12.4	8.2	6.9	11.1	8.4	3.6
Government public health activities[2]	—	12.8	16.5	12.0	9.2	7.0	5.4	6.5	6.4
Investment	—	**11.7**	**9.9**	**9.0**	**6.1**	**6.9**	**8.0**	**4.9**	**4.8**
Research[3]	—	10.9	10.8	8.9	7.7	6.9	9.5	2.7	2.7
Structures and equipment	—	11.9	9.5	9.1	5.5	6.8	7.3	5.8	5.7

— = Not applicable. **Note:** Numbers may not add up to totals because of rounding. (1) Freestanding facilities only. Additional services of this type are provided in hospital-based facilities and counted as hospital care. (2) Includes personal care services delivered by government public health agencies. (3) Excludes research and development expenditures of drug companies, other mfrs. and providers of medical equipment, and supplies. They are included in the expenditure class in which a product falls.

Health Coverage for Persons Under 65, by Characteristics, 1984-2007

Source: *Health, United States, 2009*, National Center for Health Statistics, Centers for Disease Control and Prevention

	Private insurance				Medicaid[1]				Not covered[2]			
	1984[3]	2000	2004	2007	1984[3]	2000	2004	2007	1984[3]	2000	2004	2007
	Percent of each population group											
Total	**76.8%**	**71.5%**	**68.8%**	**66.8%**	**6.8%**	**9.5%**	**12.5%**	**13.9%**	**14.5%**	**17.0%**	**16.4%**	**16.6%**
Age												
Under 18 years	72.6	66.6	63.2	59.8	11.9	19.6	26.4	29.8	13.9	12.6	9.2	9.0
18-44 years	76.5	70.5	67.3	65.5	5.1	5.6	7.7	8.7	17.1	22.4	23.5	23.9
45-64 years	83.3	78.7	77.1	75.5	3.4	4.5	5.5	5.9	9.6	12.6	12.8	13.5
Race and Hispanic origin[4,5]												
White, non-Hispanic	79.9	75.7	71.4	69.7	4.6	7.1	10.4	11.4	13.6	15.4	16.1	16.3
Black, non-Hispanic	58.1	55.9	53.9	51.8	20.5	21.2	24.9	27.7	19.9	19.5	17.6	17.0
All Hispanic	55.7	47.8	41.7	41.7	13.3	15.5	22.5	24.7	29.5	35.6	34.4	31.8
Percent of poverty level[4]												
Below 100%	32.2	25.2	21.8	21.4	33.0	38.4	45.0	47.6	33.9	34.2	31.0	28.4
100-149%	62.2	41.7	39.0	32.7	7.7	20.7	27.1	31.8	27.2	34.9	30.8	31.5
150-199%	77.2	58.5	52.5	47.5	3.2	11.5	16.9	20.3	17.3	27.0	27.2	28.5
200% or more	91.5	85.7	84.2	83.1	0.6	2.3	3.5	3.8	6.0	10.1	10.2	10.6
Geographic region[4]												
Northeast	80.5	76.3	74.0	72.2	8.6	10.6	13.0	15.4	10.2	12.2	11.8	11.0
Midwest	80.6	78.8	76.3	72.0	7.4	8.0	10.4	13.7	11.3	12.3	12.4	13.0
South	74.3	66.8	64.1	62.6	5.1	9.4	12.4	12.9	17.7	20.5	19.9	20.1
West	71.9	66.5	64.1	64.0	7.0	10.4	14.4	14.5	18.2	20.7	18.9	18.9

Note: Data based on household interviews of a sample of the civilian noninstitutionalized population. Percents may not add up to 100 because other types of health insurance (e.g., Medicare, military) are not shown, and persons with both private insurance and Medicaid appear in both sections. (1) Includes Medicaid and other public assistance. In 2007, the age-adjusted percent of the population under 65 covered by Medicaid was 11.3%; 1.2% were covered by state-sponsored health plans, and 1.5% were covered by State Children's Health Insurance Program (SCHIP). (2) Includes persons not covered by private insurance, Medicaid or other public assistance, Medicare, or military plans. (3) A change in the questionnaire in 1997 prevents direct comparison with later years. (4) Age adjusted. (5) Changed reporting methods make race percentages before 1999 not strictly comparable with those from 1999 on.

Spending on Health in the 50 Most Populous Countries, 2007

Source: *World Health Statistics 2010*, The World Health Organization

Country	As % of GDP	Per capita[1]	Country	As % of GDP	Per capita[1]	Country	As % of GDP	Per capita[1]	Country	As % of GDP	Per capita[1]
Afghanistan[2]	7.6%	$42	Germany	10.4%	$4,209	Nepal	5.1%	$20	Syria	3.6%	$68
Algeria	4.4	173	Ghana	8.3	54	Nigeria	6.6	74	Tanzania	5.3	22
Argentina	10.0	663	India	4.1	40	North Korea	NA	NA	Thailand	3.7	136
Bangladesh	3.4	15	Indonesia	2.2	42	Pakistan	2.7	23	Turkey	5.0	465
Brazil	8.4	606	Iran	6.4	253	Peru	4.3	160	Uganda	6.3	28
Canada	10.1	4,409	Iraq[3]	2.5	62	Philippines	3.9	63	Ukraine	6.9	210
China	4.3	108	Italy	8.7	3,136	Poland	6.4	716	United States	15.7	7,285
Colombia	6.1	284	Japan	8.0	2,751	Russia	5.4	493	United Kingdom	8.4	3,867
Congo, Dem. Rep. of	5.8	9	Kenya	4.7	34	Saudi Arabia	3.4	531	Uzbekistan	5.0	41
Egypt	6.3	101	Malaysia	4.4	307	South Africa	8.6	497	Venezuela	5.8	477
Ethiopia	3.8	9	Mexico	5.9	564	South Korea	6.3	1,362	Vietnam	7.1	58
France	11.0	4,627	Morocco	5.0	120	Spain	8.5	2,712	Yemen	3.9	43
			Myanmar	1.9	7	Sudan	3.5	40	**World**	**9.7**	**802**

NA = Not available. (1) At average exchange rate. (2) GDP also includes illicit GDPs (e.g., opium). Govt. expenditures include external assistance (ext. budget). (3) Not including expenditures for Northern Iraq.

Population Not Covered by Health Insurance, by State, 1990-2009

Source: Annual Social and Economic Supplements, Current Population Survey, U.S. Census Bureau, U.S. Dept. of Commerce
(numbers in thousands)

	2009		2000		1990			2009		2000		1990	
	No. not covered	% pop. not covered	No. not covered	% pop. not covered	No. not covered	% pop. not covered		No. not covered	% pop. not covered	No. not covered	% pop. not covered	No. not covered	% pop. not covered
AL	789	16.9%	557	12.7%	710	17.4%	MT	149	15.4%	146	16.4%	115	14.0%
AK	122	17.7	114	18.3	77	15.4	NB	205	11.5	140	8.3	138	8.5
AZ	1,273	19.6	834	16.0	547	15.5	NV	546	20.8	336	16.4	201	16.5
AR	548	19.2	367	13.8	421	17.4	NH	138	10.5	99	8.0	107	9.9
CA	7,345	20.0	6,154	18.1	5,683	19.1	NJ	1,371	15.8	985	11.7	773	10.0
CO	762	15.3	598	13.8	495	14.7	NM	430	21.7	426	23.7	339	22.2
CT	418	12.0	313	9.3	226	6.9	NY	2,837	14.8	3,001	16.0	2,176	12.1
DE	118	13.4	69	8.9	96	13.9	NC	1,685	18.0	1,046	13.1	883	13.8
DC	74	12.4	75	13.6	109	19.2	ND	67	10.7	66	10.7	40	6.3
FL	4,118	22.4	2,727	17.0	2,376	18.0	OH	1,643	14.3	1,191	10.7	1,123	10.3
GA	1,985	20.5	1,145	14.1	971	15.3	OK	659	18.1	624	18.4	574	18.6
HI	102	8.2	110	9.1	81	7.3	OR	678	17.7	417	12.2	360	12.4
ID	232	15.2	194	15.0	159	15.2	PA	1,409	11.4	963	8.0	1,218	10.1
IL	1,891	14.8	1,632	13.3	1,272	10.9	RI	127	12.3	74	7.1	105	11.1
IN	902	14.2	650	10.8	587	10.7	SC	766	17.0	473	11.9	550	16.2
IA	342	11.4	239	8.4	225	8.1	SD	108	13.5	77	10.5	81	11.6
KS	365	13.3	274	10.3	272	10.8	TN	963	15.4	585	10.4	673	13.7
KY	694	16.2	521	13.0	480	13.2	TX	6,433	26.1	4,650	22.4	3,569	21.1
LA	711	16.0	755	17.3	797	19.7	UT	415	14.8	259	11.5	156	9.0
ME	133	10.2	135	10.6	139	11.2	VT	61	9.9	50	8.3	54	9.5
MD	793	14.0	511	9.7	601	12.7	VA	1,014	13.0	747	10.7	996	15.7
MA	295	4.4	527	8.4	530	9.1	WA	869	12.9	772	13.2	557	11.4
MI	1,350	13.8	838	8.5	865	9.4	WV	253	14.0	247	13.9	249	13.8
MN	456	8.8	368	7.5	389	8.9	WI	527	9.5	398	7.5	321	6.7
MS	502	17.6	361	12.9	531	19.9	WY	86	15.8	74	15.3	58	12.5
MO	914	15.3	511	9.3	665	12.7	**U.S.**	**50,674**	**16.7**	**38,426**	**13.7**	**34,719**	**13.9**

Persons Not Covered by Health Insurance, by Selected Characteristics, 2009

Source: Annual Social and Economic Supplements, Current Population Survey, U.S. Census Bureau, U.S. Dept. of Commerce
(numbers in thousands)

Race and Hispanic origin[1]	Number	% of pop. specified at left
White	38,399	15.8%
Non-Hispanic	23,658	12.0
Black	8,102	21.0
Asian and Pacific Islander	2,409	17.2
Hispanic	15,820	32.4
Nativity		
Native born	37,694	14.1
Foreign born	12,980	34.5
Naturalized citizen	3,044	19.0
Not a citizen	9,936	46.0
Age		
Under 65 years	49,998	18.8
Under 18 years	7,513	10.0
18 to 24 years	8,923	30.4
25 to 34 years	11,963	29.1
35 to 44 years	8,759	21.7
45 to 64 years	12,840	16.1
65 years and over	676	1.8

Region	Number	% of pop. specified at left
Northeast	6,789	12.4%
Midwest	8,770	13.3
South	22,105	19.7
West	13,011	18.3
Household income		
Less than $25,000	15,483	26.6
$25,000 to $49,999	15,278	21.4
$50,000 to $74,999	9,352	16.0
$75,000 or more	10,561	9.1
Work experience[2]		
Worked year-round	29,263	20.2
Worked full-time	14,589	15.2
Worked less than full-time	14,674	29.7
Did not work	13,222	29.1
Total	**50,674**	**16.7**

(1) Persons of Hispanic origin may be of any race. (2) Of persons 18 to 64 years of age only.

Enrollment in Health Maintenance Organizations (HMOs), 1976-2004

Source: *Health, United States, 2004,* National Center for Health Statistics, U.S. Dept. of Health and Human Services

	1976	1980	1990	1995	1997	1998	1999	2000	2001	2002	2003	2004
						Number of enrolled in millions						
Total	**6.0**	**9.1**	**33.0**	**50.9**	**66.8**	**76.6**	**81.3**	**80.9**	**79.5**	**76.1**	**71.6**	**68.8**
Model type[1]												
Individual practice assoc.[2]	0.4	1.7	13.7	20.1	26.7	32.6	32.8	33.4	33.1	31.6	27.9	24.6
Group[3]	5.6	7.4	19.3	13.3	11.0	13.8	15.9	15.2	15.6	15.0	16.1	15.3
Mixed	—	—	—	17.6	29.0	30.1	32.6	32.3	30.9	29.6	27.8	28.9
Federal program[4]												
Medicaid[5]	—	0.3	1.2	3.5	5.6	7.8	10.4	10.8	11.4	12.8	14.5	14.3
Medicare	—	0.4	1.8	2.9	4.8	5.7	6.5	6.6	6.1	5.4	4.9	4.9
						Percent of population enrolled in HMOs						
Total	**2.8%**	**4.0%**	**13.4%**	**19.4%**	**25.2%**	**28.6%**	**30.1%**	**30.0%**	**28.3%**	**26.4%**	**24.6%**	**23.4%**
Geographic region												
Northeast	2.0	3.1	14.6	24.4	32.4	37.8	36.7	36.5	35.1	33.4	31.8	30.1
Midwest	1.5	2.8	12.6	16.4	19.5	22.7	23.3	23.2	21.7	20.6	19.7	18.7
South	0.4	0.8	7.1	12.4	17.9	21.0	23.9	22.6	21.0	19.8	17.1	16.0
West	9.7	12.2	23.2	28.6	36.4	39.1	41.4	41.7	40.7	38.2	35.8	34.4

— = Not available. **Note:** Data as of June 30 in 1976-80, Jan. 1 from 1990 onwards. HMOs in Guam included starting in 1994; Puerto Rico, 1998; Guam HMO enrollment was 32,000 in 2003 and Puerto Rico enrollment was 1,726,000 in 2003. Open-ended enrollment in HMO plans, amounting to 7.6 mil on Jan. 1, 2003, included from 1994 onwards. (1) Enrollment may not equal total because some plans did not report these characteristics. (2) This type of HMO contracts with an association of physicians from various settings (a mixture of solo and group practices) to provide health services. (3) Group includes staff, group, and network model types. (4) Enrollment by Medicaid or Medicare beneficiaries, where the Medicaid or Medicare program contracts directly with the HMO to pay the premium. (5) Data for 1990 and later include enrollment in managed-care health insuring organizations.

Health Care Visits, by Selected Characteristics, 1997-2007

Source: National Health Interview Survey; *Health, United States*; National Center for Health Statistics, CDC

	No visits			1-3 visits			4-9 visits			10 or more visits		
	1997	2000	2007	1997	2000	2007	1997	2000	2007	1997	2000	2007
						Percent distribution						
All persons	**16.5%**	**16.7%**	**16.4%**	**46.2%**	**45.4%**	**47.2%**	**23.6%**	**24.6%**	**23.6%**	**13.7%**	**13.3%**	**12.8%**
Age												
Under 6 years	5.0	6.3	6.2	44.9	44.5	48.3	37.0	38.1	35.8	13.0	11.1	9.7
6-17 years	15.3	15.2	12.4	58.7	58.2	61.4	19.3	20.6	20.3	6.8	6.0	6.0
18-44 years	21.7	23.5	24.1	46.7	45.2	46.3	19.0	19.1	18.4	12.6	12.2	11.2
45-64 years	16.9	15.0	14.9	42.9	43.4	45.3	24.7	25.7	23.9	15.5	15.9	15.9
65-74 years	9.8	9.0	8.4	36.9	34.5	35.4	31.6	34.5	36.0	21.6	22.1	20.3
75 years and over	7.7	5.8	5.5	31.8	29.3	30.6	33.8	39.3	36.4	26.6	25.6	27.5
Sex												
Male	21.3	21.7	21.3	47.1	45.9	47.3	20.6	22.3	20.9	11.0	10.1	10.5
Female	11.8	11.9	11.5	45.4	44.8	47.1	26.5	27.0	26.3	16.3	16.3	15.1
Race and Hispanic origin												
White, not Hispanic	14.7	14.5	14.1	46.6	45.4	47.4	24.4	25.9	24.8	14.3	14.1	13.7
Black, not Hispanic	16.9	17.1	15.1	46.1	46.8	48.6	23.1	23.5	23.5	13.8	12.6	12.8
Hispanic[1]	24.9	26.8	25.2	42.3	41.8	44.6	20.3	19.8	20.3	12.5	11.6	9.9
Health insurance status[2]												
Insured continuously	14.1	14.0	13.4	49.2	48.8	51.0	23.6	24.6	23.5	13.0	12.6	12.1
Uninsured for any period	18.9	20.6	19.8	46.0	44.5	46.0	20.8	20.8	21.4	14.4	14.1	12.8
Uninsured	39.0	43.2	42.9	41.4	39.6	40.7	13.2	12.1	11.5	6.4	5.1	4.9

Note: Covers visits to doctor's offices, emergency departments, and home visits in the 12-month period prior to interview. Estimates are age-adjusted to the year 2000 standard population. Total includes persons of races not shown separately and of unknown health insurance status. (1) Persons of Hispanic origin may be of any race. (2) In 12 months prior to interview, for under-65 population only; persons having both Medicaid and private coverage are classified as having private coverage.

Top 20 Reasons Given by Patients for Outpatient Visits, 2007

Source: National Hospital Ambulatory Medical Care Survey, National Center for Health Statistics, CDC, U.S. Dept. of Health and Human Services

Rank	Number of visits (thous.)	% distrib. Total
1. Progress visit, not otherwise specified	6,188	7.0%
2. General medical examination	5,221	5.9
3. Prenatal examination, routine	2,694	3.0
4. Cough	1,923	2.2
5. Medication, other and unspecified kinds	1,818	2.0
6. Symptoms referable to throat	1,588	1.8
7. Diabetes mellitus	1,474	1.7
8. Well-baby examination	1,372	1.5
9. Back symptoms	1,359	1.5
10. Stomach pain, cramps, and spasms	1,347	1.5
11. Counseling, not otherwise specified	1,323	1.5%
12. Postoperative visit	1,306	1.5
13. Gynecological examination	1,111	1.2
14. Hypertension	979	1.1
15. Low back symptoms	929	1.0
16. Headache, pain in head	855	1.0
17. Earache or ear infection	852	1.0
18. Chest pain and related symptoms	850	1.0
19. Psychotherapy	843	0.9
20. Skin rash	828	0.9
All other reasons	**54,036**	**60.8**
All visits	**88,894**	**100.0**

Emergency Room Visits by Top 20 Hospital Discharge Diagnosis Groups, 2007

Source: National Hospital Ambulatory Medical Care Survey, National Center for Health Statistics, CDC, U.S. Dept. of Health and Human Services

Rank	Principal diagnosis group	Number (thous.)	% of all visits	Rank	Principal diagnosis group	Number (thous.)	% of all visits
1.	Heart disease, excluding ischemic	923	6.3%	13.	Gastrointestinal hemorrhage	209	1.4%
2.	Chest pain	829	5.7	14.	Anemia	208	1.4
3.	Pneumonia	507	3.5	15.	Urinary tract infection, site not specified	203	1.4
4.	Cerebrovascular disease	446	3.0	16.	Noninfectious enteritis and colitis	195	1.3
5.	Ischemic heart disease	423	2.9	17.	Complications of pregnancy, childbirth, and the puerperium	191	1.3
6.	Psychoses, excluding major depressive disorder	357	2.4	18.	Abdominal pain	186	1.3
7.	Cellulitis and abscess	334	2.3	19.	Disorder of gallbladder and biliary tract	186	1.3
8.	Malignant neoplasms	269	1.5	20.	Asthma	158	1.1
9.	Fracture of the lower limb	244	1.5	**All other diagnoses[1]**		**8,116**	**55.4**
10.	Syncope and collapse	223	1.5	**All visits**		**14,641**	**100.0**
11.	Diabetes mellitus	218	1.5				
12.	Fractures, excluding lower limb	216	1.5				

(1) Includes blanks and discharges in which diagnosis was unknown.

Most Frequently Mentioned Drugs at Outpatient Department Visits, 2007

Source: National Hospital Ambulatory Medical Care Survey, National Center for Health Statistics, CDC, U.S. Dept. of Health and Human Services

Rank	Therapeutic drug category[1]	No. of mentions (thous.)	% of tot.[2]	Rank	Therapeutic drug category[1]	No. of mentions (thous.)	% of tot.[2]
1.	Analgesics	28,457	12.7%	11.	ACE[3] inhibitors	6,820	3.0%
2.	Antidepressants	10,700	4.8	12.	Proton pump inhibitors	6,233	2.8
3.	Antihyperlipidemic agents	9,873	4.4	13.	Dermatological agents	6,006	2.7
4.	Antidiabetic agents	8,887	4.0	14.	Antihistamines	5,712	2.5
5.	Anxiolytics, sedatives, and hypnotics	8,174	3.6	15.	Antiemetic or antivertigo agents	5,222	2.3
6.	Diuretics	8,028	3.6	16.	Viral vaccines	4,480	2.0
7.	Beta-adrenergic blocking agents	7,958	3.5	17.	Calcium channel blockers	3,854	1.7
8.	Bronchodilators	7,737	3.4	18.	Minerals and electrolytes	3,839	1.7
9.	Antiplatelet agents	7,506	3.3	19.	Adrenal cortical steroids	3,776	1.7
10.	Anticonvulsants	7,113	3.2	20.	Antipsychotics	3,471	1.5

(1) Based on the Multum Lexicon second-level therapeutic drug category. (2) Based on an estimated 224,872,000 drug mentions at outpatient department visits in 2007. A drug mention is documentation in a patient's record of a drug provided, prescribed, or continued at the visit. (3) Angiotensin-converting enzyme.

U.S. Transplant Waiting List, June 2010[1]

Source: Organ Procurement and Transplantation Network (OPTN), United Network for Organ Sharing (UNOS)

Type of transplant	Patients waiting	% of total
All organs[2]	**107,891**	**100.0**
Kidney	85,396	79.2
Liver	16,089	14.9
Heart	3,151	2.9
Kidney-pancreas	2,203	2.0
Lung	1,803	1.7
Pancreas	1,457	1.4
Intestine	245	0.2
Heart-lung	78	0.1

U.S. Transplants Performed, 2009

Type of transplant	Number	% of total
All organs	**28,465**	**100.0**
Kidney	16,831	59.1
Liver	6,320	22.2
Heart	2,211	7.8
Lung	1,660	5.8
Kidney-pancreas	854	3.0
Pancreas	379	1.3
Intestine	180	0.6
Heart-lung	30	0.1

(1) As of June 11, 2010. (2) Figures may not add up to total because patients waiting for more than one organ are included in multiple categories.

Physicians by Sex and Specialty, 2005

Source: American Medical Assn., as of Dec. 31, 2005

	Male	Female		Male	Female		Male	Female
All Specialties[1]	**649,347**	**235,627**	General Preventive Med.	1,297	751	Pediatrics	33,515	36,636
Aerospace Medicine	442	33	General Surgery	32,329	5,173	Physical Med./Rehab.	4,812	2,478
Allergy & Immunology	3,056	1,050	Internal Medicine	104,688	46,245	Plastic Surgery	6,075	777
Anaesthesiology	30,452	8,370	Medical Genetics	250	226	Psychiatry	27,213	13,079
Cardiovascular Disease	20,060	2,054	Neurological Surgery	4,976	312	Public Health	1,091	464
Child Psychiatry	3,829	3,019	Neurology	10,396	3,266	Pulmonary Diseases	8,385	1,422
Colon/Rectal Surgery	1,116	149	Nuclear Medicine	1,164	283	Radiation Oncology	3,271	1,017
Dermatology	6,535	3,906	Obstetrics/Gynecology	24,801	17,258	Radiology	7,465	1,270
Diagnostic Radiology	18,527	5,126	Occupational Medicine	2,172	502	Thoracic Surgery	4,750	166
Emergency Medicine	21,877	5,987	Ophthalmology	15,529	3,177	Transplantation Surgery	94	10
Family Practice	54,022	26,305	Orthopedic Surgery	22,775	1,021	Urology	10,060	508
Forensic Pathology	413	207	Otolaryngology	8,777	1,084	Vascular	17	5
Gastroenterology	10,473	1,255	Pathology-Anat./Clin.	12,523	6,037	Other Speciality	4,427	908
General Practice	9,544	2,120	Pediatric Cardiology	1,276	480	Unspecified	3,813	1,720

(1) Includes "Inactive," "Address Unknown," and certain specialties with very few practitioners.

Drug Use in the General U.S. Population, 2009

Source: Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Dept. of Health and Human Services

According to the Substance Abuse and Mental Health Service Administration's 2009 annual survey, an estimated 118.7 mil Americans 12 years of age and older (or 47.1% of that population) had used an illicit drug at least once in their lifetimes. Of that number, an estimated 75.8 mil (30.1% of persons 12 or older) had used an illicit drug other than marijuana at least once in their lives. About 15.1% of the 12-and-older population had used an illicit drug in the previous year; 8.7% had used one in the month prior to their participation in the survey. The rate of current illicit drug use (i.e., with in the past month) in 2009 was 10.8% for men and 6.6% for women. The Substance Abuse and Mental Health Services Administration's Drug Abuse Warning Network (DAWN) reported 1.9 mil drug abuse or misuse-related visits to hospital emergency departments in 2007. More than half of all visits (52%) involved an illicit drug. Cocaine was a factor in 29% of these. Alcohol in combination with illegal drug use was involved in 13% of emergency visits.

Illicit Drug Use Among Persons 12 or Older, 2004-09

Source: National Survey on Drug Use and Health, Substance Abuse and Mental Health Services Admin. (SAMHSA), U.S. Dept. of Health and Human Services.

(numbers in thousands)

	2004		2005		2006		2007		2008		2009	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Used in lifetime												
Illicit drugs[1]	110,057	45.8	112,085	46.1	111,774	45.4	114,275	46.1	117,325	47.0	118,705	47.1
Illicit drugs other than marijuana[1]	70,657	29.4	71,822	29.5	72,906	29.6	73,494	29.7	75,573	30.3	75,780	30.1
Used in past month												
Illicit drugs[1]	19,071	7.9	19,720	8.1	20,357	8.3	19,857	8.0	20,077	8.0	21,813	8.7
Illicit drugs other than marijuana[1]	8,247	3.4	8,963	3.7	9,615	3.9	9,270	3.7	8,565	3.4	9,157	3.6
Used in past year												
Illicit drugs[1]	34,807	14.5	35,041	14.4	35,775	14.5	35,692	14.4	35,525	14.2	37,954	15.1
Marijuana and hashish	25,451	10.6	25,375	10.4	25,378	10.3	25,085	10.1	25,768	10.3	28,521	11.3
Illicit drugs other than marijuana[1]	19,658	8.2	20,109	8.3	21,254	8.6	21,144	8.5	19,990	8.0	21,000	8.3
Cocaine	5,658	2.4	5,523	2.3	6,069	2.5	5,738	2.3	5,255	2.1	4,797	1.9
Crack	1,304	0.5	1,381	0.6	1,479	0.6	1,451	0.6	1,109	0.4	1,016	0.4
Heroin	398	0.2	379	0.2	560	0.2	366	0.1	453	0.2	605	0.2
Hallucinogens	3,878	1.6	3,809	1.6	3,956	1.6	3,762	1.5	3,678	1.5	4,509	1.8
LSD	592	0.2	563	0.2	666	0.3	620	0.3	802	0.3	779	0.3
PCP	210	0.1	164	0.1	187	0.1	137	0.1	99	0.0	122	0.0
Ecstasy	1,915	0.8	1,960	0.8	2,130	0.9	2,132	0.9	2,139	0.9	2,799	1.1
Inhalants	2,255	0.9	2,187	0.9	2,218	0.9	2,080	0.8	2,047	0.8	2,090	0.8
Nonmedical use of psychotherapeutics[2]	14,849	6.2	15,346	6.3	16,482	6.7	16,280	6.6	15,166	6.1	16,006	6.4
Pain relievers	11,256	4.7	11,815	4.9	12,649	5.1	12,466	5.0	11,885	4.8	12,405	4.9
OxyContin®	1,213	0.5	1,226	0.5	1,323	0.5	1,422	0.6	1,459	0.6	1,677	0.7
Tranquilizers	5,068	2.1	5,249	2.2	5,058	2.1	5,282	2.1	5,103	2.0	5,460	2.2
Stimulants	3,254	1.4	3,088	1.3	3,791	1.5	2,998	1.2	2,639	1.1	3,060	1.2
Sedatives	737	0.3	750	0.3	926	0.4	864	0.3	621	0.2	811	0.3

(1) Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. (2) Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.

Lifetime Prevalence of Drug Use in Grade 12 Students, 1975-2009

Source: Monitoring the Future Survey, Univ. of Michigan; National Institute on Drug Abuse, National Institutes of Health

(in percentages who've ever used)

Drug	1975	1980	1985	1990	1995	2000	2004	2005	2006	2007	2008	2009	2008-09 change
Any illicit drug[1,2]	55.2%	65.4%	60.6%	47.9%	48.4%	54.0%	51.1%	50.4%	48.2%	46.8%	47.4%	46.7%	–0.7%
Marijuana/hashish	47.3	60.3	54.2	40.7	41.7	48.8	45.7	44.8	42.3	41.8	42.6	42.0	–0.7
Inhalants[4]	—	17.3	18.1	18.5	17.8	14.6	11.4	11.9	11.5	11.0	10.1	10.2	0.0
Amyl/butyl nitrites[5]	—	11.1	7.9	2.1	1.5	0.8	1.3	1.1	1.2	1.2	0.6	1.1	0.5
Hallucinogens[3,6]	—	15.6	12.1	9.7	13.1	13.6	9.9	9.3	8.8	8.9	9.0	8.0	–1.0
LSD	11.3	9.3	7.5	8.7	11.7	11.1	4.6	3.5	3.3	3.4	4.0	3.1	–0.8
PCP[5]	—	9.6	4.9	2.8	2.7	3.4	1.6	2.4	2.2	2.1	1.8	1.7	–0.1
Ecstasy (MDMA)	—	—	—	—	—	11.0	7.5	5.4	6.5	6.5	6.2	6.5	0.3
Cocaine	9.0	15.7	17.3	9.4	6.0	8.6	8.1	8.0	8.5	7.8	7.2	6.0	–1.2
Crack	—	—	—	3.5	3.0	3.9	3.9	3.5	3.5	3.2	2.8	2.4	–0.4
Heroin (with and without a needle)	2.2	1.1	1.2	1.3	1.6	2.4	1.5	1.5	1.4	1.5	1.3	1.2	0.0
Narcotics other than heroin[7,8]	9.0	9.8	10.2	8.3	7.2	10.6	13.5	12.8	13.4	13.1	13.2	13.2	0.0
Amphetamines[2,7]	22.3	26.4	26.2	17.5	15.3	15.6	15.0	13.1	12.4	11.4	10.5	9.9	–0.7
Methamphetamine	—	—	—	—	—	7.9	6.2	4.5	4.4	3.0	2.8	2.4	–0.4
Crystal meth. (ice)	—	—	—	2.7	3.9	4.0	4.0	4.0	3.4	3.4	2.8	2.1	–0.8
Sedatives (barbiturates)[7]	18.2	14.9	11.8	7.5	7.6	9.3	10.1	11.0	10.6	9.6	8.9	8.4	–0.5
Methaqualone[7]	8.1	9.5	6.7	2.3	1.2	0.8	1.3	1.3	1.2	1.0	0.8	0.7	0.0
Tranquilizers[3,7]	17.0	15.2	11.9	7.2	7.1	8.9	10.6	9.9	10.3	9.5	8.9	9.3	0.4
Alcohol[9]	90.4	93.2	92.2	89.5	80.7	80.3	76.8	75.1	72.7	72.2	71.9	72.3	0.4
Cigarettes	73.6	71.0	68.8	64.4	64.2	62.5	52.8	50.0	47.1	46.2	44.7	43.6	–1.1
Smokeless tobacco	—	—	—	—	30.9	23.1	16.7	17.5	15.2	15.1	15.6	16.3	0.7
Steroids[7]	—	—	—	2.9	2.3	2.5	3.4	2.6	2.7	2.2	2.2	2.2	0.0

— = Not available. (1) Includes marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin; or any use of narcotics other than heroin, amphetamines, sedatives (barbiturates), methaqualone (excluded since 1990), or tranquilizers not under a doctor's orders. (2) Because of changes to question wording, data from 1982 on are not directly comparable to data from prior years. (3) Because of changes to question wording, data from 2001 on are not directly comparable to data from prior years. (4) Adjusted for underreporting of amyl and butyl nitrites. (5) Because of changes to question wording, data from 1987 on are not directly comparable to data from prior years. (6) Adjusted for underreporting of PCP. (7) Includes only drug use not under a doctor's orders. (8) Because of changes to question wording, data from 2002 on are not directly comparable to data from prior years. (9) Because of changes to question wording, data from 1993 on are not directly comparable to data from prior years.

Cigarette Use in the U.S., 1985-2008

Source: National Survey on Drug Use and Health, Substance Abuse and Mental Health Services Admin. (SAMHSA), U.S. Dept. of Health and Human Services
(percentage reporting use in the month prior to the survey)

	1985	2000	2005	2006	2007	2008
Total[1]	**38.7**	**24.9**	**24.9**	**25.0**	**24.2**	**23.9**
Sex						
Male	43.4	26.9	27.4	27.8	27.1	26.3
Female	34.5	23.1	22.5	22.4	21.5	21.7
Age group						
12-17 years	29.4	13.4	10.8	10.4	9.8	9.1
18-25	47.4	38.3	39.0	38.4	36.2	35.7
26 years and older	45.7[3]	24.2	24.3	24.7	24.1	23.8
Race/ethnicity						
White, not Hispanic	38.9	25.9	26.0	26.1	25.6	25.2
Black, not Hispanic	38.0	23.3	24.5	24.4	23.2	24.8
Hispanic	40.0	20.7	22.1	22.4	20.5	19.4
Education[2]						
Non-high school graduate	37.3	32.4	34.8	35.6	32.9	34.4
High school graduate	37.0	31.1	31.8	31.9	31.9	30.6
Some college	32.6	27.7	28.1	27.7	26.8	26.6
College graduate	23.0	13.9	13.8	14.3	14.0	14.0

(1) Persons 12 years of age and older. (2) Persons aged 18 and older. (3) Persons aged 26 to 34 only.

Daily Use of Cigarettes by U.S. 8th, 10th, and 12th Graders, 1995-2008[1]

Source: Monitoring the Future Study, Univ. of Michigan Inst. for Social Research and National Inst. on Drug Abuse
(percent who smoked daily in last 30 days)

	8th grade						10th grade						12th grade					
	1995	2000	2005	2007	2008	2007-08 change	1995	2000	2005	2007	2008	2007-08 change	1995	2000	2005	2007	2008	2007-08 change
Total	**9.3**	**7.4**	**4.0**	**3.0**	**3.1**	**0.0%**	**16.3**	**14.0**	**7.5**	**7.2**	**5.9**	**–1.3%**	**21.6**	**20.6**	**13.6**	**12.3**	**11.4**	**0.9%**
Sex																		
Male	9.2	7.0	3.9	3.4	3.2	–0.2	16.3	13.7	7.2	7.7	6.2	–1.5	21.7	20.9	14.6	13.0	12.0	–1.0
Female	9.2	7.5	4.0	2.6	2.9	0.3	16.1	14.1	7.7	6.6	5.5	–1.1	20.8	19.7	11.9	11.2	10.6	–0.6
College plans																		
None or under 4 yrs.	22.5	21.7	14.4	12.3	10.8	–1.5	32.7	28.8	19.2	18.9	17.9	–1.0	33.7	31.7	24.9	22.5	21.1	–1.4
Complete 4 yrs.	7.5	5.6	2.9	2.2	2.3	0.2	13.3	11.6	5.9	5.6	4.3	–1.4	17.4	16.6	10.5	9.9	9.0	–0.9
Region																		
Northeast	9.2	6.9	3.2	1.7	2.4	0.7	15.8	14.1	7.6	6.8	5.3	–1.5	22.5	22.8	13.3	14.3	11.3	–2.9
North central	11.0	9.0	4.8	3.8	3.9	0.1	17.6	16.3	8.6	10.0	7.6	–2.4	25.7	23.6	16.3	14.5	12.9	–1.6
South	9.4	7.8	5.0	3.8	3.7	0.0	19.3	15.7	8.8	7.2	6.9	–0.3	21.7	19.4	15.4	12.9	13.1	0.3
West	7.0	4.9	2.4	1.9	2.0	0.0	9.4	7.8	4.0	4.7	3.4	–1.3	14.5	16.9	7.6	7.4	7.0	–0.4
Race/ethnicity[2]																		
White	10.5	9.0	4.6	3.9	3.3	–0.5	23.9	25.7	17.1	14.5	14.3	–0.2	23.9	25.7	17.1	14.5	14.3	–0.2
Black	2.8	3.2	2.1	2.1	1.9	–0.2	6.1	8.0	5.6	5.8	5.8	0.0	6.1	8.0	5.6	5.8	5.8	–0.1
Hispanic	9.2	7.1	3.1	2.8	2.5	–0.3	11.6	15.7	7.7	6.6	6.7	–1.3	11.6	15.7	7.7	6.6	6.7	0.0

(1) Figures and percentage changes may not add up to totals because of rounding. (2) For each of these groups, data for the specified year and previous year have been combined to increase sample size and thus provide a more reliable estimate.

Alcohol Use by 8th and 12th Graders, 1980-2008

Source: Monitoring the Future Study, Univ. of Michigan Inst. for Social Research and National Inst. on Drug Abuse

	1980	1990	1995	2000	2003	2005	2006	2007	2008	2007-08 change
Alcohol[1]	**Percent using alcohol in the month before the survey**									
All 12th graders	**72.0%**	**57.1%**	**51.3%**	**50.0%**	**47.5%**	**47.0%**	**45.3%**	**44.4%**	**43.1%**	**–1.3%**
Male	77.4	61.3	55.7	54.0	51.7	50.7	47.3	47.1	45.8	–1.3
Female	66.8	52.3	47.0	46.1	43.8	43.3	43.0	41.4	40.9	–0.6
White	75.4	63.8	54.5	55.1	52.3	52.3	50.7	49.3	48.6	–0.6
Black	47.6	35.8	35.2	30.0	29.9	29.0	29.2	28.7	28.6	–0.1
Hispanic	63.6	49.1	48.7	51.2	46.4	43.3	43.4	41.4	38.9	–2.5
All 8th graders	—	—	**24.6**	**22.4**	**19.7**	**17.1**	**17.2**	**15.9**	**15.9**	**0.1**
Male	—	—	25.0	22.5	19.4	16.2	16.3	15.6	15.4	–0.2
Female	—	—	24.0	22.0	19.8	17.9	17.6	16.0	16.4	0.4
White	—	—	25.4	24.7	20.1	17.9	16.9	15.6	15.2	–0.4
Black	—	—	18.7	16.0	15.5	14.9	13.1	12.3	12.9	0.6
Hispanic	—	—	32.4	26.7	25.3	20.6	21.2	23.0	21.5	–1.5
Heavy alcohol[2]	**Percent heavily using the 2 weeks before the survey**									
All 12th graders	**41.2%**	**32.2%**	**29.8%**	**30.0%**	**27.9%**	**27.1%**	**25.4%**	**25.9%**	**24.6%**	**–1.3%**
Male	52.1	39.1	36.9	36.7	34.2	32.6	28.9	30.7	28.4	–2.2
Female	30.5	24.4	23.0	23.5	22.1	21.6	21.5	21.5	21.3	–0.2
White	44.3	36.6	32.3	34.6	32.4	32.5	30.4	29.7	29.9	0.2
Black	17.7	14.4	14.9	11.5	10.8	11.3	11.4	11.5	10.9	–0.5
Hispanic	33.1	25.6	26.6	31.0	25.9	23.9	23.3	22.5	21.5	–1.1
All 8th graders	—	—	**12.3**	**11.7**	**9.8**	**8.4**	**8.7**	**8.3**	**8.1**	**–0.2**
Male	—	—	12.5	11.7	10.2	8.2	8.6	8.2	8.1	–0.1
Female	—	—	12.1	11.3	9.4	8.6	8.5	8.2	8.0	–0.2
White	—	—	12.1	13.0	10.0	9.0	8.4	8.0	7.8	–0.2
Black	—	—	8.3	7.3	7.5	6.1	5.7	5.6	5.7	0.1
Hispanic	—	—	18.4	16.0	13.8	12.1	11.6	12.5	12.3	–0.2

— Data not available. **Note:** Monitoring the Future study excludes high school dropouts (about 3-6% of the class group, according to a 1996 report) and absentees (about 16-17% of 12th graders and about 9-10% of 8th graders). High school dropouts and absentees have higher alcohol usage than those included in the survey. (1) Since 1993 the alcohol question has indicated that a “drink” is defined as “more than a few sips.” (2) Five or more drinks in a row at least once in the prior 2-week period.

Acquired Immune Deficiency Syndrome (AIDS)

Source: Centers for Disease Control and Prevention; www.cdc.gov

AIDS (Acquired Immune Deficiency Syndrome) is caused by the human immunodeficiency virus (**HIV**). HIV kills or disables crucial immune cells, progressively destroying the body's ability to fight disease.

HIV is commonly **spread** through unprotected sexual contact with an infected partner's semen or vaginal fluids. It is also spread through contact with infected blood. Where modern screening techniques are used, it is rare to contract HIV from transfusion, but it can be contracted when intravenous drug users share syringes and similar equipment with others. A woman can also transmit HIV to her child during pregnancy or delivery or through breastfeeding. With treatment, a woman can reduce her transmission rate from about 25% to less than 2%. There is no evidence HIV can spread through saliva or casual contact such as in the sharing of food utensils, towels and bedding, telephones, or toilet seats.

Some people experience flu-like symptoms a short time after infection with HIV. Even when symptoms are not present, HIV is active in the body, multiplying, infecting, and killing crucial CD4+ T cells, also known as T-lymphocytes or T-helper cells, which signal other immune cells to perform their functions.

The term **AIDS** applies to the most advanced stages of HIV infection. According to the official case definition issued by the Centers for Disease Control and Prevention (CDC), an HIV-infected person with fewer than 200 CD4+ T cells per cubic millimeter of blood can be said to have AIDS. (Healthy adults usually have 1,000 or more per cubic millimeter.) An HIV-infected person, regardless of T cell count, is diagnosed with AIDS if he or she develops 1 of 26 conditions that typically affect people with advanced HIV. Most of these conditions are opportunistic infections that occur when the immune system is so ravaged by HIV that the body cannot fight off certain bacteria, viruses, and microbes.

Months or years prior to the onset of AIDS, people may experience such symptoms as swollen glands, lack of energy, fevers and sweats, and skin rashes. People diagnosed with AIDS may develop infections of the intestinal tract, lungs, brain, eyes, and other organs and become severely debilitated. They also are prone to developing certain cancers, especially those caused by viruses, such as Kaposi's sarcoma, cervical cancer, and lymphoma. Children with AIDS may have delayed development or fail to thrive.

HIV is primarily **detected** by testing a person's blood for the presence of antibodies (disease-fighting proteins of the immune system) to HIV. In very rare cases, HIV antibodies may take more than six months after exposure to reach detectable levels. But in 97% of infected individuals, the antibodies are detectable in about six weeks. HIV testing may also be performed on oral fluid and urine samples. New rapid HIV tests can provide preliminary results in about 20 minutes.

Patients are typically given a combination of different **drugs** to prevent the HIV virus from becoming resistant to any single one. While these drugs extend the period of time between HIV infection and the development of serious illness, they do not prevent the spread of the disease to others and can have severe side effects.

The U.S. Food and Drug Administration (FDA) has approved a number of drugs that may slow the growth of HIV in the body and treat AIDS-related infections and cancers. The first group of drugs used to treat HIV—nucleoside analog reverse transcriptase inhibitors (NRTIs)—include the drug zidovudine (commonly known as AZT). Non-nucleoside reverse transcriptase inhibitors (NNRTIs), as well as a third class of drugs, called protease inhibitors, have also been approved for HIV treatment. In 2003, the FDA granted accelerated approval of Fuzeon for use with other anti-HIV drugs. Fuzeon was the first among a new class of medications called fusion inhibitors; drugs in this class interfere with HIV's entry into cells by hindering the fusion of viral and cellular membranes.

The FDA in July 2006 approved Atripla, the first once-a-day, single-pill drug combination treatment for HIV. The pill combined three previously approved drugs and cost roughly $1,100 per month in the U.S. The development was regarded as a significant milestone in HIV treatment. FDA officials said complicated drug regimens dissuaded patients from taking their pills as directed. Health experts expect the drug to dramatically improve AIDS treatment in the developing world.

Since there is no vaccine or cure for AIDS, the only **protection** is to avoid activities that carry a risk. The CDC recommends abstinence (the only certain protection) if a potential partner's HIV status is unknown, mutual monogamy with an uninfected partner, or correct and consistent use of male latex condoms.

New AIDS Cases in the U.S., by Transmission Category, 1985-2008

Source: *HIV Surveillance Report, 2008*, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, CDC

Transmission Category	All years[1]	1985	1990	2000	2004	2005	2006	2007	2008
All males 13 years of age and older	**851,974**	**7,504**	**36,193**	**30,251**	**27,545**	**27,436**	**26,741**	**26,619**	**27,543**
Male-to-male sexual contact	513,138	5,348	23,658	13,648	16,627	16,824	16,696	16,992	17,758
Injection drug use	183,052	1,103	6,923	5,554	4,527	4,350	3,921	3,708	3,555
Male-to-male sexual contact and injection drug use	74,155	661	2,943	1,587	1,964	2,085	1,889	1,759	1,704
Heterosexual contact[2]	68,546	32	715	2,537	4,204	3,920	4,005	3,961	4,301
Other[3]	13,083	—	—	—	222	256	231	199	225
All females 13 years of age and older	**211,804**	**524**	**4,547**	**9,979**	**10,033**	**9,799**	**9,661**	**9,683**	**9,567**
Injection drug use	84,339	287	2,347	2,545	2,884	2,724	2,406	2,384	2,256
Heterosexual contact[2]	120,039	119	1,538	4,025	6,956	6,856	7,029	7,069	7,112
Other[3]	7,426	—	—	—	193	219	226	230	199
All children, under 13 years of age	**9,349**	—	—	—	**55**	**55**	**40**	**30**	**41**
Perinatal	8,577	—	—	—	53	50	37	28	34
Other[4]	773	—	—	—	2	5	3	2	6

Note: The definition of AIDS cases for reporting purposes was expanded in 1985, 1987, and 1993, as more was learned about the spectrum of human immunodeficiency virus-associated diseases. (1) Includes cases for years not shown, from the beginning of the epidemic (1981) through 2008. (2) Heterosexual contact with a person known to have or be at high risk for HIV infection. (3) Includes hemophilia, blood transfusion, perinatal exposure, and risk factors not reported or not identified. (4) Includes hemophilia, blood transfusion, and risk factor not reported or not identified.

AIDS Deaths and New AIDS Cases in the U.S., 1985-2007

Source: HIV/AIDS Surveillance Supplemental Report; *Health, United States*; Office of Analysis and Epidemiology, National Center for Health Statistics, CDC

	% of total, all years	All years[1]	2003	2004	2005	2006	2007
DEATHS OF PERSONS DIAGNOSED WITH AIDS, BY YEAR[2]	—	**562,793**	**17,082**	**16,570**	**16,249**	**14,989**	**14,110**
CASES, BY YEAR AIDS FIRST DIAGNOSED							
All persons[3]	—	**1,018,428**	**38,893**	**37,633**	**36,127**	**35,695**	**35,962**
All males, 13 years of age and older	**100.0**	**810,676**	**28,370**	**27,545**	**26,525**	**26,185**	**26,355**
Race/origin							
Not of Hispanic origin							
White	44.8	362,992	9,479	9,366	9,059	8,960	8,802
Black	36.7	297,172	12,512	12,048	11,359	11,082	11,243
Asian[4]	0.8	6,415	322	317	302	351	381
Native Hawaiian or other Pacific Islander	0.1	594	43	39	46	46	64
American Indian or Alaska Native	0.3	2,730	138	124	127	112	112
Hispanic[5]	16.7	135,641	5,604	5,383	5,319	5,350	5,466
Age diagnosed							
13-14 years	0.1	643	30	42	33	26	29
15-24 years	3.8	30,454	1,220	1,324	1,434	1,416	1,755
25-34 years	31.6	256,477	5,977	5,843	5,466	5,288	5,452
35-44 years	39.9	323,350	11,754	10,989	10,226	9,981	9,407
45-54 years	17.9	144,758	6,868	6,677	6,820	6,655	6,956
55-64 years	5.3	42,768	1,956	2,073	2,015	2,204	2,181
65 years and over	1.5	12,225	566	597	532	615	575
All females, 13 years of age and older	**100.0**	**198,544**	**10,450**	**10,033**	**9,548**	**9,471**	**9,579**
Race/origin							
Not of Hispanic origin							
White	20.1	39,871	1,570	1,690	1,516	1,558	1,600
Black	62.0	123,131	7,019	6,637	6,292	6,146	6,243
Asian[5]	0.5	1,050	72	72	75	73	93
Native Hawaiian or other Pacific Islander	0.1	119	9	11	12	15	12
American Indian or Alaska Native	0.4	730	44	59	37	36	46
Hispanic[6]	16.0	31,740	1,600	1,424	1,476	1,521	1,452
Age diagnosed							
13-14 years	0.3	525	42	29	37	45	51
15-24 years	7.0	13,810	659	643	644	579	628
25-34 years	33.2	65,892	2,673	2,475	2,243	2,195	2,115
35-44 years	37.0	73,501	4,050	3,748	3,451	3,309	3,294
45-54 years	15.9	31,546	2,201	2,295	2,314	2,379	2,428
55-64 years	4.9	9,641	620	655	681	749	838
65 years and over	1.8	3,628	204	189	179	214	225
All children, under 13 years of age	**100.0**	**9,209**	**73**	**55**	**54**	**38**	**28**
Race/origin							
Not of Hispanic origin							
White	17.4	1,602	12	8	4	3	5
Black	61.9	5,699	49	34	39	29	21
Asian[5]	0.5	47	0	0	1	1	0
Native Hawaiian or other Pacific Islander	0.1	7	0	1	0	0	0
American Indian or Alaska Native	0.3	32	0	1	0	0	0
Hispanic[6]	19.1	1,757	10	9	9	4	2

Note: Data are for the 50 states and D.C. and are based on reporting by state and D.C. health departments. (1) Based on cases reported to the CDC from the beginning of the epidemic (1981) through June 30, 2008. (2) Deaths may be due to any cause. (3) Total for all years includes 7,099 persons of unknown race or multiple races. (4) Includes persons formerly classified as "Asian or Pacific Islander," before new racial categories were implemented in 2003. (5) Persons of Hispanic origin may be of any race.

Allergies and Asthma

Source: Asthma and Allergy Foundation of America, www.aafa.org

An estimated one in five Americans suffers from **allergies**. People with allergies have immune systems that react to defend the body against normally harmless substances. Common **allergens**—the substances that may trigger such a response—include plant pollens, dust mites, or animal dander; plants such as poison ivy; certain drugs, such as penicillin; and foods such as eggs, milk, nuts, or seafood.

The **tendency to develop allergies** is usually inherited. While allergies typically manifest in childhood, they can show up at any age. Food allergies and eczema (patches of dry skin) are common allergies among infants. Older children and adults may develop allergic rhinitis, or hay fever, in reaction to an inhaled allergen. Allergic rhinitis symptoms include nasal congestion, runny nose, and sneezing.

People with allergies should avoid contact with an allergen, if feasible. **Medications**, such as antihistamines and nasal steroids, may be used to decrease an allergic reaction. Other effective allergy treatments include decongestants, eye drops, and ointments. There are also treatments aimed at gradually desensitizing a patient to an allergen.

Some allergy sufferers also have **asthma**. Asthma, which can develop at any age, is a chronic inflammation disease affecting the passageways that carry air into and out of the lungs. During what is known as an asthma attack, these inflamed, supersensitive airways tighten and fill with mucus. A person may experience wheezing, difficulty breathing, tightening of the chest, and coughing. Exposure to an allergen can set off an attack. Asthma can become life-threatening if not controlled in its early stages. The following symptoms may be indicative of an **emergency**: the patient shows no improvement minutes after initial treatment; struggles to breathe while hunched over with his or her chest and neck pulled in; has trouble walking or talking; and develops gray or blue lips or fingernails.

Besides common allergens, tobacco smoke, cold air, and pollution can trigger an asthma attack, as can viral infections or physical exercise. An accurate diagnosis by a physician is important. Although there is no cure for asthma or allergies, they can be controlled through lifestyle changes and medications.

Alzheimer's Disease

Source: Alzheimer's Association, www.alz.org

Alzheimer's disease, the most common form of dementia, is a progressive, degenerative brain disease in which nerve cells deteriorate and die. Its first symptoms usually involve impaired memory and confusion about recent events. As the disease advances, it results in greater impairment of memory, thinking, judgment, language, behavior, and physical health.

The **rate of progression** of Alzheimer's varies, ranging from 3 to 20 years. The average length of time from onset of symptoms until death is five years. As they become progressively debilitated, affected individuals grow increasingly susceptible to infections of the lungs, urinary tract, and other organs.

Alzheimer's disease affects an estimated 5.3 mil Americans, striking men and women of all races and ethnicities. Although most people are older than age 65 when diagnosed with Alzheimer's, younger-onset, or early-onset, cases occur in people in their 40s and 50s. An estimated 13% of the U.S. population over age 65 has Alzheimer's.

Diagnosis involves a comprehensive evaluation that may include a complete health history, physical examination, neurological and mental status assessments, and other tests. Skilled health care professionals can generally diagnose Alzheimer's with about 90% accuracy. Depression, drug interactions, nutritional imbalances, and infections such as AIDS, meningitis, and syphilis can cause similar symptoms. Other forms of dementia, such as those associated with stroke, Huntington's disease, Parkinson's disease, frontotemporal dementia, and vascular disease can also appear to be Alzheimer's. Absolute confirmation of diagnosis requires a brain biopsy or autopsy.

Treatments for cognitive and behavioral symptoms are available, but no intervention has yet been developed to prevent Alzheimer's or reverse its course. Some research suggests that risk factors for heart disease, such as high blood pressure, elevated cholesterol, diabetes, and excess body weight, may increase a person's risk of developing Alzheimer's. Staying physically and mentally active and socially connected may be associated with a lower risk for the disease.

Providing **care** for people with Alzheimer's is physically and psychologically demanding. About 70% of affected individuals live at home, where family or friends tend to them without pay. In the disease's advanced stages, many individuals require long-term residential care. Nearly half of all nursing home residents in the U.S. have Alzheimer's.

The costs of diagnosing, treating, and providing long-term care in this country for Alzheimer's patients are estimated to be $172 billion in 2010. People with Alzheimer's need a safe, stable environment and a regular daily schedule offering appropriate stimulation. Physical exercise and social interaction are important, as are proper nutrition and adequate pain management. Security is also a consideration, because many people with Alzheimer's tend to wander. An identification bracelet with the person's name, address, and condition may help ensure the safe return of an individual who wanders.

Warning Signs of Alzheimer's Disease

- Forgetting recently learned information or inability to learn new information
- Difficulty with familiar, everyday tasks such as cooking or dressing
- Inability to communicate coherently
- Disorientation to time and place
- Poor or decreased judgment
- Problems with abstract thinking
- Misplacing objects
- Rapid changes in mood or behavior
- Increased irritability, anxiety, depression, confusion, and restlessness
- Prolonged loss of initiative

Arthritis

Source: Arthritis Foundation, www.arthritis.org; Centers for Disease Control and Prevention

The term arthritis refers to more than 100 different diseases that cause pain, stiffness, swelling, and restricted movement in joints. The condition is usually chronic. The CDC estimates that nearly 70 mil adults suffer from arthritis and chronic joint symptoms. Arthritis annually results in 36 mil doctor visits and an estimated 744,000 hospitalizations. The cause for most types of arthritis is unknown; scientists are studying the roles played by genetics, lifestyle, and environment.

Symptoms may develop slowly or suddenly. A visit to the doctor is indicated when pain, stiffness, swelling in a joint, or difficulty in moving a joint persists for more than two weeks. To diagnose arthritis, the doctor records the patient's symptoms and examines his or her joints, looking for any swelling or limited movement. In addition, the doctor checks for other signs often seen with arthritis, such as rashes, mouth sores, or eye involvement. The doctor may test blood, urine, or joint fluid, or take X-rays of the joints.

Of the three most prevalent forms of arthritis, **osteoarthritis** is the most common, affecting approximately 27 mil Americans in 2005. It usually occurs after age 45. In patients with osteoarthritis, also called degenerative arthritis, the protective cartilage of joints is lost and changes occur in the bone, leading to pain and stiffness. It usually occurs in the fingers, knees, feet, hips, and back.

Fibromyalgia, another common arthritis condition, affected about 5 mil Americans in 2005. People suffering from fibromyalgia experience widespread pain and tenderness in muscles and their attachments to bone. Common symptoms include fatigue, disturbed sleep, stiffness, and psychological distress. More women than men are afflicted with this type of arthritis.

Rheumatoid arthritis, which affected an estimated 1.3 mil in the U.S. in 2005, is one of the most serious and disabling forms of the disease. In this type—which is also more common and more degenerative in women—inflammation of the joints leads to cartilage and bone damage. The areas of the body that can be affected are the hands, wrists, feet, knees, ankles, shoulders, neck, jaw, and elbows.

Other forms of arthritis and related conditions include lupus, gout, ankylosing spondylitis, and scleroderma. Bursitis and tendinitis, which may result from injuring or overusing a joint, are also related.

Medications that relieve pain and swelling, such as analgesics, anti-inflammatory drugs, biologic response modifiers, glucocorticoids, and antirheumatic drugs, can be used to treat arthritis. They also tend to slow the disease process. Most treatment programs call for exercise, use of heat or cold, and joint-protection techniques, such as avoidance of excess stress on the joints, the use of assistive devices, and weight loss and control. In some cases, surgery may help.

Cancer Prevention

Source: American Cancer Society, Inc., www.cancer.org

PRIMARY PREVENTION: Modifiable determinants of cancer risk.

Smoking	The risk of developing lung cancer is about 23 times higher for current male smokers and 13 times higher for current female smokers than for those who have never smoked. Smoking accounts for at least 30% of all U.S. cancer deaths. Tobacco use is responsible for nearly 1 in 5 deaths in the U.S. Smoking is associated with cancer of the lung, mouth, nasal cavities, pharynx, larynx, esophagus, stomach, pancreas, uterine cervix, kidney, bladder, and acute myeloid leukemia.
Nutrition and diet	Risk for colon, breast (among postmenopausal women), kidney, prostate, and endometrial cancers increases for those who are overweight and obese. It's not yet known for certain how diet, nutrition intake, and the amount and distribution of body fat factor into the development of certain cancers. But eating a mostly plant-based diet, with grains and beans and five or more servings of fruits and vegetables each day, and regular physical activity can help one achieve and maintain a healthy weight. That in turn may reduce the risk for many cancers.
Sunlight	Many of the more than 1 million skin cancers diagnosed annually in the U.S. could have been prevented by protection from the sun's rays. Epidemiological evidence shows that sun exposure is a major factor in the development of melanoma and that incidence rates are increasing worldwide.
Alcohol	Heavy drinking, especially when accompanied by cigarette smoking or smokeless tobacco use, increases the risk of cancers of the mouth, larynx, pharynx, esophagus, and liver. Studies have also noted an association between regular alcohol consumption and an increased risk of breast cancer.
Smokeless tobacco	Use of chewing tobacco, snuff, and other tobacco products that are not smoked increases the risk of cancers of the mouth and pharynx. The excess risk of cancer of the cheek and gum may reach nearly 50-fold among long-term snuff users.
Estrogen	Menopausal hormone therapy (MHT, formerly called hormone replacement therapy) without the use of progestin can increase the risk of endometrial cancer. Combining progestin with estrogen MHT use may help minimize that risk. Studies, however, suggest that long-term use (5 years or more) of MHT increases the risk of breast cancer and may exceed the benefits. The benefits and risks of the use of estrogen by menopausal women should be discussed carefully with one's doctor.
Radiation	Excessive exposure to ionizing radiation can increase cancer risk. Medical and dental X-rays are adjusted to deliver the lowest dose possible without sacrificing image quality. Excessive radon exposure in the home may increase lung cancer risk, especially in cigarette smokers.
Environmental hazards	Exposure to various chemicals (including benzene, asbestos, vinyl chloride, arsenic, and aflatoxin) increases risk of various cancers. Risk of lung cancer from asbestos is greatly increased among smokers.

Cancer-Detection Guidelines

SECONDARY PREVENTION: Steps to diagnose a cancer or precursor as early as possible after it has developed.

In addition to indicated screening for cancers of the breast, colon and rectum, prostate, and uterine cervix, a cancer-related checkup should include health counseling and, depending on a person's age and sex, include examinations for cancers of the thyroid, oral cavity, skin, lymph nodes, testes, and ovaries, as well as some nonmalignant diseases. Special tests for certain cancer sites for individuals at average risk are recommended as outlined below:

Breast cancer	Women should start getting annual mammograms beginning at age 40. Women who are at increased risk because of family history, genetic predisposition, or past breast cancer should discuss the benefits and limitations of initiating screening at an earlier age. A clinical breast exam should be part of a periodic health exam—about every three years for women in their 20s and 30s and yearly for women 40 and older. Women should be aware of any changes in their breasts and report these promptly to their health care provider.
Cervical cancer	Women should begin cervical cancer screening about three years after having vaginal intercourse for the first time, but no later than when they are 21 years old. Screening should be done every year with regular Pap tests or every two years using liquid-based Pap tests. Beginning at age 30, women who have had three normal Pap test results in a row may choose to get screened every two to three years. Women who have certain risk factors such as diethylstilbestrol (DES) exposure before birth, HIV infection, or a weakened immune system due to organ transplant, chemotherapy, or chronic steroid use should continue to be screened annually. Another reasonable option for women aged 30 and older is to get screened every three years (but not more frequently) with either the conventional or liquid-based Pap test, plus the HPV DNA test. Women 70 years of age and older who have had three or more normal Pap test results in a row and no abnormal Pap test results in the last 10 years may choose to stop cervical cancer screening. Women with a history of cervical cancer, DES exposure before birth, HIV infection or a weakened immune system should continue to be screened as long as they are in good health. Women who have had a total hysterectomy (removal of the uterus and cervix) may also choose to cease cervical cancer screening, unless the surgery was done to treat cervical cancer or precancer. Women who have had a hysterectomy without removal of the cervix should continue to follow the guidelines above.
Colorectal cancer	Beginning at age 50, both men and women should follow one of these testing schedules: • Yearly fecal occult blood test or flexible sigmoidoscopy every five years; • yearly fecal occult blood test plus flexible sigmoidoscopy every five years; • colonoscopy every 10 years; or • double-contrast barium enema every five years. **Note:** Persons known to be at increased risk for colorectal cancer (inflammatory bowel disease, personal or family history, etc.) need to begin screening at an earlier age and may need more frequent screening.
Endometrial cancer	For women at high risk of hereditary nonpolyposis colon cancer (HNPCC), annual screening including an endometrial biopsy should commence at age 35.
Prostate cancer	The prostate-specific antigen (PSA) test with or without a digital rectal examination should be offered annually to men who are aged 50 and older who have a 10-year life expectancy. Men at high risk, such as African-American men and men with one or more first-degree family members (father, brother, or son) diagnosed with prostate cancer at an early age, should start getting tested at age 45. For both men at average risk and high risk, information should be provided about what is known and not known about the benefits and limitations of early detection and treatment of prostate cancer so that an informed decision about testing can be made.
Skin cancer	Adults should practice skin self-exams regularly. Suspicious lesions and moles should be evaluated promptly by a physician.

Estimated New U.S. Cancer Cases and Deaths for Leading Sites, 2010

Source: *Cancer Facts & Figures 2010*, American Cancer Society, Inc.

The following estimates exclude basal and squamous cell skin cancers and in situ carcinomas (i.e., noninvasive cancers), except urinary bladder. In 2010, an estimated 54,010 new cases of carcinoma in situ of the breast and 46,770 cases of melanoma in situ are expected to be diagnosed. More than 2 mil cases of basal cell and squamous cell cancer were treated in 2006. They are highly curable forms of skin cancer and do not need to be reported to cancer registries.

Estimated New Cases

Both sexes		Male		Female	
Lung and bronchus	222,520	Prostate	217,730	Breast	207,090
Prostate	217,730	Lung and bronchus	116,750	Lung and bronchus	105,770
Breast	209,060	Urinary bladder	52,760	Colon	53,430
Colon	102,900	Colon	49,470	Uterine corpus	43,470
Urinary bladder	70,530	Melanoma—skin	38,870	Thyroid	33,930
Melanoma—skin	68,130	Non-Hodgkin lymphoma	35,380	Non-Hodgkin lymphoma	30,160
Non-Hodgkin lymphoma	65,540	Kidney and renal pelvis	35,370	Melanoma—skin	29,260
Kidney and renal pelvis	58,240	Rectum	22,620	Kidney and renal pelvis	22,870
Thyroid	44,670	Pancreas	21,370	Ovary	21,880
Uterine corpus	43,470	Liver and intrahepatic bile duct	17,430	Pancreas	21,770
All sites	**1,529,560**	**All sites**	**789,620**	**All sites**	**739,940**

Estimated New Deaths

Both sexes		Male		Female	
Lung and bronchus	157,300	Lung and bronchus	86,220	Lung and bronchus	71,080
Colon and rectum	51,370	Prostate	32,050	Breast	39,840
Breast	40,230	Colon and rectum	26,580	Colon and rectum	24,790
Pancreas	36,800	Pancreas	18,770	Pancreas	18,030
Prostate	32,050	Liver and intrahepatic bile duct	12,720	Ovary	13,850
Non-Hodgkin lymphoma	20,210	Esophagus	11,650	Non-Hodgkin lymphoma	9,500
Liver and intrahepatic bile duct	18,910	Non-Hodgkin lymphoma	10,710	Uterine corpus	7,950
Urinary bladder	14,680	Urinary bladder	10,410	Liver and intrahepatic bile duct	6,190
Esophagus	14,500	Kidney and renal pelvis	8,210	Brain and other nervous system	5,720
Ovary	13,850	Brain and other nervous system	7,420	Kidney and renal pelvis	4,830
All sites	**569,490**	**All sites**	**299,200**	**All sites**	**270,290**

U.S. Cancer Survival Rates by Year of Diagnosis, 1960-2006[1]

Source: SEER (Surveillance, Epidemiology, and End Results) Cancer Statistics Review, 1975-2007, National Cancer Institute

				White			Black		
Year	Total	Male	Female	Total	Male	Female	Total	Male	Female
1960-63	—	—	—	39.0	—	—	27.0	—	—
1970-73	—	—	—	43.0	—	—	31.0	—	—
1975-77	50.3	42.4	57.3	51.2	43.5	58.0	39.9	32.8	47.3
1978-80	50.3	43.8	56.4	51.3	45.1	57.0	39.6	33.3	46.6
1981-83	51.5	46.0	56.7	52.6	47.4	57.5	39.6	34.3	45.6
1984-86	53.6	47.8	59.0	54.8	49.3	60.0	40.8	35.5	46.5
1987-89	56.4	51.6	61.1	57.8	53.3	62.1	43.6	38.8	48.9
1990-92	60.7	59.3	62.3	62.3	61.1	63.5	48.1	47.1	49.2
1993-95	62.4	61.4	63.4	63.6	62.7	64.5	53.1	54.1	51.9
1996-98	64.6	63.9	65.3	65.8	65.1	66.4	55.7	57.7	53.4
1999-2006	67.8	67.9	67.7	69.1	69.2	69.0	59.2	62.1	55.9

Note: The geographic areas of surveillance may vary for different years. — = Statistic could not be calculated due to fewer than 25 cases during the time period. (1) 5-year relative suvival rate for all invasive cancer sites.

U.S. Cancer Survival Rate by Age at Diagnosis, 1999-2006[1]

Source: SEER (Surveillance, Epidemiology, and End Results) Cancer Statistics Review, 1975-2007, National Cancer Institute

				White			Black		
Age	Total	Male	Female	Total	Male	Female	Total	Male	Female
Under age 45	79.0	73.8	82.3	80.7	76.2	83.8	65.7	57.5	70.8
Ages 45-54	71.5	65.2	76.5	73.2	66.8	78.2	59.2	56.6	61.8
Ages 55-64	68.4	68.2	68.6	69.4	69.0	69.9	60.6	64.3	54.9
Under age 65	71.8	68.4	75.0	73.2	69.7	76.4	61.3	60.7	61.9
Ages 65 and older	59.3	63.7	54.2	59.9	64.0	55.4	52.4	60.6	42.7
Ages 65-74	63.8	67.2	59.1	64.4	67.5	60.2	57.7	64.9	47.4
Ages 75 and older	53.5	58.2	49.2	54.3	58.6	50.5	43.6	51.6	36.9

(1) 5-year relative suvival rate for all invasive cancer sites.

Breast Cancer

Source: American Cancer Society, Inc., www.cancer.org

In 2010, an estimated 207,090 women and 1,970 men in the U.S. will be newly diagnosed with breast cancer, and about 39,840 women and 390 men will die from it. Currently, an estimated 2.4 mil women are living with a history of breast cancer, the second biggest cause of cancer death for women in the U.S. (lung cancer ranks first). But mortality rates have been declining, especially among younger women, probably because of earlier detection and improved treatment.

The **risk** for breast cancer increases with age. It is higher for women with a personal or family history of cancer, a long menstrual history (menstrual periods that started early and ended later in life), recent use of birth control pills, long-term use of postmenopausal estrogen replacement therapy, and who have no children or had no live birth until age 30 or older. Other risk factors include alcohol consumption and obesity. Inherited mutations such as in the BRCA1 and BRCA2 genes greatly increase risk, but these probably account for 5% to

10% of all breast cancers. By far the majority of women who develop breast cancer have no family history of it.

Breast cancer often **manifests** first as an abnormality on a mammogram X-ray. Physical symptoms that show up later, which may be detectable by a woman or her doctor, include a breast lump and, less commonly, breast thickening, swelling, distortion, or tenderness; skin irritation or dimpling; or pain, scaliness, or retraction of the nipple. Breast pain is more commonly associated with benign (i.e., noncancerous) conditions.

Studies show that **early detection** increases survival and treatment options (See "Cancer Prevention," p. 158). Although most detected breast lumps are noncancerous, any suspicious lump should be biopsied.

Treatment for breast cancer may involve lumpectomy (local removal of a tumor), mastectomy (surgical removal of the breast), radiation therapy, chemotherapy, hormone therapy, or immunotherapy. For women with early-stage breast cancer, long-term survival rates following lumpectomy plus radiation therapy are similar to survival rates after a mastectomy.

Prostate Cancer

Source: Prostate Cancer Foundation, www.pcf.org; American Cancer Society, Inc., www.cancer.org

The **prostate** is a male gland located between the bladder and scrotum that secretes seminal fluid. Prostate cancer is the most common non-skin cancer in the U.S., and the second-most common cause, after lung cancer, of cancer deaths in American men. In 2010, an estimated 217,730 men will be diagnosed with prostate cancer, and about 32,050 will die from the disease. It was estimated that in 2006, 2.2 mil men with a history of prostate cancer were alive, making up nearly half of all male cancer survivors in the U.S.

The exact **cause** of prostate cancer is unknown. The most identifiable risk factors are age, family history, and race. About half of all prostate cancers are diagnosed in men over the age of 68, and the chances of developing the disease rise dramatically with age. Men with a single first-degree relative with a history of prostate cancer are twice to three times as likely to develop the disease, and those with two or more first-degree relatives are three to five times as likely to get it. African-American men are much more likely to develop prostate cancer than non-Hispanic white men and are twice as likely to die from it. The cause for this disparity remains unknown; both socioeconomic and biologic differences are likely involved.

Usually, the disease has no **symptoms** in its early stages. If symptoms arise, they may include a need to urinate frequently; difficulty starting urination; weak or interrupted flow; pain during urination; difficulty having an erection; painful ejaculation; blood in urine or semen; and frequent pain or stiffness in the lower back, hips, or upper thighs.

The American Cancer Society recommends that once they reach 50, men showing no symptoms and with no family history of prostate cancer speak with their health care provider about the benefits and risks of being screened through a prostate specific antigen **(PSA) blood test or digital rectal exam (DRE)**. African-American men or those with a family history of the disease should be aware of their screening options beginning at age 40 or 45. Men under 40 seldom get prostate cancer.

Prostate cancer **treatment** may include surgery, radiation, hormone deprivation therapy, chemotherapy, or some combination. If caught early on, while tumor cells are localized within the prostate, the five-year relative survival rate approaches 100%.

Skin Cancer

Source: American Cancer Society, Inc., www.cancer.org

Skin cancer is generally divided into two main classes, **nonmelanomas** and **melanomas**, both types affecting different types of skin cells. Melanoma develops in skin cells called melanocytes, which produce melanin, a pigment that gives skin a tan or brown color and helps to protect the deeper layers of skin from the harmful effects of the sun. Melanoma is the most dangerous type of skin cancer because it can easily spread to other parts of the body.

Although skin cancer is the most common type of cancer diagnosed in the U.S., melanoma only accounts for about 4% of all skin cancers. The American Cancer Society estimates that in 2010, 68,130 new cases of melanoma will be diagnosed in the U.S., and about 11,790 people will die from skin cancer.

The exact causes of melanoma are unclear, but there are several **risk factors** that have been associated with the disease:

- Overexposure to UV light (sunlight)
- Presence of moles; moles themselves are not harmful but are associated with an increased risk for skin cancer.
- Family history
- Use of immune suppression drugs
- Age; melanoma is more likely to occur in older people.
- Gender; men get melanoma more often than women.
- Past history of melanoma
- Xeroderma pigmentosum (XP), a rare, genetic condition in which people are less able to repair damage caused by sunlight.

Melanomas generally look like abnormal moles on the surface of the skin. Normal moles are most often an evenly colored brown, tan, or black spot on the skin that can be flat or raised. They normally have a distinct border that separates them from normal skin cells. Moles can be present at birth, form over time, or even disappear. Abnormal moles differ from regular skin cells and may be a sign of skin cancer. An irregular mole should be examined as soon as possible. Irregular moles generally have the following characteristics:

- Asymmetry—one half of the mole does not match the other half.
- Irregular border—the edge of the mole is jagged; no distinct divide between the mole and regular skin.
- Color—not uniform; there may be shades of tan, brown, black, and sometimes patches of red, blue, or white.
- Diameter—moles wider than ¼ inch are abnormal (however, melanomas can be smaller).

If a melanoma is suspected, the doctor will perform a biopsy using cells extracted from the suspected cancer or by removing the whole mass and examining it. If a melanoma is found, doctors will often check to see if the cancer has spread to other parts of the body. This is called **staging** and is represented by Roman numerals I through IV (1-4). The lower the number, the less the cancer has spread. This will determine what course of treatment is necessary.

If caught early, melanoma is highly curable. The five-year survival rates for the various stages are as follows:

- All stages 90%
- Local 98%
- Regional 62%
- Distant 15%

Treatment may include simple removal of the melanoma; amputation if the cancer is found on a finger or toe; or treatment involving chemotherapy, immunotherapy, or radiation if the melanoma has spread to other parts of the body.

Depression

Source: National Institute of Mental Health, National Institutes of Health, U.S. Dept. of Health and Human Services

Depression is a serious illness that affects thoughts, feelings, and the ability to function in everyday life. It strikes all age groups, and often goes unrecognized or is inadequately treated. The National Institute of Mental Health (NIMH) estimates that about 20.9 mil American adults age 18 and older suffer from depression or some other mood or depressive disorder in any given year; more than 16% of all Americans will have had depression at some point in life. Young people are at particular risk; in a one-year period, three times as many persons with depression were 18 to 29 years old as were 60 or older.

Nearly twice as many women as men suffer from a depressive illness in a given year. Although conventional wisdom holds that depression is most closely associated with menopause, the childbearing years, followed by the years prior to menopause, are marked by the highest rates of depression. The influence of hormones on depression in women has been an active area of NIMH research.

In a given year, 1-5% of people age 65 and older living in the community (i.e., residing outside of institutions) suffer from major depression. Depression frequently occurs with other physical illnesses including heart disease, stroke, cancer, and diabetes. It is not a normal part of aging.

Available **treatments** can alleviate symptoms, and with awareness growing, more people with depression are seeking help. But many depressed people—and those around them—still fail to realize that they have an illness or could benefit from medical help.

Symptoms and Types of Depression

- Persistent sad mood
- Loss of interest or pleasure in activities once enjoyed, including sex
- Significant changes in appetite or body weight
- Difficulty sleeping or oversleeping
- Lethargy or agitation
- Loss of energy
- Feelings of worthlessness or inappropriate guilt
- Difficulty thinking or concentrating
- Recurrent thoughts of death or suicide

A diagnosis of **major depressive disorder** (or **unipolar major depression**) is made if an individual reports experiencing five or more of these symptoms in the same two-week period.

Bipolar disorder (or **manic-depressive illness**) is characterized by episodes of major depression alternating with periods of mania, when a person experiences a persistent, abnormally elevated mood or irritability, accompanied by feelings of inflated self-esteem, less need for sleep, increased talkativeness, racing thoughts, distractibility, agitation, and excessive involvement in pleasurable activities that have a high potential for painful consequences. While it shares some of the features of major depression, bipolar disorder is a distinct illness.

Dysthymic disorder (or **dysthymia**), a less severe yet more chronic form of depression, is diagnosed when a depressed mood persists for at least two years in adults (one year in children or adolescents) and is accompanied by at least two other depressive symptoms. Many people with dysthymic disorder also experience major depressive episodes.

In contrast to normal experiences of sadness, depression is extreme and persistent and can interfere significantly with an individual's ability to function. A study sponsored by the World Health Organization and the World Bank found unipolar major depression to be the leading cause of disability in the U.S. and worldwide.

Treatments for Depression

A variety of **medicines** are used to treat depression. These drugs influence the functioning of certain neurotransmitters in the brain, primarily serotonin and norepinephrine, known as monoamines. Older drugs—tricyclic antidepressants (TCAs) and monoamine oxidase inhibitors (MAOIs)—affect the functioning of both of these neurotransmitters. But they can have strong side effects or, in the case of MAOIs, require dietary restrictions. Newer medications, such as selective serotonin reuptake inhibitors (SSRIs), have fewer side effects. All of these medications can be effective, but some people respond to one type and not another.

NIMH research has shown that certain types of **psychotherapy**, particularly cognitive-behavioral therapy (CBT) and interpersonal therapy (IPT), can help relieve depression. CBT helps patients change the negative thinking and behaving patterns often associated with depression. IPT focuses patients on working through personal relationships that may contribute to depression. Studies of adults have shown that a combination of psychotherapy and antidepressant medication is most effective in treating moderate-to-severe depression.

Electroconvulsive therapy (ECT) has been found effective in treating some cases of severe depression, particularly those that have not responded to other forms of treatment. ECT involves producing a seizure in the brain of a patient under general anesthesia by applying electrical stimulation through electrodes placed on the scalp. Memory loss and other cognitive problems, though common side effects, are typically short-lived.

Diabetes

Source: American Diabetes Association, www.diabetes.org; Centers for Disease Control and Prevention

Diabetes is a chronic disease in which the body does not produce or properly use the hormone **insulin**. Insulin is needed to convert sugar, starches, and other foods into energy. Both genetics and environment appear to play roles in the onset of diabetes. This disease, which has no cure, is the sixth leading cause of death by disease in the U.S. According to death certificate data, 72,449 people in the U.S. died as a result of diabetes in 2006. In 2007, an estimated 23.6 mil Americans had diabetes, 5.7 mil of whom were undiagnosed.

The American Diabetes Association recommends the following guidelines for **diagnosing** diabetes: lowering the acceptable level of blood sugar in a fasting glucose test from 140 mg of glucose/deciliter of blood to 126 mg/deciliter; testing all adults 45 years of age and older, and then every three years if results are normal; and testing high-risk individuals starting at a younger age more frequently. The American Diabetes Association supports studies proving that detection at an earlier stage and modest lifestyle changes, such as eating better and exercising more, will help prevent or delay complications.

There are two major types of diabetes:

Type 1 (formerly known as insulin dependent, or juvenile diabetes). The body produces very little or no insulin; the disease most often begins in childhood or early adulthood. People with type 1 diabetes must take daily insulin injections to stay alive.

Type 2 (formerly known as non-insulin dependent, or adult-onset diabetes). The body does not produce enough or cannot properly use insulin. It is the most common form of the disease (90%-95% of diabetes cases in people over age 20) and often begins later in life.

Pre-Diabetes

Among U.S. adults 40-74 years of age, 57 mil (40.1% of the total population) have **pre-diabetes**, the state that occurs when a person's blood glucose levels are higher than normal but not high enough for a diagnosis of diabetes. One study indicated that about 11% of people with pre-diabetes developed type 2 diabetes each year during the average three-year study follow-up period. Other studies showed that most people with pre-diabetes develop type 2 diabetes within 10 years.

Complications from Diabetes

People often have diabetes many years before it is diagnosed. During that time, serious complications may develop. Potential complications include the following:

Blindness. Diabetes is the leading cause of new cases of blindness in people ages 20-74. Each year, 12,000 to 24,000 people lose their eyesight because of diabetes.

Kidney disease. 10% to 21% of all people with diabetes develop kidney disease. In 2005, a total of 46,739 people in the U.S. and Puerto Rico initiated treatment for end-stage renal disease (kidney failure) because of diabetes.

Amputations. Diabetes is the most frequent cause for nontraumatic lower limb amputations. The risk of a leg amputation is 15 to 40 times greater for a person with diabetes than for the average American. In 2004, approximately 71,000 lower-limb amputations were performed as a result of complications brought on by diabetes.

Heart disease and stroke. People with diabetes are two to four times more likely to have heart disease. They are also two to four times more likely to suffer a stroke.

Warning Signs of Diabetes

Type 1 Diabetes (usually occur suddenly):

- frequent urination
- unusual thirst
- extreme hunger
- unusual weight loss
- extreme fatigue
- irritability

Type 2 Diabetes (occur less suddenly):

- any type 1 symptoms
- frequent infections
- blurred vision
- cuts/bruises slow to heal
- tingling/numbness in hands or feet
- recurring skin, gum, or bladder infections

Eating Disorders

Source: National Institute of Mental Health, National Institutes of Health, U.S. Dept. of Health and Human Services

Eating disorders involve serious disturbances in eating behavior, usually in the forms of extreme and unhealthy reduction of food intake or severe overeating. They are not due to a failure of will; rather, they are real and treatable medical illnesses in which certain behavior patterns get out of control. The **main types** are anorexia nervosa, bulimia nervosa, and binge-eating disorder (technically categorized with "eating disorders not otherwise identified"). These disorders usually develop in adolescence or early adulthood and often occur with other illnesses such as depression, substance abuse, and anxiety disorders. They are much more common among females; only about 5% to 15% of anorexia or bulimia patients and 35% of binge eaters are male.

If not treated, eating disorders can lead to serious complications, including heart conditions and kidney failure, which may result in death.

Anorexia nervosa affects an estimated 0.9% of all females. Symptoms include resistance to maintaining weight at minimally healthy levels, intense fear of gaining weight, exaggerated importance of body weight or shape in one's self image, and infrequent or absent menstrual periods. Anorexics see themselves as overweight even when they are dangerously thin. In response, they avoid food and take other extreme measures to lose weight, such as exercising compulsively or purging by means of vomiting or laxatives and enemas. While some anorexics fully recover after a single episode, others may relapse frequently or experience chronic deterioration.

Bulimia nervosa affects an estimated 1.5% of females. It is characterized by recurrent uncontrolled binge-eating episodes followed by what is believed to be compensatory behavior to prevent weight gain, such as self-induced vomiting, exercising excessively, or fasting. Persons with bulimia can weigh within the normal range for their age and height, but they still fear gaining weight and are intensely dissatisfied with their bodies. They often perform their behaviors in secret, feeling shame when they binge and relief when they purge.

Binge-eating disorder, which is not officially approved as a psychiatric diagnosis, affects an estimated 2% to 3.5% of males and females in the U.S. As with bulimia, a binge-eating disorder involves episodes of excessive eating during which the sufferer may feel a complete lack of control. But individuals with this disorder do not compensate by purging, exercising, or fasting. Many are thus overweight, and the shame they feel can lead to further bingeing.

Eating disorder sufferers may not admit they are ill. Early diagnosis and a comprehensive **treatment** program are essential to recovery. Some patients may need immediate hospitalization. For anorexia, treatment usually follows three established steps: weight restoration, usually in an inpatient hospital setting; treatment of any accompanying psychological disturbances, including the use of medications; and achieving long-term remission or recovery by reducing or eliminating negative thoughts and behaviors.

Heart and Blood Vessel Disease

Source: American Heart Association, www.heart.org; National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention; National Heart, Blood, and Lung Institute, National Institutes of Health, U.S. Dept. of Health and Human Services

Warning Signs of Heart Attack

- Chest discomfort. Most heart attacks involve discomfort in the center of the chest that lasts more than a few minutes or that goes away and then returns. It can feel like uncomfortable pressure, squeezing, fullness, or pain.
- Discomfort in other areas of the upper body. Symptoms can include pain or discomfort in one or both arms, the back, neck, jaw, or stomach.
- Shortness of breath. This feeling may occur with or without chest discomfort.
- Other signs may include breaking out in a cold sweat, nausea, or lightheadedness.
- The American Heart Association advises immediate action at onset of symptoms, as more than half of heart attack victims die within an hour of symptoms first manifesting. Call 9-1-1. Get to a hospital right away.

Warning Signs of Stroke

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body.
- Sudden confusion, trouble speaking or understanding.
- Sudden trouble seeing in one or both eyes.
- Sudden trouble walking, dizziness, loss of balance or coordination.
- Sudden severe headache with no known cause.
- Prompt treatment of a stroke can be a major factor in controlling the effects. If you have one or more stroke symptoms that last more than a few minutes, call 9-1-1 or the emergency medical service number immediately so an ambulance, ideally one with advanced life support, can be sent for you quickly.

Major Modifiable Risk Factors

High blood pressure: High blood pressure, or hypertension, increases the risk of stroke, heart attack, kidney failure, and heart failure. It affects men and women of all races, ethnic origins, and ages. Obesity, physical inactivity, and an unhealthy diet can contribute to this **often symptomless** disease. Individuals should have a blood pressure reading at least once every two years or more often if advised by a physician.

A blood pressure reading is really two measurements, with one value written above the other, such as 122/78 mmHg. The upper number (systolic pressure) represents the amount of pressure in the blood vessels when the heart contracts (beats) and pushes blood through the circulatory system. The lower number (diastolic pressure) represents the pressure in the blood vessels between beats, when the heart is resting. According to recent National Institutes of Health (NIH) guidelines, a blood pressure reading below 120/80 is considered normal, while readings from 120/80 to 139/89 are considered prehypertension.

High blood pressure is divided into two stages:
Stage 1 is 140-159 (systolic) over 90-99 (diastolic);
Stage 2 is 160+ (systolic) over 100+ (diastolic).

The diagnosis can be based on either the systolic or the diastolic reading.

High blood pressure usually cannot be cured, but it can be controlled in a variety of ways, including lifestyle modifications and medication. Treatment always should be at the direction and under the supervision of a physician. The treatment goal for patients with hypertension is blood pressure below 140/90. Individuals with hypertension and diabetes or chronic kidney disease should aim for blood pressure lower than 130/80.

High blood cholesterol: Cholesterol is a waxy fat-like substance found in all cells of the body. It is produced by the body and also comes in some foods. The body needs some cholesterol, but excess levels increase the risk of heart disease. High cholesterol in itself **usually does not cause symptoms,** so many people are unaware that they have a problem.

There are two major kinds of cholesterol: LDL (low-density lipoprotein), often called "bad" cholesterol, leads to narrowing of the arteries. HDL (high-density lipoprotein), known as "good" cholesterol, helps reduce that risk.

NIH guidelines classify total cholesterol levels (determined by a blood test) of less than 200 mg/dl as desirable, 200-239 as borderline high, and 240 and higher as high. About 37 mil Americans have a cholesterol level of 240 mg/dl or higher. LDL levels of less than 100 are considered optimal, 130-159 as borderline high, 160-189 as high, and 190 and higher as very high. For HDL, levels of 60 mg/dl and higher are considered protective against heart disease, while levels under 40 mg/dl are considered a risk factor.

As with high blood pressure, high blood cholesterol can be controlled by lifestyle changes and medication and should be treated by a physician.

Triglycerides, another form of fat in the blood, can also raise the risk of heart disease. Levels that are borderline high (150-199) or high (200 or more) may need treatment.

Diabetes: Diabetes is a major risk factor for heart disease; at least 65% of people with diabetes mellitus die of some form of heart or blood vessel disease. See also "Diabetes" on pp. 161-62.

Smoking: Cigarette smokers are two to four times more likely to develop coronary heart disease (CHD). Smoking is also associated with the risk of sudden cardiac death.

Obesity: Using a body mass index (BMI) of 25 and higher for overweight and 30 and higher for obesity, an estimated 142 mil Americans age 20 and over could be considered overweight or obese. Of these, more than 67 mil are obese. See also "Weight Guidelines for Adults" on p. 169.

Physical inactivity: A sedentary lifestyle is a risk factor for CHD. The risk increase is comparable to that observed for high blood cholesterol, high blood pressure, or cigarette smoking.

Women and Cardiovascular Disease

The American Heart Association reports that diseases of the heart and stroke, respectively, are the number one and number three killers of women over the age of 25. (Cancer is the second leading cause.) More than one in four women died of some form of cardiovascular disease in 2006. Because heart disease was long viewed as a "man's" disease, many of the major cardiovascular studies were conducted only on men. Recent attention has been directed toward understanding the influence of gender on cardiovascular disease risk and prevention, but important gaps in knowledge remain.

Women often present some of the same classic symptoms of heart attack as men, such as chest pain that spreads to the shoulders and arms. But women may more often report atypical chest pain or complain of abdominal pain, difficulty breathing (dyspnea), and nausea. Another problem in diagnosis is that women tend to have heart attacks later in life than men, so symptoms may be masked by other age-related diseases such as arthritis or osteoporosis. Even certain diagnostic tests and procedures such as the exercise stress test may not be as accurate in women, with the result that the disease process leading to heart attack or stroke may not be detected early on, with potentially serious consequences.

Irritable Bowel Syndrome

Source: National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health

Irritable Bowel Syndrome (IBS)—a functional disorder, not a disease, in the large intestine—is one of the most common disorders diagnosed by physicians. Nearly one in five Americans has IBS symptoms, and it accounts for more than 1 out of every 10 doctor visits in the U.S. IBS occurs more frequently in women than in men, and it usually begins before the age of 35 for about 50% of those affected. Though IBS causes discomfort and may even be painful, it does not damage the bowel.

Many people are uncomfortable discussing IBS because of its embarrassing symptoms. They may include the following:

- bloating
- gas
- diarrhea
- constipation
- abdominal pain or cramping
- mucus in the stool
- feeling as if one has not finished a bowel movement

For most people, IBS is a chronic condition, and there will likely be times when the symptoms may worsen or disappear altogether only to reappear in the future. Most complications are derived from the symptoms, such as hemorrhoids, which may form as a result of diarrhea and constipation. People with chronic IBS may also go through periods of depression because of the constant discomfort and the symptoms' interference in work and personal relationships.

The specific causes for IBS are unknown. The walls of the intestines are lined with layers of muscle that contract and relax in a coordinated manner as they move food through the digestive system. When a person has IBS, the contractions cause food to either speed up or slow down as it moves though the bowel, subsequently causing gas, bloating, diarrhea, or constipation. Some researchers believe that people who suffer from IBS have a colon that is particularly sensitive to certain foods. Milk products, alcohol, caffeine, carbonated drinks, chocolate, and fatty foods in particular can trigger IBS symptoms. Another common factor is a low tolerance for stretching of the large intestine. Women tend to

Malaria

(Plasmodium parasite) Infectious disease known from as early as 2700 BCE. Virtually eradicated in developed countries; still a major killer in tropical regions. **Transmission:** bite from infected mosquito. **Symptoms:** high fever, shaking chills, heavy sweating, headache, fatigue, enlarged spleen. If left untreated, organ damage and death. **Treatment:** antimalarial drugs, including chloroquine, for treatment and prevention. **Est. annual cases:** 1,255 in the U.S. in 2008; worldwide, an estimated 243 mil cases, 863,000 deaths, most young children in sub-Saharan Africa.

Measles

(Rubeola virus) Once-common viral infection; today almost nonexistent in U.S. and Canada. **Transmission:** airborne transmission by infected persons. **Symptoms:** itchy and raised rash, sore throat, cough, pink eye, high fever; in rare cases, encephalitis, seizures, permanent deafness, death. **Vaccine:** highly effective. **Treatment:** no specific treatment; symptoms relieved with bed rest, acetaminophen, humidified air. **Annual U.S. cases:** 140 in 2008.

Mumps

(Mumps virus) Acute and contagious viral infection. **Transmission:** direct contact with mucus or saliva of infected persons. **Symptoms:** painful, visible swelling of the salivary or parotid glands in the face. Chills, headache, fever, painful swallowing. In some cases, inflammation of testes, pancreas, ovaries. In severe cases, brain swelling and symptoms ranging from nausea and drowsiness to seizures and permanent deafness. **Vaccine:** MMR vaccine is effective. **Treatment:** no specific treatment; symptoms may be relieved by applying ice or heat to swollen glands. **Annual U.S. cases:** 454 in 2008.

Peptic ulcer

(Most from *Helicobacter pylori* [*H. pylori*] bacteria; also overuse of aspirin or other anti-inflammatory drugs) Weakening of the stomach's protective mucous coating, allowing stomach acid and bacteria to irritate stomach lining. **Transmission:** *H. pylori* may be transmitted through food and water. **Symptoms:** indigestion; bloating; dull, transient abdominal pain or discomfort; nausea; vomiting. **Treatment:** antibiotics, acid-suppressing drugs. **Est. annual U.S. cases:** about 20% of the population under 40 years of age and half of those over 60 may be infected with *H. pylori*. An estimated 500,000 to 850,000 develop peptic ulcers each year.

Pertussis or Whooping cough

(Bordetella pertussis or *B. parepertussis)* Upper respiratory bacterial infection. **Transmission:** airborne transmission by infected persons; highly contagious. **Symptoms:** initially, mild cold-like symptoms, fever, diarrhea, difficulty breathing; later, violent coughing with characteristic "whooping" heard when patient tries to breathe between coughs, vomiting. In severe cases, apnea, pneumonia, seizures, encephalopathy. **Vaccine:** available as part of combination vaccine that also prevents diphtheria and tetanus. **Treatment:** antibiotics in early cases; otherwise, disease must run its course. **Annual U.S. cases:** 13,278 in 2008.

Salmonella or Salmonellosis

(Salmonella enteritidis) Bacterial infection. **Transmission:** eating foods contaminated by feces carrying the bacteria or undercooked meats or raw eggs contaminated by bacteria. Contact with feces of infected animal or pet. **Symptoms:** fever, diarrhea, abdominal cramps 12 to 72 hours after infection. **Treatment:** no standard treatment. Runs its course in four to seven days; antibiotics in severe cases. **Annual U.S. cases:** 51,040 lab-confirmed cases in 2008.

Shigellosis

(Four species of *Shigella: boydii, dysenteriae, flexneri*, and *sonnei*) Bacterial infection and a form of dysentery, an intestinal disease. **Transmission:** consuming food contaminated by infected feces or vegetables grown in fields containing contaminated sewage. Swimming in contaminated water. **Symptoms:** watery or bloody diarrhea one to four days after infection, high fever, vomiting, painful bowel movements, severe diarrhea. In extreme cases, seizures in children, intestinal perforation. **Treatment:** mild infection allowed to run its course; replacement of fluids and salts lost through excessive diarrhea. Antibiotics in severe cases. Although severe diarrhea is symptomatic, antidiarrheal medicines may make illness worse. **Annual U.S. cases:** 22,625 in 2008.

Syphilis

(Treponema pallidum) Bacterial infection known since ancient times that spread rampantly throughout Europe in the Middle Ages. **Transmission:** sexually transmitted. **Symptoms:** primary stage: painless sore, called a chancre, where bacteria enters the body; usually heals in 3 to 12 weeks with or without treatment. Without treatment, disease enters secondary stage: skin rash as chancre is healing or weeks after it's healed. Without treatment, enters tertiary stage: mouth sores, fever, fatigue, loss of appetite, weight loss, hair loss, jaundice, syphilitic meningitis, aortal aneurysms, lesions, damage to nervous system, heart, and eyes. Most infected do not progress beyond primary or secondary stage. **Treatment:** curable with antibiotics (mostly penicillin). **Annual U.S. cases:** 46,277 total in 2008; 13,500 primary and secondary.

Tetanus or Lockjaw

(Clostridium tetani) Bacterial infection. **Transmission:** bacteria, found in soil, enters body through broken skin. **Symptoms:** muscle stiffness and spasms or "locking" of muscles of the jaw, neck, and limbs. **Vaccine:** four forms of immunization. **Treatment:** tetanus immune globulin to fight infection; with treatment, less than 10% of cases are fatal. **Est. annual U.S. cases:** approximately 100 per year, most due to lack of immunization.

Tuberculosis

(Mycobacterium tuberculosis) Bacterial infection that primarily affects the lungs. **Transmission:** airborne transmission by persons with active TB infection. **Symptoms:** weight loss, fever, cough with discharge (sometimes with bloody sputum), night sweats, growing shortness of breath over time, chest pains. **Vaccine/treatment:** BCG (Bacille Calmette Guerin) vaccine only effective in protecting young children and used where TB is prevalent. Not recommended by health experts for use in the U.S. because of the low risk of infection and its variable effectiveness. **Annual U.S. cases:** 12,904 in 2008.

Yellow fever

(Yellow fever virus, in *flavivirus* group) Viral infection that has caused large epidemics in South America, the Caribbean, and Africa. **Transmission:** bite from mosquitoes carrying the virus. **Symptoms:** headaches, muscle aches, fever, jaundice (yellowing skin), nausea and vomiting, kidney failure, severe generalized pain; in severe cases, shock, coma, and death. **Vaccine:** available, safe and effective. **Treatment:** symptoms treated until disease runs its course. **Est. annual cases:** 0 in the U.S.; 200,000 new cases, 30,000 deaths worldwide.

Food Guide Pyramid



In 2005, the U.S. Dept. of Agriculture issued a revised food guide pyramid called MyPyramid, along with new dietary guidelines for Americans. The new pyramid represents the latest findings in health and nutrition, with a focus on reducing calorie consumption and increasing physical activity. More specifically, the revised system factors in weight, age, gender, and physical activity in putting together a nutrition plan and distinguishes between necessary and unnecessary types of fats and sugars. In addition, the system allows for variation and personalization according to an individual's caloric needs. The guidelines below are general guidelines for better health and nutrition. To get a personalized nutrition and exercise assessment and for dietary recommendations, visit MyPyramid.gov.

Dietary Guidelines for Americans: Key Recommendations

- Choose nutrient-dense foods and beverages among the basic food groups while limiting the intake of foods with saturated and trans fats, cholesterol, added sugars, salt, and alcohol.
- To maintain a healthy body weight, balance calories consumed with calories expended.
- To prevent gradual weight gain over time, make small decreases in consumed calories and increase physical activity.
- Engage in regular physical activity.
- Keep fit through cardiovascular conditioning, stretching exercises for flexibility, and resistance exercises or calisthenics for muscle strength and endurance.
- Eat a sufficient amount of fruits and vegetables each day.
- Choose from all five vegetable subgroups: dark greens, orange, legumes, starchy vegetables, and other vegetables.
- Consume 3 cups per day of fat-free or low-fat milk or equivalent milk products.
- Consume less than 10% of calories from saturated fatty acids and less than 300 mg a day of cholesterol; keep trans fatty acid consumption as low as possible.
- Keep total fat intake between 20%-35% of calories, with most fats coming from sources of polyunsaturated and monounsaturated fatty acids such as fish, nuts, and vegetable oils.
- Choose lean, low-fat, or fat-free meat, poultry, dry beans, and milk or milk products.
- Eat fiber-rich fruits, vegetables, and whole grains.
- Consume less than 2,300 mg (approx. 1 tsp of salt) of sodium per day.
- Eat potassium-rich foods, such as fruits and vegetables.
- If you drink alcoholic beverages, do so in moderation: up to one drink per day for women and up to two drinks per day for men.

Food Ingredients

Protein

Proteins, composed of amino acids, are essential to good nutrition. They build, maintain, and repair the body. Best sources: eggs, milk, fish, meat, poultry, soybeans, nuts. High-quality proteins such as eggs, meat, or fish supply all eight amino acids needed in a diet. Plant foods—whole grain breads and cereals, rice, oats, soybeans, other beans, split peas, and nuts—can be combined to meet protein needs as well.

Fats

Fats provide energy by furnishing calories to the body. They also contain vitamins A, D, E, and K. They are the most concentrated source of energy in a diet. Best sources of polyunsaturated and monounsaturated fats: margarine, vegetable/plant oils, nuts. Concentrated sources of saturated fats: meats, cheeses, butter, cream, egg yolks, lard.

Carbohydrates

Carbohydrates provide energy to the body by supplying immediate calories. The carbohydrate group includes sugars, starches, fiber, and starchy vegetables. Best sources: grains, legumes, potatoes, vegetables, fruits.

Fiber

The portion of plant foods that our bodies cannot digest is known as fiber. There are two basic types: insoluble ("roughage") and soluble. Insoluble fibers help move food materials through the digestive tract; soluble fibers tend to slow them down. Both types absorb water, thus preventing and treating constipation by softening and increasing the bulk of the undigested food components passing through the digestive tract. Soluble fibers may also be helpful in reducing blood cholesterol levels. Best sources: beans, bran, fruits, whole grains, vegetables.

Water

Water dissolves and transports other nutrients throughout the body, aiding in the processes of digestion, absorption, circulation, and excretion. It helps regulate body temperature.

Vitamins

Vitamin A—promotes good eyesight; helps keep skin and mucous membranes resistant to infection. Best sources: liver, sweet potatoes, carrots, kale, cantaloupe, turnip greens, collard greens, broccoli, fortified milk.

Vitamin B_1 (thiamine)—prevents beriberi. Essential to carbohydrate metabolism and nervous system health. Best sources: pork, enriched cereals, grains, soybeans, nuts.

Vitamin B_2 (riboflavin)—protects the skin, mouth, eyes, eyelids, and mucous membranes. Essential to protein and energy metabolism. Best sources: milk, meat, poultry, cheese, broccoli, spinach.

Vitamin B_6 (pyridoxine)—important in the regulation of the central nervous system and in protein metabolism. Best sources: whole grains, meats, fish, poultry, nuts, brewers' yeast.

Vitamin B_{12} (cobalamin)—needed to form red blood cells. Best sources: meat, fish, poultry, eggs, dairy products.

Niacin—maintains health of skin, the tongue, and the digestive system. Best sources: poultry, peanuts, fish, enriched flour, bread.

Folic acid (folacin)—required for normal blood cell formation, growth, and reproduction and for important chemical reactions in body cells. Best sources: yeast, orange juice, green leafy vegetables, wheat germ, asparagus, broccoli, nuts.

Other B vitamins—biotin, pantothenic acid.

Vitamin C (ascorbic acid)—maintains collagen, a protein necessary for the formation of skin, ligaments, and bones. Helps heal wounds and mend fractures. Aids in resisting some types of viral and bacterial infections. Best sources: citrus fruits and juices, cantaloupe, broccoli, Brussels sprouts, potatoes and sweet potatoes, tomatoes, cabbage.

Vitamin D—important for bone development. Best sources: sunlight, fortified milk and milk products, fish-liver oils, egg yolks.

Vitamin E (tocopherol)—helps protect red blood cells. Best sources: vegetable oils, wheat germ, whole grains, eggs, peanuts, margarine, green leafy vegetables.

Vitamin K—necessary for formation of prothrombin, which helps blood to clot. Also made by intestinal bacteria. Best dietary sources: green leafy vegetables, tomatoes.

Minerals

Calcium—works with phosphorus to build and maintain bones and teeth. Best sources: milk and milk products, cheese, blackstrap molasses, some types of tofu.

Phosphorus—performs more functions than any other mineral and plays a part in nearly every chemical reaction in the body. Best sources: cheese, milk, meats, poultry, fish, tofu.

Iron—necessary for the formation of myoglobin, which is a reservoir of oxygen for muscle tissue, and hemoglobin, which transports oxygen within blood. Best sources: lean meats, beans, green leafy vegetables, shellfish, enriched breads and cereals, whole grains.

Other minerals—chromium, cobalt, copper, fluorine, iodine, magnesium, manganese, molybdenum, potassium, selenium, sodium, sulfur, zinc.

Understanding Food Label Claims

Source: Center for Food Safety and Applied Nutrition, Food and Drug Admin., U.S. Dept. of Health and Human Services

The federal Nutrition Labeling and Education Act of 1990 provides that manufacturers can make certain claims on processed food labels only if they meet the definitions specified here:

Sugar

Sugar free: less than 0.5 g per serving

No added sugar; Without added sugar; No sugar added:
No sugars added during processing or packing, including ingredients that contain sugars (e.g., fruit juices, applesauce, or dried fruit).
Processing does not increase sugar content above the amount naturally in the ingredients. (A functionally insignificant increase in sugars is acceptable from processes used for purposes other than increasing sugar content.)
Food for which it substitutes normally contains added sugars.

Reduced sugar: at least 25% less sugar than reference food

Fat

Fat free: less than 0.5 g of fat per serving

Saturated fat free: less than 0.5 g of saturated fat per serving, and the level of trans fatty acids does not exceed 1% of total fat

Low fat: 3 g or less per serving and, if the serving is 30 g or less or 2 tbs or less, per 50 g of the food

Low saturated fat: 1 g or less per serving and not more than 15% of calories from saturated fatty acids

Reduced fat; Less fat: at least 25% less per serving than reference food

Fiber

High fiber: 5 g or more per serving (must also meet low-fat definition or state level of total fat)

Good source of fiber: 2.5 g to 4.9 g per serving

More fiber; Added fiber: at least 2.5 g more per serving than reference food

Sodium

Sodium free: less than 5 mg per serving

Low sodium: 140 mg or less per serving and, if the serving is 30 g or less or 2 tbs or less, per 50 g of the food

Very low sodium: 35 mg or less per serving and, if the serving is 30 g or less or 2 tbs or less, per 50 g of the food

Reduced sodium; Less sodium: at least 25% less per serving than reference food

Calories

Low calorie: 40 calories or less per serving; if the serving is 30 g or less or 2 tbs or less, 40 calories or less per 50 g of food

Calorie free: under 5 calories per serving

Reduced calories; Fewer calories: at least 25% fewer calories than reference food

Cholesterol

Cholesterol free: less than 2 mg of cholesterol and 2 g or less of saturated fat per serving

Low cholesterol: 20 mg or less and 2 g or less of saturated fat per serving and, if the serving is 30 g or less or 2 tbs or less, per 50 g of the food

Reduced cholesterol; Less cholesterol: at least 25% less than reference food

Other Food Label Claims

Source: Food Safety and Inspection Service, Agricultural Marketing Service, U.S. Dept. of Agriculture

The FDA allows food producers and marketers to use language on their packaging that advertises the health benefits and production methods of their products. Products marked *certified* have been formally evaluated for class, grade, or other quality characteristics by the U.S. Dept. of Agriculture's (USDA) Food Safety and Inspection Service. Below are some common packaging terms and their meanings.

Organic: Produced by farmers who use environmentally friendly methods to raise their crops or animals. Before a product can be labeled organic, the farm where the food is grown must pass a special inspection by a USDA official. Organic foods must be produced without conventional pesticides; fertilizers made with synthetic ingredients or sewage sludge; bioengineering; or ionizing radiation.

The official *USDA organic* label may appear on vegetables, fruit, packages of meat, cartons of milk, eggs, cheese, and other single-ingredient foods. Foods with more than one ingredient can place the official seal on their packaging if at least 95% of the ingredients are organic. Products with at least 70% organic ingredients may advertise prominently on the front of the package that the item contains organic ingredients. Products with less than 70% organic ingredients may not make any organic claims on the front of the package but may list organic ingredients on the side panel. Foods that contain 100% organic ingredients may advertise that fact on the front of the packaging along with the organic seal.

Natural: A minimally-processed product that does not contain any artificial ingredient or added color. The label must explain the specific use of the term *natural* with regard to the product, such as "no added colorings," "no artificial ingredients," or "minimally processed."

Free range or **free roaming:** The product comes from an animal that was given access to the outdoors for an unspecified amount of time each day. Animals raised in slaughterhouses are not considered free range. Free range products do not necessarily mean healthier or more disease-free.

Halal and **Zabiah Halal:** Produced in federally inspected meat packing plants and handled in accordance with Islamic law and under Islamic authority.

Kosher: Meat and poultry products prepared under Rabbinical supervision.

Minimal processing: Produced using traditional physical processes that do not fundamentally alter the raw products in order to make food edible, to preserve it, or to make it safe for human consumption. Includes smoking, roasting, freezing, drying, and fermenting. Applies mostly to meat and poultry.

No hormones: Hormones are not allowed in raising hogs or poultry, so those products may not make this claim. If sufficient documentation is provided to the USDA proving that hormones were not used, this term may appear on packages of beef.

No antibiotics: Claim may be made on a package (red meat and poultry) if sufficient documentation is provided to the USDA showing that the animals were raised without being administered antibiotics.

Recommended Levels for Elements (Minerals)

Source: Food and Nutrition Board, Institute of Medicine, National Academy of Sciences, 2005

(in milligrams per day (mg/d) or micrograms per day (µg/d); asterisk denotes level defined as "adequate intake" (AI))

Life stage group		Calcium (mg/d)	Chromium (µg/d)	Copper (µg/d)	Fluoride (mg/d)	Iodine (µg/d)	Iron (mg/d)	Magnesium (mg/d)	Manganese (mg/d)	Molybdenum (µg/d)	Phosphorus (mg/d)	Selenium (µg/d)	Zinc (mg/d)
Infants	0-6 mos.	210*	0.2*	200*	0.01*	110*	0.27*	30*	0.003*	2*	100*	15*	2*
	7-12 mos.	270*	5.5*	220*	0.5*	130*	11	75*	0.6*	3*	275*	20*	3
	1-3 yrs.	500*	11*	340	0.7*	90	7	80	1.2*	17	460	20	3
	4-8 yrs.	800*	15*	440	1*	90	10	130	1.5*	22	500	30	5
Males	9-13 yrs.	1,300*	25*	700	2*	120	8	240	1.9*	34	1,250	40	8
	14-18 yrs.	1,300*	35*	890	3*	150	11	410	2.2*	43	1,250	55	11
	19-30 yrs.	1,000*	35*	900	4*	150	8	400	2.3*	45	700	55	11
	31-50 yrs.	1,000*	35*	900	4*	150	8	420	2.3*	45	700	55	11
	51-70 yrs.	1,200*	30*	900	4*	150	8	420	2.3*	45	700	55	11
	over 70 yrs.	1,200*	30*	900	4*	150	8	420	2.3*	45	700	55	11
Females	9-13 yrs.	1,300*	21*	700	2*	120	8	240	1.6*	34	1,250	40	8
	14-18 yrs.	1,300*	24*	890	3*	150	15	360	1.6*	43	1,250	55	9
	19-30 yrs.	1,000*	25*	900	3*	150	18	310	1.8*	45	700	55	8
	31-50 yrs.	1,000*	25*	900	3*	150	18	320	1.8*	45	700	55	8
	51-70 yrs.	1,200*	20*	900	3*	150	8	320	1.8*	45	700	55	8
	over 70 yrs.	1,200*	20*	900	3*	150	8	320	1.8*	45	700	55	8
Pregnancy	18 yrs. or less	1,300*	29*	1,000	3*	220	27	400	2.0*	50	1,250	60	12
	19-30 yrs.	1,000*	30*	1,000	3*	220	27	350	2.0*	50	700	60	11
	31-50 yrs.	1,000*	30*	1,000	3*	220	27	360	2.0*	50	700	60	11
Lactation	18 yrs. or less	1,300*	44*	1,300	3*	290	10	360	2.6*	50	1,250	70	13
	19-30 yrs.	1,000*	45*	1,300	3*	290	9	310	2.6*	50	700	70	12
	31-50 yrs.	1,000*	45*	1,300	3*	290	9	320	2.6*	50	700	70	12

Recommended Levels for Vitamins

Source: Food and Nutrition Board, Institute of Medicine, National Academy of Sciences, 2005

(in milligrams per day (mg/d) or micrograms per day (µg/d); asterisk denotes level defined as "adequate intake" (AI))

Life stage group		Vitamin A (µg/d)[1]	Vitamin C (mg/d)	Vitamin D (µg/d)[2]	Vitamin E (mg/d)	Vitamin K (µg/d)	Thiamin (mg/d)	Riboflavin (mg/d)	Niacin (mg/d)[3]	Vitamin B6 (mg/d)	Folate (µg/d)[4]	Vitamin B12 (µg/d)	Pantothenic acid (mg/d)	Biotin (µg/d)	Choline (mg/d)[5]
Infants	0-6 mos.	400*	40*	5*	4*	2.0*	0.2*	0.3*	2*	0.1*	65*	0.4*	1.7*	5*	125*
	7-12 mos.	500*	50*	5*	5*	2.5*	0.3*	0.4*	4*	0.3*	80*	0.5*	1.8*	6*	150*
Children	1-3 yrs.	300	15	5*	6	30*	0.5	0.5	6	0.5	150	0.9	2*	8*	200*
	4-8 yrs.	400	25	5*	7	55*	0.6	0.6	8	0.6	200	1.2	3*	12*	250*
Males	9-13 yrs.	600	45	5*	11	60*	0.9	0.9	12	1.0	300	1.8	4*	20*	375*
	14-18 yrs.	900	75	5*	15	75*	1.2	1.3	16	1.3	400	2.4	5*	25*	550*
	19-30 yrs.	900	90	5*	15	120*	1.2	1.3	16	1.3	400	2.4	5*	30*	550*
	31-50 yrs.	900	90	5*	15	120*	1.2	1.3	16	1.3	400	2.4	5*	30*	550*
	51-70 yrs.	900	90	10*	15	120*	1.2	1.3	16	1.7	400	2.4	5*	30*	550*
	over 70 yrs.	900	90	15*	15	120*	1.2	1.3	16	1.7	400	2.4	5*	30*	550*
Females	9-13 yrs.	600	45	5*	11	60*	0.9	0.9	12	1.0	300	1.8	4*	20*	375*
	14-18 yrs.	700	65	5*	15	75*	1.0	1.0	14	1.2	400[7]	2.4	5*	25*	400*
	19-30 yrs.	700	75	5*	15	90*	1.1	1.1	14	1.3	400[7]	2.4	5*	30*	425*
	31-50 yrs.	700	75	5*	15	90*	1.1	1.1	14	1.3	400[7]	2.4	5*	30*	425*
	51-70 yrs.	700	75	10*	15	90*	1.1	1.1	14	1.5	400	2.4	5*	30*	425*
	over 70 yrs.	700	75	15*	15	90*	1.1	1.1	14	1.5	400	2.4	5*	30*	425*
Pregnancy	18 yrs. or less	750	80	5*	15	75*	1.4	1.4	18	1.9	600[8]	2.6	6*	30*	450*
	19-30 yrs.	770	85	5*	15	90*	1.4	1.4	18	1.9	600[8]	2.6	6*	30*	450*
	31-50 yrs.	770	85	5*	15	90*	1.4	1.4	18	1.9	600[8]	2.6	6*	30*	450*
Lactation	18 yrs. or less	1,200	115	5*	19	75*	1.4	1.6	17	2.0	500	2.8	7*	35*	550*
	19-30 yrs.	1,300	120	5*	19	90*	1.4	1.6	17	2.0	500	2.8	7*	35*	550*
	31-50 yrs.	1,300	120	5*	19	90*	1.4	1.6	17	2.0	500	2.8	7*	35*	550*

Note: For healthy breastfed infants, the AI is the mean intake. The AI for other life stage and gender groups is believed to cover needs of all individuals in the group, but lack of data or uncertainty in the data prevent being able to specify with confidence the percentage of individuals covered by this intake. (1) As retinol activity equivalents (RAEs). (2) In the absence of adequate exposure to sunlight. (3) As niacin equivalents (NEs). (4) As dietary folate equivalents (DFEs). (5) Although AIs have been set for choline, there are few data to assess whether a dietary supply of choline is needed at all stages of the life cycle. (6) Because 10%-30% of older people may malabsorb food-bound B_{12}, it is advisable for those older than 50 years to meet their RDA mainly by consuming foods fortified with B_{12} or a supplement containing B_{12}. (7) In view of evidence linking folate intake with neural tube defects in the fetus, it is recommended that all women capable of becoming pregnant consume 400 mg from supplements or fortified foods in addition to intake of food folate from a varied diet. (8) It is assumed that women will continue consuming 400 mg from supplements or fortified food until their pregnancy is confirmed and they enter prenatal care, which ordinarily occurs after the end of the periconceptional period—the critical time for formation of the neural tube.

Dietary Requirements

The Food and Nutrition Board of the National Academy of Sciences' Institute of Medicine, in reports published between 1997 and 2005, established **Dietary Reference Intakes (DRIs)**. DRIs establish daily consumption values for vitamins and elements (often called minerals) that aim to optimize health, not just guard against nutritional deficiencies, at all stages of life.

There are four DRI categories. The **Recommended Dietary Allowance (RDA)** gives intake values that meet the nutrient requirements of almost all (97%-98%) healthy individuals in a specified group. The **Estimated Average Requirement (EAR)** specifies the intake amounts meeting the estimated nutrient need of half the individuals in a specified group. **Adequate Intake (AI)** values are given when there's inadequate scientific evidence to calculate an EAR. For healthy breastfed infants, the AI is the mean intake; for other life stage groups, the AI is thought to cover the needs of all group individuals, but lack of data or uncertainty in the data prevents the percentage of individuals covered from being specified with confidence. The **Tolerable Upper Intake Level (UL)** designates the maximum intake amount that is unlikely to pose a risk of adverse health effects in almost all healthy individuals in a group. RDAs and AIs may both be used as individual intake goals.

Weight Guidelines for Adults

Source: *Dietary Guidelines for Americans, 2005*, U.S. Dept. of Agriculture; National Center for Health Statistics, CDC

Guidelines on identification, evaluation, and treatment of overweight and obesity in adults were released in June 1998 by the National Heart, Lung, and Blood Institute (NHLBI), in cooperation with the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The guidelines, based on research into risk factors contributing to heart disease, stroke, and other conditions, define overweight and obesity in terms of **body mass index (BMI)**. BMI is based on a person's weight and height and is strongly correlated with total body fat content. A BMI of 25-29 is said to indicate **overweight**; a BMI of 30 or higher indicates **obesity**. Weight reduction is advised for persons with a BMI of 25 or higher. Factors such as a large waist circumference, high blood pressure or cholesterol, and family medical history may increase a person's risk of developing an obesity-related disease.

The National Center for Health Statistics estimates more than ⅓ of adults in the U.S. are obese. Over the last two decades, the prevalence of overweight children has doubled, and among adolescents, it has tripled. In 2008, about 16.9% of children and adolescents between the ages of 2 and 19 were obese. A high prevalence of overweight and obesity is a public health concern because excess body fat has been associated with type 2 diabetes, hypertension, dyslipidemia, cardiovascular disease, stroke, gall bladder disease, respiratory dysfunction, gout, osteoarthritis, and certain kinds of cancers.

The table below shows the BMI for certain heights and weights. For weight reduction tips, contact the Weight-control Information Network, 1 WIN Way, Bethesda, MD 20892-3665. (877) 946-4627. win.niddk.nih.gov

Body Mass Index (BMI) by Height and Weight

Weight (lbs)

Height	HEALTHY						OVERWEIGHT					OBESE									
4'10"	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167	172	177	181	186
4'11"	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173	178	183	188	193
5'0"	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179	184	189	194	199
5'1"	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185	190	195	201	206
5'2"	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191	196	202	207	213
5'3"	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197	203	208	214	220
5'4"	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204	209	215	221	227
5'5"	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210	216	222	228	234
5'6"	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216	223	229	235	241
5'7"	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223	230	236	242	249
5'8"	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230	236	243	249	256
5'9"	128	135	142	149	155	162	169	176	182	189	195	203	209	216	223	230	236	243	250	257	263
5'10"	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243	250	257	264	271
5'11"	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250	257	265	272	279
6'0"	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258	265	272	279	287
6'1"	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265	272	280	288	295
6'2"	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272	280	287	295	303
6'3"	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279	287	295	303	311
6'4"	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287	295	304	312	320
BMI[1]	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**

(1) The BMI numbers apply to both men and women. Some very muscular people may have a high BMI without health risks.

Estimated Calorie Requirements[1]

Estimated amounts of calories, rounded to the nearest 200, needed to maintain energy balance by sex, for various age groups and levels of physical activity.

	Age (years)	Sedentary[2]	Moderately[3] active	Active[4]		Age (years)	Sedentary[2]	Moderately[3] active	Active[4]
Child	2-3	1,000	1,000-1,400	1,000-1,400	Male	4-8	1,400	1,400-1,600	1,600-2,000
Female	4-8	1,200	1,400-1,600	1,400-1,800		9-13	1,800	1,800-2,200	2,000-2,600
	9-13	1,600	1,600-2,000	1,800-2,200		14-18	2,200	2,400-2,800	2,800-3,200
	14-18	1,800	2,000	2,400		19-30	2,400	2,600-2,800	3,000
	19-30	2,000	2,000-2,200	2,400		31-50	2,200	2,400-2,600	2,800-3,000
	31-50	1,800	2,000	2,200		51+	2,000	2,200-2,400	2,400-2,800
	51+	1,600	1,800	2,000-2,200					

(1) Based on median height and weight for children and adolescents up to 18 years of age and a Body Mass Index (BMI) of 21.5 for adult females and 22.5 for adult males. (2) Engaging only in minimal activities associated with ordinary day-to-day life. (3) Includes physical activity equivalent to walking 1.5 to 3 miles per day at 3-4 mph. (4) Includes physical activity equivalent to walking more than 3 miles per day at 3-4 mph.

Calories Used During Physical Activity

Source: Center for Nutrition Policy and Promotion, U.S. Dept. of Agriculture

Amounts of calories burned during physical activities are estimates for a 154-pound person. The more an individual weighs, the more calories he or she will burn up with the same degree of exercise.

Moderate physical activities	In 1 hour	In 30 mins.	Vigorous physical activities	In 1 hour	In 30 mins.
Hiking	370	185	Running/jogging (5 miles per hour)	590	295
Light gardening/yard work	330	165	Bicycling (more than 10 miles per hour)	590	295
Dancing	330	165	Swimming (slow freestyle laps)	510	255
Golf (walking and carrying clubs)	330	165	Aerobics	480	240
Bicycling (less than 10 miles per hour)	290	145	Walking (4½ miles per hour)	460	230
Walking (3 ½ miles per hour)	280	140	Heavy yard work (e.g., chopping wood)	440	220
Weight training (general light workout)	220	110	Weight lifting (vigorous effort)	440	220
Stretching	180	90	Basketball (vigorous)	440	220

Finding Your Target Heart Rate

Source: Carole Casten, EdD, *Aerobics Today*; Peg Jordan, RN, Aerobics and Fitness Assn. of America

The target heart rate is the rate of heartbeats a person should aim for during aerobic exercise (e.g., running, cycling, or cross-country skiing) to get the full benefit for cardiovascular conditioning.

First, determine the intensity level at which one would like to exercise. Someone who's led a sedentary lifestyle may want to begin an exercise regimen at the 60% level and work up to the 70% level. Athletes and highly fit individuals must work at an 85% or higher level to receive benefits. Second, calculate the target heart rate. One common way is by using the American College of Sports Medicine Method.

An individual should subtract his or her age from 220, then multiply that number by the desired intensity level of the workout. Divide the answer by 6 for a 10-second pulse count. (The 10-second pulse count is useful for checking whether the target heart rate is being achieved during the workout. One can easily check one's pulse—on the inside of the wrist or side of the neck—by counting the number of beats in 10 seconds.)

For example, a 20-year-old wishing to exercise at 70% intensity would do the following calculations to figure out his or her target heart rate:

Maximum heart rate	220 – 20 = 200
Target heart rate	200 × 0.70 = 140
10-second pulse count	140/6 = 23.33

To work out at 70% intensity, this 20-year-old would strive for a target heart rate of 140 beats per minute, or a 10-second pulse count of 23.

To obtain cardiovascular fitness benefits from aerobic exercise, an individual should participate in an aerobic activity at least three to five times a week for 20-30 minutes each session. Cardiac patients and very sedentary individuals can obtain benefits with shorter periods (15-20 minutes per session). Generally, training changes occur within four to six weeks, but they can occur in as little as two weeks.

Overweight, Obesity, and Healthy Weight in the U.S., 1960-2008[1]

Source: National Health and Nutrition Examination Survey (NHANES), National Center for Health Statistics, CDC

Weight status by sex	1960-62	1971-74	1976-80	1988-94	1999-2002	2001-04	2005-08
				Percent of population			
Overweight or obese[2]							
Both sexes[3]	44.8%	47.7%	47.4%	55.6%	65.2%	65.9%	67.4%
Male	49.5	54.7	52.9	60.1	68.8	70.3	72.5
Female[3]	40.2	41.1	42.0	51.3	61.7	61.6	62.5
Obese[4]							
Both sexes[3]	13.3	14.6	15.1	22.7	31.1	31.2	33.9
Male.	10.7	12.2	12.8	19.7	28.1	29.2	32.4
Female[3]	15.7	16.8	17.1	25.4	34.0	33.1	35.3
Healthy weight[5]							
Both sexes[3]	51.2	48.8	49.6	41.9	32.9	32.4	30.9
Male	48.3	43.0	45.4	38.7	30.2	28.6	26.5
Female[3]	54.1	54.3	53.7	45.1	35.6	36.2	35.2

Note: Percents do not add up to 100 because persons with BMIs of less than 18.5 are not included in these figures. Height was measured without shoes; two pounds were deducted from 1960-62 data to allow for weight of clothing. (1) In persons 20-74 years of age, age-adjusted to 2000 standard population group. Data based on measured height and weight of a sample of the civilian noninstitutionalized population. (2) With a body mass index (BMI) greater than or equal to 25.0. (3) Not including pregnant women. (4) With a body mass index (BMI) greater than or equal to 30.0 (5) With a BMI greater than or equal to 18.5 and less than 25.0. See table on p. 169 to calculate BMI.

Basic First Aid

Source: Courtesy of the American National Red Cross; www.redcross.org. All rights reserved in all countries.

Note: This information is not intended to be a substitute for formal training. It is recommended that you contact your local American Red Cross chapter to sign up for a First Aid/CPR/AED course.

In an emergency, it is important to get medical assistance as soon as possible, but knowing what to do until a doctor or other trained person gets to the scene can save a life, especially in cases of severe bleeding, choking, poisoning, and shock.

People with special medical problems, such as diabetes, cardiovascular disease, epilepsy, or allergies, are urged to wear some sort of emblem identifying the problem as a safeguard against receiving medication that might be harmful or even fatal. Emblems may be obtained from Medic Alert Foundation, 2323 Colorado Ave., Turlock, CA 95382; (888) 633-4298; www.medicalert.org.

Animal bite: Call 9-1-1 or the local emergency number if the wound is bleeding seriously or if you suspect the animal might have rabies. Control any bleeding. Wash minor wounds with soap under running water and apply triple antibiotic ointment and a dressing. When possible, proper authorities should test the animal for rabies.

Asphyxiation: Call 9-1-1 or the local emergency number. Give care for any life-threatening conditions.

Bleeding: Use a barrier between your hand and the wound to help prevent infection. Cover wound with a sterile compress. Apply direct pressure until bleeding stops. Cover compress with a bandage. Call 9-1-1 or the local emergency number if bleeding is severe.

Burn: Check for life-threatening conditions. If the burn is mild, with skin unbroken and no blisters, flush with cold running water until pain subsides. Apply a loose, sterile dry dressing to prevent infection. If the burn is severe, call 9-1-1 or the local emergency number. Care for shock (see below). Keep the person from getting chilled or overheated until advanced medical assistance arrives. Do not try to clean a severe burn or break blisters.

Chemical in eye: Call 9-1-1 or the local emergency number. Turn the person's head to the side so that the affected eye is lower than the unaffected eye. Continuously flush the injured eye with water.

Choking: See **First aid for choking** below.

Convulsions (seizures): Remove nearby objects that might cause injury. Protect the person's head by placing a thin folded towel or item of clothing under it. If there is fluid in the person's mouth, roll him or her on one side so that the fluid may drain from the mouth. Do not place anything between the person's teeth. Stay with the person until he or she is fully conscious. If convulsions do not stop, get medical attention immediately.

Cut (minor): Use a clean barrier between your hand and the wound to prevent infection. Apply direct pressure for a few minutes to control any bleeding. Wash the wound thoroughly with soap and water and apply triple antibiotic ointment or cream. Cover the wound with a sterile compress and a bandage or use an adhesive bandage.

Fainting: If the person feels faint, lower him or her to the ground. Lay the person down on his or her back. If possible, elevate the person's legs 8 to 12 inches. Care for any life-threatening conditions. Loosen any restrictive clothing and check for any signs of injury. Call 9-1-1 or the local emergency number.

Foreign object in eye: If an object is embedded in someone's eye, do not remove it. If not embedded, try to remove the object by having the person blink several times. If the object doesn't come out, gently flush the eye with water. Do not rub the eye. If the object still doesn't come out, the person should receive professional medical attention.

Frostbite: Handle the frostbitten area gently. Do not rub. If there is no danger of the affected area refreezing, soak it in warm water (not warmer than 105°F). Do not allow the frostbitten area to touch the side of the water container. Keep the frostbitten part in the water until normal color returns and it feels warm. Loosely bandage the area with dry, sterile dressings. If fingers or toes are frostbitten, put sterile gauze between them. Call 9-1-1 or seek emergency help as soon as possible.

Heat stroke and heat exhaustion: Remove the person from the heat. Loosen any tight clothing. Fan the person and apply cool, wet cloths to the skin. If the person is conscious, have him or her slowly drink some cool water. Call 9-1-1 if the person's condition does not improve or if you suspect heat stroke.

Heart attack and stroke: See pp. 162-63.

Hypothermia: Call 9-1-1 or the local emergency number. Move person to a warm place. Remove wet clothing and dry the person, if necessary. Warm the person gradually by wrapping him or her in warm blankets or clothing. Apply heat pads or other heat sources if available but do not apply directly to the body. If the person is alert, give him or her warm, non-alcoholic and decaffeinated liquids to drink.

Loss of limb: Call 9-1-1 or the local emergency number and care for any life-threatening conditions. If a limb is severed, it is important to properly protect the limb so that it can possibly be reattached. After the victim is cared for, the limb should be wrapped in sterile gauze or clean material and placed in a clean plastic bag or other suitable container. Pack ice around the limb on the outside of the bag or container to keep the limb cold. Be sure the limb is taken to the hospital with the person.

Poisoning: Care for any life-threatening conditions. Call the National Poison Control Center (800-222-1222), 9-1-1, or the local emergency number and follow their directions. Do not give the person any food or drink or induce vomiting unless specified to do so by medical professionals.

Shock (injury-related): Monitor breathing and consciousness. Have the person lie down and keep him or her as comfortable as possible. Elevate his or her legs 8 to 12 inches unless you suspect a head, neck, or back injury or broken hip or leg bones. Do not attempt to move the person if spinal injury is suspected. Maintain normal body temperature. If the weather is cold or damp, place blankets or extra clothing over and under the person; if the weather is hot, provide shade.

Snakebite: Call 9-1-1 or the local emergency number. Wash the injury. Keep the area still and at a lower level than the heart. Keep the person calm. If professional medical help cannot get to the person within 30 minutes, consider using a snakebite kit if available. Care for a bite from an elapid snake, such as a coral snake, is the same except you should apply an elastic roller bandage after washing the wound.

Sprains and fractures: Apply ice to reduce swelling and pain. Do not try to straighten or move broken limbs. Apply a splint to immobilize the injured area only if you have to move or transport the person to seek medical attention, and it does not cause more pain. If you suspect a serious injury, call 9-1-1 or the local emergency number.

Sting from insect: If possible, remove the stinger by scraping it away with your finger or a plastic card (like a credit card) or using tweezers. If you use tweezers, grasp the stinger, not the venom sac. Wash the area with soap and water. Cover it to keep it clean. Apply a cold pack to reduce pain and swelling. Call 9-1-1 or the local emergency number immediately if the wound does not stop swelling, the person collapses, or he or she is known to be allergic to the sting.

Unconsciousness: Call 9-1-1 or the local emergency number immediately. Care for any life-threatening conditions. If the person shows signs of life (movement and breathing), place him or her in the recovery position (i.e., lying on a side with head supported, so that the airway is open). Do not move the person if a spinal injury is suspected.

First Aid for Choking

The recommended first aid for a conscious choking victim who is unable to speak, cough, or breathe, is to deliver a series of five blows to the back and five thrusts to the abdomen. Have another person call 9-1-1 or the local emergency number. Obtain consent from the victim to treat him or her. Lean the victim forward and apply five blows to his or her back with the heel of your hand. Then stand or kneel behind the victim and wrap your arms around his or her waist. Make a fist with one hand and place the thumb side against the middle of the person's abdomen, just above the navel and well below the lower tip of the breastbone. Grasp your fist in your other hand and quickly thrust upwards into the abdomen five times. Continue back blows and abdominal thrusts until the object is dislodged, and the person can breathe or cough forcefully, or the person loses consciousness.

VITAL STATISTICS

Recent Trends in Vital Statistics

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

Births

An estimated 4,136,000 babies were born in the U.S. in 2009, a decrease from 4,247,000 in 2008. The birth rate decreased to 13.5 per 1,000 total population, a new record low.

The fertility rate (number of live births per 1,000 women aged 15-44 years) decreased to an estimated 66.8 for 2009, down from the 2008 rate of 68.4.

Deaths

The number of deaths during 2009 was estimated at 2,426,000 according to provisional data, down from 2,453,000 in 2008. The death rate in 2009 decreased to 7.9 deaths per 1,000 population, down from 8.1 in 2008. The infant death rate was 6.3 deaths under 1 year per 1,000 live births in 2009, down from 6.5 in 2008.

Natural Increase

As a result of natural increase (the excess of births over deaths), an estimated 1,710,000 persons were added to the population in 2009. The rate fell to 5.6 per 1,000 population, down from 5.8 in 2008.

Marriages

An estimated 2,077,000 marriages were performed in 2009, compared to 2,157,000 in 2008. The provisional marriage rate for 2009 (6.8 per 1,000 population) was down from the 2008 rate of 7.1.

Divorces

The divorce rate went down slightly from 3.5 per 1,000 population in 2008 to 3.4 per 1,000 population in 2009, according to provisional data. Data are incomplete however. The NCHS does not include divorce data for California, Georgia, Hawaii, Indiana, Louisiana, and Minnesota.

Births and Deaths in the U.S., 1960-2009

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

	BIRTHS		DEATHS			BIRTHS		DEATHS	
Year	Total number	Rate	Total number	Rate	Year	Total number	Rate	Total number	Rate
1960	4,257,850	23.7	1,711,982	9.5	1999	3,959,417	14.2	2,391,399	8.6
1970	3,731,386	18.4	1,921,031	9.5	2000	4,058,814	14.4	2,403,351	8.5
1980	3,612,258	15.9	1,989,841	8.8	2001	4,025,933	14.1	2,416,425	8.5
1990	4,092,994	16.7	2,148,463	8.6	2002	4,021,726	13.9	2,443,387	8.5
1992	4,049,024	15.8	2,175,613	8.5	2003	4,089,950	14.1	2,448,288	8.4
1993	4,000,240	15.4	2,268,553	8.7	2004	4,112,052	14.0	2,397,615	8.2
1994	3,952,767	15.0	2,278,994	8.7	2005	4,138,349	14.0	2,448,017	8.3
1995	3,899,589	14.6	2,312,132	8.7	2006	4,265,555	14.2	2,426,264	8.1
1996	3,891,494	14.4	2,314,690	8.6	2007	4,315,000	14.3	2,415,000	8.0
1997	3,880,894	14.2	2,314,245	8.5	2008	4,247,000	13.9	2,453,000	8.1
1998	3,941,553	14.3	2,337,256	8.5	2009[P]	4,136,000	13.5	2,426,000	7.9

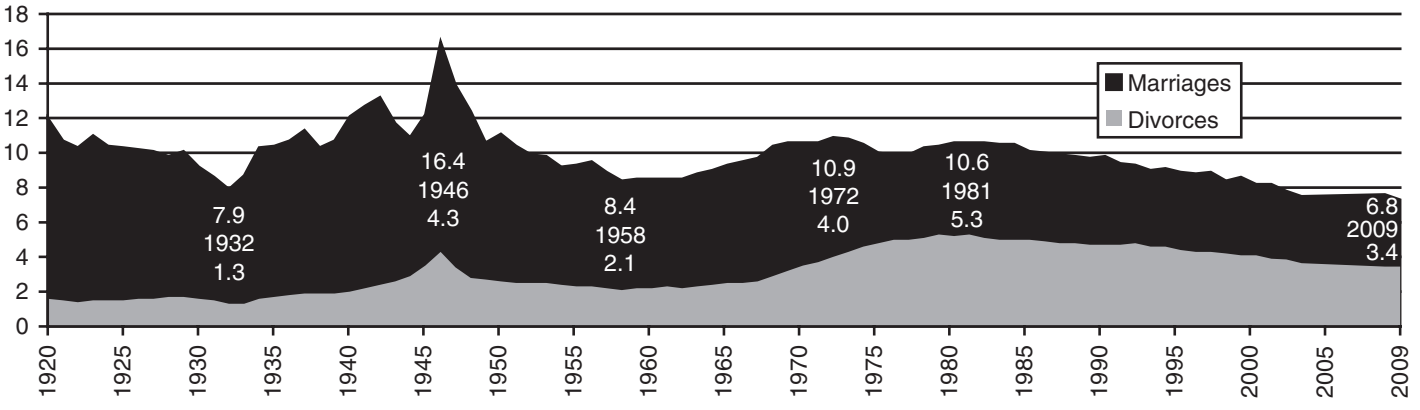
P = Provisional data. **Note:** Statistics cover only events occurring within the U.S. and exclude fetal deaths. Rates per 1,000 population; enumerated as of Apr. 1 for census years; estimated as of July 1 for all other years. Beginning 1970, statistics exclude births and deaths occurring among nonresidents of the U.S. Data include revisions. Birth and death rates for years in the 1990s revised on basis of the 2000 Census.

Marriage and Divorce Rates, 1920-2009

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

(Divorce rates for 2006-09 were calculated excluding data and populations from the nonreporting states California, Georgia, Hawaii, Indiana, Louisiana, and Minnesota. Some data are provisional.)

The U.S. marriage rate dipped during the Depression and peaked sharply just after World War II; the trend after that has been more gradual. The divorce rate generally rose from the 1920s through 1981, when it peaked at 5.3 per 1,000 population, before declining somewhat. The graph below shows marriage and divorce rates since 1920.



U.S. Median Age at First Marriage, 1890-2009

Source: Bureau of the Census, U.S. Dept. of Commerce

Year[1]	Men	Women	Year[1]	Men	Women	Year[1]	Men	Women	Year[1]	Men	Women	Year[1]	Men	Women
1890	26.1	22.0	1960	22.8	20.3	1991	26.3	24.1	1998	26.7	25.0	2004	27.4	25.3
1900	25.9	21.9	1965	22.8	20.6	1992	26.5	24.4	1999	26.9	25.1	2005	27.1	25.3
1910	25.1	21.6	1970	23.2	20.8	1993	26.5	24.5	2000	26.8	25.1	2006	27.5	25.5
1920	24.6	21.2	1975	23.5	21.1	1994	26.7	24.5	2001	26.9	25.1	2007	27.5	25.6
1930	24.3	21.3	1980	24.7	22.0	1995	26.9	24.5	2002	26.9	25.3	2008	27.6	25.9
1940	24.3	21.5	1985	25.5	23.3	1996	27.1	24.8	2003	27.1	25.3	2009	28.1	25.9
1950	22.8	20.3	1990	26.1	23.9	1997	26.8	25.0						

(1) Figures after 1947 based on pop. 15 to 54 years in Current Population Survey data; earlier figures based on decennial censuses.

Divorce Rates by State, 2009

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

State	Divorce rate	State	Divorce rate	State	Divorce rate
Alabama	4.3	Louisiana	NA	Oklahoma	4.6
Alaska	4.8	Maine	4.0	Oregon	3.5
Arizona	3.5	Maryland	2.7	Pennsylvania	2.3
Arkansas	5.6	Massachusetts	1.9	Rhode Island	3.2
California	NA	Michigan	3.3	South Carolina	2.7
Colorado	4.2	Minnesota	NA	South Dakota	3.2
Connecticut	3.1	Mississippi	4.1	Tennessee	4.1
Delaware	3.9	Missouri	3.9	Texas	3.1
District of Columbia	2.2	Montana	4.0	Utah	3.9
Florida	4.3	Nebraska	3.0	Vermont	3.4
Georgia	NA	Nevada	6.7	Virginia	3.6
Hawaii	NA	New Hampshire	3.7	Washington	3.9
Idaho	5.0	New Jersey	2.8	West Virginia	5.1
Illinois	2.5	New Mexico	4.0	Wisconsin	3.1
Indiana	NA	New York	2.4	Wyoming	5.2
Iowa	2.4	North Carolina	3.9	Puerto Rico	3.8
Kansas	3.7	North Dakota	2.5		
Kentucky	4.6	Ohio	3.2	**United States**	**3.4**

NA = Not available. **Note:** Rates per 1,000 population.

Birth Rates; Fertility Rates by Age of Mother, 1950-2008

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

			Live births per 1,000 women by age of mother									
	Birth	Fertility	10-14	15-19 years			20-24	25-29	30-34	35-39	40-44	45-49
Year	rate[1]	rate[2]	years	Total	15-17	18-19	years	years	years	years	years	years
1950	24.1	106.2	1.0	81.6	40.7	132.7	196.6	166.1	103.7	52.9	15.1	1.2
1960	23.7	118.0	0.8	89.1	43.9	166.7	258.1	197.4	112.7	56.2	15.5	0.9
1970	18.4	87.9	1.2	68.3	38.8	114.7	167.8	145.1	73.3	31.7	8.1	0.5
1980	15.9	68.4	1.1	53.0	32.5	82.1	115.1	112.9	61.9	19.8	3.9	0.2
1990	16.7	70.9	1.4	59.9	37.5	88.6	116.5	120.2	80.8	31.7	5.5	0.2
1992	15.8	68.4	1.4	60.3	37.6	93.6	113.7	115.7	79.6	32.3	5.9	0.3
1993	15.4	67.0	1.4	59.0	37.5	91.1	111.3	113.2	79.9	32.7	6.1	0.3
1994	15.0	65.9	1.4	58.2	37.2	90.2	109.2	111.0	80.4	33.4	6.4	0.3
1995	14.6	64.6	1.3	56.0	35.5	87.7	107.5	108.8	81.1	34.0	6.6	0.3
1996	14.4	64.1	1.2	53.5	33.3	84.7	107.8	108.6	82.1	34.9	6.8	0.3
1997	14.2	63.6	1.1	51.3	31.4	82.1	107.3	108.3	83.0	35.7	7.1	0.4
1998	14.3	64.3	1.0	50.3	29.9	80.9	108.4	110.2	85.2	36.9	7.4	0.4
1999	14.2	64.4	0.9	48.8	28.2	79.1	107.9	111.2	87.1	37.8	7.4	0.4
2000	14.4	65.9	0.9	47.7	26.9	78.1	109.7	113.5	91.2	39.7	8.0	0.5
2001	14.1	65.3	0.8	45.3	24.7	76.1	106.2	113.4	91.9	40.6	8.1	0.5
2002	13.9	64.8	0.7	43.0	23.2	72.8	103.6	113.6	91.5	41.4	8.3	0.5
2003	14.1	66.1	0.6	41.6	22.4	70.7	102.6	115.6	95.1	43.8	8.7	0.5
2004	14.0	66.3	0.7	41.1	22.1	70.0	101.7	115.5	95.3	45.4	8.9	0.5
2005	14.0	66.7	0.7	40.5	21.4	69.9	102.2	115.5	95.8	46.3	9.1	0.6
2006	14.2	68.5	0.6	41.9	22.0	73.0	105.9	116.7	97.7	47.3	9.4	0.6
2007[3]	14.3	69.5	0.6	42.5	22.2	73.9	106.4	117.5	99.9	47.5	9.5	0.6
2008[3]	13.9	68.7	0.6	41.5	21.7	70.7	103.1	115.1	99.3	46.9	9.9	0.7

(1) Live births per 1,000 population. (2) Live births per 1,000 women 15-44 years of age. (3) Preliminary.

Cesarean Delivery Rates by State, 1996-2007

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

	1996	2007	Percent change 1996-2007		1996	2007	Percent change 1996-2007
Alabama	23.3%	33.8%	45%	Missouri	20.4%	30.3%	49%
Alaska	16.7	22.6	35	Montana	19.1	29.4	54
Arizona	16.1	26.2	63	Nebraska	19.8	30.9	56
Arkansas	25.3	34.8	38	Nevada	19.3	33.1	72
California	20.6	32.1	56	New Hampshire	20.3	30.8	52
Colorado	15.1	25.8	71	New Jersey	24.0	38.3	60
Connecticut	19.8	34.6	75	New Mexico	17.2	23.3	35
Delaware	21.0	32.1	53	New York	22.9	33.7	47
District of Columbia	21.3	32.6	53	North Carolina	21.1	30.7	45
Florida	21.6	37.2	72	North Dakota	18.9	28.4	50
Georgia	20.9	32.0	53	Ohio	19.0	29.8	57
Hawaii	17.5	26.4	51	Oklahoma	22.5	33.6	49
Idaho	16.0	24.0	50	Oregon	16.9	28.2	67
Illinois	19.3	30.3	57	Pennsylvania	19.4	30.1	55
Indiana	20.3	29.4	45	Rhode Island	17.7	32.2	82
Iowa	18.6	29.4	58	South Carolina	22.6	33.4	48
Kansas	19.2	29.8	55	South Dakota	20.8	26.6	28
Kentucky	21.3	34.6	62	Tennessee	21.7	33.3	53
Louisiana	26.4	35.9	36	Texas	23.1	33.7	46
Maine	20.8	30.0	44	Utah	15.9	22.2	40
Maryland	21.6	33.1	53	Vermont	16.5	26.8	62
Massachusetts	19.8	33.5	69	Virginia	21.1	33.5	59
Michigan	20.2	30.4	50	Washington	16.8	29.0	73
Minnesota	16.9	26.2	55	West Virginia	22.8	35.2	54
Mississippi	26.6	36.2	36	Wisconsin	15.6	25.0	60
				Wyoming	18.3	26.9	47
				United States	**20.7**	**31.8**	**54**

Note: The cesarean rate is the percentage of all live births by cesarean delivery.

Assisted Reproductive Technology (ART) Pregnancy Success Rates, 2007

Source: *2007 Assisted Reproductive Technology Success Rates: National Summary and Fertility Clinic Reports*, Centers for Disease Control (CDC), U.S. Dept. of Health and Human Services

Type of cycle	Age of woman[1] Under 35	35-37	38-40	41-42	43-44
			Number		
Fresh embryos from nondonor eggs	42,127	23,504	20,612	9,535	4,814
Average number of embryos transferred	2.2	2.5	2.8	3.1	3.2
Frozen embryos from nondonor eggs	10,518	5,388	3,518	1,126	448
Average number of embryos transferred	2.2	2.2	2.4	2.5	2.4
Fresh embryos from nondonor eggs			Percent distribution		
Cycles resulting in pregnancies	45.7%	37.2%	28.1%	18.4%	10.2%
Cycles resulting in live births[2]	39.6	30.5	20.9	11.5	5.4
Retrievals resulting in live births[2]	42.9	34.2	24.4	14.0	6.7
Transfers resulting in live births[2]	45.9	36.9	27.1	16.0	8.4
Transfers resulting in singleton live births[2]	29.9	25.7	20.6	13.6	7.7
Pregnancies with twins	33.2	28.2	21.6	14.0	10.6
Pregnancies with triplets or more	3.5	4.5	4.0	2.5	0.8
Live births having multiple infants[2]	34.9	30.4	23.9	15.4	8.9
Cancellations	7.6	10.8	14.1	17.8	19.6
Frozen embryos from nondonor eggs					
Transfers resulting in live births[2]	33.6%	29.9%	25.0%	20.9%	14.7%

Donor eggs	All ages combined[3] Fresh embryos	Frozen embryos
Number of transfers	10,321	5,633
Average number of embryos transferred	2.2	2.3
Percentage of transfers resulting in live births[2]	55.1%	31.9%

Note: 89% (430 of 483) of ART clinics in the U.S. submitted data in 2007. A total of 142,435 cycles were reported. There were 43,412 live-birth deliveries resulting from ART cycles started in 2007. There were 57,569 infants born as a result of ART cycles performed in 2007. (1) Clinic-specific outcome rates are unreliable for women older than 44 undergoing ART cycles using fresh or frozen embryos with nondonor eggs. (2) A multiple-infant birth is counted as one live birth. (3) All ages (including ages over 44) are reported together because previous data show that patient age does not materially affect success with donor eggs.

Numbers of Multiple Births in the U.S., 1990-2007

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

The general upward trend in multiple births reflects greater numbers of births to older women and increased use of fertility drugs.

Year	Twins	Triplets	Quadruplets	Quintuplets[1]	Year	Twins	Triplets	Quadruplets	Quintuplets[1]
1990	93,865	2,830	185	13	2000	118,916	6,742	506	77
1993	96,445	3,834	277	57	2001	121,246	6,885	501	85
1994	97,064	4,233	315	46	2002	125,134	6,898	434	69
1995	96,736	4,551	365	57	2003	128,665	7,110	468	85
1996	100,750	5,298	560	81	2004	132,219	6,750	439	86
1997	104,137	6,148	510	79	2005	133,122	6,208	418	68
1998	110,670	6,919	627	79	2006	137,085	6,118	355	67
1999	114,307	6,742	512	67	2007	138,961	5,967	369	91

(1) Quintuplets and other multiple births of 5 or more.

Top 15 Countries for U.S. Foreign Adoptions, 2000-09[1]

Source: Office of Immigration Statistics, Dept. of Homeland Security

Country	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
China	2,990	3,852	5,453	6,493	7,906	7,044	6,859	6,119	4,681	5,053
Ethiopia	2,221	1,666	1,255	732	441	289	135	105	158	95
Russia	1,580	1,859	2,310	3,706	4,639	5,865	5,209	4,939	4,279	4,269
South Korea	1,106	1,038	939	1,376	1,630	1,716	1,790	1,779	1,870	1,794
Guatemala	773	4,082	4,728	4,135	3,783	3,264	2,328	2,419	1,609	1,518
Ukraine	605	487	606	460	821	723	702	1,106	1,246	659
Vietnam	490	737	828	163	NA	25	382	766	737	724
Haiti	336	300	190	309	234	356	250	187	192	131
India	298	306	416	320	323	406	472	464	543	503
Kazakhstan	298	380	540	587	755	826	825	819	672	398
Philippines	292	279	265	245	271	196	214	221	219	173
Taiwan	254	262	184	187	141	89	107	41	44	24
Colombia	237	308	310	344	291	287	272	334	407	246
Nigeria	122	114	35	53	62	59	46	41	33	5
Ghana	104	100	33	28	16	11	6	11	17	13
Total[2]	**12,782**	**17,229**	**19,741**	**20,705**	**22,710**	**22,911**	**21,320**	**20,100**	**19,087**	**18,120**

NA = Not available. (1) Ranked by 2009 totals. (2) Total includes countries not shown.

10 Leading Causes of Infant Death in the U.S., 2007

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

Cause	Number	Percent of total deaths	Mortality rate[1]
Congenital malformations, deformations, and chromosomal abnormalities	5,785	19.9%	134.0
Disorders related to short gestation and low birth weight, not elsewhere classified	4,857	16.7	112.5
Sudden infant death syndrome	2,453	8.4	56.8
Newborn affected by maternal complications of pregnancy	1,769	6.1	41.0
Accidents (unintentional injuries)	1,285	4.4	29.8
Newborn affected by complications of placenta, cord, and membranes	1,135	3.9	26.3
Bacterial sepsis[2] of newborn	820	2.8	19.0
Respiratory distress of newborn	789	2.7	18.3
Diseases of the circulatory system	624	2.1	14.5
Neonatal hemorrhage	597	2.0	13.8
All other causes	9,024	31.0	209.0
All causes	**29,138**	**100.0**	**674.9**

(1) Infant deaths per 100,000 live births. (2) Toxic condition resulting from the spread of bacteria.

Nonmarital Childbearing in the U.S., 1970-2007

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

	1970	1975	1980	1985	1990	1995	2000	2003	2004	2005	2006	2007
Births to unmarried mothers (thous.)	**399**	**448**	**666**	**828**	**1,165**	**1,254**	**1,347**	**1,416**	**1,470**	**1,527**	**1,642**	**1,715**
Race of mother	**Percent of live births to unmarried mothers**											
All races	10.7%	14.3%	18.4%	22.0%	28.0%	32.2%	33.2%	34.6%	35.8%	36.9%	38.5%	39.7%
White	5.5	7.1	11.2	14.7	20.4	25.3	27.1	29.4	30.5	31.7	—	34.8
Black	37.5	49.5	56.1	61.2	66.5	69.9	68.5	68.2	68.8	69.3	—	71.2
American Indian or Alaska Native	22.4	32.7	39.2	46.8	53.6	57.2	58.4	61.3	62.3	63.5	64.6	65.3
Asian or Pacific Islander	—	—	7.3	9.5	13.2	16.3	14.8	15.0	15.5	16.2	16.3	16.6
Hispanic origin (selected states)[1,2]	—	—	23.6	29.5	36.7	40.8	42.7	45.0	46.4	48.0	49.9	51.3
White, non-Hispanic (selected states)[1]	—	—	9.5	12.4	16.9	21.2	22.1	23.6	24.5	25.3	26.6	27.8
Black, non-Hispanic (selected states)[1]	—	—	57.2	62.0	66.7	70.0	68.7	68.5	69.3	69.9	70.7	71.6
Maternal age	**Percent distribution of live births to unmarried mothers**											
Under 20 years	50.1%	52.1%	40.8%	33.8%	30.9%	30.9%	28.0%	24.3%	23.7%	23.1%	22.7%	22.5%
20-24 years	31.8	29.9	35.6	36.3	34.7	34.5	37.4	38.8	38.5	38.3	38.1	37.6
25 years and over	18.1	18.0	23.5	29.9	34.4	34.7	34.6	36.9	37.8	38.6	39.2	39.9
Race of mother	**Live births per 1,000 unmarried women 15-44 years of age[3]**											
All races and origins	26.4	24.5	29.4	32.8	43.8	44.3	44.0	44.9	46.1	47.5	—	52.3
White[4]	13.9	12.4	18.1	22.5	32.9	37.0	38.2	40.4	41.6	43.0	—	48.1
Black[4]	95.5	84.2	81.1	77.0	90.5	74.5	70.5	66.3	67.2	67.8	—	72.6
Hispanic origin (selected states)[1,2]	—	—	—	—	89.6	88.7	87.2	92.2	95.7	100.3	—	108.4
White, non-Hispanic	—	—	—	—	—	28.1	28.0	28.6	29.4	30.1	—	33.3

— = Not available. (1) Data for Hispanics and non-Hispanics are affected by expansion of the reporting area for an Hispanic-origin item on the birth certificate and by immigration. The states in the reporting area increased from 22 in 1980, to 23 and the District of Columbia in 1983, 48 and DC by 1990, and 50 and DC by 1993. (2) Includes mothers of all races. (3) Rates computed by relating births to unmarried mothers, regardless of mother's age, to unmarried women 15-44 years of age. (4) For 1970 and 1975, birth rates are by race of child.

Number, Ratio, and Rate of Legal Abortions in U.S., 1970-2006

Source: *Abortion Surveillance, U.S., 2006*, Centers for Disease Control and Prevention, U.S. Dept. of Health and Human Services

Year	Legal abortions	Ratio[1]	Rate[2]	Year	Legal abortions	Ratio[1]	Rate[2]	Year	Legal abortions	Ratio[1]	Rate[2]
1970	193,491	52	5	1983	1,268,987	349	23	1995	1,210,883	311	20
1971	485,816	137	11	1984	1,333,521	364	24	1996	1,225,937	315	21
1972	586,760	180	13	1985	1,328,570	354	24	1997	1,186,039	306	20
1973	615,831	196	14	1986	1,328,112	354	23	1998[3]	884,273	264	17
1974	763,476	242	17	1987	1,353,671	356	24	1999[3]	861,789	256	17
1975	854,853	272	18	1988	1,371,285	352	24	2000[4]	857,475	245	16
1976	988,267	312	21	1989	1,396,658	346	24	2001[4]	853,485	246	16
1977	1,079,430	325	22	1990	1,429,247	344	24	2002[4]	854,122	246	16
1978	1,157,776	347	23	1991	1,388,937	338	24	2003[5]	848,163	241	16
1979	1,251,921	358	24	1992	1,359,146	334	23	2004[5]	839,226	238	16
1980	1,297,606	359	25	1993	1,330,414	333	23	2005[6]	820,151	233	15
1981	1,300,760	358	24	1994	1,267,415	321	21	2006[6]	846,181	236	16
1982	1,303,980	354	24								

(1) Number of abortions per 1,000 live births. (2) Number of abortions per 1,000 women aged 15-44 years. (3) Without estimates for AK, CA, NH, and OK. (4) Without estimates for AK, CA, and NH. (5) Without estimates for CA, NH, and WV. (6) Without estimates for CA, NH, and LA.

Reported Abortions by Age, Race, and Marital Status, 2006

Source: *Abortion Surveillance, U.S., 2006*, Centers for Disease Control and Prevention, U.S. Dept. of Health and Human Services

	Race							
	White		Black		Other		Total, all races	
Characteristic	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Age group (years)								
Under 15	1,318	0.4%	1,549	0.7%	148	0.4%	3,015	0.5%
15-19	53,047	16.5	35,068	16.6	5,646	13.4	93,761	16.3
20-24	108,387	33.8	68,195	32.2	12,193	29.0	188,775	32.8
25-29	74,533	23.2	54,528	25.8	10,080	24.0	139,141	24.2
30-34	43,398	13.5	31,229	14.8	7,274	17.3	81,901	14.2
35-39	29,393	9.2	16,365	7.7	4,740	11.3	50,498	8.8
40 and over	11,065	3.4	4,744	2.2	1,979	4.7	17,788	3.1
Total[1]	**321,141**	**100.0**	**211,678**	**100.0**	**42,060**	**100.0**	**574,879**	**100.0**
Marital status								
Married	52,213	17.9	20,444	10.6	12,435	31.9	85,092	16.3
Unmarried	239,433	82.1	172,428	89.4	26,534	68.1	438,395	83.7
Total[2]	**291,646**	**100.0**	**192,872**	**100.0**	**38,969**	**100.2**	**523,487**	**100.0**

(1) Data from 36 reporting areas; excludes three states (CA, LA, and NH) that did not report data and 13 states/areas (AZ, CT, DC, FL, IL, MA, NE, NV, NM, RI, UT, WA, and WY) for which race by age either was not reported or was reported as unknown for more than 15% of women. (2) Data from 33 reporting areas; excludes three states (CA, LA, and NH) that did not report data and 16 states/areas (AZ, AR, CT, DC, FL, IL, MD, MA, NE, NV, NM, NY [excluding New York City], RI, UT, WA, and WY) for which race by marital status either was not reported or was reported as unknown for more than 15% of women.

Sexual Behavior in the U.S.

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

Data released by the National Center for Health Statistics in 2005 show that about 90% of U.S. men and women 18-44 years of age think of themselves as heterosexual; 2.3% of men and 1.3% of women as homosexual; and 1.8% of men and 2.8% of women as bisexual. However, 6.2% of men 18-44 years of age reported ever having had sex with another male as of 2002 (up from 2.3% in 1991), and 11.5% of women reported ever having had a sexual experience with another woman (up from 4.1% in 1992).

Ten percent of males age 15-44 had never had sex with a female, but this percentage varied greatly with age: more than half (52%) of males age 15-17 had never had sex with a female, but only 1.8% of males age 40-44 had not done so. Percentages were slightly lower for women, with only 8.4% of females age 15-44 having never had sex with a male, with specific percentages ranging from 50.2% for females age 15-17 to only 1.3% for females age 40-44.

Among men age 15-44 who had sex with at least one partner in the previous year, 39% reported using a condom in their most recent sexual encounter (24% of married men and 65% of never-married men). Among women, only 22% reported using a condom (13% of married and 42% of never-married women). Condom use was also more frequent among younger men and women: in the 15-19 age group, 66% of males and 44% of females used a condom in their most recent sexual encounter.

Lifetime and Median Number of Sexual Partners, by Age and Race, 2002

Source: Sexual Behavior and Selected Health Measures, 2002, National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

	Number of opposite-sex partners in lifetime, % distrib.						Median no.[2]
	0	1	2	3-6	7-14	15+	
Male, 15-44 years[1]	**9.6**	**12.5**	**8.0**	**27.2**	**19.5**	**23.2**	**5.6**
Age							
15-19	43.5	23.4	9.0	17.0	4.9	2.3	1.6
20-24	9.9	15.7	11.6	33.1	13.9	15.8	3.8
25-44	2.9	9.5	6.9	27.7	23.7	29.2	6.7
Race/Hispanic origin							
White, non-Hispanic	9.8	13.4	8.3	27.0	19.2	22.3	5.3
Black, non-Hispanic	8.6	5.8	5.9	24.0	22.1	33.7	8.3
Hispanic or Latino	9.1	13.5	8.5	32.5	18.4	17.9	4.5

	Number of opposite-sex partners in lifetime, % distrib.						Median no.[2]
	0	1	2	3-6	7-14	15+	
Female, 15-44 years[1]	**8.6**	**22.5**	**10.8**	**32.6**	**16.3**	**9.2**	**3.3**
Age							
15-19	37.8	27.2	9.0	19.1	5.0	1.9	1.4
20-24	8.9	24.6	13.0	32.2	14.4	6.9	2.8
25-44	1.7	20.9	10.7	36.0	19.4	11.4	3.8
Race/Hispanic origin							
White, non-Hispanic	7.8	21.0	10.6	32.1	18.2	10.2	3.6
Black, non-Hispanic	7.7	12.4	8.4	44.8	18.0	8.8	4.1
Hispanic or Latina	10.5	34.6	14.9	27.2	8.2	4.6	1.7

(1) Includes people of other or multiple race and origin groups, not shown separately. (2) Excludes people who have never had intercourse with an opposite-sex partner.

Contraceptive Use in the U.S., by Age, 2006-08

Source: National Survey of Family Growth, National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

	Age in years						
	15-44	15-19	20-24	25-29	30-34	35-39	40-44
	Number in thousands						
All women	**61,864**	**10,431**	**10,140**	**10,250**	**9,587**	**10,475**	**10,982**
Contraceptive status and method	Percent distribution[2]						
Using contraception	**61.8%**	**28.2%**	**54.7%**	**64.2%**	**70.3%**	**75.0%**	**77.8%**
Female sterilization	16.7	—	1.3	9.6	20.6	28.2	39.1
Male sterilization	6.1	0.0	0.4	2.1	5.8	12.4	15.3
Pill	17.3	15.2	26.2	22.6	17.4	14.4	8.6
Implant, Lunelle™, or patch	0.7	0.5	0.8	1.3	0.9	0.3	—
3-month injectable (Depo-Provera™)	2.0	2.6	2.8	3.3	1.6	0.7	0.9
Contraceptive ring	1.5	1.0	3.4	2.0	1.7	0.7	0.3
Intrauterine device (IUD)	3.4	1.0	3.2	4.0	4.7	4.4	3.2
Condom	10.0	6.4	13.4	13.1	12.0	8.4	6.8
Periodic abstinence—calendar rhythm	0.5	—	0.2	0.7	0.7	0.9	0.5
Periodic abstinence—natural family planning	0.1	0.0	0.0	0.0	0.6	—	—
Withdrawal	3.2	1.1	2.8	5.1	3.7	4.3	2.5
Other methods[1]	0.3	—	—	0.4	0.7	—	—
Not using contraception	**38.2**	**71.8**	**45.3**	**35.8**	**29.7**	**25.0**	**22.2**
Surgically sterile–female (noncontraceptive)	0.4	0.0	0.0	—	—	0.4	1.7
Nonsurgically sterile–female or male	1.7	0.5	1.5	2.6	1.6	2.2	1.8
Pregnant or postpartum	5.4	3.9	10.0	7.7	8.1	1.9	1.7
Seeking pregnancy	4.1	0.9	4.3	6.3	5.9	5.1	2.5
Never had intercourse or no intercourse in last 3 months	19.2	60.0	20.4	10.6	8.7	7.4	8.0
Had intercourse without contraception in last 3 months	7.3	6.5	9.1	8.6	5.3	8.0	6.4

— = Figure does not meet standard of reliability or precision. **Note:** Data was collected in interviews conducted in 2006-08 for the National Survey of Family Growth. For all methods shown, the reported standard error was less than 3.1%. (1) Includes diaphragm (with or without jelly or cream), emergency contraception, female condom or vaginal pouch, foam, cervical cap, Today™ sponge, suppository or insert, jelly or cream (without diaphragm), and other methods.

Contraceptive Use in the U.S., by Race and Marital Status, 2006-08

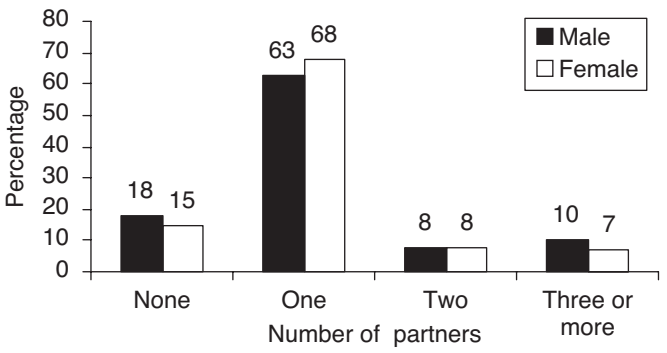
Source: National Survey of Family Growth, National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

	Race and Hispanic origin					Marital and cohabitation status			
	Hispanic	White, single race	Black, single race	Total other or multiple race	Asian only	Currently married	Currently cohabiting	Formerly married	Never married
	Number in thousands[2]								
All women	**10,377**	**37,660**	**8,452**	**5,375**	**2,493**	**27,006**	**6,821**	**5,190**	**22,847**
Contraceptive status and method	Percent distribution					Percent distribution			
Using contraception	**58.5%**	**64.7%**	**54.5%**	**59.2%**	**63.9%**	**78.6%**	**71.2%**	**60.6%**	**39.3%**
Female sterilization	19.6	14.9	21.8	16.1	11.6	23.6	16.3	35.3	4.5
Male sterilization	3.4	8.3	1.1	3.9	4.5	12.7	2.2	2.3	0.3
Pill	11.4	21.2	11.4	10.9	11.1	16.3	23.2	11.4	18.1
Implant, Lunelle™, or patch	1.5	0.5	0.6	1.0	0.0	0.7	1.0	—	0.6
3-month injectable (Depo-Provera™)	2.6	1.4	4.1	1.8	—	1.4	3.1	2.6	2.2
Contraceptive ring	1.2	1.6	1.7	0.8	—	1.0	3.7	0.8	1.5
Intrauterine device (IUD)	4.8	3.3	2.8	2.2	1.9	5.3	4.7	2.1	1.1
Condom	9.4	9.5	8.8	16.2	26.1	11.7	10.2	4.1	9.1
Periodic abstinence—calendar rhythm	0.6	0.5	—	1.0	2.1	1.0	0.4	—	0.2
Periodic abstinence—natural family planning	—	—	—	—	—	0.2	—	—	—
Withdrawal	3.0	3.3	2.1	5.1	4.8	4.5	5.3	1.4	1.5
Other methods[1]	0.5	0.3	—	—	—	0.3	—	—	0.2
Not using contraception	**41.5**	**35.3**	**45.5**	**40.8**	**36.1**	**21.4**	**28.8**	**39.4**	**60.7**
Surgically sterile–female (noncontraceptive)	0.7	0.2	0.4	—	0.0	0.3	—	1.0	0.4
Nonsurgically sterile–female or male	1.8	1.6	1.8	1.9	1.2	1.0	2.2	2.7	2.1
Pregnant or postpartum	8.3	4.9	5.7	3.4	2.9	7.2	10.5	2.6	2.6
Seeking pregnancy	6.2	3.5	4.4	4.1	3.0	6.4	7.1	0.8	1.3
Never had intercourse or no intercourse in last 3 months	18.8	18.3	22.6	21.2	23.1	0.9	1.8	21.1	45.6
Had intercourse without contraception in last 3 months	5.8	6.7	10.6	9.5	5.9	5.5	6.9	11.3	8.7

— = Figure does not meet standard of reliability or precision. **Note:** Data was collected in interviews conducted in 2006-08 for the National Survey of Family Growth. For all methods shown, the reported standard error was less than 3.1%. (1) Includes diaphragm (with or without jelly or cream), emergency contraception, female condom or vaginal pouch, foam, cervical cap, Today™ sponge, suppository or insert, jelly or cream (without diaphragm), and other methods.

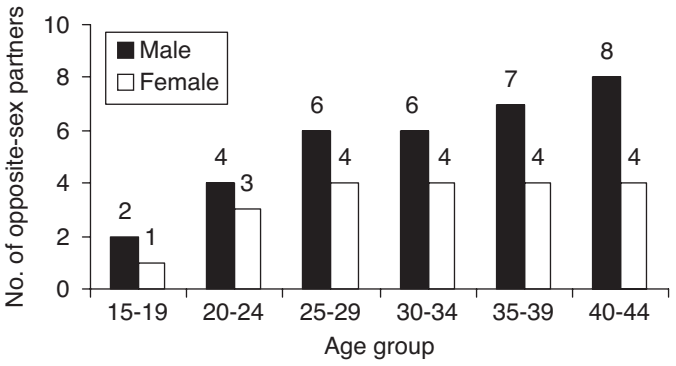
Median Number of Opposite-Sex Partners in Past Year, 2002

Source: *Sexual Behavior and Selected Health Measures, 2002*, National Center for Health Statistics
Note: U.S. males and females 15-44 years of age.



Median Number of Opposite-Sex Partners in Lifetime, 2002

Source: *Sexual Behavior and Selected Health Measures, 2002*, National Center for Health Statistics



Sexual Activity of High School Students, 2009

Source: *Youth Risk Behavior Surveillance—United States, 2009*, Centers for Disease Control and Prevention

	Ever had sexual intercourse			First sexual intercourse before age 13			Currently sexually active[1]			Condom use during last sexual intercourse[2]		
	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
Race/ethnicity												
White[3]	44.7%	39.6%	42.0%	2.2%	4.4%	3.4%	35.4%	28.9%	32.0%	56.1%	71.0%	63.3%
Black[3]	58.3	72.1	65.2	5.6	24.9	15.2	45.0	50.3	47.7	51.8	72.5	62.4
Hispanic	45.4	52.8	49.1	3.7	9.8	6.7	34.1	35.0	34.6	48.0	61.7	54.9
Grade												
9	29.3	33.6	31.6	3.6	11.3	7.7	21.6	21.2	21.4	57.7	69.9	64.0
10	39.6	41.9	40.9	3.6	9.0	6.5	29.3	28.8	29.1	63.5	71.9	67.8
11	52.5	53.0	53.5	2.7	5.9	4.3	41.5	39.1	40.3	54.0	68.9	61.4
12	65.0	59.6	62.3	2.2	6.4	4.4	53.1	45.1	49.1	46.3	65.0	55.0
Total	**45.7**	**46.1**	**46.0**	**3.1**	**8.4**	**5.9**	**35.6**	**32.6**	**34.2**	**53.9**	**68.6**	**61.1**

(1) Sexual intercourse during the 3 months preceding the survey. (2) Among the 34.2% who were sexually active. (3) Non-Hispanic.

Sexual Activity of Older Adults

Source: National Social Life, Health, and Aging Project at the Univ. of Chicago

		% sexually active with a partner		% reporting sexual behavior			% reporting sexual problem[1]				
Sex	Age	In prev. 12 mo.	2-3+ times per mo.[1]	Intercourse[1]	Oral sex[1]	Masturbation[2]	Lack of interest	Stimulation problems	No pleasure	Anxiety	Pain
Men	57-64	83.7%	67.5%	91.1%	62.1%	63.4%	28.2%	30.7%	3.8%	25.1%	3.0%
	65-74	67.0	65.4	78.5	47.9	53.0	28.5	44.6	7.0	28.9	3.2
	75-85	38.5	54.2	83.5	28.3	27.9	24.2	43.5	5.1	29.3	1.0
Women	57-64	61.6	62.6	86.8	52.7	31.6	44.2	35.9	24.0	10.4	17.8
	65-74	39.5	65.4	85.4	46.5	21.9	38.4	43.2	22.0	12.5	18.6
	75-85	16.7	54.1	74.4	35.0	16.4	49.3	43.6	24.9	9.9	11.8

Note: Based on in-home interviews of 3,005 U.S. adults (1,550 women and 1,455 men) between July 2005 and Mar. 2006. (1) If reported having sex in prev. 12 months. (2) In prev. 12 months asked of all respondents by questionnaire.

U.S. Fires, 2009

Source: National Fire Protection Assn.

Fires

- Public fire departments responded to 1,348,500 fires in 2009, a 7.1% decrease from 2008. Every 23 seconds, a fire department responds to a fire somewhere in the United States.
- There were 480,500 structure fires in 2009, a decrease of 6.7% from 2008. 75% of them (362,500 fires) occurred in homes.
- Fires in vehicles dropped 7.2% from the previous year, totaling 219,000 in 2009.
- There were 649,000 fires in outside properties, a decrease of 7.4% from 2008.

Civilian deaths

- There were an estimated 3,010 civilian fire deaths in 2009. This was a 9.3% decrease from the year before.
- The number of civilian fire deaths that occurred in home structure fires decreased 6.9% to 2,565, and fires in the home caused 85% of all fire deaths.
- Fires caused an average of one civilian death every 175 minutes.

Civilian injuries

- There were an estimated 17,050 civilian fire injuries reported in 2009, a 2.1% increase over 2008. Nationwide, a civilian was injured in a fire every 31 minutes.
- Home structure fires were the site of 12,650 civilian fire injuries in 2009, and non-home structure fires accounted for 2,090 civilian injuries.

Property damage

- Direct property damage from fires amounted to an estimated $12.5 bil in 2009, a decrease of 19.4% from 2008. Structure fires accounted for $10.8 bil of property damage.
- Property loss associated with home fires came to $7.6 bil for 2009.

Intentionally set fires

- There were an estimated 26,500 intentionally set structure fires in 2009, a decrease of 13.1% from 2008.
- Intentionally set structure fires are believed to have resulted in 170 civilian deaths in 2009, a significant decrease of 46.0% from the year before. Property damage from intentionally set structure fires totaled $684 mil, a decrease of 21.0% from the 2008 figure.
- The number of intentionally set vehicle fires in 2009 was 15,000, a decrease of 14.3% from the previous year. Intentionally set vehicle fires caused an estimated $108 mil in property damage, a decrease of 22.3% from 2008.

U.S. Motor Vehicle Accidents, 2008

Source: National Safety Council; Natl. Highway Traffic Safety Admin.

An estimated 39,000 people in the U.S. were killed in motor vehicle accidents in 2008, according to preliminary figures from the National Safety Council, down 10% from the total for 2007. Although the number of drivers (208.1 mil) increased in 2008, vehicle miles driven (2.9 tril) and the death rate per 100 mil vehicle miles decreased 6% to 1.33.

Motor vehicle deaths per 10,000 registered vehicles dropped from 1.69 in 2007 to 1.51 in 2008, and were down from 2.02 in 1998, a decrease of 25% over 10 years. This rate has declined in most years since the introduction of the automobile. The rate of fatalities per 100,000 population declined 20% between 1998 and 2008, and 10% between 2007 and 2008.

The split between male and female licensed drivers was basically 50-50. Male drivers were involved in about 5.8 mil accidents, whereas female drivers were in 4.3 mil. Male drivers were also involved in 75% of fatal accidents, about 36,881, compared with 12,568 accidents involving female drivers.

In 2008, 11,773 traffic fatalities, or 32%, involved an intoxicated (blood alcohol concentration of 0.08 or greater) driver or motorcycle operator, a decline of 9.7% from 2007. In cases where a driver or nonoccupant drank at all, traffic fatalities totaled 13,846 people, or 37%. Driving under the influence of alcohol or drugs factored in about 14% of all traffic accidents.

Seat belt use was 84% in 2009. In 2008, safety belts and child restraints saved an estimated 13,494 lives. Another 2,546 lives were saved by frontal air bags. Women used safety belts (86%) more often than men (81%). The least likely safety belt users were rural drivers (79%) and drivers of pickup trucks (74%).

	Deaths	Injuries
All motor vehicle accidents	39,000	2,100,000
Collision between motor vehicles	15,100	1,530,000
Collision with fixed object	12,600	330,000
Pedestrian accidents	5,600	75,000
Noncollision accidents (e.g., rollovers)	4,500	100,000
Collision with pedal cycle	900	59,000
Collision with railroad train	200	1,000
Other (mostly collisions with animals)	100	5,000

Note: NSC numbers are rounded. NHTSA intoxication data is final.

Improper Driving Reported in Accidents, 2000-08

Source: National Safety Council

Type	Percentage of fatal accidents			Percentage of injury accidents			Percentage of all accidents		
	2008	2004	2000	2008	2004	2000	2008	2004	2000
Improper driving	**58.7%**	**66.0%**	**61.6%**	**59.9%**	**67.1%**	**60.3%**	**57.6%**	**61.0%**	**57.8%**
Speed too fast or unsafe	15.7	17.6	23.7	10.6	13.7	16.3	10.6	12.5	13.6
Right of way	10.2	13.1	18.6	15.6	19.1	19.9	12.9	15.7	20.1
Failed to yield	6.8	9.0	10.1	11.2	14.6	15.0	9.6	12.0	12.7
Disregarded signal	1.5	2.1	4.6	2.5	1.8	3.6	1.8	1.2	5.3
Passed stop sign	1.9	1.9	3.8	1.9	3.6	1.3	1.5	2.5	2.2
Drove left of center	5.9	7.3	8.2	1.1	1.7	1.1	1.0	1.3	1.0
Improper overtaking	1.0	1.3	0.9	0.5	0.9	0.6	0.8	0.9	0.9
Made improper turn	2.9	3.9	0.7	3.1	4.6	2.0	3.4	4.6	2.4
Followed too closely	0.7	0.8	0.5	7.2	7.2	4.3	6.8	8.0	5.7
Other improper driving	22.3	22.0	9.0	21.8	19.9	16.1	22.1	18.0	14.1
No improper driving stated	**41.3**	**34.0**	**38.4**	**40.1**	**32.9**	**39.7**	**42.4**	**39.0**	**42.2**

Note: Based on reports from state traffic authorities. When a driver was under the influence of alcohol or drugs, the accident was considered a result of the driver's physical condition—not a driving error. For this reason, accidents in which the driver was reported to be under the influence are included under "no improper driving stated."

Risk Behaviors in High School Students, 2009

Source: *Youth Risk Behavior Surveillance—United States, 2009*, Centers for Disease Control and Prevention

		Percent rarely or never wore seat belts[1]			Percent rarely or never wore bicycle helmets[2]			Percent who rode with a driver who had been drinking alcohol[3]		
		Female	Male	Total	Female	Male	Total	Female	Male	Total
Race	White, non-Hispanic	7.6%	11.2%	9.5%	80.2%	83.9%	82.3%	26.9%	25.5%	26.2%
	Black, non-Hispanic	8.3	14.8	11.7	92.7	92.9	92.8	28.7	31.2	30.0
	Hispanic	7.8	9.8	8.8	88.4	89.7	89.1	34.9	33.5	34.2
Grade	9	9.8	11.2	10.6	85.3	84.2	84.7	30.0	25.3	27.5
	10	6.8	11.7	9.4	82.8	86.9	85.2	27.6	28.3	28.0
	11	6.0	11.2	8.7	83.4	87.9	85.9	29.6	29.2	29.4
	12	8.0	12.0	10.1	79.4	84.1	82.1	27.9	28.6	28.2
Total		**7.7**	**11.5**	**9.7**	**83.1**	**85.8**	**84.7**	**28.8**	**27.8**	**28.3**

(1) When riding in a car driven by someone else. (2) Among the 69.5% of students who rode bicycles during the 12 months preceding the survey. (3) In a car or other vehicle one or more times in the 30 days preceding the survey.

Death Rates[1] for Suicide at Selected Ages, 1960-2006

Source: *Health, United States, 2007*, National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

Age	2006			2000			1980			1960		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
15-24	9.9	16.2	3.2	10.2	17.1	3.0	12.3	20.2	4.3	5.2	8.2	2.2
25-44	13.8	21.5	5.9	13.4	21.3	5.4	15.6	24.0	7.7	12.2	17.9	6.6
45-64	16.0	24.8	7.7	13.5	21.3	6.2	15.9	23.7	8.9	22.0	34.4	10.2
65 and older	14.2	28.5	3.9	15.2	31.1	4.0	17.6	35.0	6.1	24.5	44.0	8.4
All ages	**10.9**	**18.0**	**4.5**	**10.4**	**17.7**	**4.0**	**12.2**	**19.9**	**5.7**	**12.5**	**20.0**	**5.6**

Note: Rate is per 100,000 population.

Leading Causes of Death in the U.S., 2007

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

	Number	% of total deaths	Death rate[1]
All causes	**2,423,712**	**100.0%**	**803.6**
1. Diseases of heart	616,067	25.4	204.3
2. Cancer	562,875	23.2	186.6
3. Stroke	135,952	5.6	45.1
4. Chronic lower respiratory diseases	127,924	5.3	42.4
5. Accidents (unintentional injuries)	123,706	5.1	41.0
6. Alzheimer's disease	74,632	3.1	24.7
7. Diabetes	71,382	2.9	23.7
8. Influenza and pneumonia	52,717	2.2	17.5
9. Kidney disease	46,448	1.9%	15.4
10. Septicemia	34,828	1.4	11.5
11. Intentional self-harm (suicide)	34,598	1.4	11.5
12. Chronic liver disease and cirrhosis	29,165	1.2	9.7
13. Hypertension and hypertensive renal disease	23,965	1.0	7.9
14. Parkinson's disease	20,058	0.8	6.7
15. Assault (homicide)	18,361	0.8	6.1
All other causes (residual)	451,034	18.6	149.5

(1) Per 100,000 population.

Principal Types of Accidental Deaths in the U.S., 1970-2008

Source: National Safety Council

Year	Total	Motor vehicle	Falls	Poisoning	Drowning	Fires, flames, smoke	Suffocation: ingestion of food, object	Firearms	Mechanical suffocation
1970	NA	54,633	16,926	5,299	7,860	6,718	2,753	2,406	NA
1980	105,718	53,172	13,294	4,331	7,257	5,822	3,249	1,955	NA
1985	93,457	45,901	12,001	5,170	5,316	4,938	3,551	1,649	NA
1990	91,983	46,814	12,313	5,803	4,685	4,175	3,303	1,416	NA
1992	86,777	40,982	12,646	7,082	3,542	3,958	3,182	1,409	NA
1993	90,437	41,893	13,141	8,537	3,807	3,900	3,160	1,521	NA
1994	91,437	42,524	13,450	8,994	3,942	3,986	3,065	1,356	NA
1995	93,320	43,363	13,986	9,072	4,350	3,761	3,185	1,225	NA
1996	94,948	43,649	14,986	9,510	3,959	3,741	3,206	1,134	NA
1997	95,644	43,458	15,447	10,163	4,051	3,490	3,275	981	NA
1998	97,835	43,501	16,274	10,801	4,406	3,255	3,515	866	NA
1999[1]	97,860	42,401	13,162	12,186	3,529	3,348	3,885	824	1,618
2000	97,900	43,354	13,322	12,757	3,482	3,377	4,313	776	1,335
2001	101,537	43,788	15,019	14,078	3,281	3,309	4,185	802	1,370
2002	106,742	45,380	16,257	17,550	3,447	3,159	4,128	762	1,389
2003	109,277	44,757	17,229	19,457	3,306	3,369	4,272	730	1,309
2004	112,012	44,933	18,807	20,950	3,308	3,229	4,470	649	1,421
2005	117,809	45,343	19,656	23,617	3,582	3,197	4,386	789	1,514
2006[2]	121,599	45,316	20,823	27,531	3,579	3,109	4,332	642	1,580
2007[2]	121,000	43,100	23,300	25,600	4,200	3,000	4,800	660	1,600
2008[3]	118,000	39,000	22,900	29,000	3,600	3,000	4,900	680	1,900
				Death rates per 100,000 population					
1970	NA	26.8	8.3	2.6	3.9	3.3	1.4	1.2	NA
1980	47.8	23.4	5.9	1.9	3.2	2.6	1.4	0.9	NA
1985	39.3	19.3	5.0	2.2	2.2	2.1	1.5	0.7	NA
1990	36.9	18.8	4.9	2.3	1.9	1.7	1.3	0.6	NA
1992	34.0	16.1	5.0	2.7	1.4	1.6	1.2	0.6	NA
1993	35.1	16.3	5.1	3.4	1.5	1.5	1.2	0.6	NA
1994	35.1	16.3	5.2	3.5	1.5	1.5	1.2	0.5	NA
1995	35.5	16.5	5.3	3.4	1.7	1.4	1.2	0.5	NA
1996	35.8	16.5	5.6	3.5	1.5	1.4	1.2	0.4	NA
1997	35.7	16.2	5.8	3.8	1.5	1.3	1.2	0.4	NA
1998	36.2	16.1	6.0	4.0	1.6	1.2	1.3	0.3	NA
1999[1]	35.9	15.5	4.8	4.5	1.3	1.2	1.4	0.3	0.6
2000	35.6	15.7	4.8	4.6	1.3	1.2	1.6	0.3	0.5
2001	35.6	15.4	5.3	4.9	1.2	1.2	1.5	0.3	0.5
2002	37.1	15.8	5.6	6.4	1.2	1.1	1.4	0.3	0.5
2003	37.6	15.4	5.9	6.7	1.1	1.2	1.5	0.3	0.4
2004	38.1	15.3	6.4	7.1	1.1	1.1	1.5	0.2	0.5
2005	39.7	15.3	6.6	8.0	1.2	1.1	1.5	0.3	0.5
2006[2]	40.8	15.2	7.0	9.2	1.2	1.0	1.5	0.2	0.5
2007[2]	40.2	14.3	7.7	8.5	1.4	1.0	1.6	0.2	0.5
2008[3]	38.8	12.8	7.5	9.5	1.2	1.0	1.6	0.2	0.6

NA = Not available. **Note:** All figures include on-the-job deaths. (1) Data for 1999 and later not comparable with earlier data because of classification changes. (2) Revised data. (3) Preliminary. Totals include 13,107 other accidental deaths in 2008.

Worldwide Airline Fatalities, 1987-2008[1]

Source: National Safety Council

Year	Aircraft accidents[2]	Passenger deaths	Death rate[3]	Year	Aircraft accidents[2]	Passenger deaths	Death rate[3]
1987	25	900	0.06	1998	20	904	0.03
1988	29	742	0.04	1999	21	499	0.02
1989	29	879	0.05	2000	18	757	0.03
1990	27	544	0.03	2001	13	577	0.02
1991	29	638	0.03	2002	13	791	0.03
1992	28	1,070	0.06	2003	7	466	0.02
1993	33	864	0.04	2004	9	203	0.01
1994	27	1,170	0.05	2005	17	712	0.02
1995	25	711	0.03	2006	12	751	0.02
1996	24	1,146	0.05	2007	11	587	0.01
1997	25	921	0.04	2008[4]	11	439	0.01

(1) Excluding accidents due to acts of unlawful interference. (2) Involving 1 or more passenger fatalities and an aircraft with a maximum takeoff mass greater than 2,250 kg. (3) Passenger deaths per 100 mil passenger kilometers. (4) Preliminary.

Deaths in the U.S. Involving Firearms, by Age and Sex, 2006

Source: National Safety Council

	All ages	Under 5	5-14	15-19	20-24	25-44	45-64	65-74	75 & over
Total firearms deaths	**30,896**	**63**	**346**	**2,809**	**4,346**	**11,201**	**7,939**	**1,892**	**2,300**
Male	26,712	40	258	2,549	3,954	9,584	6,541	1,667	2,119
Female	4,184	23	88	260	392	1,617	1,398	225	181
Unintentional	642	13	41	100	93	187	133	33	42
Male	567	11	33	96	90	158	111	32	36
Female	75	2	8	4	3	29	22	1	6
Suicide	16,883	—	62	701	1,277	4,971	6,043	1,689	2,140
Male	14,734	—	52	639	1,157	4,250	5,091	1,522	2,023
Female	2,149	—	10	62	120	721	952	167	117
Homicide	12,791	48	237	1,940	2,887	5,754	1,653	158	114
Male	10,886	27	167	1,751	2,624	4,908	1,248	104	57
Female	1,905	21	70	189	263	846	405	54	57
Legal Intervention	360	0	1	33	48	205	68	4	1
Male	344	0	1	31	47	200	61	4	0
Female	16	0	0	2	1	5	7	0	1
Undetermined[1]	220	2	5	35	41	84	42	8	3
Male	181	2	5	32	36	68	30	5	3
Female	39	0	0	3	5	16	12	3	0

— = Not applicable/available. (1) The intention involved (whether accident, suicide, or homicide) could not be determined.

U.S. Infant Mortality Rates, by Race and Sex, 1960-2007[1]

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

	ALL RACES			WHITE			BLACK		
Year	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
1960	26.0	29.3	22.6	22.9	26.0	19.6	44.3	49.1	39.4
1970	20.0	22.4	17.5	17.8	20.0	15.4	32.6	36.2	29.0
1980	12.6	13.9	11.2	11.0	12.3	9.6	21.4	23.3	19.4
1985	10.6	11.9	9.3	9.3	10.6	8.0	18.2	19.9	16.5
1989	9.8	10.8	8.8	8.1	9.0	7.1	18.6	20.0	17.2
1990	9.2	10.3	8.1	7.6	8.5	6.6	18.0	19.6	16.2
1991	8.9	10.0	7.8	7.3	8.3	6.3	17.6	19.4	15.7
1992	8.5	9.4	7.6	6.9	7.7	6.1	16.8	18.4	15.3
1993	8.4	9.3	7.4	6.8	7.6	6.0	16.5	18.3	14.7
1994	8.0	8.8	7.2	6.6	7.2	5.9	15.8	17.5	14.1
1995	7.6	8.3	6.8	6.3	7.0	5.6	15.1	16.3	13.9
1996	7.3	8.0	6.6	6.1	6.7	5.4	14.7	16.0	13.3
1997	7.2	8.0	6.5	6.0	6.7	5.4	14.2	15.5	12.8
1998	7.2	7.8	6.5	6.0	6.5	5.4	14.3	15.7	12.8
1999	7.1	7.7	6.4	5.8	6.4	5.2	14.6	15.9	13.2
2000	6.9	7.6	6.2	5.7	6.2	5.1	14.1	15.5	12.6
2001	6.8	7.5	6.1	5.7	6.2	5.1	14.0	15.5	12.5
2002	7.0	7.6	6.3	5.8	6.4	5.1	14.4	15.4	13.3
2003	6.9	7.6	6.1	5.7	6.3	5.0	14.0	15.5	12.4
2004	6.8	7.5	6.1	5.7	6.2	5.1	13.8	15.2	12.3
2005	6.9	7.6	6.2	5.7	6.3	5.1	13.7	15.2	12.3
2006	6.7	7.3	6.0	5.6	6.1	5.0	13.3	14.4	12.2
2007	6.8	7.4	6.1	5.6	6.2	5.1	13.2	14.5	11.9

(1) Rates per 1,000 live births in specified group.

Years of Life Expected at Birth in U.S., 1900-2007

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

	ALL RACES			WHITE			BLACK		
Year[1]	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
1900	47.3	46.3	48.3	47.6	46.6	48.7	NA	NA	NA
1910	50.0	48.4	51.8	50.3	48.6	52.0	NA	NA	NA
1920	54.1	53.6	54.6	54.9	54.4	55.6	NA	NA	NA
1930	59.7	58.1	61.6	61.4	59.7	63.5	NA	NA	NA
1940	62.9	60.8	65.2	64.2	62.1	66.6	NA	NA	NA
1950	68.2	65.6	71.1	69.1	66.5	72.2	NA	NA	NA
1960	69.7	66.6	73.1	70.6	67.4	74.1	NA	NA	NA
1970	70.8	67.1	74.7	71.7	68.0	75.6	64.1	60.0	68.3
1975	72.6	68.8	76.6	73.4	69.5	77.3	68.8	62.4	71.3
1980	73.7	70.0	77.5	74.4	70.7	78.1	68.1	63.8	72.5
1985	74.7	71.2	78.2	75.3	71.9	78.7	69.3	65.0	73.4
1990	75.4	71.8	78.8	76.1	72.7	79.4	69.1	64.5	73.6
1992	75.5	72.1	78.9	76.4	73.0	79.5	69.6	65.0	73.9
1993	75.5	72.1	78.9	76.3	73.0	79.5	69.2	64.6	73.7
1994	75.7	72.4	79.0	76.5	73.3	79.6	69.5	64.9	73.9
1995	75.8	72.5	78.9	76.5	73.4	79.6	69.6	65.2	73.9
1996	76.1	73.1	79.1	76.8	73.9	79.7	70.2	66.1	74.2
1997	76.5	73.6	79.4	77.1	74.3	79.9	71.1	67.2	74.7
1998	76.7	73.8	79.5	77.3	74.5	80.0	71.3	67.6	74.8
1999	76.7	73.9	79.4	77.3	74.6	79.9	71.4	67.8	74.7
2000	76.8	74.1	79.3	77.3	74.7	79.9	71.8	68.2	75.1
2001	76.9	74.2	79.4	77.4	74.8	79.9	72.0	68.4	75.2
2002	76.9	74.3	79.5	77.4	74.9	79.9	72.1	68.6	75.4
2003	77.1	74.5	79.6	77.6	75.0	80.0	72.3	68.8	75.6
2004	77.5	74.9	79.9	77.9	75.4	80.4	72.8	69.3	76.0
2005	77.4	74.9	79.9	77.9	75.4	80.4	72.8	69.3	76.1
2006	77.7	75.1	80.2	78.2	75.7	80.6	73.2	69.7	76.5
2007	77.9	75.4	80.4	78.4	75.9	80.8	73.6	70.0	76.8

NA = Not available. (1) Data prior to 1940 for does not include all states.

U.S. Life Expectancy at Selected Ages, 2007

Source: National Center for Health Statistics (NCHS), U.S. Dept. of Health and Human Services

Exact age	ALL RACES[1]			WHITE			BLACK		
in years	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
0	77.9	75.4	80.4	78.4	75.9	80.8	73.6	70.0	76.8
1	77.5	74.9	79.9	77.8	75.4	80.2	73.6	70.1	76.8
5	73.6	71.0	76.0	73.9	71.4	76.3	69.7	66.2	72.9
10	68.6	66.1	71.0	68.9	66.5	71.3	64.7	61.3	67.9
15	63.7	61.1	66.1	64.0	61.6	66.3	59.8	56.3	63.0
20	58.8	56.4	61.2	59.2	56.8	61.5	55.1	51.7	58.1
25	54.1	51.8	56.3	54.4	52.2	56.6	50.4	47.2	53.3
30	49.4	47.1	51.5	49.7	47.5	51.7	45.8	42.7	48.5
35	44.6	42.5	46.7	44.9	42.8	46.9	41.2	38.2	43.8
40	39.9	37.8	41.9	40.2	38.1	42.1	36.7	33.8	39.1
45	35.4	33.3	37.2	35.6	33.6	37.4	32.3	29.5	34.7
50	30.9	29.0	32.7	31.1	29.2	32.8	28.1	25.4	30.4
55	26.7	24.9	28.2	26.8	25.1	28.4	24.2	21.7	26.3
60	22.5	20.9	23.9	22.6	21.0	24.0	20.6	18.3	22.4
65	18.6	17.2	19.9	18.7	17.3	19.9	17.2	15.2	18.7
70	15.0	13.7	16.0	15.0	13.8	16.0	14.1	12.4	15.2
75	11.7	10.6	12.5	11.7	10.6	12.4	11.2	9.9	12.1
80	8.8	7.9	9.4	8.8	7.9	9.3	8.7	7.7	9.4
85	6.5	5.8	6.8	6.4	5.7	6.8	6.7	6.0	7.1
90	4.6	4.1	4.8	4.6	4.1	4.8	5.1	4.6	5.3
95	3.2	2.9	3.3	3.2	2.9	3.3	3.8	3.5	3.9
100	2.3	2.1	2.3	2.2	2.0	2.2	2.8	2.6	2.8

(1) Includes races other than white and black.

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Political leaders, journalists, other prominent living persons. As of Oct. 2009. Excludes most who fall in categories listed elsewhere in Noted Personalities, such as Writers of the Present and Entertainment Personalities of the Present, or in Sports Personalities. Includes some figures active in American life but not U.S. citizens.

Jack Abramoff, b 2/28/58 (Atlantic City, NJ), former lobbyist; convicted in 2006 of crimes including bribing public officials.
Roger Ailes, b 5/15/40 (Warren, OH), TV exec.
Madeleine K. Albright, b 5/15/37 (Prague, Czech.), former sec. of state.
Edwin "Buzz" Aldrin, b 1/20/30 (Montclair, NJ), former astronaut, 2nd person to walk on the Moon.
Samuel A. Alito Jr., b 4/1/50 (Trenton, NJ), Supreme Court justice.
Paul Allen, b 1/21/53 (Seattle, WA), co-founder of Microsoft.
Christiane Amanpour, b 1/12/58 (London, Eng., UK), TV journalist.
Richard K. Armey, b 7/7/40 (Cando, ND), former U.S. rep. (TX), House majority leader.
Neil Armstrong, b 8/5/30 (Wapakoneta, OH), former astronaut, 1st person to walk on the Moon.
John Ashcroft, b 5/9/42 (Chicago, IL), former MO gov., U.S. attorney gen.
David Axelrod, b 2/22/55 (New York, NY), sr. adviser to Pres. Obama, political strategist.
F. Lee Bailey, b 6/10/33 (Waltham, MA), attorney.
Russell Baker, b 8/14/25 (Morrisonville, VA), columnist.
Haley Barbour, b 10/22/47 (Yazoo City, MS), MS governor.
Bob Barr, b 11/5/48 (Iowa City, IA), former U.S. rep. (GA), 2008 Libertarian pres. nominee.
Dave Barry, b 7/3/47 (Armonk, NY), humorist.
Marion Barry, b 3/6/36 (Itta Bena, MS), former Wash., DC, mayor; DC city council member.
Max Baucus, b 12/11/41 (Helena, MT), senator (D, MT), Finance Committee chair.
Gary Bauer, b 5/4/46 (Covington, KY), domestic policy adviser to Pres. Reagan; founder, Campaign for Working Families.
Glenn Beck, b 2/10/64 (Mount Vernon, WA), political commentator.
William Bennett, b 7/31/43 (Brooklyn, NY), author, former education secretary.
Chris Berman, b 5/10/55 (Greenwich, CT), sportscaster.
Ben Bernanke, b 12/13/53 (Augusta, GA), Federal Reserve Chairman.
Carl Bernstein, b 2/14/44 (Washington, DC), journalist; with Woodward cracked Watergate scandal.
Jeff Bezos, b 1/12/64 (Albuquerque, NM), founder and CEO of Amazon.com.
Jill Biden, b 6/5/51 (Hammonton, NJ), English college professor, wife of vice pres. Joe Biden.
Joseph R. Biden Jr., b 11/20/42 (Scranton, PA), former senator (D, DE), U.S. vice president.
James H. Billington, b 6/1/29 (Bryn Mawr, PA), librarian of U.S. Congress.
Rod Blagojevich, b 12/10/56 (Chicago, IL), impeached IL governor.
Lloyd Blankfein, b 9/20/54 (Bronx, NY), CEO and chairman of Goldman Sachs.
Wolf Blitzer, b 3/22/48 (Augsburg, Germany), TV journalist.
Harold Bloom, b 7/11/30 (New York, NY), literary critic.
Michael R. Bloomberg, b 2/14/42 (Brighton, MA), NYC mayor, financial information/media entrepreneur.
Roy Blunt, b 1/10/50 (Niangua, MO), U.S. rep. (R, MO), former House minority whip.
John Boehner, b 11/17/49 (Cincinnati, OH), U.S. rep. (R, OH), House minority leader.
Charles F. Bolden, b 8/19/46 (Columbia, SC), NASA head.
Julian Bond, b 1/14/40 (Nashville, TN), civil rights leader, former NAACP chairman.
Barbara Boxer, b 11/11/40 (Brooklyn, NY), senator (D, CA).
Bill Bradley, b 7/28/43 (Crystal City, MO), former senator (D, NJ), basketball player, pres. candidate.
James Brady, b 8/29/40 (Centralia, IL), former pres. press sec.; gun control advocate.
L. Paul Bremer III, b 9/30/41 (Hartford, CT), diplomat, former top U.S. civilian administrator in Iraq.
Jimmy Breslin, b 10/17/30 (Jamaica, Queens, NY), columnist, author.
Stephen Breyer, b 8/15/38 (San Francisco, CA), Supreme Court justice.
Sergey Brin, b 8/21/73 (Moscow, Russia), co-founder of Google.
Roslyn M. Brock, b 5/30/65 (Fort Pierce, FL), NAACP chair.
David Broder, b 9/11/29 (Chicago Heights, IL), journalist.
Tom Brokaw, b 2/6/40 (Webster, SD), TV journalist, retired NBC anchor.
David Brooks, b 8/11/61 (Toronto, ON, Can.), columnist, political commentator.
Joyce Brothers, b 10/20/29 (New York, NY), psychologist.
Aaron Brown, b 11/10/48 (Hopkins, MN), broadcast journalist.
Jerry (Edmund G.) Brown Jr., b 4/7/38 (San Francisco, CA), atty. gen. (CA); former CA gov., pres. candidate.
Michael Brown, b 11/11/54 (Guymon, OK), former FEMA head, resigned under fire after Hurricane Katrina.
Scott Brown, b 9/12/59 (Wakefield, MA), senator (R, MA).
Pat Buchanan, b 11/2/38 (Washington, DC), journalist, former pres. candidate.
Warren Buffett, b 8/30/30 (Omaha, NE), investor, leading philanthropist.
Roland Burris, b 8/3/37 (Centralia, IL), senator (D, IL), first African American atty. gen. of IL.
Barbara Bush, b 6/8/25 (Flushing, NY), former first lady.
Barbara Bush, b 11/25/81 (Dallas, TX), daughter of former Pres. George W. Bush.
George H. W. Bush, b 6/12/24 (Milton, MA), former U.S. president.
George W. Bush, b 7/6/46 (New Haven, CT), former U.S. president.
Laura Bush, b 11/4/46 (Midland, TX), former first lady.
Eric Cantor, b 6/6/63 (Richmond, VA), U.S. rep. (R, VA), House minority whip.
Tucker Carlson, b 5/16/69 (San Francisco, CA), journalist, TV commentator.
Jimmy Carter, b 10/1/24 (Plains, GA), former U.S. president; 2002 Nobel Peace Prize winner.
Rosalynn Carter, b 8/18/27 (Plains, GA), former first lady.
James Carville Jr., b 10/25/44 (Fort Benning, GA), TV political commentator.
Steve Case, b 8/21/58 (Honolulu, HI), former AOL Time Warner chairman.
Julie Chen, b 1/6/70 (New York, NY), co-host of *The Early Show* and *Big Brother*.
Dick Cheney, b 1/30/41 (Lincoln, NE), former U.S. vice president.
Lynne Cheney, b 8/14/41 (Casper, WY), political commentator, wife of Dick Cheney.
Michael Chertoff, b 11/28/53 (Elizabeth, NJ), former sec. of homeland security.
Noam Chomsky, b 12/7/28 (Philadelphia, PA), linguist; activist.
Chris Christie, b 9/6/62 (Newark, NJ), NJ governor.
Steven Chu, b 2/28/48 (St. Louis, MO), energy secretary, atomic physicist.
Connie Chung, b 8/20/46 (Washington, DC), TV journalist.
James R. Clapper, director of national intelligence.
Bill Clinton, b 8/19/46 (Hope, AR), former U.S. president.
Chelsea Clinton, b 2/27/80 (Little Rock, AR), daughter of former pres. Clinton and Hillary Rodham Clinton.
Hillary Rodham Clinton, b 10/26/47 (Chicago, IL), sec. of state, former senator (D, NY), former first lady, 2008 pres. contender.
James Clyburn, b 7/21/40 (Sumter, SC), U.S. rep. (D, SC), House majority whip.
Kenneth Cole, b 3/23/54 (Brooklyn, NY), fashion designer.
Gail Collins, b 11/25/45 (Cincinnati, OH), newspaper columnist, writer.
Anderson Cooper, b 6/3/67 (New York, NY), CNN anchor.
Jon Corzine, b 1/1/47 (Willey's Station, IL), former NJ governor.
Bob Costas, b 3/22/52 (Queens, NY), TV sports journalist.
Ann Coulter, b 12/8/61 (New Canaan, CT), political commentator, author.
Katie Couric, b 1/7/57 (Arlington, VA), TV journalist, former NBC morning anchor, anchor of *CBS Evening News*.
Mark Cuban, b 7/31/58 (Pittsburgh, PA), entrepreneur, Dallas Mavericks (NBA) owner.
Andrew Cuomo, b 12/6/57 (New York, NY), NY State attorney general.
Mario Cuomo, b 6/15/32 (Jamaica, Queens, NY), former NY governor.
Ann Curry, b 11/19/56 (Guam), *Today* show news anchor.
Richard M. Daley, b 4/24/42 (Chicago, IL), Chicago mayor.

Thomas Daschle, b 12/9/47 (Aberdeen, SD), former senator (D, SD) and Senate minority leader.
Howard Dean, b 11/17/48 (New York, NY), former VT gov., pres. contender; former Dem. Natl. Committee chair.
Oscar de la Renta, b 7/22/36 (Santo Domingo, Dominican Rep.), fashion designer.
Tom DeLay, b 4/8/47 (Laredo, TX), former U.S. rep. (R, TX), House Majority leader.
Michael Dell, b 2/23/65 (Houston, TX), founder, chairman, and CEO of Dell computers.
Alan Dershowitz, b 9/1/38 (Brooklyn, NY), attorney.
Barry Diller, b 2/2/42 (San Francisco, CA), media exec.
John Dingell, b 7/8/26 (Colorado Springs, CO), U.S. rep (D, CO), Dean of the House.
Lou Dobbs, b 9/24/45 (Childress, TX), TV journalist.
James Dobson, b 4/21/36 (Shreveport, LA), evangelical Christian leader, chairman of Focus on the Family.
Christopher Dodd, b 5/27/44 (Willimantic, CT), senator (D, CT), 2008 pres. contender.
Elizabeth Hanford Dole, b 7/29/36 (Salisbury, NC), former senator (R, NC), former Red Cross pres., cabinet member.
Robert Dole, b 7/22/23 (Russell, KS), former Senate majority leader (R, KS), 1996 pres. nominee.
Sam Donaldson, b 3/11/34 (El Paso, TX), TV journalist.
Elizabeth Drew, b 11/16/35 (Cincinnati, OH), journalist.
Matt Drudge, b 10/27/66 (Takoma Park, MD), Internet journalist.
Michael S. Dukakis, b 11/3/33 (Brookline, MA), former MA gov., pres. nominee.
Arne Duncan, b 11/6/64 (Chicago, IL), education secretary.
Dick Durbin, b 11/21/44 (East St. Louis, IL), Senate majority whip (D, IL).
Bernard Ebbers, b 8/27/41 (Edmonton, AB, Can.), former WorldCom CEO; jailed for fraud.
Roger Ebert, b 6/18/42 (Urbana, IL), film critic.
Marian Wright Edelman, b 6/6/39 (Bennettsville, SC), pres. and founder of the Children's Defense Fund.
Elizabeth Edwards, b 7/3/49 (Jacksonville, FL), attorney, wife of John Edwards.
John Edwards, b 6/10/53 (Seneca, SC), former senator (D, NC), 2004 vice-pres. candidate, 2008 pres. contender.
Edward Egan, b 4/2/32 (Oak Park, IL), Rom. Cath. cardinal, archbishop emeritus of New York.
Michael Eisner, b 3/7/42 (Mt. Kisco, NY), former Disney Co. CEO.
Lawrence J. Ellison, b 8/17/44 (New York, NY), Oracle Corp. founder, CEO.
Rahm Emanuel, b 11/29/59 (Chicago, IL), former White House chief of staff, former U.S. rep. (D, IL).
Myrlie Evers-Williams, b 3/17/33 (Vicksburg, MS), civil rights activist.
Louis Farrakhan, b 5/11/33 (Roxbury, MA), Nation of Islam leader.
Russell Feingold, b 3/2/53 (Janesville, WI), senator (D, WI).
Dianne Feinstein, b 6/22/33 (San Francisco, CA), senator (D, CA).
Geraldine Ferraro, b 8/26/35 (Newburgh, NY), former U.S. rep. (D, NY), vice-pres. nominee.
Carly (Carleton) S. Fiorina, b 9/6/54 (Austin, TX), former CEO of Hewlett-Packard.
Larry Flynt, b 11/1/42 (Lakeville, KY), publisher.
Steve (Malcolm) Forbes Jr., b 7/18/47 (Morristown, NJ), publisher, former pres. contender.
Betty Ford, b 4/8/18 (Chicago, IL), former first lady.
Tom Ford, b 8/27/61 (Austin, TX), fashion designer.
Barney Frank, b 3/31/40 (Bayonne, NJ), attorney, U.S. rep. (D, MA), chairman of House Financial Services Committee.
Al Franken, b 5/21/51 (New York, NY), senator (D, MN); humorist, political writer, radio host.
Thomas Friedman, b 7/20/53 (Minneapolis, MN), columnist, author.
Bill Gates, b 10/28/55 (Seattle, WA), software pioneer; Microsoft exec.
Henry Louis Gates Jr., b 9/16/50 (Keyser, WV), African American studies scholar.
Robert M. Gates, b 9/25/43 (Wichita, KS), sec. of defense.
David Geffen, b 2/21/43 (Brooklyn, NY), entertainment exec.
Timothy Geithner, b 8/18/61 (New York, NY), Treasury secretary, former CEO of Federal Reserve Bank of NY.
Louis Gerstner, b 3/1/42 (Mineola, NY), retired IBM exec.
Robert Gibbs, b 3/29/71 (Auburn, AL), White House press secretary.
Charles Gibson, b 3/4/43 (Evanston, IL), TV journalist, former host of ABC's *World News*.
Kirsten Gillibrand, b 12/9/66 (Albany, NY), senator (D, NY), attorney.
Newt Gingrich, b 6/17/43 (Harrisburg, PA), former House Speaker (D, GA).
Ruth Bader Ginsburg, b 3/15/33 (Brooklyn, NY), Supreme Court justice.
Rudolph Giuliani, b 5/28/44 (Brooklyn, NY), 2008 pres. contender; former NYC mayor.
John Glenn, b 7/18/21 (Cambridge, OH), former senator (D, OH); astronaut.
Alberto Gonzales, b 8/4/55 (San Antonio, TX), former U.S. attorney general.
Roger Goodell, b 2/19/59 (Jamestown, NY), NFL commissioner.
Ellen Goodman, b 4/11/41 (Newton, MA), columnist.
Doris Kearns Goodwin, b 1/4/43 (Brooklyn, NY), historian, TV commentator.
Berry Gordy, b 11/28/29 (Detroit, MI), Motown record label founder.
Al Gore Jr., b 3/31/48 (Washington, DC), former senator, U.S. vice president, 2000 pres. candidate; 2007 Nobel Peace Prize winner.
Tipper Gore, b 8/19/48 (Washington, DC), wife of Al Gore.
Rev. Billy Graham, b 11/7/18 (Charlotte, NC), evangelist.
(William) Franklin Graham III, b 7/14/52 (Asheville, NC), evangelist, son of Billy Graham.
Andrew Greeley, b 2/5/28 (Oak Park, IL), Rom. Cath. priest, sociologist, writer.
Jeff Greenfield, b 6/10/43 (New York, NY), TV journalist.
Alan Greenspan, b 3/6/26 (New York, NY), former Federal Reserve chairman.
Bryant Gumbel, b 9/29/48 (New Orleans, LA), TV journalist.
Greg Gumbel, b 5/3/46 (New Orleans, LA), sportscaster.
Jenna Bush Hager, b 11/25/81 (Dallas, TX), daughter of former Pres. George W. Bush.
Pete Hamill, b 6/24/35 (Brooklyn, NY), journalist, author.
Lee Hamilton, b 4/20/31 (Daytona Beach, FL), 9/11 commission vice-chair, former U.S. rep. (D, IN).
Sean Hannity, b 12/30/61 (New York, NY), radio and TV host, author, political commentator.
J. Dennis Hastert, b 1/2/42 (Aurora, IL), former Speaker of the House (R, IL).
Orrin Hatch, b 3/22/34 (Homestead Park, PA), senator (R, UT).
Hugh Hefner, b 4/9/26 (Chicago, IL), publisher.
Tommy Hilfiger, b 3/24/51 (Elmira, NY), fashion designer.
Anita Hill, b 7/30/56 (Morris, OK), legal scholar; complainant against Clarence Thomas.
Paris Hilton, b 2/17/81 (New York, NY), heiress; actress.
Christopher Hitchens, b 4/13/49 (Portsmouth, Eng., UK), journalist, author.
James P. Hoffa, b 5/19/41 (Detroit, MI), Teamsters Union head.
Richard Holbrooke, b 4/24/41 (Scarsdale, NY), spec. envoy to Afghanistan and Pakistan, former U.S. amb. to UN.
Eric Holder Jr., b 1/21/51 (Bronx, NY), first African American U.S. attorney general.
David Horowitz, b 1/10/39 (New York, NY), consumer advocate, columnist, author.
Steny H. Hoyer, b 6/14/39 (New York, NY), U.S. House majority leader (D, MD).
Mike Huckabee, b 8/24/55 (Hope, AR), former gov. (R, AR), minister, 2008 pres. contender, TV host.
Arianna Huffington, b 7/15/50 (Athens, Greece), political commentator.
H. Wayne Huizenga, b 12/29/39 (Evergreen Park, IL), entrepreneur, sports exec.
Brit Hume, b 6/22/43 (Washington, DC), TV journalist on FOX.
Kay Bailey Hutchison, b 7/22/43 (Galveston, TX), senator (R, TX).
Lee Iacocca, b 10/15/24 (Allentown, PA), former auto exec.
Carl Icahn, b 2/16/36 (Queens, NY), financier.
Gwen Ifill, b 9/29/55 (Queens, NY), TV journalist, moderator on PBS.
Jeffrey Immelt, b 2/19/56 (Cincinnati, OH), General Electric CEO.
Don Imus, b 7/23/40 (Riverside, CA), talk-show host.
Daniel Inouye, b 9/7/24 (Honolulu, HI), senator (D, HI), President pro tempore.
Patricia Ireland, b 10/19/45 (Oak Park, IL), feminist leader.
Rev. Jesse Jackson, b 10/8/41 (Greenville, SC), civil rights leader, former pres. contender.
Marc Jacobs, b 4/9/64 (New York, NY), fashion designer.
Valerie Jarrett, b 11/14/56 (Shiraz, Iran), sr. adviser to Pres. Obama.
Bobby Jindal, b 6/10/71 (Baton Rouge, LA), LA governor, first elected Indian American governor.
Steve Jobs, b 2/24/55 (San Francisco, CA), Apple Computer exec.; Pixar exec.
Jasper Johns, b 5/15/30 (Augusta, GA), artist.
Robert L. Johnson, b 4/8/46 (Hickory, MS), Black Entertainment Television founder and CEO.
Vernon E. Jordan Jr., b 8/15/35 (Atlanta, GA), attorney, former pres. adviser, civil rights leader.
Elena Kagan, b 4/28/60 (New York, NY), Supreme Court justice.
Tim Kaine, b 2/26/58 (St. Paul, MN), chair of Democratic National Committee, VA governor.
Donna Karan, b 10/2/48 (Forest Hills, Queens, NY), fashion designer.
Jeffrey Katzenberg, b 12/21/50 (New York, NY), entertainment exec.
Thomas Kean, b 4/21/35 (New York, NY), 9/11 commission chair, former Drew Univ. pres., former NJ gov.
Garrison Keillor, b 8/7/42 (Anoka, MN), author, broadcaster.
Anthony M. Kennedy, b 7/23/36 (Sacramento, CA), Supreme Court justice.
Robert (Bob) Kerrey, b 8/27/43 (Lincoln, NE), former senator (D, NE); president of the New School (NYC).
John Kerry, b 12/11/43 (Aurora, CO), senator (D, MA), Foreign Relations Committee chair, 2004 pres. candidate.
Jack Kevorkian, b 5/26/28 (Pontiac, MI), physican, assisted-suicide activist.
Larry King, b 11/19/33 (Brooklyn, NY), TV talk show host.
Michael Kinsley, b 3/9/51 (Detroit, MI), editor, political commentator.
Calvin Klein, b 11/19/42 (Bronx, NY), fashion designer.
Philip H. Knight, b 2/24/38 (Portland, OR), founder and chairman of the board of Nike.

Edward I. Koch, b 12/12/24 (Bronx, NY), former NYC mayor.
Ted Koppel, b 2/8/40 (Lancashire, Eng., UK), former ABC network TV journalist; former anchor of *Nightline*.
Larry Kramer, b 6/25/35 (Bridgeport, CT), AIDS activist, writer.
Nicholas D. Kristof, b 4/27/59 (Chicago, IL), Pulitzer Prize winning columnist, author.
William Kristol, b 12/23/52 (New York, NY), editor, columnist.
Steve Kroft, b 8/22/45 (Kokomo, IN), TV journalist.
Paul Krugman, b 2/28/53 (Long Island, NY), economist, columnist.
Dennis Kucinich, b 10/8/46 (Cleveland, OH), U.S. rep. (D, OH), pres. contender.
Brian Lamb, b 10/9/41 (Lafayette, IN), cable TV exec., journalist.
Matt Lauer, b 12/30/57 (New York, NY), TV journalist; NBC *Today* show co-host.
Ralph Lauren, b 10/14/39 (Bronx, NY), fashion designer.
Bernard F. Law, b 11/4/31 (Torreon, Mexico), cardinal archbishop emeritus of Boston.
Patrick Leahy, b 3/31/40 (Montpelier, VT), senator (D, VT), Judiciary Committee chair.
Norman Lear, b 7/27/22 (New Haven, CT), TV producer, political activist.
Jim Lehrer, b 5/19/34 (Wichita, KS), TV journalist, author.
Carl Levin, b 6/28/34 (Detroit, MI), senator (D, MI), Armed Services Committee chair.
Monica Lewinsky, b 7/23/73 (San Francisco, CA), former White House intern.
Joseph Lieberman, b 2/24/42 (Stamford, CT), senator (Ind., CT), former vice pres. candidate, 2004 pres. contender.
Rush Limbaugh, b 1/12/51 (Cape Girardeau, MO), radio talk-show host.
Gary Locke, b 1/21/50 (Seattle, WA), commerce secretary, former WA gov.
Trent Lott, b 10/9/41 (Grenada, MS), former senator (R, MS), former Senate minority whip.
Shannon Lucid, b 1/14/43 (Shanghai, China), NASA scientist, astronaut.
Richard Lugar, b 4/4/32 (Indianapolis, IN), senator (R, IN).
Rachel Maddow, b 4/1/73 (Castro Valley, CA), TV/radio host, political commentator.
Bernie Madoff, b 4/29/38 (Queens, NY), financier who swindled investors; sentenced to 150 years in prison.
Roger Mahony, b 2/27/36 (Hollywood, CA), Rom. Cath. cardinal, archbishop of Los Angeles.
Mary Matalin, b 8/19/53 (Chicago, IL), political commentator.
Chris Matthews, b 12/18/45 (Philadelphia, PA), TV journalist.
John McCain, b 8/29/36 (Panama Canal Zone), senator (R, AZ); 2008 Republican presidential candidate.
Mitch McConnell, b 2/20/42 (Tuscumbia, AL), senator (R, KY), Senate minority leader.
David McCullough, b 7/7/33 (Pittsburgh, PA), historian, biographer.
George McGovern, b 7/19/22 (Avon, SD), former senator (D, SD), 1972 pres. nominee.
Dr. Phil McGraw, b 9/1/50 (Vinita, OK), talk-show host, motivational speaker, author.
James McGreevey, b 8/6/57 (Jersey City, NY), former NJ governor; resigned amid allegations of sexual harassment and admitted he was gay.
John McLaughlin, b 3/29/27 (Providence, RI), TV journalist.
Russell Means, b 11/10/39 (Pine Ridge Indian Reserv., SD), Native American activist.
Ken Mehlman, b 1967 (Baltimore, MD), former Republican National Comm. chair.
Kate Michelman, b 8/4/42 (NJ), abortion-rights activist.
Kate Millett, b 9/14/34 (St. Paul, MN), author, feminist.
George Mitchell, b 8/20/33, (Waterville, ME), spec. envoy for Middle East peace, former Senate majority leader (D, ME), diplomat, former Disney Co. chairman.
Walter Mondale, b 1/5/28 (Ceylon, MN), former vice pres., senator (D, MN), 1984 pres. nominee.
Michael Moore, b 4/23/54 (Davison, MI), activist, documentary filmmaker, author.
Bill Moyers, b 6/5/34 (Hugo, OK), TV journalist, author.
Robert S. Mueller III, b 8/7/44 (New York, NY), FBI director.
Michael Mullen, b 10/4/46 (Los Angeles, CA), chairman of Joint Chiefs of Staff.
Rupert Murdoch, b 3/11/31 (Melbourne, Aust.), media exec.
Ralph Nader, b 2/27/34 (Winsted, CT), consumer advocate, independent pres. cand. in 1996, 2000, 2004, and 2008.
Ray Nagin, b 6/11/56 (New Orleans, LA), former New Orleans mayor.
Janet Napolitano, b 11/29/57 (New York, NY), homeland security sec., former AZ governor.
John Negroponte, b 7/21/39 (London, Eng., UK), former director of National Intelligence, former U.S. rep. to UN.
Craig Newmark, b 12/6/52 (Morristown, NY), founder of Craigslist.com.
Peggy Noonan, b 9/7/50 (Brooklyn, NY), columnist, speechwriter.
Oliver North, b 10/7/43 (San Antonio, TX), talk-show host, former Natl. Sec. Council aide, fig. in Iran-contra scandal.
Eleanor Holmes Norton, b 6/13/37 (Washington, DC), U.S. House delegate for Washington, DC.
Sam Nunn, b 9/8/38 (Perry, GA), former senator (D, GA).
Barack Obama, b 8/4/61 (Honolulu, HI), U.S. President, former senator (D, IL).
Michelle Obama, b 1/17/64 (Chicago, IL), first lady, lawyer.
Soledad O'Brien, b 9/19/66 (Smithtown, NY), TV journalist.
Sandra Day O'Connor, b 3/26/30 (El Paso, TX), former Supreme Court justice.
Keith Olbermann, b 1/27/59 (New York, NY), TV news anchor and commentator, former ESPN host.
Bill O'Reilly, b 9/10/49 (New York, NY), TV commentator, host.
Peter Orszag, b 12/16/68 (Boston, MA), former dir., office of management and budget.
Joel Osteen, b 3/5/63 (Houston, TX), televangelist, author.
Michael Ovitz, b 12/14/46 (Encino, CA), entertainment exec.
Clarence Page, b 6/2/47 (Dayton, OH), journalist, TV commentator.
Lawrence Page, b 9/26/73 (East Lansing, MI), co-founder of Google.
Camille Paglia, b 4/2/47 (Endicott, NY), scholar, author.
Sarah Palin, b 2/11/64 (Sandpoint, ID), former AK governor, 2008 Republican vice-pres. nominee.
Leon E. Panetta, b 6/28/38 (Monterey, CA), CIA director, former White House chief of staff, U.S. rep. (D, CA).
Richard Parsons, b 4/4/48 (Brooklyn, NY), Citigroup chairman, former Time Warner CEO.
David Paterson, b 5/20/54 (Brooklyn, NY), attorney, first African American NY governor.
Ron Paul, b 8/20/35 (Pittsburgh, PA), physician, U.S. rep. (R, TX), 2008 pres. contender.
Jane Pauley, b 10/31/50 (Indianapolis, IN), TV journalist.
Henry Paulson, b 3/28/46 (Palm Beach, FL), former sec. of treasury, former CEO/chairman of Goldman Sachs.
Nancy Pelosi, b 3/26/40 (Baltimore, MD), U.S. rep. (D, CA); Speaker of the House.
Ross Perot, b 6/27/30 (Texarkana, TX), entrepreneur, former pres. nominee.
David Petraeus, b 11/7/52 (Cornwall-on-Hudson, NY), U.S. Forces Afghanistan cmdr.
Colin Powell, b 4/5/37 (New York, NY), former sec. of state, natl. security adviser, Joint Chiefs of Staff chairman.
Dan Quayle, b 2/4/47 (Indianapolis, IN), former U.S. vice pres., senator (R, IN), pres. contender.
Anna Quindlen, b 7/8/53 (Philadelphia, PA), author, columnist.
Dan Rather, b 10/31/31 (Wharton, TX), TV journalist, retired CBS anchor.
Nancy Reagan, b 7/6/21 (Flushing, Queens, NY), former first lady.
Sumner Redstone, b 5/27/23 (Boston, MA), Viacom/CBS chairman.
Ralph Reed Jr., b 6/24/61 (Portsmouth, VA), political adviser.
Robert B. Reich, b 6/24/46 (Scranton, PA), economist, author, former labor sec.
Harry Reid, b 12/2/39 (Searchlight, NV), Senate majority leader (D, NV).
Janet Reno, b 7/21/38 (Miami, FL), former U.S. attorney gen.
Condoleezza Rice, b 11/14/54 (Birmingham, AL), former sec. of state, former natl. security adviser.
Susan Rice, b 11/17/64 (Washington, DC), U.S. ambassador to UN.
Frank Rich, b 6/2/49 (Washington, DC), essayist, columnist.
Bill Richardson, b 11/15/47 (Pasadena, CA), NM gov., former energy sec., UN ambassador, U.S. rep. (D, NM); 2008 pres. contender.
Sally K. Ride, b 5/26/51 (Encino, CA), former astronaut, 1st U.S. woman in space.
Tom Ridge, b 8/26/45 (Munhall, PA), former sec. of homeland security, former PA gov.
Geraldo Rivera, b 7/4/43 (New York, NY), TV journalist.
Cokie Roberts, b 12/27/43 (New Orleans, LA), TV journalist.
John G. Roberts, b 1/27/55 (Buffalo, NY), Supreme Court chief justice.
Robin Roberts, b 11/23/60 (Tuskeegee, AL), *Good Morning America* co-host.
Rev. Pat Robertson, b 3/22/30 (Lexington, VA), religious broadcasting exec., former pres. contender.
V. Gene Robinson, b 5/29/47 (Lexington, KY), first openly gay Episcopal bishop.
David Rockefeller, b 6/12/15 (New York, NY), banker.
Al Roker, b 8/20/54 (Queens, NY), TV weather person.
Mitt Romney, b 3/12/47 (Detroit, MI), former MA gov, former Olympics organizer; 2008 pres. contender.
Andy Rooney, b 1/14/19 (Albany, NY), TV commentator.
Charlie Rose, b 1/5/42 (Henderson, NC), TV journalist.
Karl Rove, b 12/25/50 (Denver, CO), former adviser to Pres. G. W. Bush, political commentator.
Donald Rumsfeld, b 7/9/32 (Chicago, IL), former sec. of defense.
Morley Safer, b 11/8/31 (Toronto, ON, Can.), TV journalist.
Ken Salazar, b 3/2/55 (Alamosa, CO), interior sec., former sen. (D, CO), rancher.
Diane Sawyer, b 12/22/45 (Glasgow, KY), TV journalist, anchor of ABC *World News with Diane Sawyer*.
Antonin Scalia, b 3/11/36 (Trenton, NJ), Supreme Court justice.
Bob Schieffer, b 2/25/37 (Austin, TX), CBS TV news anchor.
Phyllis Schlafly, b 8/15/24 (St. Louis, MO), political activist.

Caroline Kennedy Schlossberg, b 11/27/57 (New York, NY), author, daughter of Pres. Kennedy.
Eric Schmidt, b 4/27/55 (Washington, DC), Google CEO.
Patricia Schroeder, b 7/30/40 (Portland, OR), former U.S. rep (D, CO) Assoc. of Am. Publishers CEO.
Rev. Robert Schuller, b 9/16/26 (Alton, IA), TV evangelist.
Charles Schumer, b 11/23/50 (Brooklyn, NY), senator (D, NY).
Arnold Schwarzenegger, b 7/30/47 (Thal, Styria, Austria), CA governor, former actor.
H. Norman Schwarzkopf, b 8/22/34 (Trenton, NJ), former military leader.
Willard Scott, b 3/7/34 (Alexandria, VA), former TV weather person.
Kathleen Sebelius, b 5/15/58 (Cincinnati, OH), health and human services secretary, former KS governor.
Allan H. (Bud) Selig, b 7/30/34 (Milwaukee, WI), MLB commissioner.
Richard Serra, b 11/2/39 (San Francisco, CA), sculptor.
Rev. Al Sharpton, b 10/3/54 (Brooklyn, NY), activist, civil rights leader; 2004 pres. contender.
Eric Shinseki, b 11/28/42 (Lihue, HI), veterans affairs secretary, former Army chief of staff.
Maria Shriver, b 11/6/55 (Chicago, IL), TV journalist, CA first lady.
George P. Shultz, b 12/13/20 (New York, NY), former sec. of state, other cabinet posts.
Russell Simmons, b 10/4/57 (Queens, NY), music producer.
Bob Simon, b 5/29/41 (Bronx, NY), TV journalist.
O. J. Simpson, b 7/9/47 (San Francisco, CA), former football star, murder defendant.
Harry Smith, b 8/21/51 (Lansing, IL), TV journalist, CBS morning anchor.
Liz Smith, b 2/2/23 (Ft. Worth, TX), gossip columnist.
Hilda Solis, b 10/20/57 (Los Angeles, CA), labor sec., former U.S. rep. (D, CA).
George Soros, b 8/12/30 (Budapest, Hungary), financier, philanthropist.
Sonia Sotomayor, b 6/25/54 (Bronx, NY), Supreme Court justice.
David H. Souter, b 9/17/39 (Melrose, MA), former Supreme Court justice.
Arlen Specter, b 2/12/30 (Wichita, KS), senator (R then D, PA).
Steven Spielberg, b 12/18/46 (Cincinnati, OH), movie director, producer.
Eliot Spitzer, b 6/10/59 (Bronx, NY), former NY gov.; resigned after involvement with prostitutes exposed.
Lesley Stahl, b 12/16/41 (Swampscott, MA), TV journalist.
Kenneth Starr, b 7/21/46 (Vernon, TX), former Whitewater indep. counsel.
Michael Steele, b 10/19/58 (Prince George's, MD), Republican Natl. Committee chair, former MD lt. governor.
Shelby Steele, b 1/1/46 (Chicago, IL), scholar, critic.
Ben Stein, b 11/25/44 (Washington, DC), attorney, columnist, former speechwriter, actor, TV personality.
Gloria Steinem, b 3/25/34 (Toledo, OH), author, feminist.
Frank Stella, b 5/12/36 (Malden, MA), painter.
George Stephanopoulos, b 2/10/61 (Fall River, MA), TV journalist, former pres. adviser; *Good Morning America* co-host.
David J. Stern, b 9/22/42 (New York, NY), NBA commissioner.
Howard Stern, b 1/12/54 (Roosevelt, NY), radio talk show host.
John Paul Stevens, b 4/20/20 (Chicago, IL), former Supreme Court justice.
Martha Stewart, b 8/3/41 (Nutley, NJ), homemaking adviser, entrepreneur, TV personality.
Biz Stone, b 3/10/74 (Boston, MA), co-founder of Twitter.
Chesley (Sully) Sullenberger III, b 1/23/51 (Denison, TX), US Airways pilot who safely landed a jet in the Hudson River.
Arthur Ochs Sulzberger Jr., b 9/22/51 (Mt. Kisco, NY), newspaper publisher.
Lawrence H. Summers, b 11/30/54 (New Haven, CT), Council of Economic Advisers dir., former Harvard Univ. pres.
George Tenet, b 1/5/53 (Flushing, Queens, NY), former CIA director.
Clarence Thomas, b 6/23/48 (Savannah, GA), Supreme Court justice.
Helen Thomas, b 8/4/20 (Winchester, KY), former journalist.
Fred Thompson, b 8/19/42 (Sheffield, AL), former senator (R, TN), actor, 2008 pres. contender.
Tommy G. Thompson, b 11/19/41 (Elroy, WI), former sec. of health and human services, former WI gov.
Richard Trumka, b 7/24/49 (Waynesburg, PA), pres. of AFL-CIO.
Donald Trump, b 6/14/46 (Jamaica, Queens, NY), real estate exec., TV personality.
Ted Turner, b 11/19/38 (Cincinnati, OH), TV exec, philanthropist.
Neil deGrasse Tyson, b 10/5/58 (New York, NY), astrophysicist, director of NYC's Hayden Planetarium, author, television host.
Abigail Van Buren, b 7/4/18 (Sioux City, IA), retired advice columnist.
Gloria Vanderbilt, b 2/20/24 (New York, NY), fashion designer, heiress.
Greta Van Susteren, b 6/11/54 (Appleton, WI), attorney, TV journalist.
Jesse Ventura, b 7/15/51 (Minneapolis, MN), former wrestler, former MN governor; radio talk show host.
Meredith Vieira, b 12/30/53 (Providence, RI), *Today* show co-host.
Antonio Villaraigosa, b 1/23/53 (East Los Angeles, CA), 1st Hispanic mayor of L.A. since 1870s.
Paul Volcker, b 9/5/27 (Cape May, NJ), economist, former Federal Reserve chairman.
Mike Wallace, b 5/9/18 (Brookline, MA), TV journalist.
Barbara Walters, b 9/25/31 (Boston, MA), TV journalist.
Vera Wang, b 6/27/49 (New York, NY), fashion designer.
Rick Warren, b 1/28/54 (San Jose, CA), evangelical Christian pastor, founder of Saddleback Church, author.
James Watson, b 4/6/28 (Chicago, IL), biochemist, DNA pioneer, co-winner of the 1962 Nobel Prize.
Dr. Andrew Weil, b 6/8/42 (Philadelphia, PA), health adviser.
Harvey Weinstein, b 3/19/52 (Flushing, Queens, NY), movie exec.
Jack Welch, b 11/19/35 (Peabody, MA), former General Electric CEO.
Jann Wenner, b 1/7/46 (New York, NY), publisher, founder of *Rolling Stone*.
Cornel West, b 6/23/53 (Tulsa, OK), African American scholar, critic.
Ruth Westheimer, b 6/4/28 (Frankfurt am Main, Germany), human sexuality expert.
Meg Whitman, b 8/4/56 (Cold Spring Harbor, NY), former eBay pres. and CEO.
Elie Wiesel, b 9/30/28 (Sighet, Romania), scholar, author, 1986 Nobel Peace Prize winner.
George Will, b 5/4/41 (Champaign, IL), journalist, author.
Brian Williams, b 5/5/59 (Elmira, NY), NBC TV news anchor.
Evan Williams, b 3/31/72 (Clarks, NE), co-founder and CEO of Twitter.
Jody Williams, b 10/9/50 (Brattleboro, VT), peace activist, 1997 Nobel Peace Prize winner.
Oprah Winfrey, b 1/29/54 (Kosciusko, MS), TV and media personality, businesswoman, actress.
Bob Woodward, b 3/26/43 (Geneva, IL), journalist; with Bernstein cracked Watergate scandal.
Steve Wynn, b 1/27/42 (New Haven, CT), casino developer.
Paula Zahn, b 2/24/56 (Omaha, NE), TV journalist.
Mark Zuckerberg, b 5/14/84 (Dobbs Ferry, NY), founder of Facebook.
Mortimer Zuckerman, b 6/4/37 (Montreal, QC, Can.), publisher, columnist.

Widely Known World Personalities of the Present

Living non-Americans only. Generally excludes current heads of state or government (see Nations chapter) and excludes most others covered elsewhere, such as in Widely Known Americans, Entertainment and Writers lists, or Sports Personalities.

Mahmoud Abbas (Abu Mazen), b 3/26/35 (Safed, Palestine [now Israel]), president of the Palestinian National Authority.
Gerry Adams, b 10/6/48 (Belfast, N. Ireland, UK), Sinn Fein leader.
Viswanathan Anand, b 12/11/69 (Chennai, Madras, India), world chess champion.
Prince Andrew, b 2/19/60 (London, Eng., UK), Duke of York (2nd son of Queen Elizabeth II).
Kofi Annan, b 4/8/38 (Kumasi, Ghana), former UN sec.-gen.; 2001 Nobel laureate.
Princess Anne, b 8/15/50 (London, Eng., UK), Princess Royal (daughter of Queen Elizabeth II).
Oscar Arias Sánchez, b 9/13/41 (Heredia, Costa Rica), former Costa Rican pres., peace negotiator, 1987 Nobel laureate.
Giorgio Armani, b 7/30/34 (Piacenza, Italy), fashion designer.
Ban Ki-Moon, b 6/13/44 (Umsong, [now] South Korea), UN sec.-gen.
Ehud Barak, b 2/12/42 (Mishmar Ha-Sharon Kibbutz, Israel), Israeli minister of defense, former Israeli prime min.
Ahmed Ben Bella, b 12/25/18 (Marnia, Algeria), 1st Algerian prime min.; revolutionary leader.
Benedict XVI (Joseph Ratzinger), b 4/16/27 (Marktl am Inn, Germany), pope of Rom. Cath. Church, elected 2005.
Boris Berezovsky, b 1/23/46 (Moscow, USSR), businessman, politician.
Tim Berners-Lee, b 6/8/55 (London, Eng., UK), World Wide Web inventor.
Osama bin Laden, b 3/10/57 (Riyadh, Saudi Ar.), leader of al-Qaeda terrorist organization.
Tony Blair, b 5/6/53 (Edinburgh, Scot., UK), former British prime minister.
Hans Blix, b 6/28/28 (Uppsala, Swed.), former UN weapons inspector.
Bono (Paul David Hewson), b 5/20/60 (Glasnevin, Dublin, Ire., UK), musician, social activist, philanthropist.
Fernando Botero, b 4/19/32 (Medellín, Col.), Colombian artist.
Boutros Boutros-Ghali, b 11/14/22 (Cairo, Egypt), former UN sec.-gen.
Richard Branson, b 7/18/50 (S. London, Eng., UK), British Virgin Records and Airways founder.
Gordon Brown, b 2/20/51 (Glasgow, Scot., UK), former British prime minister.
Tina Brown, b 11/21/53 (Maidenhead, Eng., UK), journalist, TV talk show host, author.
Carla Bruni, b 12/23/67 (Turin, Italy), first lady of France, musician, actress, model.
Mark Burnett, b 7/17/60 (Myland, Eng., UK), reality TV producer.
Rhonda Byrne, b 3/12/51 (Australia), author, TV writer and producer.
Kim Campbell, b 3/10/47 (Port Alberni, BC, Can.), former Canadian prime min.
Pierre Cardin, b 7/7/22 (San Biaggio di Callalta, Italy), fashion designer.

Princess Caroline, b 1/23/57 (Monte Carlo, Monaco), Monaco royal (eldest daughter of Prince Rainier and Princess Grace).
Fidel Castro, b 8/13/26 (Birán, Cuba), former prime minister of Cuba.
Prince Charles, b 11/14/48 (London, Eng., UK), Prince of Wales (eldest son of Queen Elizabeth II); heir to British throne.
Jacques Chirac, b 11/29/32 (Paris, France), former president of France.
Deepak Chopra, b 1946 (New Delhi, India), new age writer.
Jean Chrétien, b 1/11/34 (Shawinigan, QC, Can.), former Canadian prime min.
Christo (Javacheff), b 6/13/35 (Gabrovo, Bulg.), artist.
Joe (Charles Joseph) Clark, b 6/5/39 (High River, AB, Can.), former Canadian prime min.
King Constantine II, b 6/2/40 (Psychiko, Greece), former king of Greece.
Simon Cowell, b 10/7/59 (Brighton, East Sussex, Eng., UK), music executive, TV producer, former *American Idol* host.
Dalai Lama (Tenzin Gyatso), b 7/6/35 (Taktser, Amdo, Tibet), Buddhist leader; 1989 Nobel laureate.
Richard Dawkins, b 3/26/41 (Nairobi, Kenya), ethologist, evolutionary biologist, author.
Shirin Ebadi, b 6/21/47 (Hamadan, Iran), human rights activist, 2003 Nobel Peace Prize winner.
Prince Edward, b 3/10/64 (London, Eng., UK), Earl of Essex (3rd son of Queen Elizabeth II).
Mohamed ElBaradei, b 6/17/42 (Cairo, Egypt), former director general of the International Atomic Energy Agency (IAEA); 2005 Nobel Peace Prize winner.
Prince Felipe, b 1/30/68 (Madrid, Spain), heir to Spanish throne.
Sarah Ferguson, b 10/15/58 (London, Eng., UK), Duchess of York, ex-wife of Prince Andrew.
John Galliano, b 11/28/60 (Gibraltar, UK terr.), fashion designer.
Valery Giscard d'Estaing, b 2/2/26 (Koblenz, Ger.), former French pres.
Jane Goodall, b 4/3/34 (London, Eng., UK), anthropologist, primatologist.
Mikhail Gorbachev, b 3/2/31 (Privolnoye, USSR), former Soviet pres.; 1990 Nobel Peace Prize winner.
Jürgen Habermas, b 6/18/29 (Dusseldorf, Ger.), philosopher.
Vaclav Havel, b 10/5/36 (Prague, Czech.), former Czech pres.; playwright.
Stephen Hawking, b 1/8/42 (Oxford, Eng., UK), physicist, author.
Carlos Slim Helú, 1/28/40 (Mexico City, Mexico), chairman and CEO of Telmex, Telcel and América Móvil.
Prince Henry (Harry) (of Wales), b 9/15/84 (London, Eng., UK), son of Prince Charles; 3rd in line to British throne.
Damien Hirst, b 6/7/65 (Bristol, Eng., UK), artist.
David Hockney, b 7/9/37 (Bradford, Eng., UK), artist.
Jiang Zemin, b 8/17/26 (Yangzhou, Jiangsu Prov., China), former pres. of China.
Garry Kasparov, b 4/13/63 (Baku, Azerbaijan, USSR), former world chess champion; Russian pro-democracy leader.
Ayatollah Ali Khamenei, b 7/17/39 (Mashhad, Iran), Supreme Leader and former president of Iran, cleric, author.
F. W. (Frederik Willem) de Klerk, b 3/18/36 (Johannesburg, S. Africa), former S. African pres.; 1993 Nobel Peace Prize winner.
Helmut Kohl, b 4/3/30 (Ludwigshafen, Ger.), former German chancellor.
Hans Kung, b 3/19/28 (Sursee, Switz.), Rom. Cath. theologian.
Karl Lagerfeld, b 9/10/38 (Hamburg, Germany), fashion designer.
Richard Leakey, b 12/19/44 (Nairobi, Kenya), anthropologist, paleontologist, conservationist.
Tzipi Livni, b 7/5/58 (Tel Aviv, Israel), attorney, head of Israeli Kadima party, foreign affairs minister of Israel.
Wangari Maathai, b 4/1/40 (Nyeri, Kenya), environmental and political activist; 2004 Nobel Peace Prize winner.
John Major, b 3/29/43 (Wimbledon, Eng., UK), former British prime min.
Nelson Mandela, b 7/18/18 (Transkei, S. Africa), former pres. of S. Africa; 1993 Nobel Peace Prize winner.
Imelda Marcos, b 7/2/29 (Manila, Philip.), former first lady of Philippines; Philip. House of Rep. member.
Paul Martin, b 8/28/38 (Windsor, ON, Can.), former prime minister of Canada.
Peter Max, b 10/19/37 (Berlin, Ger.), artist, designer.
Stella McCartney, b 9/13/71 (London, Eng., UK), fashion designer.
Angela Merkel, b 7/17/54 (Hamburg, Ger.), 1st woman chancellor of Germany.
Jean-Marie Messier, b 12/13/56 (Grenoble, Fr.), former CEO of Vivendi Universal.
Empress Michiko, b 10/20/34 (Tokyo, Japan), empress of Japan.
Rev. Sun Myung Moon, b 1/6/20 (Kwangju Sangsa Ri, N. Korea), Unification Church founder.
Kate Moss, b 1/16/74 (Addiscombe, Surrey, Eng., UK), model.
Mir Hussein Moussavi, b 9/29/41 (Khameneh, Iran), challenger in Iran's 2009 presidential election.
Brian Mulroney, b 3/20/39 (Baie-Corneau, QC, Can.), former Canadian prime min.
Prince Naruhito, b 2/23/60 (Tokyo, Japan), crown prince of Japan.
Hassan Nasrallah, b 8/31/60 (Qarantina, Lebanon), leader of the Hezbollah in Lebanon.
Queen Noor (Lisa Halaby), b 8/23/51 (Washington, DC), American-born widow of Jordan's King Hussein.
Ehud Olmert, b 9/30/45 (Binyamina, Palestine), former prime minister of Israel.
Daniel Ortega Saavedra, b 11/11/45 (La Libertad, Nicar.), Nicaraguan pres., Sandinista leader.
Camilla Parker-Bowles, Duchess of Cornwall, b 7/17/47 (London, Eng., UK), wife of Prince Charles.
Jean-Marie le Pen, b 6/20/28 (La Trinite-sur-Mer, Fr.), French right-wing politician.
Javier Perez de Cuellar, b 1/19/20 (Lima, Peru), former UN sec.-gen.
Prince Philip, b 6/10/21 (Corfu, Greece), Duke of Edinburgh (husband of Queen Elizabeth II).
Gerhard Richter, b 2/9/32 (Dresden, Ger.), artist.
Mary Robinson, b 5/21/44 (Ballina, Co. Mayo, Ireland), former Irish pres., former UN High Commissioner for Human Rights.
Ségolène Royal, b 9/22/53 (Dakar, Senegal), French socialist politician, 2007 candidate for president of France.
Moqtada al-Sadr, b 1974 (Iraq), extremist Shiite cleric.
Carlos Salinas de Gortari, b 4/3/48 (Mexico City, Mex.), former Mexican pres.
Helmut Schmidt, b 12/23/18 (Hamburg, Germany), former German chancellor.
Gerhard Schröder, b 4/7/44 (Mossenburg, Germany), former German chancellor.
Yitzhak Shamir, b 10/22/15 (Kuzinoy, Poland), former Israeli prime minister.
Ariel Sharon, b 2/26/28 (Kfar Malal, Palestine), former Israeli prime minister.
Eduard Shevardnadze, b 1/25/28 (Mamati, Georgia, USSR), former Georgian pres.
Ayatollah Ali al-Sistani, b 8/4/30 (Mashhad, Iran), major Iraqi Shiite religious leader.
Princess Stephanie, b 2/1/65 (Monte Carlo, Monaco), youngest child of Prince Rainier and Princess Grace.
Dominique Strauss-Kahn, b 4/25/49 (Neuilly-sur-Seine, France), International Monetary Fund managing director.
Aung San Suu Kyi, b 6/19/45 (Rangoon, Myanmar), political activist, 1991 Nobel Peace Prize winner; under effective house arrest.
Valentina Tereshkova, b 3/6/37 (Maslennikovo, Russia, USSR), 1st woman in space.
Margaret Thatcher, b 10/13/25 (Grantham, Eng., UK), former British prime min.
John Napier Turner, b 6/7/29 (Richmond, Surrey, Eng., UK), former Canadian prime min.
Desmond Tutu, b 10/7/31 (Klerksdorp, Transvaal, S. Africa), former S. African archbishop; 1984 Nobel Peace Prize winner.
Lech Walesa, b 9/29/43 (Popowo, Pol.), Solidarity leader; 1983 Nobel Peace Prize winner; former president of Poland.
Prince William (of Wales), b 6/21/82 (London, Eng., UK), son of Prince Charles; 2nd in line to British throne.
Rowan Williams, b 6/14/50 (Ystradgynlais, Wales, UK), Archbishop of Canterbury.
Muhammad Yunus, b 6/28/40 (Chittagong, India), 2006 Nobel Peace prize winner, economics professor.
Ayman al-Zawahiri, b 6/19/51 (Cairo, Egypt), reputed high-ranking al-Qaeda leader.

Architects

Max Abramovitz, 1908-2004, Avery Fisher Hall, New York, NY; U.S. Steel Bldg. (now USX Towers), Pittsburgh, PA.
Tadao Ando, b 1941, Modern Art Museum, Ft. Worth, TX; Stone Hill Center, MA.
Henry Bacon, 1866-1924, Lincoln Memorial, Washington, DC.
Benjamin Banneker, 1731-1806, African American inventor, astronomer, mathematician; helped design and lay out Washington, DC.
Pietro Belluschi, 1899-1994, Juilliard School, Lincoln Center, Pan Am Bldg. (now MetLife Bldg.) with Walter Gropius, New York, NY.
Marcel Breuer, 1902-81, Whitney Museum of American Art (with Hamilton Smith), New York, NY.
Charles Bulfinch, 1763-1844, State House, Boston, MA; Capitol (part), Washington, DC.
Gordon Bunshaft, 1909-90, Lever House, Park Ave., New York, NY; Hirshhorn Museum, Washington, DC.
Daniel H. Burnham, 1846-1912, Union Station, Washington, DC; Flatiron Bldg., New York, NY.
Irwin Chanin, 1892-1988, theaters, skyscrapers, New York, NY.
David Childs, b 1941, Washington Mall Master Plan/Constitution Gardens, Washington, DC; WTC Freedom Tower, New York, NY.
Lucio Costa, 1902-98, master plan for city of Brasilia, Brazil (with Oscar Niemeyer).
Ralph Adams Cram, 1863-1942, Cath. of St. John the Divine, New York, NY; U.S. Military Acad. (part), West Point, NY.
Norman Foster, b 1935, Commerzbank Headquarters, Frankfurt-am-Main, Ger.; London Millennium Bridge, Eng., UK.
James Ingo Freed, 1930-2005, Holocaust Memorial Museum, Washington, DC; Jacob K. Javits Center, New York, NY.
R. Buckminster Fuller, 1895-1983, U.S. Pavilion (geodesic domes), Expo 67, Montreal, QC, Can.
Frank O. Gehry, b 1929, Guggenheim Museum, Bilbao, Spain; Experience Music Project, Seattle, WA; Walt Disney Concert Hall, Los Angeles, CA.
Cass Gilbert, 1859-1934, Custom House, Woolworth Bldg., New York, NY; Supreme Court Bldg., Washington, DC.
Bertram G. Goodhue, 1869-1924, Capitol, Lincoln, NE; St. Thomas's Church, St. Bartholomew's Church, New York, NY.

Michael Graves, b 1934, Portland Bldg., Portland, OR; Humana Bldg., Louisville, KY.
Walter Gropius, 1883-1969, Pan Am Bldg. (now MetLife Bldg.) (with Pietro Belluschi), New York, NY.
Zaha Hadid, b 1950, Rosenthal Center for Contemporary Art, Cincinnati, OH.
Lawrence Halprin, 1916-2009, Ghirardelli Sq., San Francisco, CA; Nicollet Mall, Minneapolis, MN; FDR Memorial, Washington, DC.
Peter Harrison, 1716-75, Touro Synagogue, Redwood Library, Newport, RI.
Wallace K. Harrison, 1895-1981, Metropolitan Opera House, Lincoln Center, New York, NY.
Thomas Hastings, 1860-1929, NY Public Library (with John Carrère), Frick Mansion, New York, NY.
James Hoban, 1762-1831, White House, Washington, DC.
Raymond Hood, 1881-1934, Rockefeller Center (part), Daily News Bldg., New York, NY; Tribune Tower, Chicago, IL.
Richard M. Hunt, 1827-95, Metropolitan Museum (part), New York, NY; Biltmore Estate, Asheville, NC.
Helmut Jahn, b 1940, United Airlines Terminal, O'Hare Airport, Chicago, IL.
William Le Baron Jenney, 1832-1907, Home Insurance (demolished 1931), Chicago, IL.
Philip C. Johnson, 1906-2005, AT&T headquarters (now 550 Madison Ave.), New York, NY; Transco (now Williams) Tower, Houston, TX.
Albert Kahn, 1869-1942, General Motors Bldg., Detroit, MI.
Louis Kahn, 1901-74, Salk Laboratory, La Jolla, CA; Yale Art Gallery, New Haven, CT.
Christopher Grant LaFarge, 1862-1938, Roman Catholic Chapel, West Point, NY.
Benjamin H. Latrobe, 1764-1820, Capitol (part), Washington, DC; State Capitol Bldg., Richmond, VA.
Le Corbusier (Charles-Edouard Jeanneret), 1887-1965, Salvation Army Hostel, Swiss Dormitory, Paris, France; master plan for cities of Algiers and Buenos Aires.
William Lescaze, 1896-1969, Philadelphia Savings Fund Society, PA; Borg-Warner Bldg., Chicago, IL.
Daniel Libeskind, b 1946, primary architect for the rebuilding World Trade Center site, New York, NY.
Maya Lin, b 1959, Vietnam Veterans Mem., Washington, DC.
Charles Rennie Mackintosh, 1868-1928, Glasgow School of Art; Hill House, Helensburgh, Scot., UK.
Bernard R. Maybeck, 1862-1957, Hearst Hall, Univ. of CA, Berkeley; First Church of Christ Scientist, Berkeley, CA.
Charles F. McKim, 1847-1909, Public Library, Boston, MA; Columbia Univ. (part), New York, NY.
Charles M. McKim, b 1920, KUHT-TV Transmitter Bldg., Lutheran Church of the Redeemer, Houston, TX.
Richard Meier, b 1934, Getty Center Museum, Los Angeles, CA; High Museum of Art, Atlanta, GA.
Ludwig Mies van der Rohe, 1886-1969, Seagram Bldg. (with Philip C. Johnson), New York, NY; National Gallery, Berlin, Ger.
Robert Mills, 1781-1855, Washington Monument, Washington, DC.
Charles Moore, 1925-93, Sea Ranch, nr. San Francisco, CA; Piazza d'Italia, New Orleans, LA.
Julia Morgan, 1872-1957, San Simeon, CA.
Richard J. Neutra, 1892-1970, Mathematics Park, Princeton, NJ; Orange Co. Courthouse, Santa Ana, CA.
Oscar Niemeyer, b 1907, government buildings, Brasilia Palace Hotel, all Brasilia, Braz.
Gyo Obata, b 1923, Natl. Air & Space Museum, Smithsonian Inst., Washington, DC; Dallas-Ft. Worth Airport, TX.
Frederick L. Olmsted, 1822-1903, Central Park, New York, NY; Fairmount Park, Philadelphia, PA.
I(eoh) M(ing) Pei, b 1917, East Wing, Natl. Gallery of Art, Washington, DC; Pyramid, The Louvre, Paris, Fr.; Rock & Roll Hall of Fame and Museum, Cleveland, OH.
Cesar Pelli, b 1926, World Financial Center, Carnegie Hall Tower, New York, NY; Petronas Twin Towers, Malaysia.
William Pereira, 1909-85, Cape Canaveral, FL; Transamerica Bldg., San Francisco, CA.
Renzo Piano, b 1937, Pompidou Centre, Paris, Fr.; New York Times Building, New York, NY.
John Russell Pope, 1874-1937, National Gallery, Jefferson Memorial, Washington, DC.
John Portman, b 1924, Peachtree Center, Atlanta, GA.
George Browne Post, 1837-1913, NY Stock Exchange, New York, NY; Capitol, Madison, WI.
James Renwick Jr., 1818-95, Grace Church, St. Patrick's Cath., New York, NY; Smithsonian Institution (Castle), Washington, DC.
Henry H. Richardson, 1838-86, Trinity Church, Boston, MA.
Kevin Roche, b 1922, Oakland Museum, Oakland, CA; Fine Arts Center, University of Massachusetts, Amherst, MA.
James Gamble Rogers, 1867-1947, Columbia-Presbyterian Medical Center, New York, NY; Northwestern Univ., Evanston, IL.
John Wellborn Root, 1887-1963, Palmolive Bldg., Chicago, IL; Hotel Statler, Washington, DC.
Paul Rudolph, 1918-97, Jewitt Art Center, Wellesley College, MA; Art & Architecture Bldg., Yale Univ., New Haven, CT.
Eero Saarinen, 1910-61, Gateway to the West Arch, St. Louis, MO; Trans World Airlines Flight Center, New York, NY.
Kazuyo Sejima, b 1956, 21st Century Museum of Contemporary Art, Kanazawa, Japan (with Ryue Nishizawa).
Norma Merrick Sklarek, b 1928, Terminal One at the Los Angeles International Airport, CA.
Louis Skidmore, 1897-1962, Atomic Energy Commission town site, Oak Ridge, TN; Terrace Plaza Hotel, Cincinnati, OH.
Clarence S. Stein, 1882-1975, Temple Emanu-El, New York, NY.
Edward Durell Stone, 1902-78, interior of Radio City Music Hall, Museum of Modern Art, New York, NY.
Louis H. Sullivan, 1856-1924, Auditorium Bldg., Chicago, IL.
Kenzo Tange, 1913-2005, Hiroshima Peace Park, 1964 Tokyo Olympics twin stadiums, Japan.
Richard Upjohn, 1802-78, Trinity Church, New York, NY.
Max O. Urbahn, 1912-95, Vehicle Assembly Bldg., Cape Canaveral, FL.
Joern Utzon, 1918-2008, Sydney Opera House, Australia.
William Van Alen, 1883-1954, Chrysler Building, New York, NY.
Robert Venturi, b 1925, Gordon Wu Hall, Princeton, NJ; Mielparque Nikko Kirifuri Resort, Japan.
Ralph T. Walker, 1889-1973, NY Telephone Bldg., New York, NY; IBM Research Lab, Poughkeepsie, NY.
Roland A. Wank, 1898-1970, Cincinnati Union Terminal, OH; head architect (1933-44), Tennessee Valley Authority.
Stanford White, 1853-1906, Washington Arch in Washington Square Park, first Madison Square Garden, New York, NY.
Christopher Wren, 1632-1723, St. Paul's Cathedral, London, Eng., UK.
Frank Lloyd Wright, 1867-1959, Imperial Hotel, Tokyo, Jpn.; Guggenheim Museum, New York, NY; Kaufmann "Fallingwater" house, Bear Run, PA; Taliesin West, Scottsdale, AZ.
William Wurster, 1895-1973, Ghirardelli Sq., San Francisco, CA.
Minoru Yamasaki, 1912-86, World Trade Center (destroyed 2001), New York, NY.

Artists, Photographers, and Sculptors of the Past

Artists are painters unless otherwise indicated.

Berenice Abbott, 1898-1991, (U.S.) photographer. Documentary of New York City, *Changing New York* (1939).
Ansel Easton Adams, 1902-84, (U.S.) photographer. Landscapes of the American Southwest.
Washington Allston, 1779-1843, (U.S.) landscapist. *Belshazzar's Feast*.
Albrecht Altdorfer, 1480-1538, (Ger.) landscapist.
Andrea del Sarto, 1486-1530, (It.) frescoes. *Madonna of the Harpies*.
Fra Angelico, c. 1400-55, (It.) Renaissance muralist. *Madonna of the Linen Drapers' Guild*.
Diane Arbus, 1923-71, (U.S.) photographer. Disturbing images.
Alexsandr Archipenko, 1887-1964, (U.S.) sculptor. *Boxing Match*, *Medranos*.
Jean Arp, 1887-1966, (Fr.) sculptor and painter, founder of Dada movement.
Eugène Atget, 1856-1927, (Fr.) photographer. Paris life.
John James Audubon, 1785-1851, (U.S.) *Birds of America*.
Hans Baldung-Grien, 1484-1545, (Ger.) *Todentanz*.
Ernst Barlach, 1870-1938, (Ger.) Expressionist sculptor. *Man Drawing a Sword*.
Frédéric-Auguste Bartholdi, 1834-1904, (Fr.) *Liberty Enlightening the World* (The Statue of Liberty), *Lion of Belfort*.
Fra Bartolommeo, 1472-1517, (It.) *Vision of St. Bernard*.
Romare Bearden, 1911-88, (U.S.) collage and other media. *The Visitation*.
Aubrey Beardsley, 1872-98, (Br.) illustrator. *Salome*, *Lysistrata*, *Morte d'Arthur*, *Volpone*.
Max Beckmann, 1884-1950, (Ger.) Expressionist. *The Descent From the Cross*.
Gentile Bellini, 1426-1507, (It.) Renaissance. *Procession in St. Mark's Square*.
Giovanni Bellini, 1428-1516, (It.) Renaissance. *St. Francis in Ecstasy*.
Jacopo Bellini, 1400-70, (It.) Renaissance. *Crucifixion*.
George Wesley Bellows, 1882-1925, (U.S.) sports artist, portraitist, landscapist. *Stag at Sharkey's*, *Edith Clavell*.
Thomas Hart Benton, 1889-1975, (U.S.) American regionalist. *Threshing Wheat*, *Arts of the West*.
Ruth Bernhard, 1905-2006, (Ger.-U.S.) photographer. Black and white studies of female nudes.
Gianlorenzo Bernini, 1598-1680, (It.) Baroque sculptor. *The Assumption*.
Albert Bierstadt, 1830-1902, (U.S.) landscapist. *The Rocky Mountains*, *Mount Corcoran*.
George Caleb Bingham, 1811-79, (U.S.) American frontier. *Fur Traders Descending the Missouri*.
William Blake, 1757-1827, (Br.) engraver. *Book of Job*, *Songs of Innocence*, *Songs of Experience*.
Rosa Bonheur, 1822-99, (Fr.) realist. *The Horse Fair*.
Pierre Bonnard, 1867-1947, (Fr.) Intimist. *The Breakfast Room*, *Girl in a Straw Hat*.
Gutzon Borglum, 1867-1941, (U.S.) sculptor. Mt. Rushmore Memorial.
Hieronymus Bosch, 1450-1516, (Flem.) religious allegories. *The Crowning With Thorns*.
Sandro Botticelli, 1444-1510, (It.) Renaissance. *Birth of Venus*, *Adoration of the Magi*, *Guiliano de'Medici*.
Louise Bourgeois, 1911-2010, (Fr.) sculptor. *Maman*.

Margaret Bourke-White, 1904-71, (U.S.) photographer, photojournalist. WWII, USSR, rural South during the Depression.
Mathew Brady, c. 1823-96, (U.S.) official photographer of the Civil War.
Constantin Brancusi, 1876-1957, (Romania-Fr.) Nonobjective sculptor. *Flying Turtle*, *The Kiss*.
Georges Braque, 1882-1963, (Fr.) Cubist. *Violin and Palette*.
Pieter Bruegel the Elder, c. 1525-69, (Flem.) Renaissance. *The Peasant Dance*, *Hunters in the Snow*, *Magpie on the Gallows*.
Pieter Bruegel the Younger, 1564-1638, (Flem.) Baroque. *Village Fair*, *The Crucifixion*.
Edward Burne-Jones, 1833-98, (Br.) Pre-Raphaelite artist-craftsman. *The Mirror of Venus*.
Alexander Calder, 1898-1976, (U.S.) sculptor. *Lobster Trap and Fish Tail*.
Julia Margaret Cameron, 1815-79, (Br.) photographer, prominent portraitist.
Robert Capa (Endre Friedmann), 1913-54, (Hung.-U.S.) photographer, war photojournalist. Invasion of Normandy.
Michelangelo Merisi da Caravaggio, 1573-1610, (It.) Baroque. *The Supper at Emmaus*.
Emily Carr, 1871-1945, (Can.) landscapist. *Blunden Harbour*, *Big Raven*, *Rushing Sea of Undergrowth*.
Carlo Carrà, 1881-1966, (It.) Metaphysical school. *Lot's Daughters*, *The Enchanted Room*.
Henri Cartier-Bresson, 1908-2004, (Fr.) photographer. *Imagenes à la sauvette*.
Mary Cassatt, 1844-1926, (U.S.) Impressionist. *The Cup of Tea*, *Woman Bathing*, *The Boating Party*.
George Catlin, 1796-1872, (U.S.) American Indian life. *Gallery of Indians*, *Buffalo Dance*.
Benvenuto Cellini, 1500-71, (It.) Mannerist sculptor, goldsmith. *Perseus and Medusa*.
Paul Cézanne, 1839-1906, (Fr.) Post-Impressionist. *Card Players*, *Mont-Sainte-Victoire With Large Pine Trees*.
Marc Chagall, 1887-1985, (Russ.) Jewish life and folklore. *I and the Village*, *The Praying Jew*.
Jean Simeon Chardin, 1699-1779, (Fr.) still lifes. *The Kiss*, *The Grace*.
Giorgio de Chirico, 1888-1978, (It.) founded the Metaphysical school. *Enigma of an Autumn Night*.
Frederick Church, 1826-1900, (U.S.) Hudson River school. *Niagara*, *Andes of Ecuador*.
Giovanni Cimabue, 1240-1302, (It.) Byzantine mosaicist. *Madonna Enthroned With St. Francis*.
Claude Lorrain (Claude Gellée), 1600-82, (Fr.) Ideal-landscapist. *The Enchanted Castle*.
Thomas Cole, 1801-48, (U.S.) Hudson River school. *The Ox-Bow*, *In the Catskills*.
John Constable, 1776-1837, (Br.) landscapist. *Salisbury Cathedral From the Bishop's Grounds*.
John Singleton Copley, 1738-1815, (U.S.) portraitist. *Samuel Adams*, *Watson and the Shark*.
Lovis Corinth, 1858-1925, (Ger.) Expressionist. *Apocalypse*.
Jean-Baptiste-Camille Corot, 1796-1875, (Fr.) landscapist. *Souvenir de Mortefontaine*, *Pastorale*.
Correggio, 1494-1534, (It.) Renaissance muralist. *Mystic Marriages of St. Catherine*.
Gustave Courbet, 1819-77, (Fr.) Realist. *The Artist's Studio*.
Lucas Cranach the Elder, 1472-1553, (Ger.) Protestant Reformation portraitist. *Luther*.
Imogen Cunningham, 1883-1976, (U.S.) photographer, portraitist. Plant photography.
Nathaniel Currier, 1813-88, and **James M. Ives**, 1824-95, (both U.S.) lithographers. *A Midnight Race on the Mississippi*, *American Forest Scene—Maple Sugaring*.
John Steuart Curry, 1897-1946, (U.S.) Americana, murals. *Baptism in Kansas*.
Salvador Dalí, 1904-89, (Sp.) Surrealist. *Persistence of Memory*, *The Crucifixion*.
Honoré Daumier, 1808-79, (Fr.) caricaturist. *The Third-Class Carriage*.
Jacques-Louis David, 1748-1825, (Fr.) Neoclassicist. *The Oath of the Horatii*.
Arthur Davies, 1862-1928, (U.S.) Romantic landscapist. *Unicorns*, *Leda and the Dioscuri*.
Edgar Degas, 1834-1917, (Fr.) realist/Impressionist. *The Ballet Class*.
Willem de Kooning, 1904-97, (Neth.-U.S.) Abstract Expressionist. *Excavation*, *Woman I*, *Door to the River*.
Eugène Delacroix, 1798-1863, (Fr.) Romantic. *Massacre at Chios*, *Liberty Leading the People*.
Paul Delaroche, 1797-1856, (Fr.) historical themes. *Children of Edward IV*.
Luca Della Robbia, 1400-82, (It.) Renaissance terracotta. *Cantoria* (singing gallery), Florence cathedral.
Donatello, 1386-1466, (It.) Renaissance sculptor. *David*, *Gattamelata*.
Aaron Douglas, 1899-79, (U.S.) Harlem Renaissance illustrator and muralist.
Jean Dubuffet, 1902-85, (Fr.) painter, sculptor, printmaker. *Group of Four Trees*.
Marcel Duchamp, 1887-1968, (Fr.) Dadaist. *Nude Descending a Staircase, No. 2*.
Raoul Dufy, 1877-1953, (Fr.) Fauvist. *Chateau and Horses*.
Asher Brown Durand, 1796-1886, (U.S.) Hudson River school. *Kindred Spirits*.
Albrecht Dürer, 1471-1528, (Ger.) Renaissance painter, engraver, woodcuts. *St. Jerome in His Study*, *Melencolia I*.
Anthony van Dyck, 1599-1641, (Flem.) Baroque portraitist. *Portrait of Charles I Hunting*.
Thomas Eakins, 1844-1916, (U.S.) Realist. *The Gross Clinic*.
Alfred Eisenstaedt, 1898-1995, (Ger.-U.S.) photographer, photojournalist. Famous photo, V-J Day, Aug. 14, 1945.
Peter Henry Emerson, 1856-1936, (Br.) photographer. Promoted photography as an independent art form.
Jacob Epstein, 1880-1959, (Br.) religious and allegorical sculptor. *Genesis*, *Ecce Homo*.
Erté (Romain de Tiertoff), 1892-1990, (Fr.) painter, fashion and stage designer.
Jan van Eyck, c. 1390-1441, (Flem.) naturalistic panels. *Adoration of the Lamb*.
Roger Fenton, 1819-69, (Br.) photographer. Crimean War.
Anselm Feuerbach, 1829-80, (Ger.) Romantic Classicist. *Judgment of Paris*, *Iphigenia*.
John Bernard Flannagan, 1895-1942, (U.S.) animal sculptor. *Triumph of the Egg*.
Jean-Honoré Fragonard, 1732-1806, (Fr.) Rococo. *The Swing*.
Daniel Chester French, 1850-1931, (U.S.) sculptor. *The Minute Man of Concord*; seated *Lincoln*, Lincoln Memorial, Washington, DC.
Caspar David Friedrich, 1774-1840, (Ger.) Romantic landscapist. *Man and Woman Gazing at the Moon*.
Thomas Gainsborough, 1727-88, (Br.) portraitist. *The Blue Boy*, *The Watering Place*, *Orpin the Parish Clerk*.
Alexander Gardner, 1821-82, (U.S.) photographer. Civil War, railroad construction, Great Plains Indians.
Paul Gauguin, 1848-1903, (Fr.) Post-Impressionist. *The Tahitians*, *Spirit of the Dead Watching*.
Lorenzo Ghiberti, 1378-1455, (It.) Renaissance sculptor. "Gates of Paradise" baptistery doors, Florence, It.
Alberto Giacometti, 1901-66, (Switz.) attenuated sculptures of solitary figures. *Man Pointing*.
Giorgione, c. 1477-1510, (It.) Renaissance. *The Tempest*.
Giotto di Bondone, 1267-1337, (It.) Renaissance. *Presentation of Christ in the Temple*.
François Girardon, 1628-1715, (Fr.) Baroque sculptor of classical themes. *Apollo Tended by the Nymphs*.
Vincent van Gogh, 1853-90, (Neth.) *The Starry Night*, *L'Arlesienne*, *Bedroom at Arles*, *Self-Portrait*.
Edward Gorey, 1925-2000, (U.S.) illustrator. *The Doubtful Guest*.
Arshile Gorky, 1905-48, (U.S.) Surrealist. *The Liver Is the Cock's Comb*.
Francisco de Goya y Lucientes, 1746-1828, (Sp.) painter, printmaker. *The Naked Maja*, *The Disasters of War* (etchings).
El Greco (Domenikos Theotokopoulos), 1541-1614, (Gr.-Sp.) painter, sculptor. *View of Toledo*, *Assumption of the Virgin*.
Horatio Greenough, 1805-52, (U.S.) Neo-Classical sculptor.
Matthias Grünewald, 1480-1528, (Ger.) mystical religious themes. *The Resurrection*.
Frans Hals, c. 1580-1666, (Neth.) portraitist. *Laughing Cavalier*, *Gypsy Girl*.
Austin Hansen, 1910-96, (U.S.) photographer. Harlem, NY, life.
Childe Hassam, 1859-1935, (U.S.) Impressionist. *Southwest Wind*, *July 14 Rue Daunon*.
Edward Hicks, 1780-1849, (U.S.) folk. *The Peaceable Kingdom*.
Lewis Wickes Hine, 1874-1940, (U.S.) photographer. Studies of immigrants, children in industry.
Hans Hofmann, 1880-1966, (U.S.) early Abstract Expressionist. *Spring*, *The Gate*.
William Hogarth, 1697-1764, (Br.) caricaturist. *The Rake's Progress*.
Katsushika Hokusai, 1760-1849, (Jpn.) printmaker. *Crabs*.
Hans Holbein the Elder, 1460-1524, (Ger.) late Gothic. *Presentation of Christ in the Temple*.
Hans Holbein the Younger, 1497-1543, (Ger.) portraitist. *Henry VIII*, *The French Ambassadors*.
Winslow Homer, 1836-1910, (U.S.) naturalist, marine themes. *Marine Coast*, *High Cliff*.
Edward Hopper, 1882-1967, (U.S.) realistic urban scenes. *Nighthawks*, *House by the Railroad*.
Horst P. Horst, 1906-99, (Ger.) fashion, celebrity photographer.
Jean-Auguste-Dominique Ingres, 1780-1867, (Fr.) Classicist. *Valpincon Bather*.
George Inness, 1825-94, (U.S.) luminous landscapist. *Delaware Water Gap*.
William Henry Jackson, 1843-1942, (U.S.) photographer. American West, building of Union Pacific Railroad.
Jeanne-Claude (Javacheff), 1935-2009, (Moroc.), created large-scale, temporary installations in public places with her husband, Christo.
Donald Judd, 1928-94, (U.S.) sculptor, major Minimalist.
Frida Kahlo, 1907-54, (Mex.) folkloric stylist. *Self-Portrait With Monkey*.
Wassily Kandinsky, 1866-1944, (Russ.) Abstractionist. *Capricious Forms*, *Improvisation 28 (second version)*.
Paul Klee, 1879-1940, (Switz.) Abstractionist. *Twittering Machine*, *Pastoral*, *Death and Fire*.
Gustav Klimt, 1862-1918, (Austria) cofounder of Vienna Secession Movement. *The Kiss*.
Oscar Kokoschka, 1886-1980, (Austria) Expressionist. *View of Prague*, *Harbor of Marseilles*.
Kathe Kollwitz, 1867-1945, (Ger.) printmaker, social justice themes. *The Peasant War*.
Gaston Lachaise, 1882-1935, (U.S.) figurative sculptor. *Standing Woman*.
John La Farge, 1835-1910, (U.S.) muralist. *Red and White Peonies*, *The Ascension*.
Sir Edwin (Henry) Landseer, 1802-73, (Br.) painter, sculptor. *Shoeing*, *Rout of Comus*.
Dorothea Lange, 1895-1965, (U.S.) photographer. Great Depression, migrant farm workers.
Fernand Léger, 1881-1955, (Fr.) Machine art. *The Cyclists*.
Leonardo da Vinci, 1452-1519, (It.) Renaissance. *Mona Lisa*, *Last Supper*, *The Annunciation*.

Emanuel Leutze, 1816-68, (U.S.) historical themes. *Washington Crossing the Delaware*.
Roy Lichtenstein, 1923-97, (U.S.) Pop Art.
Jacques Lipchitz, 1891-1973, (Fr.) Cubist sculptor. *Harpist*.
Filippino Lippi, 1457-1504, (It.) Renaissance. *Adoration of the Magi*.
Fra Filippo Lippi, 1406-69, (It.) Renaissance. *Coronation of the Virgin*, *Madonna and Child With Angels*.
Morris Louis, 1912-62, (U.S.) Abstract Expressionist. *Signa*, *Stripes*, *Alpha-Phi*.
René Magritte, 1898-1967, (Belg.) Surrealist. *The Descent of Man*, *The Betrayal of Images*.
Aristide Maillol, 1861-1944, (Fr.) sculptor. *L'Harmonie*.
Édouard Manet, 1832-83, (Fr.) forerunner of Impressionism. *Luncheon on the Grass*, *Olympia*.
Andrea Mantegna, 1431-1506, (It.) Renaissance frescoes. *Triumph of Caesar*.
Franz Marc, 1880-1916, (Ger.) Expressionist. *Blue Horses*.
John Marin, 1870-1953, (U.S.) Expressionist seascapes. *Maine Island*.
Reginald Marsh, 1898-1954, (U.S.) satire. *Tattoo and Haircut*.
Agnes Martin, 1912-2004, (U.S.) abstract artist. *Night Sea*.
Masaccio, 1401-28, (It.) Renaissance. *The Tribute Money*.
Henri Matisse, 1869-1954, (Fr.) Fauvist. *Woman With the Hat*.
Michelangelo Buonarroti, 1475-1564, (It.) Renaissance. *Pietà*, *David*, *Moses*, *The Last Judgment*, Sistine Chapel ceiling.
Jean-Francois Millet, 1814-75, (Fr.) peasants. *The Gleaners*, *The Man With a Hoe*.
Joan Miró, 1893-1983, (Sp.) exuberant colors, playful images. Catalan landscape, *Dutch Interior*.
Amedeo Modigliani, 1884-1920, (It.) figurative works. *Reclining Nude*.
Piet Mondrian, 1872-1944, (Neth.) Abstractionist. *Composition With Red, Yellow and Blue*.
Claude Monet, 1840-1926, (Fr.) Impressionist. *The Bridge at Argenteuil*, *Haystacks*, *Bridge Over a Pond of Water Lillies*.
Henry Moore, 1898-1986, (Br.) sculptor of large-scale, abstract works. *Reclining Figure* (several).
Gustave Moreau, 1826-98, (Fr.) Symbolist. *The Apparition*, *Dance of Salome*.
James Wilson Morrice, 1865-1924, (Can.) landscapist. *The Ferry*, *Quebec*, *Venice*, *Looking Over the Lagoon*.
William Morris, 1834-96, (Br.) decorative artist, leader of Arts and Crafts movement.
Grandma Moses (Anna Mary Robertson Moses), 1860-1961, (U.S.) folk. *Out for the Christmas Tree*, *Catching the Thanksgiving Turkey*.
Edvard Munch, 1863-1944, (Nor.) Expressionist. *The Cry*.
Bartolome Murillo, 1618-82, (Sp.) Baroque religious artist. *Vision of St. Anthony*, *The Two Trinities*.
Elizabeth Murray, 1940-2007, (U.S.) abstract colors. *Kitchen Party*.
Eadweard Muybridge, 1830-1904, (Br.-U.S.) photographer. Studies of motion, *Animal Locomotion*.
Nadar (Gaspar-Félix Tournachon), 1820-1910, (Fr.) photographer, caricaturist, portraitist. Invented photo-essay.
Arnold Newman, 1918-2006, (U.S.) portrait photographer.
Barnett Newman, 1905-70, (U.S.) Abstract Expressionist. *Stations of the Cross*.
Isamu Noguchi, 1904-88, (U.S.) abstract sculptor, designer. *Kouros*, *BirdC(MU)*, sculptural gardens.
Kenneth Noland, 1924-2010 (U.S.) American color field painter, abstract.
Georgia O'Keeffe, 1887-1986, (U.S.) Southwest motifs. *Cow's Skull: Red*, *White*, *and Blue*; *The Shelton With Sunspots*.
José Clemente Orozco, 1883-1949, (Mex.) frescoes. *House of Tears*, *Pre-Columbian Golden Age*.
Timothy H. O'Sullivan, 1840-82, (U.S.) Civil War photographer.
Gordon Parks, 1912-2006, (U.S.) African American photographer, film maker. *Life* photographer, 1948-68.
Charles Willson Peale, 1741-1827, (U.S.) Amer. Revolutionary portraitist. *The Staircase Group*, U.S. presidents.
Rembrandt Peale, 1778-1860, (U.S.) portraitist. *Thomas Jefferson*.
Irving Penn, 1917-2009, (U.S.) portraitist, fashion photographer.
Pietro Perugino, 1446-1523, (It.) Renaissance. *Delivery of the Keys to St. Peter*.
Pablo Picasso, 1881-1973, (Sp.) painter, sculptor. *Guernica*; *Dove*; *Head of a Woman*; *Head of a Bull*, *Metamorphosis*.
Piero della Francesca, c. 1415-92, (It.) Renaissance. *Duke of Urbino*, *Flagellation of Christ*.
Camille Pissarro, 1830-1903, (Fr.) Impressionist. *Boulevard des Italiens*, *Morning*, *Sunlight*; *Bather in the Woods*.
Jackson Pollock, 1912-56, (U.S.) Abstract Expressionist. *Autumn Rhythm*.
Nicolas Poussin, 1594-1665, (Fr.) Baroque pictorial classicism. *St. John on Patmos*.
Maurice B. Prendergast, c. 1860-1924, (U.S.) Post-impressionist water colorist. *Umbrellas in the Rain*.
Pierre-Paul Prud'hon, 1758-1823, (Fr.) Romanticist. *Crime Pursued by Vengeance and Justice*.
Pierre Cecile Puvis de Chavannes, 1824-98, (Fr.) muralist. *The Poor Fisherman*.
Raphael Sanzio, 1483-1520, (It.) Renaissance. *Disputa*, *School of Athens*, *Sistine Madonna*.
Robert Rauschenberg, 1925-2008, (U.S.) printmaker. *Combine*, *Bed*, *Revolvers*, *Outpost*.
Man Ray (Emmanuel Radnitsky), 1890-1976, (U.S.) Dadaist and Surrealist. *Observing Time*, *The Lovers*, *Marquis de Sade*.
Odilon Redon, 1840-1916, (Fr.) Symbolist painter, lithographer. *In the Dream*, *Vase of Flowers*.
Rembrandt van Rijn, 1606-69, (Neth.) painter, printmaker. *The Bridal Couple*, *The Night Watch*.
Frederic Remington, 1861-1909, (U.S.) painter, sculptor. Portrayer of the American West, *Bronco Buster*.
Pierre-Auguste Renoir, 1841-1919, (Fr.) Impressionist. *The Luncheon of the Boating Party*, *Dance in the Country*.
Joshua Reynolds, 1723-92, (Br.) portraitist. *Mrs. Siddons as the Tragic Muse*.
Herb Ritts, 1952-2002, (U.S.) photographer. Nudes, celebrities.
Diego Rivera, 1886-1957, (Mex.) frescoes. *The Fecund Earth*.
Larry Rivers, 1923-2002, (U.S.) painter, sculptor, often realistic. Dutch Masters series.
Henry Peach Robinson, 1830-1901, (Br.) photographer. A leader of "high art" photography.
Norman Rockwell, 1894-1978, (U.S.) painter, illustrator. *Saturday Evening Post* covers.
Auguste Rodin, 1840-1917, (Fr.) sculptor. *The Thinker*.
Willy Ronis, 1910-2009, (Fr.) photographer. Post-war Paris.
Joe Rosenthal, 1911-2006, (U.S.) photojournalist; photographed six marines raising the U.S. flag over Iwo Jima in WWII.
Mark Rothko, 1903-70, (U.S.) Abstract Expressionist. *Light, Earth and Blue*.
Georges Rouault, 1871-1958, (Fr.) Expressionist. *Three Judges*.
Henri Rousseau, 1844-1910, (Fr.) primitive exotic themes. *The Snake Charmer*.
Theodore Rousseau, 1812-67, (Switz.-Fr.) landscapist. *Under the Birches*, *Evening*.
Peter Paul Rubens, 1577-1640, (Flem.) Baroque. *Mystic Marriage of St. Catherine*.
Jacob van Ruisdael, c. 1628-82, (Neth.) landscapist. *Jewish Cemetery*.
Charles M. Russell, 1866-1926, (U.S.) Western life.
Salomon van Ruysdael, c. 1600-70, (Dutch) landscapist. *River With Ferry-Boat*.
Albert Pinkham Ryder, 1847-1917, (U.S.) seascapes, allegories. *Toilers of the Sea*.
Augustus Saint-Gaudens, 1848-1907, (U.S.) memorial statues. *Farragut*, *Mrs. Henry Adams (Grief)*.
Niki de Saint Phalle,1930-2002, (Fr.) paintings, sculptures, prints, large public installations.
Andrea Sansovino, 1460-1529, (It.) Renaissance sculptor. *Baptism of Christ*.
Jacopo Sansovino, 1486-1570, (It.) Renaissance sculptor. *St. John the Baptist*.
John Singer Sargent, 1856-1925, (U.S.) Edwardian society portraitist. *The Wyndham Sisters*, *Madam X*.
George Segal, 1924-2000, (U.S.) sculptor. Life-sized figures realistically depicting daily life.
Georges Seurat, 1859-91, (Fr.) Pointillist. *Sunday Afternoon on the Island of La Grande Jatte*.
Gino Severini, 1883-1966, (It.) Futurist and Cubist. *Dynamic Hieroglyph of the Bal Tabarin*.
Ben Shahn, 1898-1969, (U.S.) social and political themes. Sacco and Vanzetti series, *Seurat's Lunch*, *Handball*.
Charles Sheeler, 1883-1965, (U.S.) abstractionist.
David Alfaro Siqueiros, 1896-1974, (Mex.) political muralist. *March of Humanity*.
David Smith, 1906-65, (U.S.) welded metal sculpture. *Hudson River Landscape*, *Zig*, *Cubi* series.
Edward Steichen, 1879-1973, (U.S.) photographer. Credited with transforming photography into an art form.
Alfred Stieglitz, 1864-1946, (U.S.) photographer, editor. Helped create acceptance of photography as art.
Paul Strand, 1890-1976, (U.S.) photographer. People, nature, landscapes.
Gilbert Stuart, 1755-1828, (U.S.) portraitist. George Washington, Thomas Jefferson, James Madison.
Thomas Sully, 1783-1872, (U.S.) portraitist. *Col.Thomas Handasyd Perkins*, *The Passage of the Delaware*.
William Henry Fox Talbot, 1800-77, (Br.) photographer. *Pencil of Nature*, early photographically illustrated book.
George Tames, 1919-94, (U.S.) photographer. Presidents, political leaders.
Yves Tanguy, 1900-55, (Fr.) Surrealist. *Rose of the Four Winds*; *Mama*, *Papa Is Wounded!*
Giovanni Battista Tiepolo, 1696-1770, (It.) Rococo frescoes. *The Crucifixion*.
Jacopo Tintoretto, 1518-94, (It.) Mannerist. *The Last Supper*.
Titian (Tiziano Vecellio), c. 1488-1576, (It.) Renaissance. *Venus and the Lute Player*, *The Bacchanal*.
Jose Rey Toledo, 1916-94, (U.S.) Native American life. Tribal dances.
Henri de Toulouse-Lautrec, 1864-1901, (Fr.) Post-impressionist. *At the Moulin Rouge*.
John Trumbull, 1756-1843, (U.S.) historical themes. *The Declaration of Independence*.
J(oseph) M(allord) W(illiam) Turner, 1775-1851, (Br.) Romantic landscapist. *Snow Storm*.

Paolo Uccello, 1397-1475, (It.) Gothic-Renaissance. *The Rout of San Romano*.
Maurice Utrillo, 1883-1955, (Fr.) Impressionist. *Sacre-Coeur de Montmartre*.
John Vanderlyn, 1775-1852, (U.S.) Neoclassicist. *Ariadne Asleep on the Island of Naxos*.
Diego Velázquez, 1599-1660, (Sp.) Baroque. *Las Meninas*, *Portrait of Juan de Pareja*.
Jan Vermeer, 1632-75, (Neth.) interior genre subjects. *Young Woman With a Water Jug*.
Paolo Veronese, 1528-88, (It.) devotional themes, vastly peopled canvases. *The Temptation of St. Anthony*.
Andrea del Verrocchio, 1435-88, (It.) sculptor. *Colleoni*.
Maurice de Vlaminck, 1876-1958, (Fr.) Fauvist landscapist. *Red Trees*.
Andy Warhol, 1928-87, (U.S.) Pop Art. *Campbell's Soup Cans*, *Marilyn Diptych*.
Antoine Watteau, 1684-1721, (Fr.) Rococo "scenes of gallantry." *The Embarkation for Cythera*.
George Frederic Watts, 1817-1904, (Br.) painter and sculptor. Grandiose allegorical themes. *Hope*.
Benjamin West, 1738-1820, (U.S.) realistic historical themes. *Death of General Wolfe*.
Edward Weston, 1886-1958, (U.S.) photographer. Landscapes of American West.
James Abbott McNeill Whistler, 1834-1903, (U.S.) *Arrangement in Grey and Black*, *No. 1: The Artist's Mother*.
Archibald M. Willard, 1836-1918, (U.S.) murals. *The Spirit of '76*.
Grant Wood, 1891-1942, (U.S.) Midwestern regionalist. *American Gothic*, *Daughters of Revolution*.
Andrew Wyeth, 1917-2009, (U.S.), regionalist. *Christina's World*.
Ossip Zadkine, 1890-1967, (Russ.) School of Paris sculptor. *The Destroyed City*, *Musicians*, *Christ*.

Business Leaders and Philanthropists of the Past

Giovanni Agnelli, 1921-2003, (It.) industrialist; principal shareholder of Fiat.
Walter Annenberg, 1908-2002, (U.S.) publisher, founder of *TV Guide*, philanthropist.
Elizabeth Arden (F. N. Graham), 1884-1966, (U.S.) Canadian-born founder of cosmetics empire.
Philip D. Armour, 1832-1901, (U.S.) industrialist; streamlined meatpacking.
Brooke Astor, 1902-2007, (U.S.) philanthropist; president of Vincent Astor Foundation.
John Jacob Astor, 1763-1848, (U.S.) German-born fur trader, banker, real estate magnate; at death, richest in U.S.
Francis W. Ayer, 1848-1923, (U.S.) ad industry pioneer.
August Belmont, 1816-90, (U.S.) German-born financier.
James B. (Diamond Jim) Brady, 1856-1917, (U.S.) financier, philanthropist, legendary bon vivant.
Adolphus Busch, 1839-1913, (U.S.) German-born businessman; established brewery empire.
Asa Candler, 1851-1929, (U.S.) founded Coca-Cola Co.
Andrew Carnegie, 1835-1919, (U.S.) Scottish-born industrialist, philanthropist; founded Carnegie Steel Co.
Tom Carvel, 1908-89, (Gr.-U.S.) founded ice cream chain.
William Colgate, 1783-1857, (Br.-U.S.) businessman, philanthropist; founded soap-making empire.
Jay Cooke, 1821-1905, (U.S.) financier; sold $1 billion in Union bonds during Civil War.
Peter Cooper, 1791-1883, (U.S.) industrialist, inventor, philanthropist; founded Cooper Union (1859).
Ezra Cornell, 1807-74, (U.S.) businessman, philanthropist; headed Western Union, established university.
Erastus Corning, 1794-1872, (U.S.) financier; headed New York Central Railroad.
Charles Crocker, 1822-88, (U.S.) railroad builder, financier.
Samuel Cunard, 1787-1865, (Can.) pioneered trans-Atlantic steam navigation.
Marcus Daly, 1841-1900, (U.S.) Irish-born copper magnate.
W. Edwards Deming, 1900-93, (U.S.) quality-control expert who revolutionized Japanese manufacturing.
Walt Disney, 1901-66, (U.S.) pioneer in cinema animation; built entertainment empire.
Herbert H. Dow, 1866-1930, (U.S.) founder of chemical co.
Anthony Drexel, 1826-93, (U.S.) banker, philanthropist, university founder.
James Duke, 1856-1925, (U.S.) founded American Tobacco, Duke Univ.
Eleuthere I. du Pont, 1771-1834, (Fr.-U.S.) gunpowder manufacturer; founded one of the largest business empires.
Thomas C. Durant, 1820-85, (U.S.) railroad official, financier.
William C. Durant, 1861-1947, (U.S.) industrialist; formed General Motors.
George Eastman, 1854-1932, (U.S.) inventor; manufacturer of photographic equipment.
Marshall Field, 1834-1906, (U.S.) merchant; founded Chicago's largest department store.
Harvey Firestone, 1868-1938, (U.S.) founded tire company.
Avery Fisher, 1906-94, (U.S.) industrialist, philanthropist; founded Fisher electronics.
Henry M. Flagler, 1830-1913, (U.S.) financier; helped form Standard Oil, developed Florida as resort state.
Malcolm Forbes, 1919-90, (U.S.) magazine publisher.
Henry Ford, 1863-1947, (U.S.) auto maker; developed first popular low-priced car.
Henry Ford 2nd, 1917-87, (U.S.) headed auto company founded by grandfather.
Henry C. Frick, 1849-1919, (U.S.) steel and coke magnate; had prominent role in development of U.S. Steel.
Jakob Fugger (Jakob the Rich), 1459-1525, (Ger.) headed leading banking, trading house, in 16th-cent. Europe.
Alfred C. Fuller, 1885-1973, (U.S.) Canadian-born businessman; founded brush company.
Elbert H. Gary, 1846-1927, (U.S.) one of the organizers of U.S. Steel; chaired board of directors, 1903-27.
Jean Paul Getty, 1892-1976, (U.S.) founded oil empire.
Amadeo Giannini, 1870-1949, (U.S.) founded Bank of America.
Stephen Girard, 1750-1831, (U.S.) French-born financier, philanthropist; richest man in U.S. at time of his death.
Leonard H. Goldenson, 1905-99, (U.S.) turned ABC into major TV network.
Jay Gould, 1836-92, (U.S.) railroad magnate, financier.
Hetty Green, 1834-1916, (U.S.) financier, the "witch of Wall St."; richest woman in U.S. in her day.
William Gregg, 1800-67, (U.S.) launched textile industry in the South.
Meyer Guggenheim, 1828-1905, (U.S.) Swiss-born merchant, philanthropist; built merchandising, mining empires.
Armand Hammer, 1898-1990, (U.S.) headed Occidental Petroleum, promoted U.S.-Soviet ties.
Edward H. Harriman, 1848-1909, (U.S.) railroad financier, administrator; headed Union Pacific.
Henry J. Heinz, 1844-1919, (U.S.) founded food empire.
Leona Helmsley, 1920-2007, (U.S.) real estate magnate, philanthropist.
Milton Snavely Hershey, 1857-1945, (U.S.) chocolate co. founder, philanthropist.
James J. Hill, 1838-1916, (U.S.) Canadian-born railroad magnate, financier; founded Great Northern Railway.
Conrad N. Hilton, 1888-1979, (U.S.) hotel chain founder.
Howard Hughes, 1905-76, (U.S.) industrialist, aviator, movie maker.
H. L. Hunt, 1889-1974, (U.S.) oil magnate.
Collis P. Huntington, 1821-1900, (U.S.) railroad magnate.
Henry E. Huntington, 1850-1927, (U.S.) railroad builder, philanthropist.
Walter L. Jacobs, 1898-1985, (U.S.) founder of the first rental car agency, which later became Hertz.
Howard Johnson, 1896-1972, (U.S.) founded restaurants.
John H. Johnson, 1918-2005, (U.S.) built publishing empire based on *Ebony* and *Jet*.
Samuel Curtis Johnson, 1928-2004, (U.S.) headed S.C. Johnson & Sons.
Henry J. Kaiser, 1882-1967, (U.S.) industrialist; built empire in steel, aluminum.
Minor C. Keith, 1848-1929, (U.S.) railroad magnate; founded United Fruit Co.
Will K. Kellogg, 1860-1951, (U.S.) businessman, philanthropist; founded breakfast food co.
Richard King, 1825-85, (U.S.) cattleman; founded half-million-acre King Ranch in Texas.
John W. Kluge, 1914-2010, (Ger-U.S.) chairman Metromedia; philanthropist.
William S. Knudsen, 1879-1948, (U.S.) Danish-born auto industry executive.
Samuel H. Kress, 1863-1955, (U.S.) businessman, art collector, philanthropist; founded "dime store" chain.
Ray A. Kroc, 1902-84, (U.S.) original CEO of McDonald's Corp.; oversaw company's vast expansion.
Alfred Krupp, 1812-87, (Ger.) armaments magnate.
Kenneth L. Lay, 1942-2006, (U.S.), former CEO of Enron; indicted on fraud charges.
William Levitt, 1907-94, (U.S.) industrialist; "suburb maker."
Thomas Lipton, 1850-1931, (Scot.) merchant; tea empire.
James McGill, 1744-1813, (Scot.-Can.) founded university.
Andrew W. Mellon, 1855-1937, (U.S.) financier, industrialist; benefactor of National Gallery of Art.
Charles E. Merrill, 1885-1956, (U.S.) financier; developed firm of Merrill Lynch.
John Pierpont Morgan, 1837-1913, (U.S.) most powerful figure in finance and industry at the turn of the century.
Akio Morita, 1921-99, (Jpn.) co-founded Sony Corp.
Malcolm Muir, 1885-1979, (U.S.) created *Business Week* magazine; headed *Newsweek*, 1937-61.
Samuel Newhouse, 1895-1979, (U.S.) publishing and broadcasting magnate; built communications empire.
Aristotle Onassis, 1906-75, (Gr.) shipping magnate.
William S. Paley, 1901-90, (U.S.) built CBS communications empire.
Frederick D. Patterson, 1901-88, (U.S.) founder of United Negro College Fund, 1944.
George Peabody, 1795-1869, (U.S.) merchant, financier, philanthropist.
James C. Penney, 1875-1971, (U.S.) businessman; developed department store chain.
Frank Perdue, 1920-2005, (U.S.) founder of Perdue Farms, chicken-processing company.
William C. Procter, 1862-1934, (U.S.) headed soap co.
John D. Rockefeller, 1839-1937, (U.S.) industrialist; established Standard Oil.

John D. Rockefeller Jr., 1874-1960, (U.S.) philanthropist; established foundation, provided land for UN.
Laurance S. Rockefeller, 1910-2004, (U.S.) philanthropist, conservationist.
Meyer A. Rothschild, 1743-1812, (Ger.) founded international banking house.
Thomas Fortune Ryan, 1851-1928, (U.S.) financier; a founder of American Tobacco.
Edmond J. Safra, 1932-99, (U.S.) banker.
David Sarnoff, 1891-1971, (U.S.) broadcasting pioneer; established first radio network, NBC.
Richard Sears, 1863-1914, (U.S.) founded mail-order co.
Werner von Siemens, 1816-92, (Ger.) industrialist, inventor.
Alfred P. Sloan, 1875-1966, (U.S.) industrialist, philanthropist; headed General Motors.
A. Leland Stanford, 1824-93, (U.S.) railroad official, philanthropist; founded university.
Frank Stanton, 1908-2006, (U.S.) president of CBS network, 1946-71.
Larry Stewart, 1948-2007, (U.S.) "Kansas City's Secret Santa."
Nathan Straus, 1848-1931, (U.S.) German-born merchant, philanthropist; headed Macy's.
Levi Strauss, c. 1829-1902, (U.S.) pants manufacturer.
Clement Studebaker, 1831-1901, (U.S.) wagon, carriage maker.
Gustavus Swift, 1839-1903, (U.S.) pioneer meatpacker.
Gerard Swope, 1872-1957, (U.S.) industrialist, economist; headed General Electric.
Dave Thomas, 1932-2002, (U.S.) Wendy's founder.
James Walter Thompson, 1847-1928, (U.S.) ad executive.
Alice Tully, 1902-93, (U.S.) philanthropist, arts patron.
Theodore N. Vail, 1845-1920, (U.S.) organized Bell Telephone system, headed AT&T.
Cornelius Vanderbilt, 1794-1877, (U.S.) financier; established steamship, railroad empires.
Henry Villard, 1835-1900, (U.S.) German-born railroad executive, financier.
Charles R. Walgreen, 1873-1939, (U.S.) founded drugstore chain.
Madame C. J. Walker, 1867-1919, (U.S.) African-American hair care entrepreneur and philanthropist.
DeWitt Wallace, 1889-1981, (U.S.) and **Lila Wallace**, 1889-1984, (U.S.) cofounders of *Reader's Digest* magazine.
Sam Walton, 1918-92, (U.S.) founder of Wal-Mart stores.
John Wanamaker, 1838-1922, (U.S.) department-store merchandising pioneer.
Aaron Montgomery Ward, 1843-1913, (U.S.) established first mail-order firm.
Thomas J. Watson, 1874-1956, (U.S.) IBM head, 1914-56.
George Westinghouse, 1846-1914, (U.S) inventor, manufacturer; organized Westinghouse Electric Co., 1886.
John Hay Whitney, 1905-82, (U.S.) publisher, sportsman, philanthropist.
Charles E. Wilson, 1890-1961, (U.S.) auto exec., public official.
Frank W. Woolworth, 1852-1919, (U.S.) created five and dime chain.
William Wrigley Jr., 1861-1932, (U.S.) founded Wrigley chewing gum company.

American Cartoonists

Reviewed by Lucy Shelton Caswell, Professor and Curator, Cartoon Research Library, Ohio State University.

Scott Adams, b 1957, Dilbert.
Charles Addams, 1912-88, macabre cartoons.
Brad Anderson, b 1924, Marmaduke.
Sergio Aragones, b 1937, *MAD* magazine.
Peter Arno, 1904-68, *The New Yorker*.
Tex Avery, 1908-80, animator; Bugs Bunny, Porky Pig.
George Baker, 1915-75, The Sad Sack.
Carl Barks, 1901-2000, Donald Duck comic books.
C. C. Beck, 1910-89, Captain Marvel.
Dave Berg, 1920-2002, *MAD* magazine.
Jim Berry, b 1932, Berry's World.
Herb Block (Herblock), 1909-2001, political cartoonist.
George Booth, b 1926, *The New Yorker*.
Berkeley Breathed, b 1957, Bloom County.
Dik Browne, 1917-89, Hi & Lois, Hagar the Horrible.
Marjorie Buell, 1904-93, Little Lulu.
Ernie Bushmiller, 1905-82, Nancy.
Milton Caniff, 1907-88, Terry & the Pirates, Steve Canyon.
Al Capp, 1909-79, Li'l Abner.
Roz Chast, b 1954, *The New Yorker.*
Paul Conrad, 1924-2010, political cartoonist.
Roy Crane, 1901-77, Captain Easy, Buz Sawyer.
R(obert) Crumb, b 1943, underground cartoonist.
Shamus Culhane, 1908-96, animator.
Jay N. "Ding" Darling, 1876-1962, political cartoonist.
Jack Davis, b 1926, *MAD* magazine.
Jim Davis, b 1945, Garfield.
Billy DeBeck, 1890-1942, Barney Google.
Rudolph Dirks, 1877-1968, The Katzenjammer Kids.
Walt Disney, 1901-66, produced animated cartoons; created Mickey Mouse, Donald Duck.
Steve Ditko, b 1927, Spider-Man.
Mort Drucker, b 1929, *MAD* magazine.
Will Eisner, 1917-2005, the Spirit.
Jules Feiffer, b 1929, political cartoonist.
Bud Fisher, 1884-1954, Mutt & Jeff.
Ham Fisher, 1900-55, Joe Palooka.
Max Fleischer, 1883-1972, Betty Boop.
Hal Foster, 1892-1982, Tarzan, Prince Valiant.
Fontaine Fox, 1884-1964, Toonerville Folks.
Isadore "Friz" Freleng, 1905-95, animator; Yosemite Sam, Porky Pig, Sylvester and Tweety Bird.
Rube Goldberg, 1883-1970, Boob McNutt.
Chester Gould, 1900-85, Dick Tracy.
Harold Gray, 1894-1968, Little Orphan Annie.
Matt Groening, b 1954, Life in Hell, The Simpsons.
Cathy Guisewite, b 1950, Cathy.
Bill Hanna, 1910-2001, and **Joe Barbera**, 1911-2006, animators; Tom & Jerry, Yogi Bear, Flintstones.
Oliver Harrington, 1912-95, Bootsie.
Johnny Hart, 1931-2007, BC, Wizard of Id.
Alfred Harvey, 1913-94, created Casper the Friendly Ghost.
Jimmy Hatlo, 1898-1963, Little Iodine.
John Held Jr., 1889-1958, Jazz Age.
George Herriman, 1881-1944, Krazy Kat.
Harry Hershfield, 1885-1974, Abie the Agent.
Al Hirschfeld, 1903-2003, *NY Times* theater caricaturist.
Burne Hogarth, 1911-96, Tarzan.
Helen Hokinson, 1900-49, *The New Yorker*.
Nicole Hollander, b 1939, Sylvia.
Lynn Johnston, b 1947 (Can.), For Better or For Worse.
Oliver Johnston, 1912-2008, Disney animator.
Chuck Jones, 1912-2002, animator; Bugs Bunny, Porky Pig.
Mike Judge, b 1962, Beavis and Butthead, King of the Hill.
Bob Kane, b 1916-98, Batman.
Bil Keane, b 1922, The Family Circus.
Walt Kelly, 1913-73, Pogo.
Hank Ketcham, 1920-2001, Dennis the Menace.
Ted Key, 1912-2008, Hazel.
Frank King, 1883-1969, Gasoline Alley.
Jack Kirby, 1917-94, Fantastic Four, The Incredible Hulk.
Rollin Kirby, 1875-1952, political cartoonist.
B(ernard) Kliban, 1935-90, cat books.
Edward Koren, b 1935, *The New Yorker*.
Harvey Kurtzman, 1921-93, *MAD* magazine.
Walter Lantz, 1900-94, Woody Woodpecker.
Gary Larson, b 1950, The Far Side.
Mell Lazarus, b 1927, Momma, Miss Peach.
Stan Lee, b 1922, Marvel Comics.
David Levine, 1926-2009, *NY Review of Books* caricatures.
Jeff MacNelly, 1947-2000, political cartoonist; Shoe.
Doug Marlette, 1949-2007, political cartoonist; Kudzu.
Don Martin, 1931-2000, *MAD* magazine.
Bill Mauldin, 1921-2003, political cartoonist.
Winsor McCay, 1872-1934, Little Nemo.
John T. McCutcheon, 1870-1949, political cartoonist.
Aaron McGruder, b 1974, The Boondocks.
George McManus, 1884-1954, Bringing Up Father.
Dale Messick, 1906-2005, Brenda Starr.
Norman Mingo, 1896-1980, Alfred E. Neuman.
Bob Montana, 1920-75, Archie.
Dick Moores, 1909-86, Gasoline Alley.
Willard Mullin, 1902-78, sports cartoonist; Dodgers "Bum," Mets "Kid."
Russell Myers, b 1938, Broom Hilda.
Thomas Nast, 1840-1902, political cartoonist; Republican elephant, Democratic donkey.
Pat Oliphant, b 1935, political cartoonist.
Frederick Burr Opper, 1857-1937, Happy Hooligan.
Richard Outcault, 1863-1928, Yellow Kid, Buster Brown.
Brant Parker, 1920-2007, Wizard of Id.
Trey Parker, b 1969, animator, co-creator of South Park.
Mike Peters, b 1943, cartoonist; Mother Goose & Grimm.
George Price, 1901-95, *The New Yorker*.
Antonio Prohias, 1921-98, Spy vs. Spy.
Alex Raymond, 1909-56, Flash Gordon, Jungle Jim.
Forrest (Bud) Sagendorf, 1915-94, Popeye.
Art Sansom, 1920-91, The Born Loser.
Charles Schulz, 1922-2000, Peanuts.
Elzie C. Segar, 1894-1938, Popeye.
Joe Shuster, 1914-92, and **Jerry Siegel**, 1914-96, Superman.
Sidney Smith, 1887-1935, The Gumps.
Otto Soglow, 1900-75, Little King.
Art Spiegelman, b 1948, Raw, Maus.
William Steig, 1907-2003, *The New Yorker*.
Matt Stone, b 1971, animator, co-creator of South Park.
James Swinnerton, 1875-1974, Little Jimmy, Canyon Kiddies.
Paul Szep, b 1941, political cartoonist.
Paul Terry, 1887-1971, animator of Mighty Mouse.
Bob Thaves, 1924-2006, Frank and Ernest.
James Thurber, 1894-61, *The New Yorker*.
Garry Trudeau, b 1948, Doonesbury.
Mort Walker, b 1923, Beetle Bailey.
Bill Watterson, b 1958, Calvin and Hobbes.
Russ Westover, 1887-1966, Tillie the Toiler.
Signe Wilkinson, b 1950, political cartoonist.
Frank Willard, 1893-1958, Moon Mullins.
J. R. Williams, 1888-1957, The Willets Family, Out Our Way.
Gahan Wilson, b 1930, *The New Yorker*.
Tom Wilson, b 1931, Ziggy.
Art Young, 1866-1943, political cartoonist.
Chic Young, 1901-73, Blondie.

Economists, Educators, Historians, and Social Scientists of the Past

For Psychologists, see Scientists of the Past.

Brooks Adams, 1848-1927, (U.S.) historian, political theoretician; *The Law of Civilization and Decay*.
Henry Adams, 1838-1918, (U.S.) historian, autobiographer; *The Education of Henry Adams*.
Francis Bacon, 1561-1626, (Eng.) philosopher, essayist, statesman; championed observation and induction.
George Bancroft, 1800-91, (U.S.) historian; 10-volume *History of the United States.*
Jack Barbash, 1910-94, (U.S.) labor economist; helped create the AFL-CIO.
Henry Barnard, 1811-1900, (U.S.) public school reformer.
Charles A. Beard, 1874-1948, (U.S.) historian; *The Economic Basis of Politics*.
(St.) Bede (the Venerable), c. 673-735, (Br.) scholar, historian; *Ecclesiastical History of the English People*.
Ruth Benedict, 1887-1948, (U.S.) anthropologist; studied Indian tribes of the Southwest.
Sir Isaiah Berlin, 1909-97, (Br.) philosopher, historian; *The Age of Enlightenment*.
Leonard Bloomfield, 1887-1949, (U.S.) linguist; *Language*.
Franz Boas, 1858-1942, (U.S.) German-born anthropologist; studied American Indians.
Van Wyck Brooks, 1886-1963, (U.S.) historian; critic of New England culture, especially literature.
W(illiam) E(dward) B(urghardt) Du Bois, 1868-1963, (U.S.) historian, sociologist; NAACP founder, 1909.
Edmund Burke, 1729-97, (Ire.) British parliamentarian and political philosopher; *Reflections on the Revolution in France*.
Nicholas Murray Butler, 1862-1947, (U.S.) educator; headed Columbia Univ., 1902-45; Nobel Peace Prize, 1931.
Joseph Campbell, 1904-87, (U.S.) author, editor, teacher; wrote books on mythology, folklore.
Thomas Carlyle, 1795-1881, (Sc.) historian, critic; *Sartor Resartus*, *Past and Present*, *The French Revolution*.
(Charles) Bruce Catton, 1899-1978, (U.S.) historian; *A Stillness at Appomattox*.
Edward Channing, 1856-1931, (U.S.) historian; 6-volume *History of the United States*.
Henry Steele Commager, 1902-98, (U.S.) historian, educator; *The Growth of the American Republic*.
John R. Commons, 1862-1945, (U.S.) economist, labor historian; *Legal Foundations of Capitalism.*
James B. Conant, 1893-1978, (U.S.) educator, diplomat; *The American High School Today*.
Benedetto Croce, 1866-1952, (It.) philosopher, statesman, historian; *Philosophy of the Spirit*.
Bernard A. De Voto, 1897-1955, (U.S.) historian; wrote trilogy on American West, edited Mark Twain manuscripts.
Melvil Dewey, 1851-1931, (U.S.) devised decimal system of library-book classification.
Donald Herbert Donald, 1920-2009, (U.S.) Pulitzer Prize-winning Civil War and Lincoln historian.
St. Clair Drake, 1911-90, (U.S.) sociologist, black studies pioneer; *Black Metropolis* (1945), with Horace R. Cayton.
Will(iam), 1885-1981 (U.S.) and **Ariel Durant**, 1898-1981 (Ukraine), historians; *The Story of Civilization*.
Emile Durkheim, 1858-1917, (Fr.) a founder of modern sociology; *The Rules of Sociological Method*.
Jean Baptiste Point du Sable, c. 1750-1818, (U.S.) pioneer trader and first settler of Chicago, 1779.
Charles Eliot, 1834-1926, (U.S.) educator, Harvard president.
Friedrich Engels, 1820-95, (Ger.) political writer; with Marx wrote the *Communist Manifesto.*
Irving Fisher, 1867-1947, (U.S.) economist; contributed to the development of modern monetary theory.
John Fiske, 1842-1901, (U.S.) historian and lecturer; popularized Darwinian theory of evolution.
Charles Fourier, 1772-1837, (Fr.) utopian socialist.
John Hope Franklin, 1915-2009, (U.S.) historian; *From Slavery to Freedom: A History of African Americans*.
Sir James George Frazer, 1854-1941, (Br.) anthropologist; studied myth in religion; *The Golden Bough*.
Milton Friedman, 1912-2006, (U.S.) economist.
John Kenneth Galbraith, 1908-2006, (Can.-U.S.) economist, author, professor, former amb. to India.
Giovanni Gentile, 1875-1944, (It.) philosopher, educator; reformed Italian educational system.
Henry George, 1839-97, (U.S.) economist, reformer; led single-tax movement.
Edward Gibbon, 1737-94, (Br.) historian; *The History of the Decline and Fall of the Roman Empire.*
Francesco Guicciardini, 1483-1540, (It.) historian; *Storia d'Italia*, principal historical work of the 16th cent.
Thomas Hobbes, 1588-1679, (Eng.) philosopher, political theorist; *Leviathan*.
Richard Hofstadter, 1916-70, (U.S.) historian; *The Age of Reform*.
Charles Hamilton Houston, 1895-1950, (U.S.) African American lawyer, Howard University instructor; champion of minority rights,
Samuel Huntington, 1927-2008, (U.S.), political scientist, Harvard University professor; *The Clash of Civilizations*.
George F. Kennan, 1904-2005, (U.S.) diplomat, historian; main architect of U.S. Cold War "containment" strategy.
John Maynard Keynes, 1883-1946, (Br.) economist; principal advocate of deficit spending.
Alfred Kinsey, 1894-1956, (U.S.) zoologist; pioneering human sex researcher.
Russell Kirk, 1918-94, (U.S.), social philosopher; *The Conservative Mind*.
Alfred L. Kroeber, 1876-1960, (U.S.) cultural anthropologist; studied Indians of North and South America.
Elisabeth Kubler-Ross, 1926-2004, (Switz.) psychiatrist, author; *On Death and Dying*.
Christopher Lasch, 1932-94, (U.S.) social critic, historian; *The Culture of Narcissism.*
James L. Laughlin, 1850-1933, (U.S.) economist; helped establish Federal Reserve System.
Margaret Leech, 1893-1974 (U.S.) historian; *Reveille in Washington, 1860-1865*.
Lucien Lévy-Bruhl, 1857-1939, (Fr.) philosopher; studied the psychology of primitive societies; *Primitive Mentality.*
John Locke, 1632-1704, (Eng.) philosopher, political theorist; *Two Treatises of Government.*
Thomas B. Macaulay, 1800-59, (Br.) historian, statesman.
Niccolò Machiavelli, 1469-1527, (It.) writer, statesman; *The Prince*.
Bronislaw Malinowski, 1884-1942, (Pol.) considered the father of social anthropology.
Thomas R. Malthus, 1766-1834, (Br.) economist; *Essay on the Principle of Population.*
Horace Mann, 1796-1859, (U.S.) pioneered modern public school system.
Karl Mannheim, 1893-1947, (Hung.) sociologist, historian; *Ideology and Utopia.*
Harriet Martineau, 1802-76, (Eng.) writer, feminist; *Society in America*
Karl Marx, 1818-83, (Ger.) political theorist, proponent of Communism; *Communist Manifesto*, *Das Kapital*.
Benjamin Mays, 1895-1984, (U.S.) minister, educator, civil rights leader; headed Morehouse College, 1940-67.
Giuseppe Mazzini, 1805-72, (It.) political philosopher.
William H. McGuffey, 1800-73, (U.S.) his *Reader* was a mainstay of 19th-cent. U.S. public education.
George H. Mead, 1863-1931, (U.S.) philosopher, social psychologist.
Margaret Mead, 1901-78, (U.S.) cultural anthropologist; popularized field; *Coming of Age in Samoa.*
Alexander Meiklejohn, 1872-1964, (U.S.) Br.-born educator; championed academic freedom and experimental curricula.
James Mill, 1773-1836, (Sc.) philosopher, historian, economist; a proponent of utilitarianism.
John Stuart Mill, 1806-73, (Eng.) philosopher, economist; *Utilitarianism*; eldest son of James Mill.
Perry G. Miller, 1905-63, (U.S.) historian; interpreted 17th-cent. New England.
Theodor Mommsen, 1817-1903, (Ger.) historian; *The History of Rome*.
Ashley Montagu, 1905-99, (Eng.) anthropologist; *The Natural Superiority of Women*.
Charles-Louis Montesquieu, 1689-1755, (Fr.) social philosopher; *The Spirit of Laws*.
Maria Montessori, 1870-1952, (It.) educator, physician; started Montessori method of student self-motivation.
Samuel Eliot Morison, 1887-1976, (U.S.) historian; chronicled voyages of early explorers.
Lewis Mumford, 1895-1990, (U.S.) sociologist, critic; *The Culture of Cities*.
Gunnar Myrdal, 1898-1987, (Swed.) economist, social scientist; *Asian Drama: An Inquiry Into the Poverty of Nations*.
Allan Nevins, 1890-1971, (U.S.) historian, biographer; *The Ordeal of the Union*.
José Ortega y Gasset, 1883-1955, (Sp.) philosopher; advocated control by elite; *The Revolt of the Masses*.
Robert Owen, 1771-1858, (Br.) political philosopher, reformer; pioneer in cooperative movement.
Thomas Paine, 1737-1809, (Br.-U.S.) political theorist, writer; *Common Sense*.
Vilfredo Pareto, 1848-1923, (It.) economist, sociologist.
Francis Parkman, 1823-93, (U.S.) historian; *France and England in North America*.
Elizabeth P. Peabody, 1804-94, (U.S.) education pioneer; founded 1st kindergarten in U.S., 1860.
William Prescott, 1796-1859, (U.S.) early American historian; *The Conquest of Peru*.
Pierre Joseph Proudhon, 1809-65, (Fr.) social theorist; father of anarchism; *The Philosophy of Property*.
François Quesnay, 1694-1774, (Fr.) economic theorist.
David Ricardo, 1772-1823, (Br.) economic theorist; advocated free international trade.
David Riesman, 1909-2002, (U.S.) sociologist; coauthor, *The Lonely Crowd*.
Jean-Jacques Rousseau, 1712-78, (Fr.) social philosopher; the father of romantic sensibility; *Confessions*.
Paul Samuelson, 1915-2009, (U.S.) economist, famed for modern mathematical approach to economics.
Edward Sapir, 1884-1939, (Ger.-U.S.) anthropologist; studied ethnology and linguistics of U.S. Indian groups.
Ferdinand de Saussure, 1857-1913, (Switz.) a founder of modern linguistics.
Arthur Schlesinger Jr., 1917-2007, (U.S.) historian, author; *The Imperial Presidency*.
Joseph Schumpeter, 1883-1950, (Czech.-U.S.) economist, sociologist.

Elizabeth Seton, 1774-1821, (U.S.) nun; est. parochial school education in U.S., first native-born American saint.
Georg Simmel, 1858-1918, (Ger.) sociologist, philosopher; helped establish German sociology.
Adam Smith, 1723-90, (Br.) economist; advocated laissez-faire economy, free trade; *The Wealth of Nations*.
Jared Sparks, 1789-1866, (U.S.) historian, educator, editor; *The Library of American Biography*.
Oswald Spengler, 1880-1936, (Ger.) philosopher, historian; *The Decline of the West*.
William G. Sumner, 1840-1910, (U.S.) social scientist, economist; laissez-faire economy, Social Darwinism.
Hippolyte Taine, 1828-93, (Fr.) historian; basis of naturalistic school; *The Origins of Contemporary France.*
A(lan) J(ohn) P(ercivale) Taylor, 1906-90, (Br.) historian; *The Origins of the Second World War*.
Nikolaas Tinbergen, 1907-88, (Neth.-Br.) ethologist; pioneer in study of animal behavior.
Alexis de Tocqueville, 1805-59, (Fr.) political scientist, historian; *Democracy in America*.
Francis E. Townsend, 1867-1960, (U.S.) led old-age pension movement, 1933.
Arnold Toynbee, 1889-1975, (Br.) historian; *A Study of History,* sweeping analysis of hist. of civilizations.
George Trevelyan, 1876-1962, (Br.) historian, statesman; favored "literary" over "scientific" history; *History of England*.
Henri Troyat, 1911-2007 (Russ.-Fr.), biographies of major figures in Russian history.
Frederick J. Turner, 1861-1932, (U.S.) historian, educator; *The Frontier in American History*.
Thorstein B. Veblen, 1857-1929, (U.S.) economist, social philosopher; *The Theory of the Leisure Class*.
Giovanni Vico, 1668-1744, (It.) historian, biographer; regarded by many as first modern historian; *New Science*.
Izaak Walton, 1593-1683, (Eng.) biographer; political-philosophical study of fishing, *The Compleat Angler*.
Booker T. Washington, 1856-1915, (U.S.) founder, 1881, and first pres. of Tuskegee Institute; *Up From Slavery*.
Sidney J., 1859-1947, and **Beatrice Webb**, 1858-1943, (Br.) leading figures in Fabian Society and Labor Party.
Max Weber, 1864-1920, (Ger.) sociologist; *The Protestant Ethic and the Spirit of Capitalism*.
Walter White, 1893-1955, (U.S.) exec. sec., NAACP, 1931-55.
Roy Wilkins, 1901-81, (U.S.) exec. director, NAACP, 1955-77.
Emma Hart Willard, 1787-1870, (U.S.) pioneered higher education for women.
Carter G. Woodson, 1875-1950, (U.S.) historian; founded Assn. for the Study of Negro Life and History.
C. Vann Woodward, 1908-99, (U.S.) historian; *The Strange Career of Jim Crow*.

American Journalists of the Past

Reviewed by Dean Mills, Dean, Missouri School of Journalism.

See also Business Leaders and Philanthropists, American Cartoonists, Writers of the Past.

Franklin P. Adams (F.P.A.), 1881-1960, humorist; wrote column "The Conning Tower."
Joseph W. Alsop, 1910-89, and **Stewart Alsop**, 1914-74, Washington-based political analysts, columnists.
Jack Anderson, 1922-2006, muckraking Washington, DC, syndicated columnist.
Brooks Atkinson, 1894-1984, theater critic.
Robert L. Bartley, 1937-2003, editorial-page editor for *Wall Street Journal*.
James Gordon Bennett, 1795-1872, editor and publisher; founded *NY Herald*.
James Gordon Bennett, 1841-1918, succeeded father, financed expeditions, founded afternoon paper.
Nellie Bly (Elizabeth Cochrane), 1867-1922, pioneer woman journalist, investig. reporter; noted for series on trip around the world.
Elias Boudinot, c. 1803-39, founding editor of first Native American newspaper in U.S., *Cherokee Phoenix* (1828-34).
Ed Bradley, 1941-2006, TV journalist (*60 Minutes*); one of the first African American journalists to report on the Vietnam War.
David Brinkley, 1920-2003, co-anchor of NBC's *Huntley-Brinkley Report*, host of ABC's *This Week With David Brinkley*.
Arthur Brisbane, 1864-1936, editor; helped introduce "yellow journalism" with sensational, simply written articles.
Heywood Broun, 1888-1939, author, columnist; founded American Newspaper Guild.
Art Buchwald, 1925-2007, journalist, humorist, syndicated columnist.
William F. Buckley Jr., 1925-2008, columnist and commentator; founder of *National Review*.
Herb Caen, 1916-97, longtime columnist for *San Francisco Chronicle* and *Examiner*.
John Campbell, 1653-1728, published *Boston News-Letter*, first continuing newspaper in the American colonies.
Jimmy Cannon, 1909-73, syndicated sports columnist.
John Chancellor, 1927-96, NBC reporter, anchor.
Harry Chandler, 1864-1944, *Los Angeles Times* publisher (1917-41); made it a dominant force.
Otis Chandler, 1928-2006, *Los Angeles Times* publisher (1960-80).
Marquis Childs, 1903-90, reporter and columnist for *St. Louis Post-Dispatch* and United Feature syndicate.
Craig Claiborne, 1920-2000, *NY Times* food editor and critic; key in internationalizing American tastes.
Charles Collingwood, 1917-85, CBS news correspondent.
Alistair Cooke, 1908-2004, journalist, TV narrator; naturalized American citizen, "Letter from America" series.
Howard Cosell, 1920-95, TV and radio sportscaster.
Gardner Cowles, 1861-1946, founded newspaper chain.
Walter Cronkite, 1916-2009, CBS evening news anchor, TV journalist.
Evelyn Cunningham, 1916-2010, African American civil rights reporter.
Cyrus Curtis, 1850-1933, publisher of *Saturday Evening Post*, *Ladies' Home Journal*, *Country Gentleman*.
John Charles Daly, 1914-91, war correspondent, TV journalist; Voice of America head.
Charles Anderson Dana, 1819-97, editor, publisher; made *NY Sun* famous for its news reporting.
Elmer (Holmes) Davis, 1890-1958, *NY Times* editorial writer, radio commentator.
Richard Harding Davis, 1864-1916, war correspondent, travel writer, fiction writer.
Benjamin Day, 1810-89, published *NY Sun* beginning in 1833, introducing penny press to the U.S.
Dorothy Dix (Elizabeth Meriwether Gilmer), 1861-1951, reporter; pioneer of the advice column genre.
Finley Peter Dunne, 1867-1936, humorist, social critic; wrote "Mr. Dooley" columns.
Mary Baker Eddy, 1821-1910, founded Christian Science movement and *Christian Science Monitor*.
Rowland Evans Jr., 1921-2001, Washington columnist.
Fanny Fern (Sara Willis Parton), 1811-72, newspaper columnist, author.
Marshall Field III, 1893-1956, retail magnate, *Chicago Sun* founder.
Doris Fleeson, 1901-70, war correspondent, columnist.
Benjamin Franklin, 1706-90, publisher of *Poor Richards Almanack*.
James Franklin, 1697-1735, printer, pioneer journalist; publisher of *New England Courant* and *Rhode Island Gazette*.
Fred W. Friendly, 1915-98, radio, TV reporter, producer, executive; collaborator with Edward R. Murrow.
Margaret Fuller, 1810-50, social reformer, transcendentalist, critic and foreign correspondent for *NY Tribune*.
Frank E. Gannett, 1876-1957, founded newspaper chain.
Mary Ellen Garber, 1916-2008, sports journalist.
William Lloyd Garrison, 1805-79, abolitionist; publisher of *The Liberator*.
Edwin Lawrence Godkin, 1831-1902, founder of *The Nation*, editor of *NY Evening Post*.
Katharine Graham,1917-2001, *Washington Post* publisher.
Sheilah Graham, 1904-89, Hollywood gossip columnist.
Horace Greeley, 1811-72, editor, politician; founded *NY Tribune*.
Meg Greenfield, 1930-99, *Newsweek* columnist, *Washington Post* editorial page editor.
Gilbert Hovey Grosvenor, 1875-1966, longtime editor of *National Geographic* magazine.
John Gunther, 1901-70, *Chicago Daily News* foreign correspondent, author.
David Halberstam, 1934-2007, journalist, sports reporter, author; *The Best and the Brightest*, *Summer of '49*.
Sarah Josepha Buell Hale, 1788-1879, first female magazine editor; *Ladies' Magazine*, later *Godey's Lady's Book.*
Paul Harvey, 1918-2009, radio broadcaster and commentator.
William Randolph Hearst, 1863-1951, founder of Hearst newspaper chain, one of the pioneers of yellow journalism.
Gabriel Heatter, 1890-1972, radio commentator.
John Hersey, 1914-98, foreign correspondent for *Time, Life*, and *The New Yorker*; author.
Marguerite Higgins, 1920-66, reporter, war correspondent.
Hedda Hopper, 1885-1966, Hollywood gossip columnist.
Roy Howard, 1883-1964, editor, executive; Scripps-Howard papers and United Press (later United Press International).
Chet (Chester Robert) Huntley, 1911-74, co-anchor of NBC's *Huntley-Brinkley Report*.
Ralph Ingersoll, 1900-85, editor; *Fortune*, *Time*, *Life* exec.
Molly Ivins, 1944-2007, author, syndicated political columnist.
Peter Jennings, 1938-2005, ABC correspondent, anchor.
Pauline Kael, 1919-2001, film critic.
H. V. (Hans von) Kaltenborn, 1878-1965, radio commentator, reporter.
Murray Kempton, 1917-97, reporter, columnist for magazines and newspapers, including *NY Post*.
Dorothy Kilgallen, 1913-65, crime reporter, columnist.
James J. Kilpatrick, 1920-2010, political columnist, author and television personality.
John S. Knight, 1894-1981, editor, publisher; founded Knight newspaper group, which merged into Knight-Ridder.





YEAR IN PICTURES













Tea Time Americans associating themselves with the Tea Party movement made their voices heard at rallies and at the polls in 2010.

Health Care Overhaul Health and Human Services Sec. Kathleen Sebelius, Pres. Barack Obama, and House Speaker Nancy Pelosi celebrated the passage of the historic—and hotly contested—health-care reform bill Mar. 23, 2010.

Primary Winners In the lead-up to the midterm elections in 2010, many candidates associated with the Tea Party movement, including Christine O'Donnell (DE) upset establishment Republican candidates to win primaries.

Senate Shifts Republican candidate Scott Brown (right) upset Martha Coakley in a special election Jan. 19, 2010, to claim the Massachusetts senate seat that had been held by liberal Sen. Ted Kennedy for more than 46 years.





Washington Weddings Washington, DC, became the sixth locale in the U.S. to legalize same-sex marriage Mar. 3, 2010.

Immigration Issues Protesters marched on the Apr. 23, 2010, signing of an Arizona immigration law that made it a state crime to be in the U.S. illegally.



New Justice Elena Kagan (below, right) was sworn in to serve on the U.S. Supreme Court Aug. 7, 2010, joining fellow woman justices Sonia Sotomayor (left) and Ruth Bader Ginsburg (center). Pres. Barack Obama had nominated the solicitor general to replace retiring Justice John Paul Stevens, who had served 34 years on the court.







Failed Attack An SUV carrying an explosive device (captured above on security-camera footage) was parked in heavily trafficked Times Square May 1, 2010, but the bomb failed to detonate. The would-be bomber confessed and was given a life sentence Oct. 5.

Mine Explosion A coal mine explosion in Montcoal, WV, killed 29 miners Apr. 5, 2010, in the deadliest U.S. mining disaster since 1972.

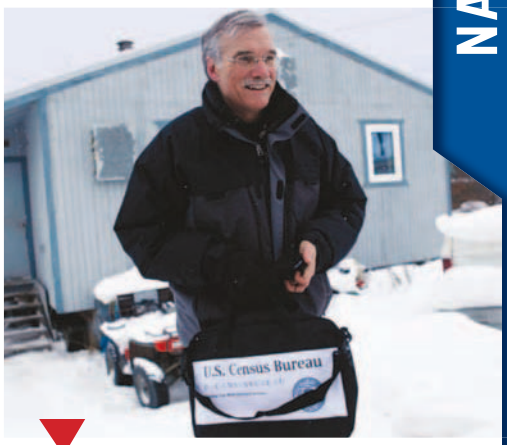
Oil Spill Disaster BP's Deepwater Horizon oil rig in the Gulf of Mexico exploded Apr. 20, 2010, leaking an estimated 4.9 million barrels into Gulf waters before it was capped July 15.







Poor Report The Census Bureau reported Sept. 16, 2010, that the rate of Americans living in poverty had reached a 15-year-high in 2009, with one in five children affected.



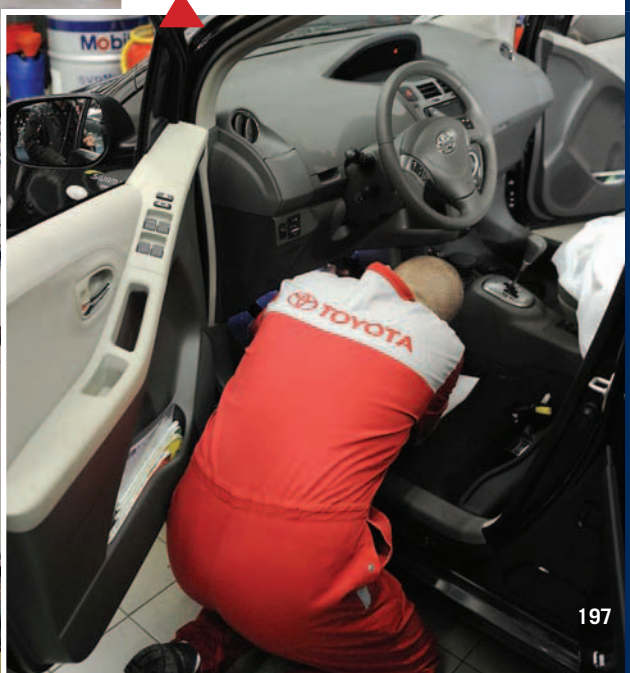
Count on It 2010 Census employees began following up with door-to-door visits after Census Bureau Dir. Robert Groves announced Apr. 28, 2010, that about 28 percent of U.S. households had not returned their 10-question forms.



Flash Floods Severe rain in Tennessee, Kentucky, and Mississippi in May 2010 led to flooding that caused at least 30 deaths and damaged historic buildings in downtown Nashville, including the Grand Ole Opry House.

Total Recall Automaker Toyota recalled nearly 9 million Toyota and Lexus vehicles worldwide, due to a variety of safety issues, from sticky accelerator pedals to hazardous floor mats.





The Giving Pledge Forty American billionaires and their families pledged Aug. 4, 2010, to give 50 percent or more of their worth to charity in a drive organized by Warren Buffett (below, top left) and Bill Gates (top center); other billionaires making the commitment included (clockwise from top right) CNN founder Ted Turner, director George Lucas, Oracle co-founder Larry Ellison, and Bloomberg LP founder Michael Bloomberg.

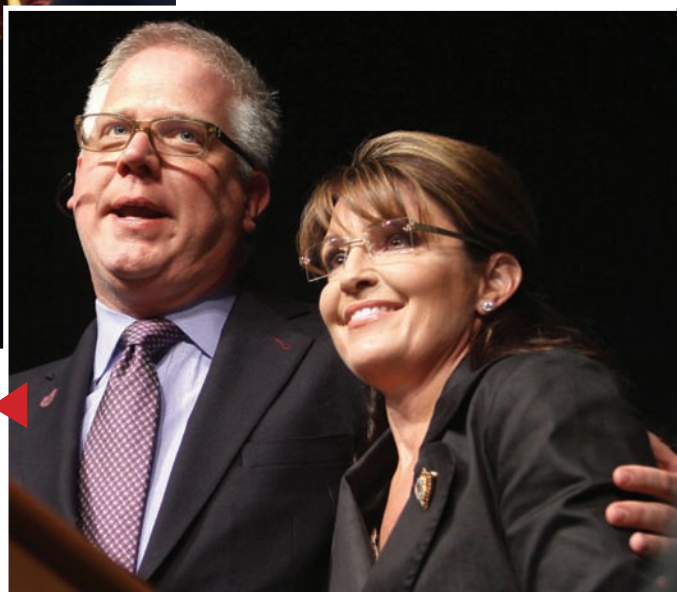




"Runaway General" Gen. Stanley McChrystal was relieved of his command of forces in Afghanistan by Pres. Barack Obama June 23, 2010, after a controversial *Rolling Stone* profile of the general was made public.

Party Crashers Michaele and Tareq Salahi, who had crashed a White House state dinner in Nov. 2009, refused to testify about the incident when they appeared before a congressional hearing Jan. 20, 2010.





Fox & Friends Fox News personality Glenn Beck and former Alaska governor and Republican vice-pres. nominee Sarah Palin appeared together at a 9/11 memorial event in Anchorage, AK, Sept. 11, 2010.



First Wedding Chelsea Clinton, daughter of former Pres. Bill Clinton and Sec. of State Hillary Clinton, wed Marc Mezvinsky in an interfaith ceremony July 31, 2010.

Oprah Over? The 25th season of *The Oprah Winfrey Show*, expected to be the last, began airing Sept. 13, 2010.



Woods Gone Wild Golf superstar Tiger Woods and wife Elin Nordegren finalized their divorce Aug. 23, 2010, following scandalous revelations about the top-earning athlete's extramarital affairs.



Traveling Man Late night TV host Conan O'Brien hit the road for live shows on "The Legally Prohibited from Being Funny on Television Tour" after ending his *The Tonight Show* run Jan. 22, 2010.



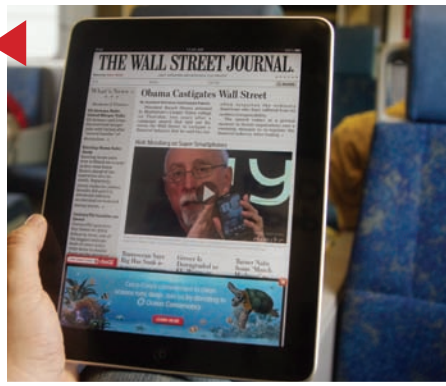


Golden Girl Octogenarian actress Betty White hosted *Saturday Night Live* May 8, 2010, earning the 35-year-old show its highest ratings since 2008.



Beyoncé Bonanza "Single Ladies" singer Beyoncé picked up six Grammy Awards—more than any other female artist had won in a single year—Jan. 31, 2010.

iPad Introduced Apple's new tablet computer, the iPad, was released Apr. 3, 2010; by June 21, 2010, more than 3 million devices had been sold.



Oscar Honors *The Hurt Locker* director Kathryn Bigelow became the first female Best Director award winner at the 82nd Academy Awards Mar. 7, 2010; *The Hurt Locker* won five other Oscars, including Best Picture.



Get Crazy Nicole "Snooki" Polizzi and Michael "The Situation" Sorrentino returned on MTV's popular reality show *Jersey Shore*, which began airing its second season on July 29, 2010.



Joseph Kraft, 1942-86, foreign policy columnist.
Irving Kristol, 1920-2009, columnist, commentator.
Arthur Krock, 1886-1974, *NY Times* political writer, Washington bureau chief.
Charles Kuralt, 1934-97, TV anchor; host of CBS "On the Road" featuring stories about life in the U.S.
Ann Landers (Eppie Lederer), 1918-2002, advice columnist.
David Lawrence, 1888-1973, reporter, columnist, publisher; founded *U.S. News & World Report*.
Frank Leslie, 1821-80, engraver, publisher of newspapers and magazines, notably *Leslie's Illustrated Newspaper*.
Alexander Liberman, 1912-99, editorial director for Condé Nast magazines.
A(bbott) J(oseph) Liebling, 1904-63, foreign correspondent, critic; principally with *The New Yorker.*
Walter Lippmann, 1889-1974, political analyst, social critic, columnist, author.
Peter Lisagor, 1915-76, Washington bureau chief, *Chicago Daily News*; broadcast commentator.
David Ross Locke, 1833-88, humorist, satirist under pseudonym P.V. Nasby; owned *Toledo (Ohio) Blade.*
Elijah Parish Lovejoy, 1802-37, abolitionist editor in St. Louis and in Alton, IL; killed by proslavery mob.
Clare Booth Luce, 1903-87, war correspondent for *Life*, diplomat, playwright.
Henry R. Luce, 1898-1967, founded *Time, Fortune, Life, Sports Illustrated.*
Dwight Macdonald, 1906-82, reporter, social critic.
Don Marquis, 1878-1937, humor columnist for *NY Sun* and *NY Tribune*; wrote "Archy and Mehitabel" stories.
Nancy Hicks Maynard, 1946-2008, African American publisher, journalist.
Robert Maynard, 1937-97, first African American editor and then owner of major U.S. paper, the *Oakland Tribune*.
C(harles) K(enny) McClatchy, 1858-1936, founder of McClatchy newspaper chain.
Sarah McClendon, 1910-2003, veteran White House correspondent.
Samuel McClure, 1857-1949, founder (1893) of *McClure's Magazine*, famous for its investigative reporting.
Anne O'Hare McCormick, 1889-1954, foreign correspondent; first woman on *NY Times* editorial board.
Robert R. McCormick, 1880-1955, editor, publisher, executive of *Chicago Tribune* and *NY Daily News*.
Ralph McGill, 1893-1969, crusading editor, publisher of *Atlanta Constitution*.
Mary McGrory, 1918-2004, Washington columnist.
O(scar) O(dd) McIntyre, 1884-1938, feature writer, syndicated columnist on everyday life in New York City.
Joseph Medill, 1823-99, longtime editor of the *Chicago Tribune*.
H(enry) L(ouis) Mencken, 1880-1956, reporter, editor, columnist with *Baltimore Sun* papers; anti-establishment viewpoint.
Edwin Meredith, 1876-1928, founder of magazine company.
Frank A. Munsey, 1854-1925, owner, editor, and publisher of newspapers and magazines, including *Munsey's Magazine*.
Edward R. Murrow, 1908-65, broadcast reporter, executive; reported from Britain in WWII; hosted *See It Now*, *Person to Person*.
Edwin Newman, 1919-2010, NBC news correspondent.
Louella Parsons, 1881-1972, Hollywood gossip columnist.
Ethel L. Payne, 1911-91, African American civil rights reporter.
Daniel Pearl, 1963-2002, American journalist; kidnapped and murdered in Pakistan.
Drew (Andrew Russell) Pearson, 1897-1969, investigative reporter, columnist.
(James) Westbrook Pegler, 1894-1969, reporter, columnist.
Shirley Povich, 1905-98, sports columnist.
Joseph Pulitzer, 1847-1911, *NY World* publisher; founded Columbia Journalism School, Pulitzer Prizes.
Joseph Pulitzer II, 1885-1955, longtime *St. Louis Post-Dispatch* editor, publisher; built it into major paper.
Ernie Pyle, 1900-45, reporter, war correspondent; killed in WWII.
Henry Raymond, 1820-69, cofounder, editor, *NY Times*.
Harry Reasoner, 1923-91, ABC and CBS news reporter, anchor.
John Reed, 1887-1920, reporter; foreign correspondent famous for coverage of Bolshevik Revolution; buried at the Kremlin.
Whitelaw Reid, 1837-1912, longtime editor, *NY Tribune*.
James Reston, 1909-95, *NY Times* political reporter, columnist.
Frank Reynolds, 1923-83, ABC reporter, anchor.
(Henry) Grantland Rice, 1880-1954, sportswriter.
Jacob Riis, 1849-1914, reporter, photographer; exposed slum conditions in *How the Other Half Lives.*
Max Robinson, 1939-88, first African American to anchor network news (ABC), 1978.
A. M. Rosenthal, 1922-2006, reporter, editor for *NY Times* (1943-99).
Harold Ross, 1892-1951, founder, editor, *The New Yorker.*
Carl T. Rowan, 1925-2000, reporter, columnist, author.
Mike Royko, 1932-97, Chicago newspaper columnist; wrote *Boss*, biography of Mayor Richard J. Daley (1902-76).
Louis Rukeyser, 1933-2006, TV journalist, financial analyst; hosted "Wall Street Week" on public television.
(Alfred) Damon Runyon, 1884-1946, sportswriter, columnist; stories collected in *Guys and Dolls*.
Tim Russert, 1950-2008, TV journalist; moderator of *Meet the Press* (NBC).
John B. Russwurm, 1799-1851, cofounded (1827) nation's first black newspaper, *Freedom's Journal,* in New York, NY.
William Safire, 1929-2009, Pulitzer Prize-winning columnist, *NY Times*.
Adela Rogers St. Johns, 1894-1988, reporter, sportswriter for Hearst newspapers.
Pierre Salinger, 1925-2004, press secretary under Pres. Kennedy and Johnson, foreign correspondent.
Harrison Salisbury, 1908-93, reporter, foreign correspondent; a Soviet specialist.
Daniel Schorr, 1916-2010, broadcast and print journalist.
E(dward) W(illis) Scripps, 1854-1926, founded first large U.S. newspaper chain, pioneered syndication.
Eric Sevareid, 1912-92, war correspondent, radio newscaster, CBS commentator.
Randy Shilts, 1951-94, journalist; author of *And the Band Played On*.
William L. Shirer, 1904-93, broadcaster, foreign correspondent; wrote *The Rise and Fall of the Third Reich*.
Howard K. Smith, 1914-2002, ABC news reporter, anchor.
Red (Walter) Smith, 1905-82, sportswriter.
Edgar P. Snow, 1905-71, correspondent; expert on Chinese Communist movement.
Tony Snow, 1955-2008, columnist, radio/TV journalist, White House press sec.
Tom Snyder, 1936-2007, television journalist.
Lawrence Spivak, 1900-94, co-creator, moderator, producer of *Meet the Press.*
(Joseph) Lincoln Steffens, 1866-1936, muckraking journalist.
I(sidor) F(einstein) Stone, 1907-89, one-man editor of *I. F. Stone's Weekly*.
Arthur Hays Sulzberger, 1891-1968, longtime publisher of *NY Times*.
C(yrus) L(eo) Sulzberger, 1912-93, *NY Times* foreign correspondent, columnist.
David Susskind, 1920-87, TV producer, public affairs talk-show host (*Open End*).
John Cameron Swayze, 1906-95, early TV newscaster (NBC).
Herbert Bayard Swope, 1882-1958, war correspondent, editor of *NY World.*
Ida Tarbell, 1857-1944, muckraking journalist.
Isaiah Thomas, 1750-1831, printer, publisher; cofounder of revolutionary journal, *Massachusetts Spy*.
Lowell Thomas, 1892-1981, radio newscaster, world traveler.
Dorothy Thompson, 1894-1961, foreign correspondent, columnist, radio commentator.
Hunter S. Thompson, 1937-2005, political journalist, author; *Fear and Loathing on the Campaign Trail* (1972).
Kenneth Thompson, 1923-2006, Canadian media magnate; owned Toronto *Globe and Mail* newspaper.
Ida Bell Wells-Barnett, 1862-1931, African American reporter, editor, anti-lynching crusader.
William Allen White, 1868-1944, newspaper editor, publisher.
Walter Winchell, 1897-1972, reporter, columnist, broadcaster of celebrity news.
John Peter Zenger, 1697-1746, printer, journalist; acquitted in precedent-setting libel suit (1735).

Military and Naval Leaders of the Past

Reviewed by Alan C. Aimone, USMA Library.

Alexander the Great, 356-323 BCE, (Maced.) conquered Persia and much of the world known to Europeans.
Harold Alexander, 1891-1969, (Br.) led Allied invasion of Italy, 1943, WWII.
Ethan Allen, 1738-89, (U.S.) headed Green Mountain Boys; captured Ft. Ticonderoga, 1775, Amer. Rev.
Edmund Allenby, 1861-1936, (Br.) in Boer War, WWI; led Egyptian expeditionary force, 1917-18.
Benedict Arnold, 1741-1801, (U.S.) victorious at Saratoga; tried to betray West Point to British, Amer. Rev.
Henry "Hap" Arnold, 1886-1950, (U.S.) commanded Army Air Force in WWII.
Ashurnasirpal II, 884-859 BCE, (Assyria) king; began Assyrian conquest of Middle East.
John Barry, 1745-1803, (U.S.) won numerous sea battles during Amer. Rev.
Pierre Beauregard, 1818-93, (U.S.) Confed. general; ordered bombardment of Ft. Sumter that began Civil War.
Belisarius, c. 505-565, (Byzant.) won remarkable victories for Byzantine emperor Justinian I.
Gebhard von Blücher, 1742-1819, (Ger.) helped defeat Napoleon at Waterloo.
Simón Bolívar, 1783-1830, (Venez.) S. Amer. revolutionary who liberated much of the continent from Spanish rule.
Napoleon Bonaparte, 1769-1821, (Fr.) defeated Russia and Austria at Austerlitz, 1805; invaded Russia, 1812; defeated at Waterloo, 1815.
Edward Braddock, 1695-1755, (Br.) commanded forces in French and Indian War.
Omar N. Bradley, 1893-1981, (U.S.) headed U.S. ground troops in Normandy invasion, 1944, WWII.

John Burgoyne, 1722-92, (Br.) general; defeated at Saratoga, Amer. Rev.
Julius Caesar, 100-44 BCE, (Rom.) general and politician; conquered northern Gaul, overthrew Roman Republic.
Charlemagne, 742-814, (Fr.) king of the Franks, Holy Roman Emperor; conquered most of Western Europe.
Claire Lee Chennault, 1893-1958, (U.S.) headed Flying Tigers in WWII.
El Cid (Rodrigo Diaz de Vivar), 1040-99, (Sp.) renowned knight; captured Valencia (1094), hero of "Song of Cid" epic.
Mark W. Clark, 1896-1984, (U.S.) helped plan N. African invasion in WWII; commander of UN forces, Korean War.
Karl von Clausewitz, 1780-1831, (Prus.) military theorist.
Lucius D. Clay, 1897-1978, (U.S.) led Berlin airlift, 1948-49.
Henry Clinton, 1738-95, (Br.) commander of forces in Amer. Rev., 1778-81.
Cochise, c. 1815-74, (Nat. Am.) chief of Chiricahua band of Apache Indians in Southwest.
Charles Cornwallis, 1738-1805, (Br.) victorious at Brandywine, 1777; surrendered at Yorktown, Amer. Rev.
Hernán Cortés, 1485-1547, (Sp.) led Spanish conquistadors in the defeat of the Aztec empire, 1519-28.
Crazy Horse, 1849-77, (Nat. Am.) Sioux war chief victorious at battle of Little Bighorn.
George Armstrong Custer, 1839-76, (U.S.) army officer defeated and killed at battle of Little Bighorn.
Benjamin O. Davis Jr., 1912-2002, (U.S.) leader of WWII black aviators; first African American general in U.S. Air Force.
Benjamin O. Davis Sr., 1877-1970, (U.S.) first African American general, 1940, in U.S. Army.
Moshe Dayan, 1915-81, (Isr.) directed campaigns in the 1967, 1973 Arab-Israeli wars.
Stephen Decatur, 1779-1820, (U.S.) naval hero of Barbary wars, War of 1812.
Anton Denikin, 1872-1947, (Russ.) led White forces in Russian civil war.
George Dewey, 1837-1917, (U.S.) destroyed Spanish fleet at Manila, 1898, Span.-Amer. War.
Karl Doenitz, 1891-1980, (Ger.) submarine comm. in chief and naval commander, WWII; last pres. of Third Reich.
Jimmy Doolittle, 1896-1993, (U.S.) led 1942 air raid on Tokyo and other Japanese cities in WWII.
Hugh Dowding, 1882-1970, (Br.) headed RAF Fighter Command, 1936-40, WWII.
Jubal Early, 1816-94, (U.S.) Confed. general; led raid on Washington, 1864, Civil War.
Dwight D. Eisenhower, 1890-1969, (U.S.) commanded Allied forces in Europe, WWII.
Erich von Falkenhayn, 1861-1922, (Ger.) minister of war, general, commander at Verdun in WWI.
David Farragut, 1801-70, (U.S.) Union admiral; captured New Orleans, Mobile Bay, Civil War.
John Arbuthnot Fisher, 1841-1920, (Br.) WWI admiral; naval reformer.
Ferdinand Foch, 1851-1929, (Fr.) headed victorious Allied armies, 1918, WWI.
Nathan Bedford Forrest, 1821-77, (U.S.) Confed. general; led raids against Union supply lines, Civil War.
Frederick the Great, 1712-86, (Prus.) led Prussia in Seven Years War.
Horatio Gates, 1728-1806, (U.S.) commanded army at Saratoga, Amer. Rev.
Genghis Khan, 1162-1227, (Mongol) unified Mongol tribes, subjugated much of Asia, 1206-21.
Geronimo, 1829-1909, (Nat. Am.) leader of Chiricahua band of Apache Indians.
Charles G. Gordon, 1833-85, (Br.) led forces in China, Crimean War; killed at Khartoum.
Ulysses S. Grant, 1822-85, (U.S.) headed Union army, Civil War, 1864-65; forced Lee's surrender, 1865.
Nathanael Greene, 1742-86, (U.S.) defeated British in Southern campaign, 1780-81, Amer. Rev.
Heinz Guderian, 1888-1954, (Ger.) tank theorist; led panzer forces in Poland, France, Russia, WWII.
Gustavus Adolphus, 1594-1632, (Swed.) king, military tactician, reformer; led forces in Thirty Years' War.
Douglas Haig, 1861-1928, (Br.) led British armies in France, 1915-18, WWI.
William F. Halsey, 1882-1959, (U.S.) defeated Japanese fleet at Leyte Gulf, 1944, WWII.
Hannibal, 247-183 BCE, (Carthage) invaded Rome, crossing Alps, in Second Punic War, 218-201 BCE.
Sir Arthur Travers Harris, 1895-1984, (Br.) led Britain's WWII bomber command.
Paul von Hindenburg, 1847-1934, (Ger.) chief of general staff, WWI; 2nd pres. of Weimar Republic.
Richard Howe, 1726-99, (Br.) commanded navy in Amer. Rev., 1776-78; June 1 victory against French, 1794.
William Howe, 1729-1814, (Br.) commanded forces in Amer. Rev., 1776-78.
Isaac Hull, 1773-1843, (U.S.) sunk British frigate *Guerriere*, War of 1812.
Thomas "Stonewall" Jackson, 1824-63, (U.S.) Confed. general; led Shenandoah Valley campaign, Civil War.
Daniel James Jr., 1920-78, (U.S.) first black 4-star general, 1975; commander, N. American Air Defense Command.
Joseph Joffre, 1852-1931, (Fr.) headed Allied armies; won Battle of the Marne, 1914, WWI.
John Paul Jones, 1747-92, (U.S.) commanded *Bonhomme Richard* in victory over *Serapis*, Amer. Rev., 1779.
Chief Joseph, c. 1840-1904, (Nat. Am.) chief of the Nez Percé; forced by army to retreat and surrender.
Stephen Kearny, 1794-1848, (U.S.) headed Army of the West in Mexican War.
Albert Kesselring, 1885-1960, (Ger.) field marshal who led the defense of Italy in WWII.
Ernest J. King, 1878-1956, (U.S.) key WWII naval strategist.
Horatio H. Kitchener, 1850-1916, (Br.) led forces in Boer War, victorious at Khartoum, organized army in WWI.
Henry Knox, 1750-1806, (U.S.) general in Amer. Rev.; first sec. of war under U.S. Constitution.
Lavrenti Kornilov, 1870-1918, (Russ.) commander-in-chief, 1917; led counter-revolutionary march on Petrograd.
Thaddeus Kosciusko, 1746-1817, (Pol.) aided Amer. Rev.
Walter Krueger, 1881-1967, (U.S.) led Sixth Army in WWII in Southwest Pacific.
Mikhail Kutuzov, 1745-1813, (Russ.) fought at Borodino, Napol. Wars, 1812; abandoned Moscow, forced French retreat.
Marquis de Lafayette, 1757-1834, (Fr.) fought in, secured French aid for Amer. Rev.
T(homas) E. Lawrence (of Arabia), 1888-1935, (Br.) organized revolt of Arabs against Turks in WWI.
William Daniel Leahy, 1875-1959, (U.S.) chief of staff to Pres. Roosevelt in WWII, Fleet Admiral.
Henry (Light-Horse Harry) Lee, 1756-1818, (U.S.) cavalry officer in Amer. Rev.
Robert E. Lee, 1807-70, (U.S.) Confed. general; defeated at Gettysburg, Civil War; surrendered to Grant, 1865.
Curtis LeMay, 1906-90, (U.S.) Air Force commander in WWII, Korean War, Vietnam War.
Lyman Lemnitzer, 1899-1988, (U.S.) WWII hero; later general, chairman of Joint Chiefs of Staff.
James Longstreet, 1821-1904, (U.S.) aided Lee at Gettysburg, Civil War.
Erich Ludendorff, 1865-1937, (Ger.) general; victor at Tannenberg, WWI.
Douglas MacArthur, 1880-1964, (U.S.) commanded forces in SW Pacific in WWII; headed occupation forces in Japan, 1945-51; UN commander in Korean War.
Carl Gustaf Mannerheim, 1867-1951, (Fin.) army officer and pres. of Finland, 1944-46.
Erich von Manstein, 1887-1973, (Ger.) served WWI, WWII; planned inv. of France (1940); convicted of war crimes.
Francis Marion, 1733-95, (U.S.) led guerrilla actions in South Carolina during Amer. Rev.
Duke of Marlborough, 1650-1722, (Br.) led forces against Louis XIV in War of the Spanish Succession.
George C. Marshall, 1880-1959, (U.S.) chief of staff in WWII; authored Marshall Plan.
Maurice, Count of Nassau, 1567-1625, (Neth.) military innovator; led forces in Thirty Years' War.
George B. McClellan, 1826-85, (U.S.) Union general; commanded Army of the Potomac, 1861-62, Civil War.
George Meade, 1815-72, (U.S.) commanded Union forces at Gettysburg, Civil War.
Doris "Dorie" Miller, 1919-43, (U.S.) Navy hero of Pearl Harbor attack; first African American awarded Navy Cross.
Billy Mitchell, 1879-1936, (U.S.) WWI air-power advocate; court-martialed for insubordination, later vindicated.
Helmuth von Moltke, 1800-91, (Ger.) victorious in Austro-Prussian, Franco-Prussian wars.
Louis de Montcalm, 1712-59, (Fr.) headed troops in Canada, French and Indian War; defeated at Quebec, 1759.
Bernard Law Montgomery, 1887-1976, (Br.) stopped German offensive at Alamein, 1942, WWII; helped plan Normandy invasion.
Daniel Morgan, 1736-1802, (U.S.) victorious at Cowpens, 1781, Amer. Rev.
Louis Mountbatten, 1900-79, (Br.) Supreme Allied Commander of SE Asia, 1943-46, WWII.
Joachim Murat, 1767-1815, (Fr.) led cavalry at Marengo, Austerlitz, and Jena, Napoleonic Wars.
Horatio Nelson, 1758-1805, (Br.) naval commander; destroyed French fleet at Trafalgar.
Michel Ney, 1769-1815, (Fr.) commanded forces in Switz., Austria, Russ., Napoleonic Wars; defeated at Waterloo.
Chester Nimitz, 1885-1966, (U.S.) commander of naval forces in Pacific in WWII.
George S. Patton, 1885-1945, (U.S.) led assault on Sicily, 1943, Third Army invasion of Europe, WWII.
Oliver Perry, 1785-1819, (U.S.) won Battle of Lake Erie in War of 1812.
John Pershing, 1860-1948, (U.S.) commanded Mexican border campaign, 1916; Amer. Expeditionary Force, WWI.
Henri Philippe Pétain, 1856-1951, (Fr.) defended Verdun, 1916; headed Vichy government in WWII.
George E. Pickett, 1825-75, (U.S.) Confed. general famed for "charge" at Gettysburg, Civil War.
Charles Portal, 1893-1971, (Br.) chief of staff, Royal Air Force, 1940-45; led in Battle of Britain.

Manfred Frieherr von Richthofen (Red Baron), 1892-1918, (Ger.) WWI flying ace, led elite fighter squadron.
Hyman Rickover, 1900-86, (U.S.) father of nuclear navy.
Matthew Bunker Ridgway, 1895-1993, (U.S.) commanded Allied ground forces in Korean War.
Erwin Rommel, 1891-1944, (Ger.) headed Afrika Korps, WWII.
Gerd von Rundstedt, 1875-1953, (Ger.) supreme commander in West, 1942-45, WWII.
Saladin, 1138-93, (Kurdish Muslim) recaptured Jerusalem from Crusaders.
Aleksandr Samsonov, 1859-1914, (Russ.) led invasion of E Prussia, WWI; defeated at Tannenberg, 1914.
Antonio Lopez de Santa Anna, 1794-1876, (Mex.) defeated Texans at the Alamo; defeated in Mexican War.
Maurice, Count of Saxe, 1696-1750, (Fr.) general, noted tactician; War of Austrian Succession, War of Pol. Succession.
Scipio Africanus the Elder, 234?-183 BCE, (Rom.) hero of 2nd Punic War; defeated Hannibal, invaded N. Africa.
Winfield Scott, 1786-1866, (U.S.) hero of War of 1812; headed forces in Mexican War, took Mexico City.
Philip Sheridan, 1831-88, (U.S.) Union cavalry officer; headed Army of the Shenandoah, 1864-65, Civil War.
William T. Sherman, 1820-91, (U.S.) Union general; sacked Atlanta during "march to the sea," 1864, Civil War.
Carl Spaatz, 1891-1974, (U.S.) directed strategic bombing against Germany, later Japan, in WWII.
Raymond Spruance, 1886-1969, (U.S.) victorious at Midway Island, 1942, WWII.
Joseph W. Stilwell, 1883-1946, (U.S.) headed forces in the China, Burma, India theater in WWII.
J.E.B. Stuart, 1833-64, (U.S.) Confed. cavalry commander, Civil War.
Sun Tzu, 6th? cent. BCE, (Chin.) general; author of *The Art of War*.
Aleksandr Suvorov, 1729-1800, (Russ.) commanded Allied Russian and Austrian armies, Russo-Turkish War.
Tamerlane, 1336-1405, (Turkoman Mongol) conqueror; established empire from India to Mediterranean Sea.
George H. Thomas, 1816-70, (U.S.) saved Union army at Chattanooga, 1863; won at Nashville, 1864, Civil War.
Semyon Timoshenko, 1895-1970, (USSR) defended Moscow, Stalingrad, WWII; led winter offensive, 1942-43.
Alfred von Tirpitz, 1849-1930, (Ger.) responsible for submarine blockade in WWI.
Henri de la Tour d'Auvergne, Viscount of Turenne, 1611-75, (Fr.) marshal; Thirty Years' War, Fronde, War of Devolution.
Sebastien Le Prestre de Vauban, 1633-1707, (Fr.) innovative military engineer, theorist.
Jonathan M. Wainwright, 1883-1953, (U.S.) forced to surrender on Corregidor, Philippines, 1942, WWII.
George Washington, 1732-99, (U.S.) led Continental army, 1775-83, Amer. Rev.
Archibald Wavell, 1883-1950, (Br.) commanded forces in N and E Africa, SE Asia in WWII.
Anthony Wayne, 1745-96, (U.S.) captured Stony Point, NY, 1779, Amer. Rev.
Duke of Wellington, 1769-1852, (Br.) defeated Napoleon at Waterloo, 1815.
William Westmoreland, 1914-2005, (U.S.) commanded forces in Vietnam, 1964-68.
William I (The Conqueror), 1027-87, (Br.) victor, Battle of Hastings, 1066; became first Norman king of England.
James Wolfe, 1727-59, (Br.) captured Quebec from French, 1759, French and Indian War.
Isoroku Yamamoto, 1884-1943, (Jpn.) comm. in chief of Japanese fleet, naval planner before and during WWII.
Georgi Zhukov, 1895-1974, (Russ.) defended Moscow, 1941; led assault on Berlin, 1945, WWII.

Philosophers and Religious Figures of the Past

Excludes most biblical figures and popes (see Religion). For Greeks and Romans, see also Historical Figures chapter.

Lyman Abbott, 1835-1922, (U.S.) clergyman, reformer; advocate of Christian Socialism.
Pierre Abelard, 1079-1142, (Fr.) philosopher, theologian, teacher; used dialectic method to support Christian beliefs.
Felix Adler, 1851-1933, (U.S.) German-born founder of the Ethical Culture Soc.
Mortimer Adler, 1902-2001, (U.S.) philosopher; helped create "Great Books" program.
(St.) Anselm, c. 1033-1109, (It.) philosopher-theologian, church leader; "ontological argument" for God's existence.
(St.) Thomas Aquinas, 1225-74, (It.) preeminent medieval philosopher-theologian; *Summa Theologica*.
Aristotle, 384-322 BCE, (Gr.) pioneering wide-ranging philosopher, logician, ethician, naturalist.
(St.) Augustine, 354-430, (N. Africa) philosopher, theologian, bishop; *Confessions*, *City of God*, *On the Trinity*.
J. L. Austin, 1911-60, (Br.) ordinary-language philosopher.
Averroes (Ibn Rushd), 1126-98, (Sp.) Islamic philosopher, physician.
Avicenna (Ibn Sina), 980-1037, (Iran) Islamic philosopher, scientist.
A(lfred) J(ules) Ayer, 1910-89, (Br.) philosopher, logical positivist; *Language, Truth, and Logic*.
Roger Bacon, c. 1214-94, (Eng.) philosopher, scientist.
Bahaullah (Mirza Husayn Ali), 1817-92, (Pers.) founder of Bahá'í faith.
Karl Barth, 1886-1968, (Switz.) theologian; a leading force in 20th-cent. Protestantism.
Thomas à Becket, 1118-70, (Eng.) archbishop of Canterbury; opposed Henry II, murdered by King's men.
(St.) Benedict, c. 480-547, (It.) founded the Benedictines.
Jeremy Bentham, 1748-1832, (Br.) philosopher, reformer; enunciated utilitarianism.
Henri Bergson, 1859-1941, (Fr.) philosopher of evolution.
George Berkeley, 1685-1753, (Ire.) idealist philosopher, bishop.
John Biddle, 1615-62, (Eng.) founder of English Unitarianism.
Jakob Boehme, 1575-1624, (Ger.) theosophist, mystic.
Dietrich Bonhoeffer, 1906-45, (Ger.) Lutheran theologian, pastor; executed as opponent of Nazis.
William Brewster, 1567-1644, (Eng.) led Pilgrims.
Emil Brunner, 1889-1966, (Switz.) Protestant theologian.
Giordano Bruno, 1548-1600, (It.) philosopher, pantheist.
Martin Buber, 1878-1965, (Ger.) Jewish philosopher, theologian; *I and Thou*.
Buddha (Siddhartha Gautama), c. 563-c. 483 BCE, (India) philosopher; founded Buddhism.
John Calvin, 1509-64, (Fr.) theologian; a key figure in the Protestant Reformation.
Rudolph Carnap, 1891-1970, (U.S.) German-born analytic philosopher; a founder of logical positivism.
William Ellery Channing, 1780-1842, (U.S.) clergyman; early spokesman for Unitarianism.
Auguste Comte, 1798-1857, (Fr.) philosopher; originated positivism.
Confucius, 551-479 BCE, (Chin.) founder of Confucianism.
John Cotton, 1584-1652, (Eng.) Puritan theologian.
Thomas Cranmer, 1489-1556, (Eng.) Anglican churchman; wrote much of *Book of Common Prayer*.
Jacques Derrida, 1930-2004, (Fr.) deconstructionist philosopher.
René Descartes, 1596-1650, (Fr.) philosopher, mathematician; "father of modern philosophy"; *Discourse on Method, Meditations on First Philosophy.*
John Dewey, 1859-1952, (U.S.) philosopher, educator; instrumentalist theory of knowledge, progressive education.
Denis Diderot, 1713-84, (Fr.) philosopher, encyclopedist.
John Duns Scotus, c. 1266-1308, (Sc.) Franciscan philosopher, theologian.
Mary Baker Eddy, 1821-1910, (U.S.) founder of Christian Science; *Science and Health.*
Jonathan Edwards, 1703-58, (U.S.) preacher, theologian; "Sinners in the Hands of an Angry God."
(Desiderius) Erasmus, c. 1466-1536, (Neth.) Renaissance humanist; *On the Freedom of the Will.*
Rev. Jerry Falwell, 1933-2007, (U.S.) TV evangelist, religious commentator.
Johann Fichte, 1762-1814, (Ger.) idealist philosopher.
Michel Foucault, 1926-84, (Fr.) structuralist philosopher, historian.
George Fox, 1624-91, (Br.) founder of Society of Friends.
(St.) Francis of Assisi, 1182-1226, (It.) espoused voluntary poverty, founded Franciscans.
al-Ghazali, 1058-1111, ([now] Iran) Islamic philosopher.
Billy James Hargis, 1925-2004, (U.S.) anti-Communist televangelist; founder of the Church of the Christian Crusade.
Georg W. F. Hegel, 1770-1831, (Ger.) idealist philosopher; *Phenomenology of Mind*.
Martin Heidegger, 1889-1976, (Ger.) existentialist philosopher; affected many fields; *Being and Time*.
Johann G. Herder, 1744-1803, (Ger.) philosopher, cultural historian; a founder of German Romanticism.
Thomas Hobbes, 1588-1679, (Eng.) philosopher, political theorist; *Leviathan.*
David Hume, 1711-76, (Sc.) empiricist philosopher; *Enquiry Concerning Human Understanding*.
Jan Hus, 1369-1415, (Czech.) religious reformer.
Edmund Husserl, 1859-1938, (Ger.) philosopher; founded the phenomenological movement.
Thomas Huxley, 1825-95, (Br.) philosopher, educator.
William Ralph Inge, 1860-1954, (Br.) theologian; explored mystic aspects of Christianity.
William James, 1842-1910, (U.S.) philosopher, psychologist, pragmatist; studied religious experience.
Karl Jaspers, 1883-1969, (Ger.) existentialist philosopher.
Joan of Arc, 1412-31, (Fr.) national heroine, a patron saint of France; key figure in the Hundred Years' War.
Immanuel Kant, 1724-1804, (Ger.) philosopher; founder of modern critical philosophy; *Critique of Pure Reason.*
Thomas à Kempis, c. 1380-1471, (Ger.) monk, devotional writer; *Imitation of Christ* attributed to him.
Soren Kierkegaard, 1813-55, (Den.) religious philosopher, pre-existentialist; *Either/Or*, *The Sickness Unto Death*.

John Knox, 1505-72, (Sc.) leader of the Protestant Reformation in Scotland.
Lao-Tzu, 604-531 BCE, (Chin.) philosopher; considered the founder of the Taoist religion.
Gottfried von Leibniz, 1646-1716, (Ger.) rationalistic philosopher, logician, mathematician.
John Locke, 1632-1704, (Eng.) political theorist, empiricist philosopher; *Essay Concerning Human Understanding.*
(St.) Ignatius Loyola, 1491-1556, (Sp.) founder of the Jesuits; *Spiritual Exercises.*
Martin Luther, 1483-1546, (Ger.) leader of the Protestant Reformation; founded Lutheran church.
Jean-Francois Lyotard, 1924-98, (Fr.) postmodern philosopher, lecturer; *The Post-Modern Condition*.
Maimonides, 1135-1204, (Sp.) major Jewish philosopher.
Gabriel Marcel, 1889-1973, (Fr.) Rom. Cath. existentialist philosopher, dramatist.
Jacques Maritain, 1882-1973, (Fr.) neo-Thomist philosopher.
Cotton Mather, 1663-1728, (U.S.) defender of orthodox Puritanism; founded Yale, 1701.
Aimee Semple McPherson, 1890-1944, (Can.) Pentecostal evangelist.
Philipp Melanchthon, 1497-1560, (Ger.) theologian, humanist; an important voice in the Reformation.
Maurice Merleau-Ponty, 1908-61, (Fr.) existentialist philosopher; *Phenomenology of Perception*.
Thomas Merton, 1915-68, (U.S.) Trappist monk, spiritual writer; *The Seven Storey Mountain*.
Dwight Moody, 1837-99, (U.S.) evangelist.
G(eorge) E(dward) Moore, 1873-1958, (Br.) philosopher; *Principia Ethica*, "A Defense of Common Sense."
Muhammad, c. 570-632, (Arab.) prophet of Islam.
Elijah Muhammad, 1897-1975, (U.S.) founder of Black Muslim group, Nation of Islam.
Heinrich Muhlenberg, 1711-87, (Ger.) organized the Lutheran Church in America.
John H. Newman, 1801-90, (Br.) Rom. Cath. convert, cardinal; led Oxford Movement; *Apologia pro Vita Sua*.
Reinhold Niebuhr, 1892-1971, (U.S.) Protestant theologian.
Richard Niebuhr, 1894-1962, (U.S.) Protestant theologian.
Friedrich Nietzsche, 1844-1900, (Ger.) philosopher; *The Birth of Tragedy*, *Beyond Good and Evil*, *Thus Spake Zarathustra*.
Robert Nozick, 1938-2002, (U.S.) political philosopher; *Anarchy, State, and Utopia*.
Blaise Pascal, 1623-62, (Fr.) philosopher, mathematician; *Pensées.*
(St.) Patrick, c. 389-c. 461, (Br.) brought Christianity to Ireland.
Norman Vincent Peale, 1898-1993, (U.S.) minister, author; *The Power of Positive Thinking*.
C(harles) S. Peirce, 1839-1914, (U.S.) philosopher, logician; originated concept of pragmatism, 1878.
Plato, c. 428-347 BCE, (Gr.) philosopher; wrote Socratic dialogues; argued for immortality of soul, indep. reality of ideas or forms; *Republic*, *Meno*, *Phaedo*, *Apology*.
Plotinus, 205-70, (Rom.) a founder of neo-Platonism; *Enneads.*
W(illard) V(an) O(rman) Quine, 1908-2001, (U.S.) philosopher, logician; "On What There Is."
John Rawls, 1922-2002, (U.S.) political philosopher; *A Theory of Justice*.
Oral Roberts, 1918-2009, (U.S.) televangelist, university founder.
Moishe Rosen, 1932-2010, (U.S.) Jews for Jesus founder.
Josiah Royce, 1855-1916, (U.S.) idealist philosopher.
Bertrand Russell, 1872-1970, (Br.) philosopher, logician; one of the founders of modern logic; a prolific popular writer.
Charles T. Russell, 1852-1916, (U.S.) founder of Jehovah's Witnesses.
Gilbert Ryle, 1900-76, (Br.) analytic philosopher; *The Concept of Mind*.
George Santayana, 1863-1952, (U.S.) philosopher, writer, critic; *The Sense of Beauty*, *The Realms of Being*.
Jean-Paul Sartre, 1905-80, (Fr.) philosopher, novelist, playwright; *Nausea*, *No Exit*, *Being and Nothingness*.
Friedrich von Schelling, 1775-1854, (Ger.) philosopher of romantic movement.
Friedrich Schleiermacher, 1768-1834, (Ger.) theologian; a founder of modern Protestant theology.
Arthur Schopenhauer, 1788-1860, (Ger.) philosopher; *The World as Will and Idea*.
Albert Schweitzer, 1875-1965, (Ger.) theologian, social philosopher, medical missionary.
Joseph Smith, 1805-44, (U.S.) founded Latter-Day Saints (Mormon) movement, 1830.
Socrates, 469-399 BCE, (Gr.) philosopher immortalized by Plato.
Herbert Spencer, 1820-1903, (Br.) philosopher of evolution.
Herbert Spiegel, 1914-2009, (U.S.) psychiatrist who popularized hypnosis.
Baruch de Spinoza, 1632-77, (Neth.) rationalist philosopher; *Ethics*.
Billy Sunday, 1862-1935, (U.S.) evangelist.
Emanuel Swedenborg, 1688-1772, (Swed.) philosopher, mystic; *Principia*.
Pierre Teilhard de Chardin, 1881-1955, (Fr.) Jesuit priest, paleontologist, philosopher-theologian; *The Divine Milieu*.
Daisetz Teitaro Suzuki, 1870-1966, (Jpn.) Buddhist scholar.
(St.) Therese of Lisieux, 1873-97, (Fr.) Carmelite nun ("Little Flower"), revered for everyday sanctity; *The Story of a Soul*.
Paul Tillich, 1886-1965, (U.S.) German-born philosopher, theologian; brought depth psychology to Protestantism.
John Wesley, 1703-91, (Br.) theologian, evangelist; founded Methodism.
Alfred North Whitehead, 1861-1947, (Br.) philosopher, mathematician; *Process and Reality*.
William of Occam, c. 1285-c. 1349, (Eng.) medieval scholastic philosopher, nominalist.
Roger Williams, c. 1603-83, (U.S.) clergyman; championed religious freedom and separation of church and state.
Ludwig Wittgenstein, 1889-1951, (Austria) philosopher; major influence on contemporary language philosophy; *Tractatus Logico-Philosophicus*, *Philosophical Investigations*.
John Woolman, 1720-72, (U.S.) Quaker social reformer, abolitionist, writer; *The Journal*.
John Wycliffe, 1320-84, (Eng.) theologian, reformer.
(St.) Francis Xavier, 1506-52, (Sp.) Jesuit missionary; "Apostle of the Indies."
Brigham Young, 1801-77, (U.S.) Mormon leader after Smith's assassination; colonized Utah.
Huldrych Zwingli, 1484-1531, (Switz.) theologian; led Swiss Protestant Reformation.

Political Leaders of the Past

U.S. presidents, vice presidents, Supreme Court justices, signers of the Declaration of Independence listed elsewhere.

Abu Bakr, 573-634, (Arab.) Muslim leader, first caliph, chosen successor to Muhammad.
Dean Acheson, 1893-1971, (U.S.) sec. of state; architect of Cold War foreign policy.
Samuel Adams, 1722-1803, (U.S.) patriot; Boston Tea Party firebrand.
Konrad Adenauer, 1876-1967, (Ger.) first West German chancellor.
Emilio Aguinaldo, 1869-1964, (Philip.) revolutionary; fought against Spain and the U.S.
Corazon Aquino, 1933-2009, (Philip.) president of the Philippines, 1986-92.
Akbar, 1542-1605, greatest Mogul emperor of India.
Carl Albert, 1908-2000, (U.S.) House rep. (D, OK), Speaker, 1971-76.
Salvador Allende Gossens, 1908-73, (Chile) Marxist pres., 1970-73; ousted and died in coup.
Idi Amin, 1925-2003, (Uganda) Ugandan ruler, 1971-79; blamed for hundreds of thousands of deaths.
Yasir Arafat, 1929-2004, (Egypt) leader of the Palestine Liberation Organization (PLO).
Herbert H. Asquith, 1852-1928, (Br.) Liberal prime min.; instituted major social reforms.
Hafez al Assad, 1930-2000, (Syr.) Syrian ruler from 1970.
Atahualpa, 1500?-1533, (Inca) ruling chief of Peru.
Kemal Ataturk, 1881-1938, (Turk.) founded modern Turkey.
Clement Attlee, 1883-1967, (Br.) Labour party leader, prime min.; enacted natl. health care system, nationalized many industries.
Stephen F. Austin, 1793-1836, (U.S.) led Texas colonization.
Mikhail Bakunin, 1814-76, (Russ.) revolutionary; leading exponent of anarchism.
Arthur J. Balfour, 1848-1930, (Br.) foreign sec. under Lloyd George; issued Balfour Declaration backing Zionism.
Bernard M. Baruch, 1870-1965, (U.S.) financier, govt. adviser.
Fulgencio Batista y Zaldívar, 1901-73, (Cub.) Cuban pres., 1940-44, 1952-59; overthrown by Castro.
Lord Beaverbrook, 1879-1964, (Br.) financier, statesman, newspaper owner.
Menachem Begin, 1913-92, (Isr.) Israeli prime min.; shared 1978 Nobel Peace Prize.
Eduard Benes, 1884-1948, (Czech.) pres. during interwar and post-WWII eras.
David Ben-Gurion, 1886-1973, (Isr.) first prime min. of Israel, 1948-53, 1955-63.
Thomas Hart Benton, 1782-1858, (U.S.) MO senator; championed agrarian interests and westward expansion.
Aneurin Bevan, 1897-1960, (Br.) Labour party leader.
Ernest Bevin, 1881-1951, (Br.) Labour party leader, foreign minister; helped lay foundation for NATO.
Benazir Bhutto, 1953-2007, (Pak.) former prime minister of Pakistan.
Otto von Bismarck, 1815-98, (Ger.) statesman known as the Iron Chancellor; uniter of Germany, 1870.
James G. Blaine, 1830-93, (U.S.) Republican politician, diplomat; influential in Pan-American movement.
Léon Blum, 1872-1950, (Fr.) socialist leader, writer; headed first Popular Front government.
William E. Borah, 1865-1940, (U.S.) isolationist senator; helped block U.S. membership in League of Nations.
Cesare Borgia, 1476-1507, (It.) soldier, politician; an outstanding figure of the Italian Renaissance.
P. W. Botha, 1916-2006, (S. Africa) S. African president, prime minister.
Tom Bradley, 1917-98, (U.S.) first African American mayor of L.A.
Willy Brandt, 1913-92, (Ger.) statesman, chancellor of West Germany, 1969-74; promoted East/West peace, *Ostpolitik*.
Leonid Brezhnev, 1906-82, (USSR) Soviet leader, 1964-82.

Aristide Briand, 1862-1932, (Fr.) foreign min.; chief architect of Locarno Pact and anti-war Kellogg-Briand Pact.
William Jennings Bryan, 1860-1925, (U.S.) Democratic, populist leader, orator; 3 times lost race for presidency.
Ralph Bunche, 1904-71, (U.S.) first black person to win the Nobel Peace Prize, 1950; undersecretary of the UN, 1950.
Byrd, Robert, 1917-2010, (U.S.) longest serving senator (D, WV).
John C. Calhoun, 1782-1850, (U.S.) political leader; champion of states' rights and a symbol of the Old South.
James Callaghan (Baron Callaghan), 1912-2005, (Br.) Labour party politician, prime min., 1976-79.
Robert Castlereagh, 1769-1822, (Br.) foreign sec.; guided Grand Alliance against Napoleon.
Camillo Benso Cavour, 1810-61, (It.) statesman; largely responsible for uniting Italy under the House of Savoy.
Nicolae Ceausescu, 1918-89, (Roman.) Communist leader, head of state, 1967-89; executed.
Austen Chamberlain, 1863-1937, (Br.) statesman; helped finalize Locarno Treaties, both 1925.
Neville Chamberlain, 1869-1940, (Br.) Conservative prime min. whose appeasement of Hitler led to Munich Pact.
Chiang Kai-shek, 1887-1975, (China) Nationalist Chinese pres. whose government was driven from mainland to Taiwan.
Madame Chiang Kai-shek (Mayling Soong), 1898-2003, (China) highly influential wife of Nationalist Chinese leader Chiang Kai-shek.
Shirley Chisholm, 1924-2005, (U.S.) first black woman elected to U.S. House (1968); pres. contender, 1972.
Winston Churchill, 1874-1965, (Br.) prime min., soldier, author; guided Britain through WWII.
Galeazzo Ciano, 1903-44, (It.) Fascist foreign minister; helped create Rome-Berlin Axis; executed by Mussolini.
Henry Clay, 1777-1852, (U.S.) "The Great Compromiser"; one of the most influential pre-Civil War political leaders.
Georges Clemenceau, 1841-1929, (Fr.) twice prem.; Woodrow Wilson's antagonist at Paris Peace Conference after WWI.
DeWitt Clinton, 1769-1828, (U.S.) political leader; responsible for promoting the Erie Canal.
Robert Clive, 1725-74, (Br.) first administrator of Bengal; laid foundation for British Empire in India.
Jean Baptiste Colbert, 1619-83, (Fr.) statesman; influential under Louis XIV; created the French navy.
Bettino Craxi, 1934-2000, (It.) Italy's first post-WWII Socialist premier.
David Crockett, 1786-1836, (U.S.) frontiersman, congressman; died defending the Alamo.
Oliver Cromwell, 1599-1658, (Br.) Lord Protector of England; led parliamentary forces during Civil War.
Curzon of Kedleston, 1859-1925, (Br.) viceroy of India, foreign sec.; major force in post-WWI world.
Édouard Daladier, 1884-1970, (Fr.) Radical Socialist politician, arrested by Vichy, interned by Germans until 1945.
Richard J. Daley, 1902-76, (U.S.) Chicago mayor.
Georges Danton, 1759-94, (Fr.) leading French Rev. figure.
Jefferson Davis, 1808-89, (U.S.) pres. of the Confederacy.
Charles G. Dawes, 1865-1951, (U.S.) statesman, banker; advanced plan to stabilize post-WWI German finances.
William L. Dawson, 1886-1970, (U.S.) IL congressman; first black chairman of a major U.S. House committee.
Alcide De Gasperi, 1881-1954, (It.) prime min.; founder of Christian Democratic party.
Charles De Gaulle, 1890-1970, (Fr.) general, statesman; first pres. of the Fifth Republic.
Deng Xiaoping, 1904-97, (China) "paramount leader" of China; backed economic modernization.
Eamon De Valera, 1882-1975, (Ire.-U.S.) statesman; led fight for Irish independence.
Thomas E. Dewey, 1902-71, (U.S.) NY governor; twice lost in try for presidency.
Ngo Dinh Diem, 1901-63, (Viet.) South Vietnamese pres.; assassinated in government takeover.
Everett M. Dirksen, 1896-1969, (U.S.) Senate Republican minority leader, orator.
Benjamin Disraeli, 1804-81, (Br.) prime min.; considered founder of modern Conservative party.
Anatoly Dobrynin, 1919-2010, (Russ.) diplomat and Soviet amb. to U.S. (1962-86).
Engelbert Dollfuss, 1892-1934, (Austria) chancellor; assassinated by Austrian Nazis.
Andrea Doria, 1466-1560, (It.) Genoese admiral, statesman; called "Father of Peace" and "Liberator of Genoa."
Stephen A. Douglas, 1813-61, (U.S.) Democratic leader, orator; ran against Lincoln for IL sen. seat, presidency.
Alexander Dubcek, 1921-92, (Czech.) statesman whose attempted liberalization was crushed, 1968.
John Foster Dulles, 1888-1959, (U.S.) sec. of state under Eisenhower; Cold War policy maker.
Abba Eban, 1915-2002, (Isr.) diplomat; foreign min., 1966-74.
Friedrich Ebert, 1871-1925, (Ger.) Social Democratic movement leader; 1st pres., Weimar Republic, 1919-25.
Sir Anthony Eden, 1897-1977, (Br.) foreign sec., prime min. during Suez invasion of 1956.
Ludwig Erhard, 1897-1977, (Ger.) economist, West German chancellor; led nation's economic rise after WWII.
King Fahd, 1923-2005, (Saudi Arab.) monarch since 1982, but inactive since 1995 stroke; encouraged U.S. relations.
Joao Baptista de Figueiredo, 1918-99, (Braz.) president of Brazil; restored the nation's democracy.
Hamilton Fish, 1808-93, (U.S.) sec. of state; successfully mediated disputes with Great Britain, Latin America.
James V. Forrestal, 1892-1949, (U.S.) sec. of navy, first sec. of defense.
Francisco Franco, 1892-1975, (Sp.) leader of rebel forces during Spanish Civil War, longtime ruler of Spain.
Benjamin Franklin, 1706-90, (U.S.) printer, publisher, author, inventor, scientist, diplomat.
Louis de Frontenac, 1620-98, (Fr.) governor of New France (Canada); encouraged explorations, fought Iroquois.
J. William Fulbright, 1905-95, (U.S.) senator (D, AR); leading figure in U.S. foreign policy during Cold War years.
Hugh Gaitskell, 1906-63, (Br.) Labour party leader; major force in reversing its stand for unilateral disarmament.
Albert Gallatin, 1761-1849, (U.S.) sec. of treasury; instrumental in negotiating end of War of 1812.
Léon Gambetta, 1838-82, (Fr.) statesman, politician; one of the founders of the Third Republic.
Indira Gandhi, 1917-84, (In.) daughter of Jawaharlal Nehru; prime min. of India, 1966-77, 1980-84; assassinated.
Mohandas K. Gandhi, 1869-1948, (In.) political leader, ascetic; led movement against British rule; assassinated.
Giuseppe Garibaldi, 1807-82, (It.) patriot, soldier; a leader in the Risorgimento, Italian unification movement.
William E. Gladstone, 1809-98, (Br.) prime min. 4 times; dominant force of Liberal party from 1868 to 1894.
Paul Joseph Goebbels, 1897-1945, (Ger.) Nazi propagandist; master of mass psychology.
Barry Goldwater, 1909-98, (U.S.) conservative U.S. senator, 1964 Republican pres. nominee.
Klement Gottwald, 1896-1953, (Czech.) Communist leader; ushered Communism into his country.
Alexander Hamilton, 1755-1804, (U.S.) first treasury sec.; champion of strong central government.
Dag Hammarskjold, 1905-61, (Swed.) statesman; UN sec.-general.
King Hassan II, 1929-99, (Moroc.) ruler of Morocco,1962-99.
John Hay, 1838-1905, (U.S.) sec. of state; primarily associated with Open Door Policy toward China.
Sir Edward Heath, 1916-2005, (Br.) Conservative prime min., 1970-74; promoted European unity.
Jesse Helms, 1921-2008, (U.S.) conservative senator (R, NC).
Patrick Henry, 1736-99, (U.S.) major Revolutionary War figure, orator.
Édouard Herriot, 1872-1957, (Fr.) Radical Socialist leader; twice prem., pres. of National Assembly.
Theodor Herzl, 1860-1904, (Hung.) founded modern Zionism.
Heinrich Himmler, 1900-45, (Ger.) head of Nazi SS and Gestapo.
Paul von Hindenburg, 1847-1934, (Ger.) field marshal, WWI; 2nd pres. of Weimar Republic, 1925-34.
Adolf Hitler, 1889-1945, (Ger.) dictator; built Nazism, launched WWII, presided over the Holocaust.
Ho Chi Minh, 1890-1969, (Viet.) N. Vietnamese pres., Vietnamese Communist leader.
Harry L. Hopkins, 1890-1946, (U.S.) New Deal administrator; closest adviser to Franklin D. Roosevelt during WWII.
Edward M. House, 1858-1938, (U.S.) diplomat; confidential adviser to Woodrow Wilson.
Samuel Houston, 1793-1863, (U.S.) leader of struggle for Texas independence.
Cordell Hull, 1871-1955, (U.S.) sec. of state, 1933-44; initiated reciprocal trade to lower tariffs, helped organize UN.
Hubert H. Humphrey, 1911-78, (U.S.) senator (D, MN), vice pres., pres. candidate.
King Hussein, 1935-99, (Jordan) peacemaker; ruler of Jordan, 1952-99.
Saddam Hussein, 1937-2006, (Iraq) Iraqi ruler; put to death for crimes against humanity.
Muhammad Ali Jinnah, 1876-1948, (Pak.) founder, first governor-general of Pakistan.
Barbara Jordan, 1936-96, (U.S.) congresswoman, orator, educator; first black woman to win a seat in the TX senate, 1966.
Benito Juarez, 1806-72, (Mex.) rallied his country against foreign threats; sought to create democratic, federal republic.
Constantine Karamanlis, 1907-98, (Gr.) Greek prime min.; restored democracy; later president.
Frank B. Kellogg, 1856-1937, (U.S.) sec. of state; negotiated Kellogg-Briand Pact to outlaw war.
Jack Kemp, 1935-2009, (U.S.) sec. of HUD, U.S. rep. (R, NY), football player.
Edward M. Kennedy, 1932-2009, (U.S.) senator (D, MA); championed progressive causes.
Robert F. Kennedy, 1925-68, (U.S.) attorney general, senator; assassinated while seeking presidency.
Aleksandr Kerensky, 1881-1970, (Russ.) headed provisional government after Feb. 1917 revolution.
Ayatollah Ruhollah Khomeini, 1900-89, (Iran), religious-political leader; spearheaded overthrow of Shah, 1979.

Nikita Khrushchev, 1894-1971, (USSR) prem., first sec. of Communist party; initiated de-Stalinization.
Kim Dae Jung, 1925-2009, (Korea) former S. Korean dissident, opposition leader, pres.; 2000 Nobelist.
Kim Il Sung, 1912-94, (Korea) N. Korean dictator, 1948-94.
Lajos Kossuth, 1802-94, (Hung.) principal figure in 1848 Hungarian revolution.
Pyotr Kropotkin, 1842-1921, (Russ.) anarchist; championed the peasants but opposed Bolshevism.
Kublai Khan, c. 1215-94, (Mongol) emperor; founder of Yüan dynasty in China.
Béla Kun, 1886-c. 1939, (Hung.) member of 3rd Communist International; tried to foment worldwide revolution.
Robert M. LaFollette, 1855-1925, (U.S.) Wisconsin public official; leader of progressive movement.
Fiorello La Guardia, 1882-1947, (U.S.) New York City reform mayor.
Pierre Laval, 1883-1945, (Fr.) politician, Vichy foreign min.; executed for treason.
Andrew Bonar Law, 1858-1923, (Br.) Conservative party politician; led opposition to Irish home rule.
Vladimir Ilyich Lenin (Ulyanov), 1870-1924, (Russ.) revolutionary; founded Bolshevism; Soviet leader, 1917-24.
Ferdinand de Lesseps, 1805-94, (Fr.) diplomat, engineer; conceived idea of Suez Canal.
Rene Levesque, 1922-87, (Can.) prem. of Quebec, 1976-85; led unsuccessful separatist campaign.
Trygve Lie, 1896-1968, (Nor.) first UN sec.-gen.
Maxim Litvinov, 1876-1951, (Pol.-Russ.) revolutionary, commissar of foreign affairs; favored cooperation with West.
Liu Shaoqi, c. 1898-1969, (China) Communist leader; fell from grace during Cultural Revolution.
David Lloyd George, 1863-1945, (Br.) Liberal party prime min.; laid foundations for modern welfare state.
Henry Cabot Lodge, 1850-1924, (U.S.) Republican senator; led opposition to participation in League of Nations.
Huey P. Long, 1893-1935, (U.S.) Louisiana political demagogue, governor, U.S. senator; assassinated.
Rosa Luxemburg, 1871-1919, (Ger.) revolutionary; leader of the German Social Democratic party and Spartacus party.
J. Ramsay MacDonald, 1866-1937, (Br.) first Labour party prime min. of Great Britain.
Harold Macmillan, 1895-1986, (Br.) prime min. of Great Britain, 1957-63.
Makarios III, 1913-77, (Cyprus) Greek Orthodox archbishop; first pres. of Cyprus.
Wilma Mankiller, 1945-1910, (U.S.) first female Chief of the Cherokee Nation.
Mao Zedong, 1893-1976, (China) chief Chinese Marxist theorist, revolutionary, political leader; led revolution establishing his nation as Communist state.
Jean Paul Marat, 1743-93, (Fr.) revolutionary, politician; identified with radical Jacobins; assassinated.
Thurgood Marshall, 1908-93, (U.S.) first black U.S. solicitor general, 1965; first black justice of U.S. Supreme Court, 1967-91.
José Martí, 1853-95, (Cub.) patriot, poet; leader of Cuban struggle for independence.
Jan Masaryk, 1886-1948, (Czech.) foreign min.; died under mysterious circumstances, allegedly committed suicide following Communist coup.
Thomas G. Masaryk, 1850-1937, (Czech.) statesman, philosopher; first pres. of Czechoslovakia.
Jules Mazarin, 1602-61, (Fr.) cardinal, statesman; prime min. under Louis XIII and queen regent Anne of Austria.
Giuseppe Mazzini, 1805-72, (It.) reformer dedicated to Risorgimento movement for renewal of Italy.
Tom Mboya, 1930-69, (Kenya) political leader; instrumental in securing independence for Kenya.
Eugene McCarthy, 1916-2005, (U.S.) political leader, author; 1968 presidential contender.
Joseph R. McCarthy, 1908-57, (U.S.) senator; extremist in searching out alleged Communists and pro-Communists.
Cosimo I de' Medici, 1519-74, (It.) Duke of Florence, grand duke of Tuscany.
Lorenzo de' Medici, the Magnificent, 1449-92, (It.) merchant prince; a towering figure in Italian Renaissance.
Catherine de Médicis, 1519-89, (Fr.) queen consort of Henry II, regent of France; influential in Catholic-Huguenot wars.
Golda Meir, 1898-1978, (Isr.) a founder of the state of Israel; prime min., 1969-74.
Klemens W. N. L. Metternich, 1773-1859, (Austria) statesman; arbiter of post-Napoleonic Europe.
Slobodan Milosevic, 1941-2006, (Serbia/Yugoslavia) former Yugoslav pres.; tried for war crimes.
François Mitterrand, 1916-96, (Fr.) pres. of France, 1981-95.
Mobutu Sese Seko, 1930-97, (Zaire) longtime ruler of Zaire (now Dem. Rep. of Congo), 1965-97; exiled after rebellion.
Guy Mollet, 1905-75, (Fr.) socialist politician, resistance leader.
Henry Morgenthau Jr., 1891-1967, (U.S.) sec. of treasury; fundraiser for New Deal and U.S. WWII activities.
Gouverneur Morris, 1752-1816, (U.S.) statesman, diplomat, financial expert; helped plan decimal coinage.
Daniel Patrick Moynihan, 1927-2003, (U.S.) senator, diplomat, social scientist, author.
Benito Mussolini, 1883-1945, (It.) leader of the Italian fascist state; assassinated.
Imre Nagy, c. 1896-1958, (Hung.) Communist prem.; assassinated after Soviets crushed 1956 uprising.
Gamal Abdel Nasser, 1918-70, (Egypt) leader of Arab unification, 2nd Egyptian pres.
Jawaharlal Nehru, 1889-1964, (In.) prime min.; guided India through its early years of independence.
Kwame Nkrumah, 1909-72, (Ghana) 1st prime min., 1957-60; pres., 1960-66, of Ghana.
Frederick North, 1732-92, (Br.) prime min.; his inept policies led to loss of American colonies.
Julius K. Nyerere, 1922-99, (Tanz.) founding father; 1st pres., 1962-85, of Tanzania.
Daniel O'Connell, 1775-1847, (Ire.) nationalist political leader; known as The Liberator.
Omar, c. 581-644, Muslim leader; 2nd caliph, led Islam to become an imperial power.
Thomas P. (Tip) O'Neill Jr., 1912-94, (U.S.) U.S. rep. (D, MA), Speaker of the House, 1977-86.
Ignace Paderewski, 1860-1941, (Pol.) statesman, pianist, composer, briefly prime min.; an ardent patriot.
Viscount Palmerston, 1784-1865, (Br.) Whig-Liberal prime min., foreign min.; embodied British nationalism.
Andreas George Papandreou, 1919-96, (Gr.) leftist politician; served twice as prem., 1981-89, 1993-96.
Georgios Papandreou, 1888-1968, (Gr.) Republican politician; served 3 times as prime min.
Franz von Papen, 1879-1969, (Ger.) politician; major role in overthrow of Weimar Republic and rise of Hitler.
Charles Stewart Parnell, 1846-1891, (Ire.) nationalist leader; "uncrowned king of Ireland."
Lester Pearson, 1897-1972, (Can.) diplomat, Liberal party leader, prime min.
Robert Peel, 1788-1850, (Br.) reformist prime min.; founder of Conservative party.
Frances Perkins, 1882-1965, (U.S.) first female cabinet member (sec. of labor).
Eva (Evita) Perón, 1919-52, (Arg.) highly influential 2nd wife of Juan Perón.
Juan Perón, 1895-1974, (Arg.) dynamic pres. of Argentina, 1946-55, 1973-74.
Joseph Pilsudski, 1867-1935, (Pol.) statesman; instrumental in reestablishing Polish state in the 20th cent.
Charles Pinckney, 1757-1824, (U.S.) founding father; his Pinckney plan largely incorporated into Constitution.
Christian Pineau, 1905-95, (Fr.) leader of French Resistance during WWII; French foreign min., 1956-58.
Augusto Pinochet (Ugarte), 1915-2006, (Chile) former Chilean ruler; indicted for human rights abuses while in office.
William Pitt the Elder, 1708-78, (Br.) statesman; the "Great Commoner," transformed Britain into imperial power.
William Pitt the Younger, 1759-1806, (Br.) prime min. during French Revolutionary wars.
Georgi Plekhanov, 1857-1918, (Russ.) revolutionary, social philosopher; called "father of Russian Marxism."
Raymond Poincaré, 1860-1934, (Fr.) 9th pres. of the Republic; advocated harsh punishment of Germany after WWI.
Pol Pot, 1925-98, (Camb.) leader of Khmer Rouge; ruled Cambodia, 1975-79; responsible for mass deaths.
Georges Pompidou, 1911-74, (Fr.) Gaullist political leader; pres., 1969-74.
Grigori Potemkin, 1739-91, (Russ.) field marshal; favorite of empress Catherine II.
Adam Clayton Powell Jr., 1908-72, (U.S.) civil rights leader; U.S. rep. (D, NY), 1945-69.
Yitzhak Rabin, 1922-95, (Isr.) military, political leader; prime min. of Israel, 1974-77, 1992-95; assassinated.
Joseph H. Rainey, 1832-87, (U.S.) first black person elected to U.S. House, 1869, from SC.
Edmund Randolph, 1753-1813, (U.S.) attorney; prominent in drafting, ratification of Constitution.
John Randolph, 1773-1833, (U.S.) Southern planter; strong advocate of states' rights.
Jeannette Rankin, 1880-1973, (U.S.) pacifist; first woman member of U.S. Congress.
Walter Rathenau, 1867-1922, (Ger.) industrialist, statesman.
Sam Rayburn, 1882-1961, (U.S.) Democratic leader; representative for 47 years, House Speaker for 17.
Hiram R. Revels, 1822-1901, (U.S.) first African American U.S. senator; elected in MS, served 1870-71.
Paul Reynaud, 1878-1966, (Fr.) statesman; prem. in 1940 at time of France's defeat by Germany.
Syngman Rhee, 1875-1965, (Korea) first pres. of S. Korea.
Cecil Rhodes, 1853-1902, (Br.) imperialist, industrial magnate; established Rhodes scholarships in his will.
Ann Richards, 1933-2006, (U.S.) former TX gov.
Cardinal de Richelieu, 1585-1642, (Fr.) statesman, known as "red eminence"; chief minister to Louis XIII.
Maximilien Robespierre, 1758-94, (Fr.) leading figure in French Revolution and Reign of Terror.

Nelson Rockefeller, 1908-79, (U.S.) Republican governor of NY, 1959-73; U.S. vice pres., 1974-77.
Eleanor Roosevelt, 1884-1962, (U.S.) influential first lady, humanitarian, UN diplomat.
Elihu Root, 1845-1937, (U.S.) lawyer, statesman, diplomat; leading Republican supporter of the League of Nations.
Dean Rusk, 1909-95, (U.S.) statesman; sec. of state, 1961-69.
John Russell, 1792-1878, (Br.) Liberal prime min. during the Irish potato famine.
Anwar al-Sadat, 1918-81, (Egypt) pres., 1970-81; promoted peace with Israel; Nobel laureate; assassinated.
António de Oliveira Salazar, 1889-1970, (Port.) longtime dictator.
José de San Martin, 1778-1850, S Amer. revolutionary; protector of Peru.
Eisaku Sato, 1901-75, (Jpn.) prime min.; presided over Japan's post-WWII emergence as major world power.
Abdul Aziz Ibn Saud, c.1880-1953, (Saudi Arabia) king of Saudi Arabia, 1932-53.
Robert Schuman, 1886-1963, (Fr.) statesman; founded European Coal and Steel Community.
Carl Schurz, 1829-1906, (U.S.) German-American political leader, journalist, orator, dedicated reformer.
Kurt Schuschnigg, 1897-1977, (Austria) chancellor; unsuccessful in stopping Austria's annexation by Germany.
William H. Seward, 1801-72, (U.S.) anti-slavery activist; as U.S. sec. of state purchased Alaska.
Carlo Sforza, 1872-1952, (It.) foreign min., anti-Fascist.
Sitting Bull, c.1831-90, (Nat. Am.) Sioux leader in Battle of Little Bighorn against George A. Custer, 1876.
Alfred E. Smith, 1873-1944, (U.S.) NY Democratic governor; first Roman Catholic to run for president.
Margaret Chase Smith, 1897-1995, (U.S.) congresswoman, senator (ME); 1st woman elected to both houses of Congress.
Jan C. Smuts, 1870-1950, (S. Africa) statesman, philosopher, soldier, prime min.
Paul Henri Spaak, 1899-1972, (Belg.) statesman, socialist leader.
Joseph Stalin, 1879-1953, (USSR) Soviet dictator, 1924-53; instituted forced collectivization, massive purges, and labor camps, causing millions of deaths.
Edwin M. Stanton, 1814-69, (U.S.) sec. of war, 1862-68.
Alexander Stephens, 1812-1883, (U.S.) vice pres. of the Confederacy.
Edward R. Stettinius Jr., 1900-49, (U.S.) industrialist; sec. of state who coordinated aid to WWII allies.
Adlai E. Stevenson, 1900-65, (U.S.) Democratic leader, diplomat, governor (IL), presidential candidate.
Henry L. Stimson, 1867-1950, (U.S.) statesman; served in 5 administrations, foreign policy adviser in 1930s and 1940s.
Carl Stokes, 1927-96, (U.S.) first black mayor of a major American city (Cleveland), 1967-72.
Suharto, 1921-2008, (Indon.) former longtime Indonesian ruler.
Sukarno, 1901-70, (Indon.) dictatorial first pres. of the Indonesian republic.
Sun Yat-sen, 1866-1925, (China) revolutionary; leader of Kuomintang, regarded as the father of modern China.
Robert A. Taft, 1889-1953, (U.S.) conservative Senate leader; called "Mr. Republican."
Charles de Talleyrand, 1754-1838, (Fr.) statesman, diplomat; the major force of the Congress of Vienna of 1814-15.
U Thant, 1909-74, (Burma) statesman, UN sec.-general.
Norman M. Thomas, 1884-1968, (U.S.) social reformer; 6 times Socialist party presidential candidate.
Josip Broz Tito, 1892-1980, (Yug.) pres. of Yugoslavia from 1953; WWII guerrilla chief, postwar rival of Stalin.
Palmiro Togliatti, 1893-1964, (It.) major Italian Communist leader.
Hideki Tojo, 1885-1948, (Jpn.) statesman, soldier; prime min. during most of WWII.
François Toussaint L'Ouverture, c.1744-1803, (Haiti) patriot, martyr; thwarted French colonial aims.
Leon Trotsky, 1879-1940, (Russ.) revolutionary; founded Red Army, expelled from party in conflict with Stalin; assassinated.
Pierre Elliott Trudeau, 1919-2000, (Can.) longtime liberal prime minister of Canada, 1968-79, 1980-84; achieved native Canadian constitution.
Rafael L. Trujillo Molina, 1891-1961, (Dom.) dictator of Dominican Republic, 1930-61; assassinated.
Moise K. Tshombe, 1919-69, (Congo) pres. of secessionist Katanga prov., prem. of Congo.
William M. Tweed, 1823-78, (U.S.) political boss of Tammany Hall, New York City's Democratic political machine.
Walter Ulbricht, 1893-1973, (Ger.) Communist leader of German Democratic Republic.
Arthur H. Vandenberg, 1884-1951, (U.S.) senator (R, MI); proponent of bipartisan anti-Communist foreign policy.
Eleutherios Venizelos, 1864-1936, (Gr.) most prominent Greek statesman of early 20th cent.
Hendrik F. Verwoerd, 1901-66, (S. Africa) prime min.; rigorously applied apartheid policy despite protest.
Kurt Waldheim, 1918-2007, (Austria) UN sec.-gen, Austrian pres.
George Wallace, 1919-98, (U.S.) former segregationist governor of Alabama, pres. candidate.
Robert Walpole, 1676-1745, (Br.) statesman; generally considered Britain's first prime min.
Harold Washington, 1922-87, (U.S.) first black mayor of Chicago.
Robert C. Weaver, 1907-97, (U.S.) first African American appointed to cabinet; sec. of Housing and Urban Development.
Daniel Webster, 1782-1852, (U.S.) orator, politician; advocate of business interests during Jacksonian agrarianism.
Caspar Weinberger, 1917-2006, (U.S.) business exec., former defense sec., other cabinet posts.
Chaim Weizmann, 1874-1952, (Russ.-Isr.) Zionist leader, scientist; first Israeli pres.
Wendell L. Willkie, 1892-1944, (U.S.) Republican who tried to unseat Franklin D. Roosevelt when he ran for his 3rd term.
Harold Wilson, 1916-95, (Br.) Labour party leader; prime min., 1964-70, 1974-76.
Boris Yeltsin, 1931-2007, (USSR-Russia) first freely elected president of post-Soviet Russia.
Coleman A. Young, 1918-97, (U.S.) first African-American mayor of Detroit, 1974-93.
Emiliano Zapata, c.1879-1919, (Mex.) revolutionary; major influence on modern Mexico.
Todor Zhivkov, 1911-98, (Bulg.) Communist ruler of Bulgaria from 1954 until ousted in a 1989 coup.
Zhou Enlai, 1898-1976, (China) diplomat, prime min.; a leading figure of the Chinese Communist party.

Scientists of the Past

Revised by Peter Barker, Prof. and Chair, Dept. of the History of Science, Univ. of Oklahoma.

For pre-modern scientists, see also Philosophers and Religious Figures of the Past and Historical Figures chapters.

Albertus Magnus, c.1200-1280, (Ger.) theologian, philosopher; helped found medieval study of natural science.
Alhazen (Ibn al-Haytham), c. 965-c.1040, mathematician, astronomer, optical theorist.
Andre-Marie Ampère, 1775-1836, (Fr.) mathematician, chemist; founder of electrodynamics.
John V. Atanasoff, 1903-95, (U.S.) physicist; co-invented Atanasoff-Berry Computer (1939-41).
Amedeo Avogadro, 1776-1856, (It.) chemist, physicist; proposed that equal volumes of gas contain equal numbers of molecules, permitting determination of molecular weights.
John Bardeen, 1908-91, (U.S.) double Nobel laureate in physics (transistor, 1956; superconductivity, 1972).
A. H. Becquerel, 1852-1908, (Fr.) physicist; discovered radioactivity in uranium (1896).
Alexander Graham Bell, 1847-1922, (U.S.) inventor; first to patent and commercially exploit the telephone (1876).
Daniel Bernoulli, 1700-82, (Switz.) mathematician; developed fluid dynamics and kinetic theory of gases.
Clifford Berry, 1918-63, (U.S.) collaborated with Atanasoff on the ABC computer (1939-41).
Jöns Jakob Berzelius, 1779-1848, (Swed.) chemist; developed modern chemical symbols and formulas.
Henry Bessemer, 1813-98, (Br.) engineer; invented Bessemer steel-making process.
Hans Bethe, 1906-2005, (Ger.-U.S.) physicist; won Nobel Prize in 1967 for describing how stars generate energy.
Bruno Bettelheim, 1903-90, (Austria-U.S.) psychoanalyst; studied disturbed children; *Uses of Enchantment* (1976).
Louis Blériot, 1872-1936, (Fr.) engineer; monoplane pioneer, first Channel flight (1909).
Franz Boas, 1858-1942, (Ger.-U.S.) founded modern anthropology; studied Pacific Coast tribes.
Niels Bohr, 1885-1962, (Den.) atomic and nuclear physicist; founded quantum mechanics.
Norman Borlaug, 1914-2009, (U.S.) plant pathologist and geneticist; father of "green" (agricultural) revolution.
Max Born, 1882-1970, (Ger.) atomic and nuclear physicist; helped develop quantum mechanics.
Satyendranath Bose, 1894-1974, (India) physicist; forerunner of modern quantum theory for integral-spin particles.
Louis de Broglie, 1892-1987, (Fr.) physicist; proposed quantum wave-particle duality.
Robert Bunsen, 1811-99, (Ger.) chemist; pioneered spectroscopic analysis; discovered rubidium, caesium.
Luther Burbank, 1849-1926, (U.S.) naturalist; developed plant breeding into a modern science.
Vannevar Bush, 1890-1974, (U.S.) electrical engineer; developed differential analyzer, an early analogue computer; headed WWII Office of Scientific Res. and Dev.
Marvin Camras, 1916-95, (U.S.) inventor, electrical engineer; invented magnetic tape recording.

Alexis Carrel, 1873-1944, (Fr.) surgeon, biologist; developed methods of suturing blood vessels, transplanting organs.

Rachel Carson, 1907-64, (U.S.) marine biologist, environmentalist; *Silent Spring* (1962).

James Chadwick, 1891-1974, (Br.) physicist; discovered the neutron (1932); led Brit. Manhattan Project group in U.S.

Albert Claude, 1898-1983, (Belg.-U.S.) a founder of modern cell biology; determined role of mitochondria.

Nicolaus Copernicus, 1473-1543, (Pol.) first modern astronomer to propose Sun as center of the planets' motions.

Jacques Yves Cousteau, 1910-97, (Fr.) oceanographer; co-inventor, with Gagnan, of the Aqualung (1943).

Seymour Cray, 1925-96, (U.S.) computer industry pioneer; developed supercomputers.

Francis Crick, 1916-2004, (Br.) biophysicist; co-discoverer of genetic code; shared 1962 Nobel Prize.

Marie, 1867-1934, (Pol.-Fr.) and **Pierre Curie**, 1859-1906, (Fr.) physical chemists; pioneer investigators of radioactivity; discovered radium and polonium (1898).

Gottlieb Daimler, 1834-1900, (Ger.) engineer, inventor; pioneer automobile manufacturer.

John Dalton, 1766-1844, (Br.) chemist, physicist; formulated atomic theory, made first table of atomic weights.

Charles Darwin, 1809-82, (Br.) naturalist; established theory of organic evolution; *Origin of Species* (1859).

Lee De Forest, 1873-1961, (U.S.) inventor of triode; pioneer in wireless telegraphy, sound pictures, television.

Pierre-Gilles de Gennes, 1932-2007, (Fr.) physicist whose research furthered the development of liquid-crystal-display (LCD) technology; awarded Nobel Prize for Physics, 1991.

Max Delbruck, 1906-81, (Ger.-U.S.) founded molecular biology.

Rudolf Diesel, 1858-1913, (Ger.) mechanical engineer; patented Diesel engine (1892).

Theodosius Dobzhansky, 1900-75, (Russ.-U.S.) biologist; reconciled genetics and natural selection.

Christian Doppler, 1803-53, (Austria) physicist; showed change in wave frequency caused by motion of source, now known as Doppler effect.

J. Presper Eckert Jr., 1919-95, (U.S.) co-inventor, with Mauchly, of the ENIAC computer (1943-45).

Thomas A. Edison, 1847-1931, (U.S.) inventor; held more than 1,000 patents, including incandescent electric lamp.

Paul Ehrlich, 1854-1915, (Ger.) medical researcher in immunology and bacteriology; pioneered antitoxin production.

Albert Einstein, 1879-1955, (Ger.-U.S.) theoretical physicist; founded relativity theory.

John F. Enders, 1897-1985, (U.S.) virologist; helped discover vaccines against polio, measles, mumps and chicken pox.

Erik Erikson, 1902-94, (U.S.) psychoanalyst, author; theory of developmental stages of life; *Childhood and Society* (1950).

Leonhard Euler, 1707-83, (Switz.) mathematician, physicist; pioneer of calculus, revived ideas of Fermat.

Gabriel Fahrenheit, 1686-1736, (Ger.) physicist; improved thermometers and introduced Fahrenheit temperature scale.

Michael Faraday, 1791-1867, (Br.) chemist, physicist; discovered electrical induction and invented dynamo (1831).

Philo T. Farnsworth, 1906-71, (U.S.) inventor; built first television system (San Francisco, 1928).

Pierre de Fermat, 1601-65, (Fr.) mathematician; founded modern theory of numbers.

Enrico Fermi, 1901-54, (It.-U.S.) nuclear physicist; demonstrated first controlled chain reaction (Chicago, 1942).

Richard Feynman, 1918-88, (U.S.) theoretical physicist, author; founder of Quantum Electrodynamics (QED).

Alexander Fleming, 1881-1955, (Br.) bacteriologist; discovered penicillin (1928).

Jean B. J. Fourier, 1768-1830, (Fr.) introduced Fourier Series, method of analysis in math and physics.

Sigmund Freud, 1856-1939, (Austria) psychiatrist; founder of psychoanalysis; *Interpretation of Dreams* (1901).

Erich Fromm, 1900-80, (U.S.) psychoanalyst; *Man for Himself* (1947).

Galileo Galilei, 1564-1642, (It.) physicist; used telescope to vindicate Copernicus, founded modern science of motion.

Carl Friedrich Gauss, 1777-1855, (Ger.) math. physicist; completed work of Fermat and Euler in number theory.

Josiah W. Gibbs, 1839-1903, (U.S.) theoretical physicist, chemist; founded chemical thermodynamics.

Robert H. Goddard, 1882-1945, (U.S.) physicist; invented liquid fuel rocket (1926).

George W. Goethals, 1858-1928, (U.S.) chief engineer who completed Panama Canal (1907-14).

William C. Gorgas, 1854-1920, (U.S.) physician; pioneer in prevention of yellow fever and malaria.

Stephen Jay Gould, 1941-2002, (U.S.) paleontologist, evolutionary biologist, writer.

Ernest Haeckel, 1834-1919, (Ger.) zoologist, evolutionist; early Darwinist, introduced concept of "ecology."

Otto Hahn, 1879-1968, (Ger.) chemist; with Meitner discovered nuclear fission (1938).

Edmund Halley, 1656-1742, (Br.) astronomer; predicted return of 1682 comet ("Halley's Comet") in 1759.

William Harvey, 1578-1657, (Br.) physician, anatomist; discovered circulation of the blood (1628).

Werner Heisenberg, 1901-76, (Ger.) physicist; developed matrix mechanics and uncertainty principle (1927).

Hermann von Helmholtz, 1821-94, (Ger.) physicist, physiologist; formulated principle of conservation of energy.

William Herschel, 1738-1822, (Ger.-Br.) astronomer; discovered Uranus (1781).

Heinrich Hertz, 1857-94, (Ger.) physicist; discovered radio waves and photoelectric effect (1886-87).

David Hilbert, 1862-1943, (Ger.) mathematician; contributed to algebra, calculus, and foundational studies (formalism).

Albert Hofmann, 1906-2008, (U.S.) father of LSD.

Edwin P. Hubble, 1889-1953, (U.S.) astronomer; discovered observational evidence of expanding universe.

Alexander von Humboldt, 1769-1859, (Ger.) naturalist, author; explored S. America, created ecology.

Edward Jenner, 1749-1823, (Br.) physician; pioneered vaccination, introduced term "virus."

James Joule, 1818-89, (Br.) physicist; found relation between heat and mechanical energy (conservation of energy).

Carl Jung, 1875-1961, (Switz.) psychiatrist; founder of analytical psychology.

Ernest Everett Just, 1883-1941, (U.S.) marine biologist; studied egg development; *Biology of Cell Surfaces* (1941).

Johannes Kepler, 1571-1630, (Ger.) astronomer; discovered laws of planetary motion.

Al-Khawarizmi, early 9th cent., (Arab.) mathematician; regarded as founder of algebra.

Robert Koch, 1843-1910, (Ger.) bacteriologist; isolated bacterial causes of tuberculosis and other diseases.

Georges Köhler, 1946-95, (Ger.) immunologist; with Cesar Milstein, developed monoclonal antibody technique.

Willem Kolff, 1911-2009, (Neth.-U.S.) physician, biomedical engineer; developed first practical kidney dialysis machine; considered the "father of artificial organs."

Jacques Lacan, 1901-81, (Fr.) influential psychoanalyst.

Joseph Lagrange, 1736-1813, (Fr.) geometer, astronomer; showed that gravity of Earth and Moon cancel, creating stable points in space around them.

Jean B. Lamarck, 1744-1829, (Fr.) naturalist; forerunner of Darwin in evolutionary theory.

Pierre Simon de Laplace, 1749-1827, (Fr.) astronomer, physicist; proposed nebular origin for solar system.

Lewis H. Latimer, 1848-1928, (U.S.) African American scientist; associate of Edison; supervised installation of first electric street lighting in New York City.

Antoine Lavoisier, 1743-94, (Fr.) a founder of modern chemistry.

Ernest O. Lawrence, 1901-58, (U.S.) physicist; invented the cyclotron.

Louis, 1903-72, and **Mary Leakey**, 1913-96, (Br.) early hominid paleoanthropologists; discovered remains in Africa.

Anton van Leeuwenhoek, 1632-1723, (Neth.) founder of microscopy.

Jerome Lejeune, 1927-94, (Fr.) geneticist; discovered chromosomal cause of Down syndrome (1959).

Claude Levi-Strauss, 1908-2009, (Belg.-Fr.) cultural anthropologist, sociologist, philosopher.

Kurt Lewin, 1890-1947, (Ger.-U.S.) social psychologist; studied human motivation and group dynamics.

Justus von Liebig, 1803-73, (Ger.) founded quantitative organic chemistry.

Joseph Lister, 1827-1912, (Br.) physician; pioneered antiseptic surgery.

Hendrik Lorentz, 1853-1928, (Neth.) physicist; developed electron theory of matter, contrib. to relativity theory.

Konrad Lorenz, 1903-89, (Austria) ethologist; pioneer in study of animal behavior.

Percival Lowell, 1855-1916, (U.S.) astronomer; predicted the existence of Pluto.

Louis, 1864-1948, and **Auguste Lumière**, 1862-1954, (Fr.) invented cinematograph, made first motion picture (1895).

Theodore H. Maiman, 1927-2007, (U.S.) physicist; invented the first workable laser, which he displayed in 1960.

Guglielmo Marconi, 1874-1937, (It.) physicist; developed wireless telegraphy.

John W. Mauchly, 1907-80, (U.S.) co-inventor, with Eckert, of computer ENIAC (1943-45).

James Clerk Maxwell, 1831-79, (Br.) physicist; unified electricity and magnetism, electromagnetic theory of light.

Maria Goeppert Mayer, 1906-72, (Ger.-U.S.) physicist; developed shell model of atomic nuclei.

Barbara McClintock, 1902-92, (U.S.) geneticist; showed that some genetic elements are mobile.

Lise Meitner, 1878-1968, (Austria) co-discoverer, with Hahn, of nuclear fission (1938).

Gregor J. Mendel, 1822-84, (Austria) botanist, monk; his experiments became the foundation of modern genetics.

Dmitri Mendeleyev, 1834-1907, (Russ.) chemist; established Periodic Table of the Elements.

Bruce R. Merrifield, 1921-2006, (U.S.) chemist; discovered how to synthesize proteins quickly and efficiently.

Franz Mesmer, 1734-1815, (Ger.) physician; introduced hypnotherapy.

Albert A. Michelson, 1852-1931, (U.S.) physicist; invented interferometer.

Robert A. Millikan, 1868-1953, (U.S.) physicist; measured electronic charge.

Thomas Hunt Morgan, 1866-1945, (U.S.) geneticist, embryologist; established role of chromosomes in heredity.

Isaac Newton, 1642-1727, (Br.) natural philosopher; discovered laws of gravitation, motion; with Leibniz, founded calculus.

Robert N. Noyce, 1927-90, (U.S.) invented microchip.

J. Robert Oppenheimer, 1904-67, (U.S.) physicist; scientific director of Manhattan Project.

Wilhelm Ostwald, 1853-1932, (Ger.) chemist, philosopher; main founder of modern physical chemistry.

Louis Pasteur, 1822-95, (Fr.) chemist; showed that germs cause disease and fermentation; originated pasteurization.

Linus C. Pauling, 1901-94, (U.S.) chemist; studied chemical bonds; campaigned for nuclear disarmament.

Jean Piaget, 1896-1980, (Switz.) psychologist; four-stage theory of intellectual development in children.

Max Planck, 1858-1947, (Ger.) physicist; introduced quantum hypothesis (1900).

Jules Henri Poincaré, 1854-1912, (Fr.) mathematician; founded algebraic topology, many other discoveries.

Walter S. Reed, 1851-1902, (U.S.) Army physician; proved mosquitoes transmit yellow fever.

Theodor Reik, 1888-1969, (Austria-U.S.) psychoanalyst; major Freudian disciple.

Bernhard Riemann, 1826-66, (Ger.) mathematician; developed non-Euclidean geometry used by Einstein.

Norbert Rillieux, 1806-94, (U.S.) African American inventor of a vacuum pan evaporator (1846); revolutionized sugar-refining industry.

Wilhelm Roentgen, 1845-1923, (Ger.) physicist; discovered X-rays (1895).

Carl Rogers, 1902-87, (U.S.) psychotherapist, author; originated nondirective therapy.

Ernest Rutherford, 1871-1937, (Br.) physicist; pioneer investigator of radioactivity, identified the atomic nucleus.

Albert B. Sabin, 1906-93, (Russ.-U.S.) developed oral polio live-virus vaccine.

Carl Sagan, 1934-96, (U.S.) astronomer, author.

Jonas Salk, 1914-95, (U.S.) developed first successful polio vaccine, widely used in U.S. after 1955.

Giovanni Schiaparelli, 1835-1910, (It.) astronomer; reported canals on Mars.

Erwin Schrödinger, 1887-1961, (Austria) physicist; developed wave equation for quantum systems.

Glenn T. Seaborg, 1912-99, (U.S.) chemist; Nobel Prize winner (1951); codiscoverer of plutonium.

Harlow Shapley, 1885-1972, (U.S.) astronomer; mapped galactic clusters and position of Sun in our own galaxy.

Norman E. Shumway, 1923-2006, (U.S.) surgeon; performed world's first successful heart-lung transplant.

B. F. Skinner, 1904-90, (U.S.) psychologist; leading advocate of behaviorism.

Richard E. Smalley, 1943-2005, (U.S.) chemist; with three other scientists, discovered buckminsterfullerenes, a previously unknown class of carbon molecules.

Roger W. Sperry, 1913-94, (U.S.) neurobiologist; established different functions of right and left sides of brain.

Benjamin Spock, 1903-98, (U.S.) pediatrician, child care expert; *Common Sense Book of Baby and Child Care*.

Charles P. Steinmetz, 1865-1923, (Ger.-U.S.) electrical engineer; developed basic ideas on alternating current.

Ernst Stuhlinger, 1913-2008, (Ger.) rocket scientist; electric propulsion for NASA in early space age.

Leo Szilard, 1898-1964, (Hung.-U.S.) physicist; helped on Manhattan Project, later opposed nuclear weapons.

Edward Teller, 1908-2003, (Hung.-U.S.) physicist; aided on Manhattan Project, had key role in development of H-bomb.

Nikola Tesla, 1856-1943, (Serb.-U.S.) invented electrical devices including a.c. dynamos, transformers, and motors.

William Thomson (Lord Kelvin), 1824-1907, (Br.) physicist; aided in success of transatlantic telegraph cable (1865); proposed Kelvin absolute temperature scale.

Alan Turing, 1912-54, (Br.) mathematician; helped develop basis for computers.

James Van Allen, 1914-2006, (U.S.) physicist; discovered the presence of radiation belts around Earth (Van Allen belts).

Rudolf Virchow, 1821-1902, (Ger.) pathologist; pioneered the modern theory that diseases affect the body through cells.

Alessandro Volta, 1745-1827, (It.) physicist; electricity pioneer.

Werner von Braun, 1912-77, (Ger.-U.S.) developed rockets for warfare and space exploration.

John Von Neumann, 1903-57, (Hung.-U.S.) mathematician; originated game theory; basic design for modern computers.

Alfred Russell Wallace, 1823-1913, (Br.) naturalist; proposed concept of evolution independently of Darwin.

John B. Watson, 1878-1958, (U.S.) psychologist; a founder of behaviorism.

James E. Watt, 1736-1819, (Br.) mechanical engineer, inventor; invented modern steam engine (1765).

Alfred L. Wegener, 1880-1930, (Ger.) meteorologist, geophysicist; postulated continental drift.

Norbert Wiener, 1894-1964, (U.S.) mathematician; founder of cybernetics.

Daniel Hale Williams, 1858-1931, (U.S.) African American surgeon; performed one of first two open-heart operations (1893).

Sewall Wright, 1889-1988, (U.S.) evolutionary theorist; helped found population genetics.

Wilhelm Wundt, 1832-1920, (Ger.) founder of experimental psychology.

Qian Xuesen (Tsien Hsue-shen), 1911-2009, (China) rocket scientist, father of China's space program.

Ferdinand von Zeppelin, 1838-1917, (Ger.) soldier, aeronaut, airship designer.

Social Reformers, Activists, and Humanitarians of the Past

Ralph David Abernathy, 1926-90, (U.S.) black civil rights activist; pres., 1968, Southern Christian Leadership Conf.

Jane Addams, 1860-1935, (U.S.) cofounder of Hull House; won Nobel Peace Prize, 1931.

Susan B. Anthony, 1820-1906, (U.S.) a leader in temperance, anti-slavery, and woman suffrage movements.

Thomas Barnardo, 1845-1905, (Br.) social reformer; pioneer in care of destitute children.

Clara Barton, 1821-1912, (U.S.) organized American Red Cross.

Daisy Bates, 1914-99, (U.S.) black civil rights leader who fought for school integration; leading advocate for the "Little Rock 9" during Arkansas desegregation crisis in 1957.

Henry Ward Beecher, 1813-87, (U.S.) clergyman, abolitionist.

Peter Benenson, 1921-2005, (Br.) activist; founded Amnesty International, 1961.

Mary McLeod Bethune, 1875-1955, (U.S.) black educator, civil rights activist; adviser to FDR and Truman; founder, pres., Bethune-Cookman College.

Amelia Bloomer, 1818-94, (U.S.) suffragette, social reformer.

William Booth, 1829-1912, (Br.) founded Salvation Army.

John Brown, 1800-59, (U.S.) abolitionist who led murder of 5 pro-slavery men; hanged.

Frances Xavier (Mother) Cabrini, 1850-1917, (It.-U.S.) Italian-born nun; founded charitable institutions; first American canonized as a saint, 1946.

Stokely Carmichael (Kwame Toure), 1941-98, (U.S.) black power activist; major proponent of Pan-Africanism; prime min. Black Panthers.

Carrie Chapman Catt, 1859-1947, (U.S.) suffragette.

Cesar Chavez, 1927-93, (U.S.) labor leader; helped establish United Farm Workers of America.

Eldridge Cleaver, 1935-98, (U.S.) revolutionary social critic; former minister of information for Black Panthers; *Soul on Ice*.

Clarence Darrow, 1857-1938, (U.S.) lawyer; defender of underdog, opponent of capital punishment.

Ossie Davis, 1917-2005, (U.S.) black civil rights activist, actor, director.

Dorothy Day, 1897-1980, (U.S.) founder of Catholic Worker movement.

Eugene V. Debs, 1855-1926, (U.S.) labor leader; led Pullman strike, 1894; 4-time Socialist presidential candidate.

Vine Deloria Jr., 1933-2005, (U.S) Native American activist, author; *Custer Died for Your Sins*.

Dorothea Dix, 1802-87, (U.S.) crusader for mentally ill.

Thomas Dooley, 1927-61, (U.S.) "jungle doctor"; noted for efforts to supply medical aid to developing countries.

Marjory Stoneman Douglas, 1890-1998, (U.S.) writer, environmentalist; campaigned to save Florida Everglades.

Frederick Douglass, 1817-95, (U.S.) slave, author, editor, orator, diplomat; edited abolitionist weekly *The North Star*.

Andrea Dworkin, 1946-2005, (U.S.) radical feminist, antipornography crusader.

Medgar Evers, 1925-63, (U.S.) black civil rights leader; campaigned to register black voters; assassinated.

James Farmer, 1920-99, (U.S.) black civil rights leader; founded Congress of Racial Equality (CORE).

Betty Friedan, 1921-2006, (U.S.) author, feminist; *The Feminine Mystique*.

Millard Fuller, 1935-2009, (U.S.) founder of Habitat for Humanity.

William Lloyd Garrison, 1805-79, (U.S.) abolitionist.

Miep Gies, 1909-2010, (Neth.) protector of Anne Frank and her family during WWII.

Emma Goldman, 1869-1940, (Russ.-U.S.) published anarchist *Mother Earth*; birth-control advocate.

Samuel Gompers, 1850-1924, (U.S.) labor leader; first president of the American Federation of Labor (AFL).

Prince Hall, 1735-1807, (U.S.) activist; founded black Freemasonry; served in American Revolutionary war.

Michael Harrington, 1928-89, (U.S.) exposed poverty in affluent U.S. in *The Other America*, 1963.

Dorothy Height, 1912-2010, (U.S.) civil rights activist, pres. of the National Council of Negro Women, 1957-97.

Sidney Hillman, 1887-1946, (U.S.) labor leader; helped organize CIO.

Benjamin Hooks, 1925-2010, (U.S.) civil rights activist, exec. dir. NAACP, 1977-92.

Samuel G. Howe, 1801-76, (U.S.) social reformer; changed public attitudes toward the handicapped.

Helen Keller, 1880-1968, (U.S.) crusader for better treatment for the handicapped; deaf and blind herself.

Coretta Scott King, 1927-2006, (U.S.) black civil rights leader; wife of Rev. Martin Luther King Jr.

Rev. Martin Luther King Jr., 1929-68, (U.S.) civil rights leader; led 1955-56 Montgomery, AL, boycott; founder, pres., Southern Christian Leadership Conference, 1957; Nobel laureate, 1964; assassinated.

Maggie Kuhn, 1905-95, (U.S.) founded Gray Panthers, 1970.

William Kunstler, 1919-95, (U.S.) civil liberties attorney.

John L. Lewis, 1880-1969, (U.S.) labor leader; headed United Mine Workers, 1920-60.

Malcolm X (Little), 1925-65, (U.S.) Black Muslim, black nationalist leader; promoted black pride; assassinated.

Karl Menninger, 1893-1990, (U.S.) with brother William, founded Menninger Clinic and Menninger Foundation.

Lucretia Mott, 1793-1880, (U.S.) reformer, pioneer feminist.

Philip Murray, 1886-1952, (U.S.) Scottish-born labor leader.

Huey P. Newton, 1942-89, (U.S.) co-founded Black Panther Party, 1966.

Florence Nightingale, 1820-1910, (Br.) founder of modern nursing.

Emmeline Pankhurst, 1858-1928, (Br.) woman suffragist.

Rosa Parks,1913-2005, (U.S.) black civil rights activist; her actions sparked 1955-56 Montgomery, AL, bus boycott.

A. Philip Randolph, 1889-1979, (U.S.) organized Brotherhood of Sleeping Car Porters, 1925; an organizer of 1941 and 1963 March on Washington movements.

Walter Reuther, 1907-70, (U.S.) labor leader; headed UAW.

Jacob Riis, 1849-1914, (U.S.) crusader for urban reforms.

Paul Robeson, 1898-1976, (U.S.) actor, singer, black civil rights activist.

Bayard Rustin, 1910-87, (U.S.) an organizer of the 1963 March on Washington; exec. director, A. Philip Randolph Institute.

Margaret Sanger, 1883-1966, (U.S.) social reformer; pioneered the birth-control movement.

Earl of Shaftesbury (A. A. Cooper), 1801-85, (Br.) social reformer.

Eunice Kennedy Shriver, 1921-2009, (U.S.) co-founder of Special Olympics for mentally challenged athletes.

Elizabeth Cady Stanton, 1815-1902, (U.S.) woman suffrage pioneer.

Lucy Stone, 1818-93, (U.S.) feminist, abolitionist.

Mother Teresa of Calcutta, 1910-97, (Alban.) nun; founded order to care for sick, dying poor; 1979 Nobel Peace Prize.

Willard Townsend, 1895-1957, (U.S.) organized the United Transport Service Employees (Red Caps), 1935.

Sojourner Truth (Isabella Baumfree), 1797-1883, (U.S.) preacher, abolitionist; worked for black educ. opportunity.

Harriet Tubman, 1823-1913, (U.S.) prominent figure in the Underground Railroad, which helped runaway slaves in the South reach safety in the North; nurse, spy for Union Army in the Civil War.

Nat Turner, 1800-31, (U.S.) slave who led the most significant of more than 200 slave revolts in U.S., in Southampton, VA; hanged.

Philip Vera Cruz, 1905-94, (Philip.-U.S.) helped found the United Farm Workers Union.

Edgar Wayburn, 1906-2010, (U.S.) Conservationist, Sierra Club pres.

William Wilberforce, 1759-1833, (Br.) social reformer; prominent in struggle to abolish slave trade.

Frances E. Willard, 1839-98, (U.S.) temperance, women's rights leader.

Mary Wollstonecraft, 1759-97, (Br.) *Vindication of the Rights of Women*.

Sports Personalities of the Past and Present

Henry (Hank) Aaron, b 1934, Milwaukee-Atlanta outfielder; hit record 755 home runs, led NL 4 times; record 2,297 RBI.

Kareem Abdul-Jabbar, b 1947, Milwaukee, L.A. Lakers center; MVP 6 times; all-time leading NBA scorer, 38,387 points.

Freddy Adu, b 1989, midfielder; youngest player ever to play in the MLS at 14 years, 308 days, in 2004.

Andre Agassi, b 1970, won Wimbledon (1992); U.S. Open ('94, '99), Aust. Open ('95, 2000-01, '03), French Open ('99).

Troy Aikman, b 1966, quarterback; led Dallas Cowboys to Super Bowl wins in 1993-94, 1996; Super Bowl MVP, 1993.

Amy Alcott, b 1956, golfer; 33 career wins (5 majors); inducted into World Golf Hall of Fame, 1999.

Grover Cleveland "Pete" Alexander, 1887-1950, pitcher; won 373 NL games; pitched 16 shutouts, 1916.

Shaun Alexander, b 1977, Washington Redskins running back; 2005 NFL MVP.

Muhammad Ali, b 1942, 3-time heavyweight champion.

Fernando Alonso, b 1981, Spanish Formula 1 racer; youngest ever to win a World Grand Prix championship, 2005.

Morten Andersen, b 1960, kicker; NFL's career points leader, with 2,544 (1982-2007).

Gary Anderson, b 1959, (S. Afr.) kicker; NFL's 2nd in career points, with 2,434.

Sparky Anderson, b 1934, first manager to win World Series in the NL (Cincinnati, 1975-76) and AL (Detroit, 1984).

Mario Andretti, b 1940, race-car driver; won Daytona 500 (1967), Indy 500 (1969); Formula 1 world title (1978).

Earl Anthony, 1938-2001, bowler; won record 6 PBA Championships (1973-75, 1981-83), 41 career PBA tournaments.

Eddie Arcaro, 1916-97, only jockey to win racing's Triple Crown twice, 1941,1948; rode to 4,779 wins in his career.

Lance Armstrong, b 1971, cyclist; record 7-time winner of the Tour de France (1999-2005).

Arthur Ashe, 1943-93, tennis player; won U.S. Open (1968); Wimbledon (1975); died of AIDS.

Evelyn Ashford, b 1957, sprinter; won 100m gold (1984) and silver (1988); member of 5 U.S. Olympic teams.

Red Auerbach, 1917-2006, coached Boston to 9 NBA titles.

Tracy Austin, b 1962, youngest player to win U.S. Open tennis title (age 16 in 1979), 2-time AP Female Athlete of the Year.

Ernie Banks, b 1931, Chicago Cubs slugger; hit 512 NL homers; twice MVP; never played in World Series.

Roger Bannister, b 1929, British physician; ran first sub-4-minute mile, May 6, 1954 (3 min. 59.4 sec.).

Charles Barkley, b 1963, NBA MVP, 1993; 4th player ever to surpass 20,000 points, 10,000 rebounds, 4,000 assists.

Rick Barry, b 1944, NBA scoring leader, 1967; ABA scoring leader, 1969.

Sammy Baugh, 1914-2008, Washington Redskins quarterback; held numerous records upon retirement after 16 seasons.

Elgin Baylor, b 1934, L.A. Lakers forward; 11-time all-star.

Bob Beamon, b 1946, Olympic long jump gold medalist, 1968; world record jump of 29' 2½" stood until 1991.

Boris Becker, b 1967, German tennis star; won U.S. Open 1989; Wimbledon champ 1985, '86, '89.

David Beckham, b 1975, English soccer star; captain of 2002 World Cup team; joined Los Angeles Galaxy, 2007, with record-breaking $250 million contract.

Bill Belichick, b 1952, NFL coach; led New England Patriots to 3 Super Bowl wins (2001, '03, '04); best all-time post-season coaching record; fined $500,000 in 2007 for violating rules about videotaping opposing sideline.

Jean Beliveau, b 1931, Montreal Canadiens center; scored 507 goals; twice MVP.

Johnny Bench, b 1947, Cincinnati Reds catcher; twice MVP; led league in home runs twice, RBIs 3 times.

Patty Berg, 1918-2006, 80+ golf tournament wins; AP Woman Athlete of the Year 3 times.

Chris Berman, b 1955, sportscaster, anchor for ESPN.

Yogi Berra, b 1925, Yankee catcher (1946-63); 3-time MVP.

Abebe Bikila, 1932-73, Ethiopian runner; won consecutive Olympic marathon gold medals in 1960 (barefoot), 1964.

Matt Biondi, b 1965, swimmer; won 5 golds, 1988 Olympics.

Larry Bird, b 1956, Boston Celtics forward (1979-92); NBA MVP, 1984-86; 1998 coach of the year with Indiana Pacers.

Bonnie Blair, b 1964, speed skater; won 5 individual gold medals in 3 Olympics (1988, '92, '94).

George Blanda, 1927-2010, quarterback, kicker; 26 years as active player, scored 2,002 career points.

Fanny Blankers-Koen, 1918-2004, track star; won 4 golds in 1948 Olympics.

Wade Boggs, b 1958, AL batting champ, 1983, 1985-88; reached 3,000 career hits, 1999 (3,010).

Usain Bolt, b 1986, Jamaican sprinter; won 3 golds in 2008 Olympics, world record for men's 100, 200 meter runs.

Barry Bonds, b 1964, outfielder; hit record 73 homers, 2001; NL MVP, 1990, 1992-93, 2001-04; 1st all-time in HRs (762); 2007, indicted on charges of perjury and

obstruction of justice in baseball steroid scandal.

Björn Borg, b 1956, led Sweden to first Davis Cup, 1975; 6-time French Open, 5-time Wimbledon champion.

Ray Bourque, b 1960, Boston defenseman,1979-2000; 5-time Norris Trophy winner; won Stanley Cup with Colorado, 2001.

Bill Bradley, b 1943, All-American at Princeton; led NY Knicks to 2 NBA titles (1970, '73); U.S. senator, 1979-97.

Donald Bradman, 1908-2001, Australian widely regarded as greatest cricketer ever; set several batting records.

Terry Bradshaw, b 1948, quarterback; led Pittsburgh to 4 Super Bowl wins, 1975-76, 1979-80; NFL MVP, 1978.

Tom Brady, b 1977, quarterback; led New England Patriots to 3 Super Bowl titles, 2002, '04, '05; Super Bowl MVP, 2002, '04; NFL MVP, 2007; most single-season TD passes (50), 2007.

Drew Brees, b 1979, New Orleans Saints quarterback; Super Bowl MVP, 2010.

Christine Brennan, b 1958, sports journalist for *USA Today*, radio and television commentator specializing in figure skating.

George Brett, b 1953, Kansas City Royals infielder; led AL in batting, 1976, 1980, 1990; MVP, 1980.

Lou Brock, b 1939, St. Louis Cardinals outfielder; stole NL single-season record 118 bases, 1974; led NL 8 times.

Jim Brown, b 1936, Cleveland fullback; 12,312 career yds.; NFL MVP 1957, '58, '65.

Paul Brown, 1908-91, football team-owner, coach; led eponymous Cleveland Browns to 3 NFL championships.

Kobe Bryant, b 1978, guard; won 3 straight titles with Lakers (2000-02); leading NBA scorer, 2005-06 and 2006-07; 2007-08 NBA MVP; member of 2008 U.S. Olympic gold-medal basketball team; NBA Finals MVP 2009, '10.

Paul "Bear" Bryant, 1913-83, college football coach with 323 wins; led Alabama to 6 national titles (1961, '64, '65, '73, '78, '79).

Sergei Bubka, b 1963, Ukrainian pole vaulter; first to clear 20 ft.; gold medal, 1988 Olympics.

Don Budge, 1915-2000, won numerous amateur and pro tennis titles; Grand Slam, 1938.

Reggie Bush, b 1985, New Orleans Saints running back drafted 2nd overall in 2006; helped USC to 2 national titles (2003-04).

Dick Butkus, b 1942, Chicago Bears linebacker; twice chosen NFL defensive player of the year.

Dick Button, b 1929, figure skater; won 1948, 1952 Olympic gold medals; world titlist, 1948-52.

Walter Camp, 1859-1925, Yale football player, coach, athletic director; established many rules for modern football.

Roy Campanella, 1921-93, Hall of Fame catcher for the Brooklyn Dodgers (1948-57); 3-time NL MVP.

Earl Campbell, b 1955, NFL running back; MVP 1978-79.

Jose Canseco, b 1964, outfielder; led Oakland A's to the World Series, 1988; wrote book about steroids in baseball, 2005.

Eric Cantona, b 1966, French soccer star; Manchester United (1992-97); named Manchester United Man of the Century, 2001.

Jennifer Capriati, b 1976, won Aust. (2001-02) and French Opens (2001); youngest top-10 player in 1990, at 14.

Rod Carew, b 1945, AL infielder; 7 batting titles, 1977 MVP.

Steve Carlton, b 1944, NL pitcher; won 20 games 6 times, Cy Young award 4 times; 4,136 career strikeouts.

Pete Carroll, b 1951, college football coach; coached the USC Trojans to 2 championships (2003-04).

Billy Casper, b 1931, PGA Player of the Year 2 times; U.S. Open champ twice.

Wilt Chamberlain, 1936-99, center; NBA leading scorer 7 times, MVP 4 times; scored 100 pts. in a game, 1962.

Bobby Clarke, b 1949, Philadelphia Flyers center; led team to 2 Stanley Cup championships; MVP 3 times.

Roger Clemens, b 1962, pitcher; 1986 AL MVP; only 7-time Cy Young winner (1986-87, '91, '97-'98, 2001, '04); twice recorded record 20 Ks in a game; 354 wins, 4,672 Ks (3rd all-time); indicted, accused of lying to Congress about using steroids, 2010.

Roberto Clemente, 1934-72, Pittsburgh Pirates outfielder; won 4 batting titles; MVP, 1966; killed in plane crash.

Kim Clijsters, b 1983, Belgian tennis player; U.S. Open winner (2005, '09-'10).

Ty Cobb, 1886-1961, Detroit Tigers outfielder; record .367 lifetime batting average, 12 batting titles.

Sebastian Coe, b 1956, British runner; won Olympic 1,500m gold medal and 800m silver medal in 1980 and 1984.

Nadia Comaneci, b 1961, Romanian gymnast; won 3 gold medals, achieved 7 perfect scores, 1976 Olympics.

Maureen Connolly, 1934-69, won tennis Grand Slam, 1953; AP Woman Athlete of the Year 3 times.

Jimmy Connors, b 1952, tennis player; 5 U.S. Open, 2 Wimbledon titles.

Alberto Contador, b 1982, Spanish cyclist; won Tour de France 2007, '09 '10.

Cynthia Cooper, b 1963, basketball; 4-time MVP of WNBA finals; 2-time league MVP for the Houston Comets.

James J. Corbett, 1866-1933, heavyweight champion, 1892-97; credited with being the first "scientific" boxer.

Angel Cordero Jr., b 1942, jockey; leading money winner, 1976, 1982-83; rode 3 Kentucky Derby winners.

Margaret Smith Court, b 1942, Australian tennis great; won 24 Grand Slam events.

Bob Cousy, b 1928, Boston guard; 6 NBA titles, 1957 MVP.

Mark Cuban, b 1958, Dallas Mavericks owner; known for criticism of NBA.

Bjoern Daehlie, b 1967, Norwegian cross-country skier; won record 8 Winter Olympic gold medals.

Lindsay Davenport, b 1976, tennis player; won Olympic gold, 1996; U.S. Open, 1998; Wimbledon, 1999; Aust. Open, 2000.

Al Davis, b 1929, Oakland Raiders owner, former coach.

Dizzy Dean, 1910-74, pitcher; St. Louis Cardinals' "Gashouse Gang" in the '30s.

Mary Decker Slaney, b 1958, runner; has held 6 separate American records from the 800m to 10,000m.

Frank Deford, b 1938, senior contributing writer for *Sports Illustrated*; author, commentator.

Oscar De La Hoya, b 1973, won IBF lightweight (1995); WBC super lightweight (1996); welterweight (1997-99, 2000) titles.

Juan Martin del Potro, b 1988, Argentinian tennis player; won U.S. Open, 2009.

Jack Dempsey, 1895-1983, heavyweight champ, 1919-26.

Donna de Varona, b 1947, 2 Olympic swimming golds, 1964; 1st female sportscaster at a major network (ABC), 1965.

Gail Devers, b 1966, Olympic 100m gold medalist (1992, '96).

Eric Dickerson, b 1960, NFL record 2,105 rushing yds.,1984.

Joe DiMaggio, 1914-99, NY Yankees outfielder; hit safely in record 56 consecutive games, 1941; AL MVP 3 times.

Landon Donovan, b 1982, forward for LA Galaxy; all-time leading U.S. international goal scorer with 45; MLS MVP, 2009.

Tony Dorsett, b 1954, Heisman winner who led the Dallas Cowboys to an NFL title in his rookie year, 1977.

Tim Duncan, b 1976, San Antonio center; 3-time NBA Finals MVP, 1999, 2003, 2005; NBA MVP, 2002-03.

Roberto Duran, b 1951, Panamanian boxer; held titles at 3 weights; lost 1980 "no mas" fight to Sugar Ray Leonard.

Leo Durocher, 1905-91, manager; won 3 NL pennants (Brooklyn, 1941; NY Giants, 1951, '54), 1954 World Series.

Dale Earnhardt Jr., b 1974, 2004 Daytona 500 winner.

Dale Earnhardt Sr., 1951-2001, 7-time NASCAR Winston Cup champ; died in a last-lap crash at 2001 Daytona 500.

Stefan Edberg, b 1966, Swedish tennis player; U.S. Open (1991, '92), Wimbledon (1988, '90), Aust. Open (1985, '87).

Gertrude Ederle, 1905-2003, first woman to swim English Channel; broke existing men's record, 1926.

Teresa Edwards, b 1964, 5-time basketball Olympian; gold medalist, 1984, '88, '96, 2000; bronze medalist, 1992.

Hicham El Guerrouj, b 1974, Moroccan runner; holds world records in mile (3:43.13) and 1,500m (3:26); won gold medals in 1,500m and 5,000m, 2004 Olympics.

John Elway, b 1960, quarterback; led Denver Broncos to 2 Super Bowl wins, 1998, '99; regular-season MVP, 1987.

Julius "Dr. J" Erving, b 1950, 3-time ABA MVP, 1981 NBA MVP.

Phil Esposito, b 1942, NHL scoring leader 5 times.

Janet Evans, b 1971, 4 Olympic swimming golds, 1988, '92.

Lee Evans, b 1947, Olympic 400m gold medalist in 1968 with 43.86 sec. world record not broken until 1988.

Chris Evert, b 1954, 6-time U.S. Open tennis champ, 3-time Wimbledon champ.

Ray Ewry, 1873-1937, track-and-field star; won 8 Olympics gold medals (1900, '04, '08).

Nick Faldo, b 1957, British golfer; won Masters, British Open 3 times each.

Juan Manuel Fangio, 1911-95 (Arg.), 5-time World Grand Prix driving champ (1951, 1954-57).

Marshall Faulk, b 1973, 2000 NFL MVP; scored then-record 26 TDs, 2001; 3-time Off. Player of the Year (1999-2001).

Brett Favre, b 1969, quarterback; led Green Bay to Super Bowl win, 1997; NFL MVP, 1995, 1996; co-MVP, 1997; left retirement in 2008 to play for NY Jets, joined Minnesota Vikings in 2009.

Roger Federer, b 1981, Swiss tennis star; won Aust. Open (2004, '06-'07, '10), Wimbledon (2003-07, '09), U.S. Open (2004-08), French Open (2009).

Bob Feller, b 1918, Cleveland Indians pitcher; won 266 games; pitched 3 no-hitters, 12 one-hitters.

Rollie Fingers, b 1946, pitcher; 341 career saves; AL MVP, Cy Young Award, 1981; World Series MVP, 1974.

Peggy Fleming, b 1948, world figure skating champion, 1966-68; gold medalist, 1968 Olympics.

Whitey Ford, b 1928, NY Yankees pitcher; won record 10 World Series games.

George Foreman, b 1949, heavyweight champion, 1973-74, 1994-95; at 45, oldest to win a heavyweight title; gold medalist, 1968 Olympics.

Dick Fosbury, b 1947, high jumper; won 1968 Olympic gold medal; developed the "Fosbury Flop."

Jimmie Foxx, 1907-67, Red Sox, Athletics slugger; MVP 3 times; triple crown, 1933.

A. J. Foyt, b 1935, won Indy 500 4 times; U.S. Auto Club champ 7 times.

Joe Frazier, b 1944, heavyweight champion, 1970-73; gold medalist, 1964 Olympics.

Walt Frazier, b 1945, Hall of Fame guard for NY Knicks' NBA championship teams (1970, '73).

Peter Gammons, b 1945, sportswriter, broadcaster; named to Baseball Hall of Fame.

Lou Gehrig, 1903-41, NY Yankees 1st baseman; MVP, 1927, '36; triple crown, 1934; AL record 184 RBIs, 1931; played in 2,130 straight games (1925-39), a record that stood until 1995.

Althea Gibson, 1927-2003, 2-time U.S. and Wimbledon champ.

Bob Gibson, b 1935, St. Louis Cardinals pitcher; won Cy Young award twice; struck out 3,117 batters.

Josh Gibson, 1911-47, Hall of Fame catcher; known as "Babe Ruth of the Negro Leagues"; credited with as many as 84 homers in 1 season, about 800 in his career.

Marc Girardelli, b 1963, (Lux.) skier; won 5 World Cup titles.

Raul Gonzalez, b 1977, Spanish soccer player; led Real Madrid to 3 Champions League titles (1998, 2000, '02); tied for all-time top UEFA goal scorer (68).

Jeff Gordon, b 1971, race car driver; youngest to win NASCAR title 4 times (1995, '97 '98, 2001).

Steffi Graf, b 1969, (Ger.) won tennis Grand Slam 1988; U.S. Open champ 5 times; Wimbledon, 7 times; Aust. 4 times; French 6 times.

Otto Graham, 1921-2003, Cleveland quarterback; 4-time all-pro.

Red Grange, 1903-91, All-American at Univ. of Illinois, 1923-25; played for Chicago Bears, 1925-35.

"Mean" Joe Greene, b 1946, Pittsburgh Steelers lineman; twice NFL outstanding defensive player.

Wayne Gretzky, b 1961, top scorer in NHL history with record 894 goals, 1,963 assists, 2,857 points; MVP, 1980-87, '89.

Bob Griese, b 1945, All-Pro quarterback; led Miami Dolphins to 17-0 season, 1972, 2 Super Bowl titles, 1973-74.

Ken Griffey Jr., b 1969, outfielder; led AL in homers 1994, '97-'99; 1997 AL MVP; 10 gold gloves.

Archie Griffin, b 1954, Ohio State running back; only 2-time winner of the Heisman Trophy (1974-75).

Florence Griffith Joyner, 1959-98, sprinter; won 3 gold medals at 1988 Olympics; world and Olympic record for 100m.

Lefty Grove, 1900-75, pitcher; won 300 AL games.

Vladimir Guerrero, b 1976, Dominican right fielder for L.A. Angels; 2004 American League MVP award.

Janet Guthrie, b 1938, 1st woman driver in Indy 500 (1977).

Tony Gwynn, b 1960, 8-time NL batting champ, (1984, '87-'89, '94-'97); 3,141 career hits.

Walter Hagen, 1892-1969, golfer; 5 PGA, 4 British Open titles.

Mika Hakkinen, b 1968, Finnish Formula One racing driver; Formula One champion, 1998, '99.

George Halas, 1895-1983, founder/player/coach of Chicago Bears; won 6 NFL championships as coach.

Dorothy Hamill, b 1956, figure skater; gold medalist at the Olympics and World championships, 1976.

Scott Hamilton, b 1958, U.S. and world figure skating champion, 1981-84; Olympic gold medalist, 1984.

Mia Hamm, b 1972, soccer player; led U.S. to World Cup (1991, '99) and Olympic ('96, 2004) titles; most career intl. goals (158).

Franco Harris, b 1950, running back; 4 Super Bowls with Steelers (1975-76, 1979-80); 1,000+ yds. in a season 8 times.

Marvin Harrison, b 1972, Indianapolis Colts wide receiver; NFL record for single-season receptions (143), 2002.

Bill Hartack, 1932-2007, jockey; rode 5 Kentucky Derby winners.

Dominik Hasek, b 1965, NHL goaltender; won Vezina Trophy, 1994-95, '97-'99, 2001; NHL MVP, 1997-98.

John Havlicek, b 1940, Boston Celtics forward; scored 26,395 career pts.

Eric Heiden, b 1958, speed skater; won 5 Olympic golds, 1980.

Rickey Henderson, b 1958, outfielder; 1990 AL MVP; record 130 stolen bases, 1982; all-time leader in steals, runs.

Sonja Henie, 1912-69, Nor. world champion figure skater, 1927-36; Olympic gold medalist, 1928, '32, '36.

Martina Hingis, b 1980, (Switz.) won Aust. and U.S. Opens, Wimbledon; youngest number one player (16 yrs., 6 mos.), 1997.

Trevor Hoffman, b 1967, relief pitcher; holds all-time career saves record (active in 2010).

Ben Hogan, 1912-97, golfer; won 4 U.S. Open titles, 2 PGA Championships, 2 Masters.

Santonio Holmes, b 1984, wide receiver, Pittsburgh Steelers; Super Bowl MVP, 2009.

Evander Holyfield, b 1962, 4-time heavyweight champion.

Rogers Hornsby, 1896-1963, NL 2nd baseman; batted record .424, 1924; twice won triple crown.

Paul Hornung, b 1935, Green Bay Packers running back, placekicker; scored record 176 points, 1960.

Ryan Howard, b 1979, first baseman for Philadelphia Phillies; known for his hitting; 2006 NL MVP.

Gordie Howe, b 1928, hockey forward; NHL MVP 6 times; scored 801 goals in 26 NHL seasons.

Carl Hubbell, 1903-88, NY Giants pitcher; 20-game winner 5 consecutive years, 1933-37.

Bobby Hull, b 1939, NHL all-star 10 times; MVP, 1965-66.

Brett Hull, b 1964, St. Louis Blues forward; led NHL in goals, 1990-92; MVP, 1991.

Catfish Hunter, 1946-99, pitched perfect game, 1968; 20-game winner 5 times.

Don Hutson, 1913-97, Packers receiver; caught 99 TD passes; 2-time NFL MVP.

Juli Inkster, b 1960, Hall of Fame golfer; 2nd to win all 4 of LPGA's modern majors; won 7 career major titles.

Bo Jackson, 1962, NFL running back (1987-90) and MLB outfielder (1986-91, '93-'94); 1985 Heisman Trophy winner.

Phil Jackson, b 1945, won 11 NBA titles as coach of Bulls and Lakers; 1970, '73 title as player with NY Knicks.

Reggie Jackson, b 1946, slugger; led AL in home runs 4 times; MVP, 1973; hit 5 World Series home runs, 1977.

"Shoeless" Joe Jackson, 1889-1951, outfielder; 3rd highest career batting average (.356); one of the "Black Sox" banned for allegedly throwing 1919 World Series.

Jaromir Jagr, b 1972, Czech hockey player; NHL MVP, 1999; Art Ross Trophy (leading scorer), 1995, 1998-2001.

LeBron James, b 1984, NBA forward; Rookie of the Year, 2004; 2008 scoring leader; member of 2008 U.S. Olympic gold medal team; NBA Most Valuable Player, 2008-09, 2009-10.

Ron Jaworski, b 1951, former NFL quarterback (1974-89); NFL analyst on ESPN.

Sally Jenkins, b 1960, sports journalist and writer for *The Washington Post*.

Bruce Jenner, b 1949, Olympic decathlon gold medalist, 1976.

Lynn Jennings, b 1960, runner; 3-time World, 9-time U.S. cross country champ; bronze (10,000m), 1992 Olympics.

Derek Jeter, b 1974, shortstop; 11-time All-Star; led NY Yankees to 5 World Series titles; World Series MVP, 2000; record for most hits by a shortstop and most hits by a Yankee.

Earvin "Magic" Johnson, b 1959, NBA MVP, 1987, '89, '90; playoff MVP, 1980, '82, '87; 4th in career assists.

Jack Johnson, 1878-1946, heavyweight champion, 1908-15.

Jimmie Johnson, b 1975, 4-time NASCAR Sprint Cup Series champ, 2006-09; 2006 Daytona 500 Winner.

Michael Johnson, b 1967, 4-time Olympic gold medalist (1992, '96, 2000); world and Olympic record, 400m and 4 × 400m.

Randy Johnson, b 1963, 5-time Cy Young winner; strikeout leader, 1992-95, 1999-2004; 4,875 strikeouts (2nd all-time); pitched perfect game, 2004.

Walter Johnson, 1887-1946, Washington Senators pitcher; won 417 games; record 110 shutouts.

Bobby Jones, 1902-71, won golf's Grand Slam, 1930; U.S. Amateur champ 5 times, U.S. Open champ 4 times.

Cobi Jones, b 1970, soccer; most U.S. national team appearances with 164.

David "Deacon" Jones, b 1938, 5-time All-Pro with L.A. Rams (1965-69); "sack" specialist credited with inventing the term.

Marion Jones, b 1975, 2000 Olympic 100m, 200m, 1,600m relay gold medalist, bronze in long jump and 400m relay; stripped of medals in 2007 after admitting use of performance-enhancing drugs.

Roy Jones Jr., b 1969, light heavyweight champ, 1999-2004.

Michael Jordan, b 1963, guard; leading NBA scorer, 1987-93, '96-'98; MVP, 1988, 1991-92, '96, '98; playoff MVP, 1991-93, '96-'98; ESPN Athlete of the Century.

Dorothy Kamenshek, 1925-2010, led Rockford (IL) Peaches to 4 All-American Girls Baseball League titles in the 1940s.

Jackie Joyner-Kersee, b 1962, Olympic gold medalist in heptathlon (1988, '92), long jump (1988).

Harmon Killebrew, b 1936, Minnesota Twins slugger; led AL in home runs 6 times; 573 lifetime.

Jean Claude Killy, b 1943, French skier; 3 Olympic golds, 1968.

Ralph Kiner, b 1922, Pittsburgh Pirates slugger; led NL in home runs 7 consecutive years, 1946-52.

Billie Jean King, b 1943, U.S. singles champ 4 times; Wimbledon champ 6 times; beat Bobby Riggs, 1973.

Peter King, b 1957, senior writer for *Sports Illustrated*.

Bob Knight, b 1940, ESPN studio analyst, ret. basketball coach; led Indiana U. to NCAA title in 1976, '81, '87; 3rd winningest men's college basketball coach (902).

Olga Korbut, b 1955, Soviet gymnast; 3 1972 Olympic golds.

Sandy Koufax, b 1935, 3-time Cy Young winner; lowest ERA in NL, 1962-66; pitched 4 no-hitters, 1 perfect game.

Jack Kramer, 1921-2009, world's number one tennis player, 1946-53; first at Wimbledon to compete in shorts.

Ingrid Kristiansen, b 1956, (Nor.) only runner to have held world records in 5,000m, 10,000m, and marathon.

Julie Krone, b 1963, winningest female jockey; only woman to ride a winner in a Triple Crown race (Belmont, 1993).

Michelle Kwan, b 1980, figure skater; 9 U.S., 5 World titles; silver medalist at 1998 Olympics, bronze in 2002.

Guy Lafleur, b 1951, 3-time NHL scoring leader; 1977-78 MVP.

Alexi Lalas, b 1970, soccer player; first modern-era American to play in Italian League Serie A.

Kenesaw Mountain Landis, 1866-1944, 1st commissioner of baseball (1920-44); banned the 8 "Black Sox" involved in fixing 1919 World Series.

Tom Landry, 1924-2000, Dallas Cowboys head coach, 1960-88; won 2 Super Bowls (1972, '78); 3rd in career wins (270).

Dick "Night Train" Lane, 1928-2002, Hall of Fame defensive back; intercepted an NFL season record 14 passes (1952).

Don Larsen, b 1929, as NY Yankee, pitched only World Series perfect game, Oct. 8, 1956—2-0 win over Brooklyn.

Rod Laver, b 1938, (Austral.) won tennis Grand Slam, 1962, 1969; Wimbledon champ 4 times.

Mario Lemieux, b 1965, 6-time NHL leading scorer; MVP, 1988, '93, '96; playoff MVP, 1991-92.

Greg Lemond, b 1961, cyclist; 3-time Tour de France winner (1986, '89-90); first American to win the event.

Ivan Lendl, b 1960, (Czech.) 8 Grand Slam tennis titles, including U.S. Open, 1985-87.

Sugar Ray Leonard, b 1956, boxer; held titles in 5 different weight classes.

Carl Lewis, b 1961, track-and-field star; won 9 Olympic gold medals in sprinting and long jump.

Lennox Lewis, b 1965, (Br.) heavyweight champ, 1994, 1997-2004, retired undefeated; gold medalist, 1998 Olympics.

Ray Lewis, b 1975, linebacker for the Baltimore Ravens; Super Bowl MVP, 2001.

Tara Lipinski, b 1982, youngest figure skater to win U.S., world championships, 1997, and Winter Olympic gold, 1998.

Vince Lombardi, 1913-70, Green Bay Packers coach; led team to 5 NFL championships, 2 Super Bowl victories.

Nancy Lopez, b 1957, Hall of Fame golfer; 4-time LPGA Player of the Year, 3-time winner of the LPGA Championship.

Greg Louganis, b 1960, won Olympic gold medals in both springboard and platform diving, 1984, 1988.

Joe Louis, 1914-81, heavyweight champion, 1937-49.

Sid Luckman, 1916-98, Chicago Bears quarterback; led team to 4 NFL championships; MVP, 1943.

Evan Lysacek, b 1985, figure skater, Olympic gold winner, 2010.

Connie Mack, 1862-1956, Philadelphia Athletics manager, 1901-50; won 9 pennants, 5 championships.

John Madden, b 1936, won Super Bowl as coach of Oakland Raiders (1977); former NFL TV analyst.

Greg Maddux, b 1966, NL pitcher; won 4 consecutive Cy Young awards, 1992-95; 355 career wins.

Karl Malone, b 1963, Utah Jazz, L.A. Lakers forward; MVP, 1997, '99; 14-time All-Star; 36,928 career points (2nd all-time).

Moses Malone, b 1955, NBA center; MVP, 1979, '82-'83.

Eli Manning, b 1981, NY Giants quarterback; Super Bowl MVP, 2008.

Peyton Manning, b 1976, Indianapolis Colts quarterback; most NFL MVP awards, 2003-04, '08-'09; Super Bowl MVP, 2007; highest single-season passer rating (121.1), 2004.

Mickey Mantle, 1931-95, NY Yankees outfielder; triple crown, 1956; 18 World Series home runs; MVP 3 times.

Diego Maradona, b 1960, (Arg.) soccer player; led Argentina to World Cup, 1986.

"Pistol" Pete Maravich, 1947-88, guard; scored NCAA record 44.2 ppg during collegiate career; led NBA in scoring, 1977.

Rocky Marciano, 1923-69, heavyweight champion, 1952-56; retired undefeated.

Dan Marino, b 1961, Miami quarterback; NFL record single-season yards passing (5,084), 1984.

Roger Maris, 1934-85, NY Yankees outfielder; hit AL record 61 home runs, 1961, record held 37 years; MVP, 1960, '61.

Curtis Martin, b 1973, Jets running back; 5-time Pro-Bowler; 4th in all-time rushing yards with 14,101.

Eddie Mathews, 1931-2001, Milwaukee-Atlanta Braves 3rd baseman; hit 512 career home runs.

Christy Mathewson, 1880-1925, pitcher; won 373 games.

Bob Mathias, 1930-2006, decathlon gold, 1948, '52 Olympics.

Hideki Matsui, b 1974, designated hitter/outfielder, 1st Japanese-born World Series MVP, 2009.

Willie Mays, b 1931, NY-S.F. Giants center fielder; hit 660 home runs, led NL 4 times; had 3,283 hits; twice MVP.

Willie McCovey, b 1938, S.F. Giants slugger; hit 521 home runs; led NL 3 times; MVP, 1969.

John McEnroe, b 1959, U.S. Open tennis champ (1979-81, '84); Wimbledon champ (1981, '83-'84).

John McGraw, 1873-1934, NY Giants manager; led team to 10 pennants, 3 championships.

Mark McGwire, b 1963, hit then-record 70 home runs in 1998; 583 career home runs (10th); admitted career steroid use, 2010.

Tamara McKinney, b 1962, 1st U.S. skier to win overall Alpine World Cup championship (1983).

Andrea Mead Lawrence, 1932-2009, skier; first woman to win 2 gold medals in alpine skiing at one Olympics (1952).

Lionel Messi, b 1987, forward for FC Barcelona; FIFA World Player of the Year, 2009.

Mark Messier, b 1961, center; NHL MVP, 1990, '92; Conn Smythe Trophy, 1984.

Debbie Meyer, b 1952, 1st swimmer to win 3 individual Olympic golds (1968).

Al Michaels, b 1944, *NBC Sunday Night Football* announcer; 5-time Outstanding Sports Personality Emmy winner.

George Mikan, 1924-2005, Minn. Lakers center; considered the best basketball player of first half of 20th century.

Stan Mikita, b 1940, Chicago Blackhawks center; led NHL in scoring 4 times; MVP twice.

Billy Mills, b 1938, runner; upset winner of the 1964 Olympic 10,000m; only American man ever to win the event.

Joe Montana, b 1956, S.F. 49ers quarterback; Super Bowl MVP, 1982, 1985, 1990.

Archie Moore, 1913-98, light-heavyweight champ, 1952-62.

Howie Morenz, 1902-37, Montreal Canadiens forward; considered best hockey player of first half of 20th century.

Edwin Moses, b 1955, undefeated in 122 consecutive 400m hurdles races, 1977-87; Olympic gold medalist, 1976, '84.

Shirley Muldowney, b 1940, 1st woman to race National Hot Rod Assoc. Top Fuel dragsters; 3-time NHRA points champ.

Eddie Murray, b 1956, 3rd player with both 3,000+ hits and 500+ home runs.

Stan Musial, b 1920, St. Louis Cardinals star; won 7 NL batting titles; MVP 3 times.

Rafael Nadal, b 1986, Spanish tennis player; won French Open (2005-08, '10), Wimbledon (2008, '10), Australian Open (2009), U.S. Open (2010); Olympic gold medal in men's singles (2008).

Bronko Nagurski, 1908-90, Chicago Bears fullback and tackle; gained more than 4,000 yds. rushing.

Joe Namath, b 1943, Jets quarterback; 1969 Super Bowl MVP.

Steve Nash, b 1974, (Can.) point guard; NBA MVP, 2005, '06.

Martina Navratilova, b 1956, Wimbledon champ 9 times; U.S. Open champ (1983-84, '86-'87); Aust. 3 times, French 2 times.

Byron Nelson, 1912-2006, won 11 consecutive golf tournaments in 1945; twice Masters and PGA titlist.

Ernie Nevers, 1903-76, Stanford football star; selected as best college fullback to play between 1919 and 1969.

Paula Newby-Fraser, b 1972, 8-time Ironman Triathlon World Champ; holds women's course record.

John Newcombe, b 1943, Australian; twice U.S. Open tennis champ; Wimbledon titlist 3 times.

Jack Nicklaus, b 1940, PGA Player of the Year, 1967, 1972; leading money winner 8 times; won 18 majors (6 Masters).

Chuck Noll, b 1932, Pittsburgh coach; won 4 Super Bowls.

Paavo Nurmi, 1897-1973, (Fin.) distance runner; won 9 Olympic gold medals, 1920, 1924, 1928.

Lorena Ochoa, b 1981, (Mex.) LPGA Player of the Year, 2006-09, money leader 2006-08.

Al Oerter, 1936-2007, discus thrower; won gold medal at 4 consecutive Olympics, 1956, '60, '64, '68.

Apolo Anton Ohno, b 1982, speed skater; most decorated American Winter Olympic athlete with 2 gold, 2 silver, 4 bronze (2002, '06, '10).

Hakeem Olajuwon, b 1963, Houston center; NBA MVP, 1994, playoff MVP, 1994-95; career blocked shots leader (3,830).

Barney Oldfield, 1878-1946, pioneer auto racer; was first to drive a car 60 mph, 1903.

Shaquille O'Neal, b 1972, center; led L.A. Lakers to NBA titles, 2000-02, and Miami Heat to NBA title, 2006; Finals MVP 2000-02; NBA MVP 2000.

Magglio Ordoñez, b 1974, Venezuelan right fielder for the Detroit Tigers.

Bobby Orr, b 1948, Boston Bruins defenseman; 8-time Norris Trophy winner; led NHL in scoring twice, assists 5 times.

Mel Ott, 1909-58, NY Giants right fielder; hit 511 home runs; led NL 6 times.

Jesse Owens, 1913-80, track and field; 4 1936 Olympic golds.

Terrell Owens, b 1973, wide receiver; NFL record for single-game receptions with 20 in 2000.

Satchel Paige, 1906-82, pitcher; starred in Negro leagues, 1924-48; entered major leagues at age 42.

Arnold Palmer, b 1929, golf's first $1 mil winner; won 4 Masters, 2 British Opens.

Jim Palmer, b 1945, Baltimore Orioles pitcher; won Cy Young award 3 times; 20-game winner 8 times.

Candace Parker, b 1986, LA Sparks forward; first woman to dunk in an NCAA tournament game; 2008 MVP award.

Joe Paterno, b 1926, football coach; most wins in NCAA Div. I-A (394); led Penn St. to titles, 1982, '86.

Danica Patrick, b 1982, race car driver; 4th woman to race at Indy 500, 1st to lead, 2005.

Floyd Patterson, 1935-2006, 2-time heavyweight champion; first to ever regain the title after losing it.

Walter Payton, 1954-99, Chicago Bears running back; 2nd most rushing yards in NFL history; top NFC rusher, 1976-80.

Pelé (Edson Arantes do Nascimento), b 1940, (Braz.) soccer player; led Brazil to 3 World Cups (1958, '62, '70); scored 1,281 goals.

Bob Pettit, b 1932, first NBA player to score 20,000 points; twice NBA scoring leader.

Richard Petty, b 1937, NASCAR national champ 7 times; 7-time Daytona 500 winner.

Michael Phelps, b 1985, swimmer; holds record for most Olympic gold medals won

by single athlete (14); won 8 medals (6 gold, 2 bronze) at 2004 Olympics, 8 gold in 2008.

Laffit Pincay Jr., b 1946, jockey; leading money-winner, 1970-74, '79, '85.

Jacques Plante, 1929-86, NHL goaltender; 7 Vezina trophies; first goalie to wear mask in a game.

Gary Player, b 1935, (S. Africa) golfer; won 3 Masters, 3 British Opens, 2 PGA Championships, and U.S. Open.

Mike Powell, b 1963, track and field athlete; holds world record for long jump (29 ft., 4.5 in.).

Steve Prefontaine, 1951-75, runner; 1st to win 4 NCAA titles in same event (5,000m, 1970-73); died in auto accident.

Kirby Puckett, 1960-2006, Minnesota Twins center fielder (1984-95); led team to World Series titles in 1987, '91.

Albert Pujols, b 1980, St. Louis first baseman; NL MVP, 2005, '08-'09.

Paula Radcliffe, b 1973, British runner; set marathon world record of 2:15:25 in London, 2003.

Kimi Räikkönen, b 1979, (Fin.) Formula One race car driver; 2007 Formula One World Drivers' Champion.

Manny Ramirez, b 1972, outfielder; 2004 World Series MVP; suspended for violating MLB performance-enhancing drug policy, 2009.

Willis Reed, b 1942, NY Knicks center; MVP, 1970; playoff MVP, 1970, '73.

Mary Lou Retton, b 1968, gymnast; won all-around gold medal at 1984 Olympics; also won 2 silvers, 2 bronzes.

José Reyes, b 1983, NY Mets shortstop; All-Star, 2006-07, '10; Mets career leader in stolen bases, triples.

Claudio Reyna, b 1973, former midfielder; U.S. National Team; named to the FIFA World Cup All-Star team, 2002.

Jerry Rice, b 1962, receiver; 1989 Super Bowl MVP; NFL record for career touchdowns (208), receptions (1,549).

Maurice Richard, 1921-2000, Montreal Canadiens forward; scored 544 regular season goals, 82 playoff goals.

Branch Rickey, 1881-1965, MLB executive; helped break baseball's color barrier, 1947; initiated farm system, 1919.

Cal Ripken Jr., b 1960, Baltimore shortstop; AL MVP, 1983, '91; most consecutive games played (2,632).

Mariano Rivera, b 1969, (Pan.) relief pitcher; helped NY Yankees to 5 World Series titles; World Series MVP, 1999; all-time MLB leader in post-season saves with 39.

Oscar Robertson, b 1938, NBA guard; averaged career 25.7 points per game; 5th in career assists (9,887); MVP, 1964.

Brooks Robinson, b 1937, Baltimore Orioles 3rd baseman; played in 4 World Series; MVP, 1964; 16 gold gloves.

Frank Robinson, b 1935, MVP in both NL and AL; triple crown, 1966; 586 career home runs; first black manager in majors.

Jackie Robinson, 1919-72, broke baseball's color barrier with Brooklyn Dodgers, 1947; NL MVP, 1949.

Sugar Ray Robinson, 1921-89, boxer; middleweight champion 5 times; welterweight champion, 1946-51.

Knute Rockne, 1888-1931, Notre Dame football coach, 1918-31; revolutionized game by stressing forward pass.

Bill Rodgers, b 1947, runner; won Boston and New York City marathons 4 times each between 1975 and 1980.

Alex Rodriguez, b 1975, NY Yankees third baseman; AL MVP in 2003, '05, '07; 13-time All Star; youngest player to ever hit 500 HRs; admitted steroid use 2001-03.

Juan "Chi Chi" Rodriguez, b 1935, champion golfer; 8 PGA tour wins, 22 Champions tour wins.

Ben Roethlisberger, b 1982, Pittsburgh Steelers quarterback; youngest to win Super Bowl, 2005.

Ronaldinho, b 1980, soccer midfielder; led Brazil to World Cup Finals in 2006; FIFA World Player of the Year, 2004, '05.

Ronaldo (Ronaldo Luiz Nazario de Lima), b 1976, soccer forward; led Brazil to 2002 World Cup title; 3-time FIFA world player of the year, 1996-97, 2002; most World Cup goals, 15.

Art Rooney, 1901-88, NFL owner; bought Pittsburgh Pirates in 1933, renamed Steelers, 1940.

Pete Rose, b 1941, won 3 NL batting titles; hit in 44 consecutive games, 1978; most career hits, 4,256; banned for gambling, 1989; admitted betting on his team, 2004.

Ken Rosewall, b 1934, Australian tennis player; 2-time U.S. champ; 8 Grand Slam singles titles.

Patrick Roy, b 1965, Montreal-Colorado goalie; only 3-time NHL playoffs MVP (Conn Smythe Trophy), 1986, '93, 2001.

Wilma Rudolph, 1940-94, sprinter; won 3 1960 Olympic golds.

Adolph Rupp, 1901-77, NCAA basketball coach; led Kentucky to 4 national titles, 1948-49, '51, '58.

Bill Russell, b 1934, Boston Celtics center; led team to 11 NBA titles; MVP 5 times; first black coach of major pro sports team.

Babe Ruth, 1895-1948, NY Yankees outfielder; hit 60 home runs, 1927, 714 lifetime (3rd all-time); led AL 12 times.

Johnny Rutherford, b 1938, auto racer; won 3 Indy 500s.

Nolan Ryan, b 1947, pitcher; holds season (383), career (5,714) strikeout records; won 324 games (7 no-hitters).

Pete Sampras, b 1971, tennis star; 1st man in Open era to win 7 Wimbledons; 2nd-most career Grand Slam wins (14).

Joan Benoit Samuelson, b 1957, won 1st Olympic women's marathon (1984), Boston Marathon (1979, '83).

Barry Sanders, b 1968, rushed for 2,053 yards in 1997; led NFL in rushing, 1990, '94, '96, '97.

Deion Sanders, b 1967, NFL cornerback (1989-2000, '04-'05) and MLB outfielder (1989-1995, '97, 2005).

Gale Sayers, b 1943, Chicago running back; twice led NFL in rushing.

Mike Schmidt, b 1949, Phillies 3rd baseman; led NL in home runs 8 times; 548 lifetime; NL MVP, 1980, '81, '86.

Michael Schumacher, b 1969, German race-car driver; 7-time Formula 1 world champ (1994-95, 2000-04).

Tom Seaver, b 1944, pitcher; won NL Cy Young award 3 times; won 311 major league games.

Monica Seles, b 1973, tennis player; won U.S. (1991-92), Aust. (1991-93, '96), French (1990-92) Opens; stabbed on court by spectator, 1993.

Maria Sharapova, b 1987, (Russ.) tennis star; won Wimbledon (2004), U.S. Open (2006), Australian Open (2008).

Patty Sheehan, b 1956, Hall of Fame golfer; 3 LPGA Championships (1983-84, '93).

Willie Shoemaker, 1931-2003, jockey; rode 4 Kentucky Derby, 5 Belmont Stakes winners; leading career money winner.

Frank Shorter, b 1947, runner; only American to win men's Olympic marathon (1972) since 1908; silver medalist (1976).

Don Shula, b 1930, all-time winningest NFL coach (347 games).

Al Simmons, 1902-56, AL outfielder; .334 lifetime batting avg.

Bill Simmons, b 1969, columnist for *Page 2* on ESPN.com known as "The Sports Guy."

O. J. Simpson, b 1947, running back; rushed for 2,003 yds., 1973; AFC leading rusher 4 times; acquitted of murder, 1995; jailed after being found guilty of robbery and kidnapping, 2008.

George Sisler, 1893-1973, St. Louis Browns 1st baseman; had then-record 257 hits, 1920; batted .340 lifetime.

Dean Smith, b 1931, retired basketball coach; most career Division I wins (879); led North Carolina to 2 NCAA titles (1982, '93).

Emmitt Smith, b 1969, running back; NFL and Super Bowl MVP, 1993.

Conn Smythe, 1895-1980, won 7 Stanley Cups as Toronto GM (1929-61); playoff MVP award named in his honor.

Sam Snead, 1912-2002, PGA and Masters champ 3 times each; record 82 PGA tournament victories.

Annika Sorenstam, b 1970, (Swed.) golfer; set LPGA 18-hole record of 59 (–13), 72-hole record of 27-under-par, 2001; won 10 LPGA majors, including career Grand Slam.

Sammy Sosa, b 1968, right fielder; 66 homers, NL MVP, 1998; 1st to hit 60+ homers 3 times (1998, '99, 2001).

Warren Spahn, 1921-2003, pitcher; won 363 NL games; 20-game winner 13 times; Cy Young award, 1957.

Tris Speaker, 1888-1958, AL outfielder; batted .345 over 22 seasons; hit record 793 career doubles.

Mark Spitz, b 1950, swimmer; won 7 golds at 1972 Olympics.

Amos Alonzo Stagg, 1862-1965, football innovator; Univ. of Chicago football coach for 41 years, 5 undefeated seasons.

Bart Starr, b 1934, Green Bay Packers quarterback; led team to 5 NFL titles, 2 Super Bowl victories.

Roger Staubach, b 1942, Dallas Cowboys quarterback; leading NFC passer 5 times.

George Steinbrenner, 1930-2010, NY Yankees owner.

Casey Stengel, 1890-1975, managed Yankees to 10 pennants, 7 World Series wins between 1949 and 1960.

Jackie Stewart, b 1939, (Scot.) auto racer; 27 Grand Prix wins.

John Stockton, b 1962, Utah Jazz guard; NBA career leader in assists, steals; NBA assists leader, 1988-96.

Picabo Street, b 1971, skier; 2-time World Cup downhill champion (1995-96); Olympic super G gold medalist, 1998.

Louise Suggs, b 1923, golfer; U.S. Women's Open champ, 1949, '52; 11 major victories, ranks 3rd all-time.

John L. Sullivan, 1858-1918, last bare-knuckle heavyweight champion, 1882-92.

Pat Summit, b 1952, women's basketball coach; led Tennessee Lady Vols to 8 NCAA titles (1987, '89, '91, '96-'98, 2007-08); all-time winningest NCAA coach.

Ichiro Suzuki, b 1973, Japanese center fielder for the Seattle Mariners; Pacific League MVP, 1994, '95, '96; American League MVP, 2001; single-season hits record (262), 2004.

Fran Tarkenton, b 1940, Minnesota, NY Giants quarterback; tied 3rd in career TD passes (342); 1975 Player of the Year.

Diana Taurasi, b 1982, WNBA shooting guard, Phoenix Mercury; gold medalist, 2008 Olympics; WNBA MVP, 2009.

Lawrence Taylor, b 1959, linebacker; led NY Giants to 2 Super Bowl titles; played in 10 Pro Bowls.

Jenny Thompson, b 1973, swimmer; most decorated U.S. female Olympian; 12 medals (8 gold) in 1992, '96, 2000, '04.

Daley Thompson, b 1958, (Br.) decathlete; Olympic gold medalist in 1980, '84.

Bobby Thomson, 1923-2010, outfielder/3B; known for pennant-clinching "Shot Heard 'Round the World" for the NY Giants, 1951.

Jim Thorpe, 1888-1953, football All-American, 1911, '12; won pentathlon and decathlon, 1912 Olympics.

Bill Tilden, 1893-1953, won 7 U.S. tennis titles, 3 Wimbledon.

Y. A. Tittle, b 1926, NY Giants quarterback; MVP, 1961, '63.

Alberto Tomba "La Bomba", b 1966, (It.) skier; 5 Olympic alpine medals (3 golds, 2 silver) in 1988, '92.

LaDainian "L.T." Tomlinson, b 1979, running back; NFL records for single season touchdowns (31), rushing touchdowns (28), most points scored in a single season (186).

Joe Torre, b 1940, baseball manager; former MLB player; managed L.A. Dodgers, NY Yankees, St. Louis Cardinals, Atlanta Braves, and NY Mets.

Lee Trevino, b 1939, golfer; won U.S., British Open twice.

Bryan Trottier, b 1956, Islanders, Penguins center for 6 Stanley Cup champs.

Gene Tunney, 1897-1978, heavyweight champion, 1926-28.

Mike Tyson, b 1966, undisputed heavyweight champ, 1987-90; at 20, youngest to win a heavyweight title (WBC, 1986).

Wyomia Tyus, b 1945, Olympic 100m gold medalist, 1964, '68.

Johnny Unitas, 1933-2002, Baltimore Colts quarterback; passed for more than 40,000 yds.; MVP, 1957, '67.

Al Unser, b 1939, Indy 500 winner 4 times.

Bobby Unser, b 1934, Indy 500 winner 3 times.

Brian Urlacher, b 1978, Chicago Bears linebacker; Defensive Rookie of the Year, 2000; 6-time Pro Bowler.

Norm Van Brocklin, 1926-83, quarterback; passed for game record 554 yds., 1951; MVP, 1960.

Amy Van Dyken, b 1973, swimmer; first American woman to win 4 gold medals in one Olympics (1996).

Michael Vick, b 1980, quarterback; suspended and convicted (2007) of illegal dog fighting, gambling activities.

Lasse Viren, b 1949, (Fin.) runner; Olympic 5,000m and 10,000m gold medalist in 1972, 1976.

Lindsey Vonn, b 1984; 1st U.S. woman to win the world super-G championship, gold medal in downhill, 2010 Olympics; 3 World Cup titles 2008-10.

Dwyane Wade, b 1982, guard; led Miami Heat to NBA title, 2006; finals MVP, 2006; member of 2008 U.S. Olympic gold medal basketball team; NBA scoring title, 2009.

Honus Wagner, 1874-1955, Pirates shortstop; 8 NL batting titles.

Grete Waitz, b 1953, (Nor.) 9-time winner of the New York City Marathon (1978-80, '82-'86, '88).

"Jersey" Joe Walcott, 1914-94, boxer; became heavyweight champion at age 37, 1951-52.

Bill Walton, b 1952, center; led Portland Trail Blazers to 1977 NBA title; MVP, 1978; NBA TV commentator.

Kurt Warner, b 1971, Rams, Giants, Cardinals quarterback; NFL MVP, 1999, 2001; Super Bowl MVP, 2000.

Tom Watson, b 1949, golfer; 6-time PGA Player of the Year; won 5 British Opens, 2 Masters, U.S. Open.

Karrie Webb, b 1974, Australian golfer; youngest woman (26 yrs. 6 mos.) to win career Grand Slam, 1999-2001.

Johnny Weissmuller, 1903-84, swimmer; won 52 national championships, 5 Olympic gold medals; set 67 world records.

Jerry West, b 1938, L.A. Lakers guard; had career average 27 pts. per game; first team all-star 10 times.

Byron "Whizzer" White, 1917-2002, running back; led NCAA in scoring and rushing at Colorado, 1937; led NFL in rushing twice, 1938, '40; Supreme Court justice, 1962-93.

Shaun White, b 1986, snowboarder/skateboarder, Olympic gold medalist in half-pipe (2006, '10).

Kathy Whitworth, b 1939, 7-time LPGA Player of the Year (1966-69, '71-'73); 88 tour wins, most on LPGA or PGA tour.

Michelle Wie, b 1989, golfer; in 2002 became youngest-ever qualifier for LPGA event; turned pro at age 15.

Michael Wilbon, b 1958, sportswriter, columnist for *Washington Post* and ESPN.

Lenny Wilkens, b 1937, winningest coach in NBA history; in Hall of Fame as player and coach.

Serena Williams, b 1981, tennis champ; won at Wimbledon (2002-03, '09-'10), U.S. Open (1999, 2002, '08); Australian Open (2003, '05, '07, '09, '10); French Open (2002); two-time Olympic gold medal winner in doubles (2000, '08) with sister Venus.

Ted Williams, 1918-2002, Boston Red Sox outfielder; won 6 batting titles, 2 triple crowns; hit .406 in 1941.

Venus Williams, b 1980, tennis champ at Wimbledon (2000, '01, '05, '07, '08), U.S. Open (2000, '01); Olympic gold medals in singles (2000) and doubles with sister Serena (2000, '08).

Helen Wills Moody, 1905-98, tennis star; won U.S. Open 7 times, Wimbledon 8 times.

Katarina Witt, b 1965, (Ger.) figure skater; won Olympic gold medal, 1984, '88; world champ, 1984-85, '87-'88.

John Wooden, 1910-2010, UCLA basketball coach; 10 NCAA titles.

Tiger Woods, b 1975, golfer; youngest to win career Grand Slam, at age 24 (1997-2000); 14 career major titles.

Mickey Wright, b 1935, golfer; won LPGA and U.S. Open championship 4 times; 82 career wins, including 13 majors.

Eric Wynalda, b 1969, soccer; 2nd leading U.S. international goal scorer with 34.

Kristi Yamaguchi, b 1971, figure skater; won national, world, Olympic titles, in 1992.

Yao Ming, b 1980, Chinese center for Houston Rockets.

Carl Yastrzemski, b 1939, Boston Red Sox slugger; won 3 batting titles; triple crown, 1967.

Cy Young, 1867-1955, pitcher; won record 511 games.

Steve Young, b 1961, 49ers quarterback; led NFL in passing, 1991-94, '96, '97; NFL MVP, 1992, '94; Super Bowl MVP, 1995.

Vince Young, b 1983, quarterback for the Tennessee Titans.

Babe Didrikson Zaharias, 1911-56, all-around athlete; 3 track-and-field medals (2 golds), 1932 Olympics; won 10 golf majors; also played baseball; 6-time AP Female Athlete of the Year.

Emil Zátopek, 1922-2000, (Czech.) runner; won 3 gold medals at 1952 Olympics (5,000m, 10,000m, marathon).

Zinedine Zidane, b 1972, soccer midfielder; led France to 1998 World Cup title; named top player in 2006; 3-time FIFA world player of the year (1998, 2000, '03).

Writers of the Present

Name (Birthplace)	Birthdate
Chinua Achebe (Ogidi, Nigeria)	11/16/30
Richard Adams (Newbury, Eng., UK)	5/9/20
Edward Albee (Wash., DC)	3/12/28
Mitch Albom (Passaic, NJ)	5/23/58
Elizabeth Alexander (New York, NY)	5/30/62
Isabel Allende (Lima, Peru)	8/2/42
Dorothy Allison (Greenville, SC)	4/11/49
Martin Amis (Oxford, Eng., UK)	8/25/49
Maya Angelou (St. Louis, MO)	4/4/28
Piers Anthony (Oxford, Eng., UK)	8/6/34
Jeffrey Archer (Somerset, Eng., UK)	4/15/40
Oscar Arias Sanchez (Heredia, Costa Rica)	9/13/41
John Ashbery (Rochester, NY)	7/28/27
Margaret Atwood (Ottawa, ON, Can.)	11/18/39
David Auburn (Chicago, IL)	1969
Jean Auel (Chicago, IL)	2/18/36
Paul Auster (Newark, NJ)	2/3/47
Alan Ayckbourn (Hampstead, Eng., UK)	4/12/39
Nicholson Baker (New York, NY)	1/7/57
David Baldacci (Richmond, VA)	8/5/60
Russell Banks (Newton, MA)	3/28/40
John Barth (Cambridge, MD)	5/27/30
Ann Beattie (Wash., DC)	9/8/47
John Berendt (Syracuse, NY)	12/5/39
Thomas Berger (Cincinnati, OH)	7/20/24
Maeve Binchy (Dalkey, Ireland)	3/28/40
Judy Blume (Elizabeth, NJ)	2/12/38
T. Coraghessan Boyle (Peekskill, NY)	12/2/48
Ray Bradbury (Waukegan, IL)	8/22/20
Barbara Taylor Bradford (Leeds, Eng., UK)	5/10/33
Christopher Bram (Buffalo, NY)	2/22/52
Geraldine Brooks (Sydney, Australia)	1955

Name (Birthplace)	Birthdate
Dan Brown (Exeter, NH)	6/22/64
Rita Mae Brown (Hanover, PA)	11/28/44
Christopher Buckley (New York, NY)	12/24/52
James Lee Burke (Houston, TX)	12/5/36
Augusten Burroughs (Pittsburgh, PA)	10/23/65
Robert Olen Butler (Granite City, IL)	1/20/45
A. S. Byatt (Sheffield, England, UK)	8/24/36
Ethan Canin (Ann Arbor, MI)	7/19/60
Peter Carey (Bacchus-Marsh, Victoria, Australia)	5/7/43
Caleb Carr (New York, NY)	8/2/55
Michael Chabon (Wash., DC)	5/24/63
Tracy Chevalier (Wash., DC)	10/19/62
Sandra Cisneros (Chicago, IL)	12/20/54
Tom Clancy (Baltimore, MD)	4/12/47
Mary Higgins Clark (Bronx, NY)	12/24/29
Beverly Cleary (McMinnville, OR)	4/12/16
Paulo Coelho (Rio de Janeiro, Brazil)	8/24/47
J(ohn) M(axwell) Coetzee (Capetown, S. Africa)	2/9/40
Billy Collins (New York, NY)	3/22/41
Jackie Collins (London, Eng., UK)	10/4/41
Evan S. Connell (Kansas City, MO)	8/17/24
Pat Conroy (Atlanta, GA)	10/26/45
Robin Cook (New York, NY)	5/4/40
Patricia Cornwell (Miami, FL)	6/9/56
Harry Crews (Alma, GA)	6/6/35
Michael Cunningham (Cincinnati, OH)	11/6/52
Don DeLillo (Bronx, NY)	11/20/36
Nelson DeMille (New York, NY)	8/23/43
Junot Díaz (Santo Domingo, Dominican Republic)	12/31/68
Joan Didion (Sacramento, CA)	12/5/34
Annie Dillard (Pittsburgh, PA)	4/30/45
E. L. Doctorow (Bronx, NY)	1/6/31

Name (Birthplace)	Birthdate
Rita Dove (Akron, OH)	8/28/52
Roddy Doyle (Dublin, Ireland)	5/5/58
Umberto Eco (Alessandria, Italy)	1/5/32
Bret Easton Ellis (Los Angeles, CA)	3/7/64
Dave Eggers (Boston, MA)	3/12/70
James Ellroy (Los Angeles, CA)	3/4/48
Louise Erdrich (Little Falls, MN)	7/6/54
Laura Esquivel (Mexico City, Mexico)	9/30/51
Jeffrey Eugenides (Detroit, MI)	3/8/60
Lawrence Ferlinghetti (Yonkers, NY)	3/24/19
Helen Fielding (Morley, Yorkshire, Eng., UK)	2/19/58
Dario Fo (San Giano, Italy)	3/26/26
Ken Follett (Cardiff, Wales, UK)	6/5/49
Richard Ford (Jackson, MS)	2/16/44
Frederick Forsyth (Ashford, Eng., UK)	8/25/38
Paula Fox (New York, NY)	4/22/23
Jonathan Franzen (Western Springs, IL)	8/17/59
Michael Frayn (London, Eng., UK)	9/8/33
Charles Frazier (Asheville, NC)	11/4/50
Brian Friel (Killyclogher, N. Ireland, UK)	1/9/29
Carlos Fuentes (Panama City, Panama)	11/11/28
Ernest J. Gaines (Oscar, LA)	1/15/33
Gabriel Garcia Marquez (Aracataca, Colombia)	3/6/28
Frank Gilroy (Bronx, NY)	10/13/25
Malcolm Gladwell (Fareham, Hampshire, Eng., UK)	9/3/63
Robert Goddard (Fareham, Hampshire, Eng., UK)	11/13/54
Gail Godwin (Birmingham, AL)	6/18/37
William Goldman (Highland Park, IL)	8/12/31
Nadine Gordimer (Springs, S. Africa)	11/20/23
Mary Gordon (Far Rockaway, NY)	12/8/49
Sue Grafton (Louisville, KY)	4/24/40
Günter Grass (Danzig [now Gdansk], Poland)	10/16/27
Shirley Ann Grau (New Orleans, LA)	7/8/29
John Grisham (Jonesboro, AR)	2/8/55
John Guare (New York, NY)	2/5/38
David Handler (Los Angeles, CA)	9/14/52
Paul Harding	12/19/67
David Hare (St. Leonards, Sussex, Eng., UK)	6/5/47
Jim Harrison (Grayling, MI)	12/11/37
Robert Hass (San Francisco, CA)	3/1/41
Vaclav Havel (Prague, Czech.)	10/5/36
Seamus Heaney (Mossbaum, Co. Derry, N. Ire., UK)	4/13/39
Mark Helprin (New York, NY)	6/28/47
Carl Hiaasen (Plantation, FL)	3/12/53
Oscar Hijuelos (New York, NY)	8/24/51
S. E. Hinton (Tulsa, OK)	7/22/50
Alice Hoffman (New York, NY)	3/16/52
Khaled Hosseini (Kabul, Afghanistan)	3/4/65
John Irving (Exeter, NH)	3/2/42
Kazuo Ishiguro (Nagasaki, Japan)	11/8/54
John Jakes (Chicago, IL)	3/31/32
P. D. James (Oxford, Eng., UK)	8/3/20
Elfriede Jelinek (Mürzzuschlag, Austria)	10/20/46
Ha Jin (Liaoning, China)	2/21/56
Edward P. Jones (Wash., DC)	10/5/50
Erica Jong (New York, NY)	3/26/42
Sebastian Junger (Boston, MA)	1/17/62
Garrison Keillor (Anoka, MN)	8/7/42
Thomas Keneally (Sydney, Australia)	10/7/35
William Kennedy (Albany, NY)	1/16/28
Sue Monk Kidd (Sylvester, GA)	8/12/48
Jamaica Kincaid (St. John's, Antigua)	5/25/49
Stephen King (Portland, ME)	9/21/47
Barbara Kingsolver (Annapolis, MD)	4/8/55
Maxine Hong Kingston (Stockton, CA)	10/27/40
Galway Kinnell (Providence, RI)	2/1/27
Dean Koontz (Everett, PA)	7/9/45
Ted Kooser (Ames, IA)	4/25/39
Jon Krakauer (Brookline, MA)	4/12/54
Judith Krantz (New York, NY)	1/9/28
Maxine Kumin (Philadelphia, PA)	6/6/25
Milan Kundera (Brno, Czechoslovakia)	4/1/29
Tony Kushner (New York, NY)	7/16/56
Jhumpa Lahiri (London, Eng., UK)	1967
David Leavitt (Pittsburgh, PA)	6/23/61
John Le Carré (Poole, Eng., UK)	10/19/31
Jean Marie Gustave Le Clézio (Nice, France)	4/13/40
Harper Lee (Monroeville, AL)	4/28/26
Ursula K. Le Guin (Berkeley, CA)	10/21/29
Elmore Leonard (New Orleans, LA)	10/11/25
Doris Lessing (Kermanshah, Persia)	10/22/19
Jonathan Lethem (Brooklyn, NY)	2/19/64
David Lodge (South London, Eng., UK)	1/28/35
Alison Lurie (Chicago, IL)	9/3/26
Gregory Maguire (Albany, NY)	6/9/54
David Malouf (Brisbane, Queensland, Australia)	3/20/34
Thomas Mallon (Glen Cove, NY)	11/2/51
David Mamet (Chicago, IL)	11/30/47
Yann Martel (Salamanca, Spain)	6/25/63
Bobbie Ann Mason (nr. Mayfield, KY)	5/1/40
Peter Matthiessen (New York, NY)	5/22/27
Armistead Maupin (Wash., DC)	4/13/44
Cormac McCarthy (Providence, RI)	7/20/33
Colleen McCullough (Wellington, NSW, Australia)	6/1/37
Alice McDermott (Brooklyn, NY)	6/27/53
Ian McEwan (Aldershot, Eng., UK)	6/21/48
Thomas McGuane (Wyandotte, MI)	12/11/39
Terry McMillan (Port Huron, MI)	10/18/51
Larry McMurtry (Wichita Falls, TX)	6/3/36
Terrence McNally (St. Petersburg, FL)	11/3/39
John McPhee (Princeton, NJ)	3/8/31
W(illiam) S(tanley) Merwin (New York, NY)	9/30/27
Stephenie Meyer (Hartford, CT)	12/24/73
Steven Millhauser (New York, NY)	8/3/43
Toni Morrison (Lorain, OH)	2/18/31
Walter Mosley (Los Angeles, CA)	1/12/52
Andrew Motion (London, Eng., UK)	10/26/52
Bharati Mukherjee (Calcutta, India)	7/27/40
Herta Müller (Nitzkydorf, Banat, Romania)	8/17/53
Alice Munro (Wingham, ON, Canada)	7/10/31
Haruki Murakami (Kyoto, Japan)	1/12/49
V. S. Naipaul (Chaguanas, Trinidad)	8/17/32
Joyce Carol Oates (Lockport, NY)	6/16/38
Edna O'Brien (Tuamgraney, Ireland)	12/15/32
Tim O'Brien (Austin, MN)	10/1/46
Kenzaburo Oe (Uchiko, Japan)	1/31/35
Michael Ondaatje (Colombo, Sri Lanka)	9/12/43
Cynthia Ozick (New York, NY)	4/17/28
Orhan Pamuk (Istanbul, Turkey)	6/7/52
Suzan-Lori Parks (Fort Knox, KY)	5/10/63
James Patterson (Newburgh, NY)	3/22/47
Jodi Picoult (New York, NY)	5/19/66
Marge Piercy (Detroit, MI)	3/31/36
Robert Pinsky (Long Branch, NJ)	10/20/40
Michael Pollan (New York, NY)	2/6/55
Richard Powers (Evanston, IL)	6/18/57
Reynolds Price (Macon, NC)	2/1/33
Richard Price (Bronx, NY)	10/12/49
E. Annie Proulx (Norwich, CT)	8/22/35
Philip Pullman (Norwich, Eng., UK)	10/19/46
Thomas Pynchon (Glen Cove, NY)	5/8/37
David Rabe (Dubuque, IA)	3/10/40
Ishmael Reed (Chattanooga, TN)	2/22/38
Ruth Rendell (London, Eng., UK)	2/17/30
Anne Rice (New Orleans, LA)	10/4/41
Adrienne Rich (Baltimore, MD)	5/16/29
Mary Roach (NH)	3/20/59
Nora Roberts (Silver Spring, MD)	10/10/50
Marilynne Robinson (Sandpoint, IL)	11/26/43
Philip Roth (Newark, NJ)	3/19/33
J. K. Rowling (Chipping Sodbury, Eng., UK)	7/31/65
Norman Rush (Oakland, CA)	10/24/33
Salman Rushdie (Bombay, India)	6/19/47
Richard Russo (Johnstown, NY)	7/15/49
Alice Sebold (Madison, WI)	9/6/63
David Sedaris (Johnson City, NY)	12/26/56
Vikram Seth (Calcutta, India)	6/20/52
John Patrick Shanley (New York, NY)	10/13/50
Sam Shepard (Ft. Sheridan, IL)	11/5/43
Neil Simon (Bronx, NY)	7/4/27
Jane Smiley (Los Angeles, CA)	9/26/49
Wole Soyinka (Abeokuta, Nigeria)	7/13/34
Nicholas Sparks (Omaha, NE)	12/31/65
Danielle Steel (New York, NY)	8/14/47
Richard Stern (New York, NY)	2/25/28
Mary Stewart (Sunderland, Eng., UK)	9/17/16
R(obert) L(awrence) Stine (Columbus, OH)	10/8/43
Tom Stoppard (Zlin, Czechoslovakia)	7/3/37
Mark Strand (Summerside, PE, Canada)	4/11/34
Elizabeth Strout (Portland, ME)	1/6/56
Wislawa Szymborska (Kornik, Poland)	7/2/23
Amy Tan (Oakland, CA)	2/19/52
Donna Tartt (Greenwood, MS)	12/23/63
Paul Theroux (Medford, MA)	4/10/41
Calvin Trillin (Kansas City, MO)	12/5/35
Scott F. Turow (Chicago, IL)	4/12/49
Anne Tyler (Minneapolis, MN)	10/25/41
Mario Vargas Llosa (Arequipa, Peru)	3/28/36
Gore Vidal (West Point, NY)	10/3/25
Paula Vogel (Wash., DC)	11/16/51
Derek Walcott (Castries, Saint Lucia)	1/23/30
Alice Walker (Eatonton, GA)	2/9/44
Joseph Wambaugh (East Pittsburgh, PA)	1/22/37
Edmund White (Cincinnati, OH)	1/19/40
Elie Wiesel (Sighet, Romania)	9/30/28
Lanford Wilson (Lebanon, MO)	4/13/37
Tom Wolfe (Richmond, VA)	3/2/31
Tobias Wolff (Birmingham, AL)	6/19/45
Herman Wouk (New York, NY)	5/27/15
Yevgeny Yevtushenko (Zima, Russia)	7/18/33

Writers of the Past

See also Journalists, and Greeks and Romans in Historical Figures chapter.

Alice Adams, 1926-99, (U.S.) novelist, short-story writer. *Superior Woman.*

James Agee, 1909-55, (U.S.) novelist. *A Death in the Family.*

S(hmuel) Y(osef) Agnon, 1888-1970, (Isr.) Hebrew novelist. *Only Yesterday.*

Conrad Aiken, 1889-1973, (U.S.) poet, critic. *Ushant*.

Anna Akhmatova, 1889-1966, (Russ.) poet. *Requiem*.

Louisa May Alcott, 1832-88, (U.S.) novelist. *Little Women.*

Sholom Aleichem, 1859-1916, (Russ.) Yiddish writer. *Tevye's Daughters*, *The Old Country.*

Vicente Aleixandre, 1898-1984, (Sp.) poet. *La destrucción o el amor*, *Dialogolos del conocimiento.*

Horatio Alger, 1832-99, (U.S.) "rags-to-riches" books.

Jorge Amado, 1912-2001, (Brazil) novelist. *Dona Flor and Her Two Husbands*, *The Violent Land*.

Eric Ambler, 1909-98, (Br.) suspense novelist. *A Coffin for Dimitrios*.

Kingsley Amis, 1922-95, (Br.) novelist, critic. *Lucky Jim*.

Hans Christian Andersen, 1805-75, (Den.) author of fairy tales. *The Ugly Duckling.*

Maxwell Anderson, 1888-1959, (U.S.) playwright. *What Price Glory?*, *High Tor*, *Winterset*, *Key Largo.*

Sherwood Anderson, 1876-1941, (U.S.) short-story writer. "Death in the Woods," *Winesburg*, *Ohio.*

Reinaldo Arenas, 1943-90, (Cuba) short-story writer, novelist. *Before Night Falls*.

Ludovico Ariosto, 1474-1533, (It.) poet. *Orlando Furioso*.

Matthew Arnold, 1822-88, (Br.) poet, critic. "Thrysis," "Dover Beach," "Culture and Anarchy."

Isaac Asimov, 1920-92, (U.S.) versatile writer, espec. of science-fiction. *I Robot*.

Miguel Angel Asturias, 1899-1974, (Guatemala) novelist. *El Señor Presidente*.

Louis Auchincloss, 1917-2010, (U.S.) novelist, memoirist, short-story writer. *The Rector of Justin*.

W(ystan) H(ugh) Auden, 1907-73, (Br.) poet, playwright, literary critic. "The Age of Anxiety."

Jane Austen, 1775-1817, (Br.) novelist. *Pride and Prejudice*, *Sense and Sensibility*, *Emma*, *Mansfield Park.*

Isaac Babel, 1894-1941, (Russ.) short-story writer, playwright. *Odessa Tales*, *Red Cavalry.*

James Baldwin, 1924-87, (U.S.) author, playwright. *The Fire Next Time*, *Blues for Mister Charlie.*

Honoré de Balzac, 1799-1850, (Fr.) novelist. *Le Père Goriot*, *Cousine Bette*, *Eugénie Grandet.*

James M. Barrie, 1860-1937, (Br.) playwright, novelist. *Peter Pan*, *Dear Brutus*, *What Every Woman Knows.*

Charles Baudelaire, 1821-67, (Fr.) poet. *Les Fleurs du Mal*.

L(yman) Frank Baum, 1856-1919, (U.S.) *Wizard of Oz* series.

Simone de Beauvoir, 1908-86, (Fr.) novelist, essayist. *The Second Sex*, *Memoirs of a Dutiful Daughter.*

Samuel Beckett, 1906-89, (Ire.) novelist, playwright. *Waiting for Godot*, *Endgame* (plays); *Murphy*, *Watt*, *Molloy* (novels).

Brendan Behan, 1923-64, (Ire.) playwright. *The Quare Fellow*, *The Hostage*, *Borstal Boy.*

Saul Bellow, 1915-2005, (U.S.) novelist. *The Adventures of Augie March*, *Humboldt's Gift*.

Robert Benchley, 1889-1945, (U.S.) humorist.

Stephen Vincent Benét, 1898-1943, (U.S.) poet, novelist. *John Brown's Body*.

Stan Berenstain, 1923-2005, (U.S.) co-writer and illustrator of *Berenstain Bears* series of children's books.

John Berryman, 1914-72, (U.S.) poet. *Homage to Mistress Bradstreet.*

Ambrose Bierce, 1842-1914, (U.S.) short-story writer, journalist. *In the Midst of Life*, *The Devil's Dictionary.*

Elizabeth Bishop, 1911-79, (U.S.) poet. *North and South—A Cold Spring*.

William Blake, 1757-1827, (Br.) poet, artist. *Songs of Innocence*, *Songs of Experience.*

Aleksandr Blok, 1880-1921, (Russ.) poet. "The Twelve," "The Scythians."

Giovanni Boccaccio, 1313-75, (It.) poet. *Decameron*.

Heinrich Böll, 1917-85, (Ger.) novelist, short-story writer. *Group Portrait With Lady*.

Jorge Luis Borges, 1900-86, (Arg.) short-story writer, poet, essayist. *Labyrinths*.

James Boswell, 1740-95, (Sc.) biographer. *The Life of Samuel Johnson*.

Pierre Boulle, 1913-94, (Fr.) novelist. *The Bridge Over the River Kwai*, *Planet of the Apes*.

Paul Bowles, 1910-99, (U.S.) novelist, short-story writer. *The Sheltering Sky*.

Anne Bradstreet, c. 1612-72, (U.S.) poet. *The Tenth Muse Lately Sprung Up in America*.

Bertolt Brecht, 1898-1956, (Ger.) dramatist, poet. *The Three-penny Opera*, *Mother Courage and Her Children.*

Joseph Brodsky, 1940-96, (Russ.-U.S.) poet. *A Part of Speech*, *Less Than One*, *To Urania*.

Charlotte Brontë, 1816-55, (Br.) novelist. *Jane Eyre.*

Emily Brontë, 1818-48, (Br.) novelist. *Wuthering Heights.*

Sterling A. Brown, 1901-89, (U.S.) poet, literature professor. *Southern Road*.

William Wells Brown, 1815-84, (U.S.) writer, memoirist; first African American to publish a novel, *Clotel*, 1853.

Elizabeth Barrett Browning, 1806-61, (Br.) poet. *Sonnets From the Portuguese*, *Aurora Leigh.*

Robert Browning, 1812-89, (Br.) poet. "My Last Duchess," "Fra Lippo Lippi," *The Ring and the Book.*

Pearl S. Buck, 1892-1973, (U.S.) novelist. *The Good Earth.*

Charles Bukowski, 1920-94, (U.S.) novelist, poet. *Ham on Rye*, *Women*.

Mikhail Bulgakov, 1891-1940, (Russ.) novelist, playwright. *The Heart of a Dog*, *The Master and Margarita.*

John Bunyan, 1628-88, (Br.) writer. *Pilgrim's Progress*.

Anthony Burgess, 1917-93, (Br.) author. *A Clockwork Orange*.

Frances Hodgson Burnett, 1849-1924, (Br.-U.S.) novelist. *The Secret Garden*.

Robert Burns, 1759-96, (Sc.) poet. "Flow Gently, Sweet Afton," "My Heart's in the Highlands," "Auld Lang Syne."

Edgar Rice Burroughs, 1875-1950, (U.S.) "Tarzan" books.

William S. Burroughs, 1914-97, (U.S.) novelist. *Naked Lunch*.

George Gordon, Lord Byron, 1788-1824, (Br.) poet. *Don Juan*, *Childe Harold*, *Manfred*, *Cain.*

Pedro Calderon de la Barca, 1600-81, (Sp.) playwright. *Life Is a Dream*.

Hortense Calisher, 1911-2009, (U.S.) novelist, short story writer. *False Entry*.

Italo Calvino, 1923-85, (It.) novelist, short-story writer. *If on a Winter's Night a Traveler*.

Luis Vaz de Camoes, 1524?-80 (Port.) poet. *The Lusiads*.

Albert Camus, 1913-60, (Fr.) writer. *The Stranger*, *The Fall.*

Elias Canetti, 1905-94, (Bulg.) novelist, essayist. *Auto-Da-Fe*.

Karel Capek, 1890-1938, (Czech.) playwright, novelist, essayist. *R.U.R. (Rossum's Universal Robots).*

Truman Capote, 1924-84, (U.S.) author. *Other Voices*, *Other Rooms*; *Breakfast at Tiffany's*; *In Cold Blood.*

Lewis Carroll (Charles Dodgson), 1832-98, (Br.) writer, mathematician. *Alice's Adventures in Wonderland*.

Giacomo Casanova, 1725-98, (It.) adventurer, memoirist.

Willa Cather, 1873-1947, (U.S.) novelist. *O Pioneers!*, *My Ántonia*, *Death Comes for the Archbishop.*

Constantine Cavafy, 1863-1933, (Gr.) poet. "Ithaka," "Sensual Pleasures."

Camilo Jose Cela, 1916-2001, (Sp.) novelist. *The Family of Pascual Duarte*, *The Hive*.

Miguel de Cervantes Saavedra, 1547-1616, (Sp.) novelist, dramatist, poet. *Don Quixote.*

Raymond Chandler, 1888-1959, (U.S.) writer of detective fiction. Philip Marlowe series.

Geoffrey Chaucer, c. 1340-1400, (Br.) poet. *The Canterbury Tales*, *Troilus and Criseyde.*

John Cheever, 1912-82, (U.S.) novelist, short-story writer. *The Wapshot Scandal*, "The Country Husband."

Anton Chekhov, 1860-1904, (Russ.) short-story writer, dramatist. *Uncle Vanya*, *The Cherry Orchard*, *The Three Sisters.*

Charles Waddell Chesnutt, 1858-1932, (U.S.) author known for his short stories. *The Conjure Woman*.

G(ilbert) K(eith) Chesterton, 1874-1936, (Br.) critic, novelist, relig. apologist. Father Brown series of mysteries.

Kate Chopin, 1851-1904, (U.S.) writer. *The Awakening*.

Agatha Christie, 1890-1976, (Br.) mystery writer; created Miss Marple, Hercule Poirot. *And Then There Were None*, *Murder on the Orient Express*, *Murder of Roger Ackroyd.*

James Clavell, 1924-94, (Br.-U.S.) novelist. *Shogun*, *King Rat*.

Arthur C. Clarke, 1929-2008, (Br.) science fiction writer. *2001: A Space Odyssey*.

Jean Cocteau, 1889-1963, (Fr.) writer, visual artist, filmmaker. *The Beauty and the Beast*, *Les Enfants Terribles.*

Samuel Taylor Coleridge, 1772-1834, (Br.) poet, critic. "Kubla Khan," "The Rime of the Ancient Mariner."

(Sidonie) Colette, 1873-1954, (Fr.) novelist. *Claudine*, *Gigi.*

Wilkie Collins, 1824-89, (Br.) novelist. *The Moonstone*.

Joseph Conrad, 1857-1924, (Br.) novelist. *Lord Jim*, *Heart of Darkness*, *The Secret Agent.*

James Fenimore Cooper, 1789-1851, (U.S.) novelist. *Leatherstocking Tales*, *The Last of the Mohicans*.

Pierre Corneille, 1606-84, (Fr.) dramatist. *Medeé*, *Le Cid.*

Hart Crane, 1899-1932, (U.S.) poet. "The Bridge."

Stephen Crane, 1871-1900, (U.S.) novelist, short-story writer. *The Red Badge of Courage*, "The Open Boat."

Michael Crichton, 1942-2008, (U.S.) writer. *The Andromeda Strain*, *Jurassic Park*.

Countee Cullen, 1903-46, (U.S.) poet, prominent in the Harlem Renaissance of the 1920s. *The Black Christ.*

E. E. Cummings, 1894-1962, (U.S.) poet. *Tulips and Chimneys*.

Roald Dahl, 1916-90, (Br.-U.S.) writer. *Charlie and the Chocolate Factory*, *James and the Giant Peach.*

Gabriele D'Annunzio, 1863-1938, (It.) poet, novelist, dramatist. *The Child of Pleasure*, *The Intruder*, *The Victim.*

Dante Alighieri, 1265-1321, (It.) poet. *The Divine Comedy*.

Robertson Davies, 1913-95, (Can.) novelist, playwright, essayist. Salterton, Deptford, and Cornish trilogies.

Daniel Defoe, 1660-1731, (Br.) writer. *Robinson Crusoe*, *Moll Flanders*, *Journal of the Plague Year.*

Charles Dickens, 1812-70, (Br.) novelist. *David Copperfield*, *Oliver Twist*, *Great Expectations*, *A Tale of Two Cities.*

Philip K. Dick, 1928-82, (U.S.) science fiction writer. *Do Androids Dream of Electric Sheep?*

James Dickey, 1923-97, (U.S.) poet, novelist. *Deliverance*.

Emily Dickinson, 1830-86, (U.S.) lyric poet. "Because I could not stop for Death . . .," "Success is counted sweetest . . ."

Isak Dinesen (Karen Blixen), 1885-1962, (Den.) author. *Out of Africa*, *Seven Gothic Tales*, *Winter's Tales.*

John Donne, 1573-1631, (Br.) poet. *Songs and Sonnets.*

José Donoso, 1924-96, (Chile) surreal novelist and short-story writer. *The Obscene Bird of Night*.

John Dos Passos, 1896-1970, (U.S.) novelist. *U.S.A.*

Fyodor Dostoyevsky, 1821-81, (Russ.) novelist. *Crime and Punishment*, *The Brothers Karamazov*, *The Possessed.*

Arthur Conan Doyle, 1859-1930, (Br.) novelist. Sherlock Holmes mystery stories.

Theodore Dreiser, 1871-1945, (U.S.) novelist. *An American Tragedy*, *Sister Carrie.*

John Dryden, 1631-1700, (Br.) poet, dramatist, critic. *All for Love*, *Mac Flecknoe*, *Absalom and Achitophel.*

Alexandre Dumas (père), 1802-70, (Fr.) novelist, dramatist. *The Three Musketeers*, *The Count of Monte Cristo.*

Alexandre Dumas (fils), 1824-95, (Fr.) dramatist, novelist. *La Dame aux Camélias*, *Le Demi-Monde.*

Paul Laurence Dunbar, 1872-1906, (U.S.) poet, novelist. *Lyrics of Lowly Life*.

Lawrence Durrell, 1912-90, (Br.) novelist, poet. *Alexandria Quartet*.

Ilya G. Ehrenburg, 1891-1967, (Russ.) writer. *The Thaw.*

George Eliot (Mary Ann Evans or Marian Evans), 1819-80, (Br.) novelist. *Silas Marner*, *Middlemarch.*

T(homas) S(tearns) Eliot, 1888-1965, (Br.) poet, critic. *The Waste Land*, "The Love Song of J. Alfred Prufrock."

Stanley Elkin, 1930-95, (U.S.) novelist, short story writer. *George Mills*.

Ralph Ellison, 1914-94, (U.S.) writer. *Invisible Man*.

Ralph Waldo Emerson, 1803-82, (U.S.) poet, essayist. "Brahma," "Nature," "The Over-Soul," "Self-Reliance."

James T. Farrell, 1904-79, (U.S.) novelist. *Studs Lonigan*.

William Faulkner, 1897-1962, (U.S.) novelist. *Sanctuary*; *Light in August*; *The Sound and the Fury*; *Absalom*, *Absalom!*

Edna Ferber, 1887-1968, (U.S.) novelist, short-story writer, playwright. *So Big*, *Cimarron*, *Show Boat*.

Henry Fielding, 1707-54, (Br.) novelist. *Tom Jones*.

F(rancis) Scott Fitzgerald, 1896-1940, (U.S.) short-story writer, novelist. *The Great Gatsby*, *Tender Is the Night.*

Gustave Flaubert, 1821-80, (Fr.) novelist. *Madame Bovary*.

Ian Fleming, 1908-64, (Br.) novelist; James Bond spy thrillers. *Dr. No*, *Goldfinger*.

Horton Foote, 1916-2009, (U.S.) playwright, screenwriter. *The Trip to Bountiful*.

Ford Madox Ford, 1873-1939, (Br.) novelist, critic, poet. *The Good Soldier*.

C(ecil) S(cott) Forester, 1899-1966, (Br.) writer. Horatio Hornblower books.

E(dward) M(organ) Forster, 1879-1970, (Br.) novelist. *A Passage to India*, *Howards End.*

Anatole France, 1844-1924, (Fr.) writer. *Penguin Island*, *My Friend's Book*, *The Crime of Sylvestre Bonnard.*

Dick Francis, 1920-2010, (Br.) crime novelist.

Marilyn French, 1929-2009, (U.S.) novelist. *The Women's Room*.

Robert Frost, 1874-1963, (U.S.) poet. "Birches," "Fire and Ice," "Stopping by Woods on a Snowy Evening."

William Gaddis, 1922-98, (U.S.) novelist. *The Recognitions*.

John Galsworthy, 1867-1933, (Br.) novelist, dramatist. *The Forsyte Saga*.

Federico Garcia Lorca, 1898-1936, (Sp.) poet, dramatist. *Blood Wedding*.

Erle Stanley Gardner, 1889-1970, (U.S.) mystery writer; created Perry Mason.

Jean Genet, 1911-86, (Fr.) playwright, novelist. *The Maids*.

Kahlil Gibran, 1883-1931, (Leban.-U.S.) mystical novelist, essayist, poet. *The Prophet.*

André Gide, 1869-1951, (Fr.) writer. *The Immoralist*, *The Pastoral Symphony*, *Strait Is the Gate.*

Allen Ginsberg, 1926-97, (U.S.) Beat poet. "Howl."

Jean Giraudoux, 1882-1944, (Fr.) novelist, dramatist. *Electra*, *The Madwoman of Chaillot*, *Ondine*, *Tiger at the Gate.*

Johann Wolfgang von Goethe, 1749-1832, (Ger.) poet, dramatist, novelist. *Faust*, *Sorrows of Young Werther.*

Nikolai Gogol, 1809-52, (Russ.) short-story writer, dramatist, novelist. *Dead Souls*, *The Inspector General.*

William Golding, 1911-93, (Br.) novelist. *Lord of the Flies*.

Oliver Goldsmith, 1728-74, (Br.-Ire.) dramatist, novelist. *The Vicar of Wakefield*, *She Stoops to Conquer.*

Maxim Gorky, 1868-1936, (Russ.) dramatist, novelist. *The Lower Depths*.

Robert Graves, 1895-1985, (Br.) poet, classical scholar, novelist. *I*, *Claudius*; *The White Goddess.*

Thomas Gray, 1716-71, (Br.) poet. "Elegy Written in a Country Churchyard," "The Progress of Poesy."

Julien Green, 1900-98, (U.S.-Fr.) expatriate American, French novelist. *Moira*, *Each Man in His Darkness.*

Graham Greene, 1904-91, (Br.) novelist. *The Power and the Glory*, *The Heart of the Matter*, *The Ministry of Fear.*

Zane Grey, 1872-1939, (U.S.) writer of Western stories.

Jakob, 1785-1863, (Ger.) philologist, folklorist; with brother **Wilhelm Grimm**, 1786-1859, collected *Grimm's Fairy Tales*.

Alex Haley, 1921-92, (U.S.) author. *Roots*.

Dashiell Hammett, 1894-1961, (U.S.) detective-story writer; created Sam Spade. *The Maltese Falcon*.

Jupiter Hammon, c. 1720-1800, (U.S.) poet; first African American to have his works published, 1761.

Knut Hamsun, 1859-1952, (Nor.) novelist. *Hunger*.

Lorraine Hansberry, 1930-65, (U.S.) playwright. *A Raisin in the Sun.*

Thomas Hardy, 1840-1928, (Br.) novelist, poet. *The Return of the Native*, *Tess of the D'Urbervilles*, *Jude the Obscure.*

E. Lynn Harris, 1955-2009, (U.S.) novelist. *Invisible Life*, *Basketball Jones*.

Joel Chandler Harris, 1848-1908, (U.S.) writer. Uncle Remus stories.

Moss Hart, 1904-61, (U.S.) playwright. *Once in a Lifetime*, *You Can't Take It With You*, *The Man Who Came to Dinner.*

Bret Harte, 1836-1902, (U.S.) short-story writer, poet. *The Luck of Roaring Camp.*

Jaroslav Hasek, 1883-1923, (Czech.) writer, playwright. *The Good Soldier Schweik*.

John Hawkes, 1925-98, (U.S.) experimental fiction writer. *The Goose on the Grave*, *Blood Oranges*.

Nathaniel Hawthorne, 1804-64, (U.S.) novelist, short-story writer. *The Scarlet Letter*, "Young Goodman Brown."

Heinrich Heine, 1797-1856, (Ger.) poet. *Book of Songs*.

Robert Heinlein, 1907-88, (U.S.) science fiction writer. *Stranger in a Strange Land*.

Joseph Heller, 1923-99, (U.S.) novelist. *Catch-22*.

Lillian Hellman, 1905-84, (U.S.) playwright, memoirist. *The Little Foxes*, *An Unfinished Woman*, *Pentimento.*

Ernest Hemingway, 1899-1961, (U.S.) novelist, short-story writer. *A Farewell to Arms*, *For Whom the Bell Tolls.*

O. Henry (W. S. Porter), 1862-1910, (U.S.) short-story writer. "The Gift of the Magi."

George Herbert, 1593-1633, (Br.) poet. "The Altar," "Easter Wings."

Zbigniew Herbert, 1924-98, (Pol.) poet. "Apollo and Marsyas."

Robert Herrick, 1591-1674, (Br.) poet. "To the Virgins to Make Much of Time."

John Hersey, 1914-93, (U.S.) novelist, journalist. *Hiroshima*, *A Bell for Adano.*

Hermann Hesse, 1877-1962, (Ger.) novelist, poet. *Death and the Lover*, *Steppenwolf*, *Siddhartha.*

Tony Hillerman, 1925-2008, (U.S.) novelist. *Dance Hall of the Dead*.

James Hilton, 1900-54, (Br.) novelist. *Lost Horizon*.

Chester Himes, 1909-84, (U.S.) novelist. *Cotton Comes to Harlem*.

Oliver Wendell Holmes, 1809-94, (U.S.) poet, novelist. *The Autocrat of the Breakfast-Table.*

Gerard Manley Hopkins, 1844-89, (Br.) poet. "Pied Beauty," "God's Grandeur."

A(lfred) E. Housman, 1859-1936, (Br.) poet. *A Shropshire Lad.*

William Dean Howells, 1837-1920, (U.S.) novelist, critic. *The Rise of Silas Lapham.*

Langston Hughes, 1902-67, (U.S.) poet, lyric writer, author; a major influence in 1920s Harlem Renaissance.

Ted Hughes, 1930-98, (Br.) British poet laureate, 1984-98. *Crow*, *The Hawk in the Rain*.

Victor Hugo, 1802-85, (Fr.) poet, dramatist, novelist. *Notre Dame de Paris*, *Les Misérables.*

Zora Neale Hurston, 1903-60, (U.S.) novelist, folklorist. *Their Eyes Were Watching God*, *Mules and Men.*

Aldous Huxley, 1894-1963, (Br.) writer. *Brave New World.*

Henrik Ibsen, 1828-1906, (Nor.) dramatist, poet. *A Doll's House*, *Ghosts*, *The Wild Duck*, *Hedda Gabler.*

William Inge, 1913-73, (U.S.) playwright. *Picnic*; *Come Back*, *Little Sheba*; *Bus Stop.*

Eugene Ionesco, 1910-94, (Fr.) surrealist dramatist. *The Bald Soprano*, *The Chairs*.

Washington Irving, 1783-1859, (U.S.) writer. "Rip Van Winkle," "The Legend of Sleepy Hollow."

Christopher Isherwood, 1904-86, (Br.) novelist, playwright. *The Berlin Stories*.

Shirley Jackson, 1919-65, (U.S.) short-story writer. "The Lottery."

Henry James, 1843-1916, (U.S.) novelist, short-story writer, critic. *The Portrait of a Lady*, *The Ambassadors*, *Daisy Miller.*

Robinson Jeffers, 1887-1962, (U.S.) poet, dramatist. *Tamar and Other Poems*, *Medea.*

James Weldon Johnson, 1871-1938, (U.S.) poet, novelist, diplomat; lyricist for *Lift Every Voice and Sing*.

Samuel Johnson, 1709-84, (Br.) author, scholar, critic. *Dictionary of the English Language*, *Vanity of Human Wishes.*

Ben Jonson, 1572-1637, (Br.) dramatist, poet. *Volpone*.

James Joyce, 1882-1941, (Ire.) writer. *Ulysses*, *Dubliners*, *A Portrait of the Artist as a Young Man*, *Finnegans Wake.*

Ernst Junger, 1895-1998, (Ger.) novelist, essayist. *The Peace*, *On the Marble Cliff*.

Franz Kafka, 1883-1924, (Aust.-Hung./ Czech.) novelist, short-story writer. *The Trial*, *The Castle*, "The Metamorphosis."

George S. Kaufman, 1889-1961, (U.S.) playwright. *The Man Who Came to Dinner*, *You Can't Take It With You.*

Yasunari Kawabata, 1899-1972, (Jpn.) novelist. *The Sound of the Mountains*.

Nikos Kazantzakis, 1883-1957, (Gr.) novelist. *Zorba the Greek*, *A Greek Passion.*

Alfred Kazin, 1915-98 (U.S.) author, critic, teacher. *On Native Grounds*.

John Keats, 1795-1821, (Br.) poet. "Ode on a Grecian Urn," "Ode to a Nightingale," "La Belle Dame Sans Merci."

Jack Kerouac, 1922-69, (U.S.) author, Beat poet. *On the Road*, *The Dharma Bums*, "Mexico City Blues."

Joyce Kilmer, 1886-1918, (U.S.) poet. "Trees."

Rudyard Kipling, 1865-1936, (Br.) author, poet. "The White Man's Burden," "Gunga Din," *The Jungle Book.*

Jean de la Fontaine, 1621-95, (Fr.) poet. *Fables choisies*.

Pär Lagerkvist, 1891-1974, (Swed.) poet, dramatist, novelist. *Barabbas*, *The Sybil.*

Selma Lagerlöf, 1858-1940, (Swed.) novelist. *Jerusalem*, *The Ring of the Lowen-skolds*.

Alphonse de Lamartine, 1790-1869, (Fr.) poet, novelist, statesman. *Méditations poétiques*.

Charles Lamb, 1775-1834, (Br.) essayist. *Specimens of English Dramatic Poets*, *Essays of Elia.*

Louis L'Amour, 1908-88, (U.S.) western author, screenwriter. *Hondo*, *The Cherokee Trail.*

Giuseppe di Lampedusa, 1896-1957, (It.) novelist. *The Leopard*.

William Langland, c. 1332-1400, (Br.) poet. *Piers Plowman*.

Ring Lardner, 1885-1933, (U.S.) short-story writer, humorist.

Steig Larsson, 1954-2004, (Swed.) novelist. *The Girl with the Dragon Tattoo*.

D(avid) H(erbert) Lawrence, 1885-1930, (Br.) novelist. *Sons and Lovers*, *Women in Love*, *Lady Chatterley's Lover.*

Halldór Laxness, 1902-98, (Iceland) novelist. *Iceland's Bell.*

Madeleine L'Engle, 1918-2007, (U.S.) novelist of young adult fiction. *A Wrinkle in Time*.

Mikhail Lermontov, 1814-41, (Russ.) novelist, poet. "Demon," *Hero of Our Time*.

Alain-René Lesage, 1668-1747, (Fr.) novelist. *Gil Blas de Santillane*.

Gotthold Lessing, 1729-81, (Ger.) dramatist, philosopher, critic. *Miss Sara Sampson*, *Minna von Barnhelm.*

Ira Levin, 1929-2007, (U.S.) novelist, playwright. *Deathtrap*.

C(live) S(taples) Lewis, 1898-1963, (Br.) critic, novelist, religious writer. *Allegory of Love*; *The Lion*, *the Witch and the Wardrobe*; *Out of the Silent Planet*.

Sinclair Lewis, 1885-1951, (U.S.) novelist. *Babbitt*, *Main Street*, *Arrowsmith*, *Dodsworth.*

Vachel Lindsay, 1879-1931, (U.S.) poet. *General William Booth Enters Into Heaven*, *The Congo.*

Li Po, 701-762, (China) poet. "Song Before Drinking," "She Spins Silk."

Hugh Lofting, 1886-1947, (Br.) writer. Dr. Doolittle series.

Jack London, 1876-1916, (U.S.) novelist, journalist. *Call of the Wild*, *The Sea-Wolf*, *White Fang.*

Henry Wadsworth Longfellow, 1807-82, (U.S.) poet. *Evangeline*, *The Song of Hiawatha.*

Lope de Vega, 1562-1635, (Sp.) playwright. *Noche de San Juan*, *Maestro de Danzar*.

H(oward) P(hillips) Lovecraft, 1890-1937, (U.S.) novelist, short-story writer. "At the Mountains of Madness."

Amy Lowell, 1874-1925, (U.S.) poet, critic. "Lilacs."

James Russell Lowell, 1819-91, (U.S.) poet, editor. *Poems*, *The Biglow Papers.*

Robert Lowell, 1917-77, (U.S.) poet. "Lord Weary's Castle."

Joaquim Maria Machado de Assis, 1839-1908, (Brazil) novelist, poet. *The Posthumous Memoirs of Bras Cubas*.

Archibald MacLeish, 1892-1982, (U.S.) poet. *Conquistador*.

Naguib Mahfouz, 1911-2006, (Egypt) novelist; first Arabic-language writer to win the Nobel Prize for Literature. *Cairo Trilogy.*

Norman Mailer, 1923-2007, (U.S.) novelist, essayist, journalist. *The Naked and the Dead.*

Bernard Malamud, 1914-86, (U.S.) short-story writer, novelist. "The Magic Barrel," *The Assistant*, *The Fixer.*

Stéphane Mallarmé, 1842-98, (Fr.) poet. *Poésies*.

Sir Thomas Malory, c. 1410-71, (Br.) writer. *Morte d'Arthur*.

Andre Malraux, 1901-76, (Fr.) novelist. *Man's Fate*.

Osip Mandelstam, 1891-1938, (Russ.) poet. *Stone*, *Tristia.*

Thomas Mann, 1875-1955, (Ger.) novelist, essayist. *Buddenbrooks*, *The Magic Mountain*, "Death in Venice."

Katherine Mansfield, 1888-1923, (Br.) short-story writer. "Bliss."

Christopher Marlowe, 1564-93, (Br.) dramatist, poet. *Tamburlaine the Great*, *Dr. Faustus*, *The Jew of Malta.*

Andrew Marvell, 1621-78, (Br.) poet. "To His Coy Mistress."

John Masefield, 1878-1967, (Br.) poet. "Sea Fever," "Cargoes," *Salt Water Ballads.*

Edgar Lee Masters, 1869-1950, (U.S.) poet, biographer. *Spoon River Anthology.*

W(illiam) Somerset Maugham, 1874-1965, (Br.) author. *Of Human Bondage*, *The Moon and Sixpence*.

Guy de Maupassant, 1850-93, (Fr.) novelist, short-story writer. "A Life," "Bel-Ami," "The Necklace."

François Mauriac, 1885-1970, (Fr.) novelist, dramatist. *Viper's Tangle*, *The Kiss to the Leper.*

Vladimir Mayakovsky, 1893-1930, (Russ.) poet, dramatist. *The Cloud in Trousers*.

Mary McCarthy, 1912-89, (U.S.) critic, novelist, memoirist. *Memories of a Catholic Girlhood.*

Frank McCourt, 1930-2009, (U.S.) memorist. *Angela's Ashes*, *'Tis*, *Teacher Man*.

Carson McCullers, 1917-67, (U.S.) novelist. *The Heart Is a Lonely Hunter*, *Member of the Wedding.*

Herman Melville, 1819-91, (U.S.) novelist, poet. *Moby-Dick*, *Typee*, *Billy Budd*, *Omoo.*

George Meredith, 1828-1909, (Br.) novelist, poet. *The Ordeal of Richard Feverel*, *The Egoist.*

Prosper Mérimée, 1803-70, (Fr.) author. *Carmen.*

James Merrill, 1926-95, (U.S.) poet. *Divine Comedies*.

James Michener, 1907-97, (U.S.) novelist. *Tales of the South Pacific.*

Edna St. Vincent Millay, 1892-1950, (U.S.) poet. *The Harp Weaver and Other Poems.*

Arthur Miller,1915-2005, (U.S.) playwright. *The Crucible*, *After the Fall*, *Death of a Salesman*.

Henry Miller, 1891-1980, (U.S.) erotic novelist. *Tropic of Cancer.*

A(lan) A(lexander) Milne, 1882-1956, (Br.) author. *Winnie-the-Pooh*.

Czeslaw Milosz, 1911-2004, (Pol.) essayist, poet. "Esse," "Encounter."

John Milton, 1608-74, (Br.) poet, writer. *Paradise Lost*, *Comus*, *Lycidas*, *Areopagitica.*

Mishima Yukio (Hiraoka Kimitake) 1925-70, (Jpn.) writer. *Confessions of a Mask*.

Gabriela Mistral, 1889-1957, (Chile) poet. *Sonnets of Death*.

Margaret Mitchell, 1900-49, (U.S.) novelist. *Gone With the Wind*.

Jean Baptiste Molière, 1622-73, (Fr.) dramatist. *Tartuffe*, *Le Misanthrope*, *Le Bourgeois Gentilhomme.*

Ferenc Molnár, 1878-1952, (Hung.) dramatist, novelist. *Liliom*, *The Guardsman*, *The Swan.*

Michel de Montaigne, 1533-92, (Fr.) essayist. *Essais.*

Eugenio Montale, 1896-1981, (It.) poet.

Brian Moore, 1921-99, (Ire.-U.S.) novelist. *The Lonely Passion of Judith Hearne.*

Clement C. Moore, 1779-1863, (U.S.) poet, educator. "A Visit From Saint Nicholas."

Marianne Moore, 1887-1972, (U.S.) poet.

Alberto Moravia, 1907-90, (It.) novelist, short-story writer. *The Time of Indifference*.

Sir Thomas More, 1478-1535, (Br.) writer, statesman, saint. *Utopia*.

Wright Morris, 1910-98, (U.S.) novelist. *My Uncle Dudley*.

Murasaki Shikibu, c. 978-1026, (Jpn.) novelist. *The Tale of Genji.*

Iris Murdoch, 1919-99, (Br.) novelist, philosopher. *The Sea*, *The Sea*.

Alfred de Musset, 1810-57, (Fr.) poet, dramatist. *La Confession d'un Enfant du Siècle*.

Vladimir Nabokov, 1899-1977, (Russ.-U.S.) novelist. *Lolita*, *Pale Fire*.

R. K. Narayan, 1906-2001, (India) novelist. *The Guide*.

Ogden Nash, 1902-71, (U.S.) poet of light verse.

Irène Némirovsky, 1903-42, (Ukraine) novelist. *David Golder*, *Suite Française*.

Pablo Neruda, 1904-73, (Chile) poet. *Twenty Love Poems and One Song of Despair*, *Toward the Splendid City.*

Patrick O'Brian, 1914-2000, (Br.) historical novelist. *Master and Commander*, *Blue at the Mizzen*.

Sean O'Casey, 1884-1964, (Ire.) dramatist. *Juno and the Paycock*, *The Plough and the Stars.*

Flannery O'Connor, 1925-64, (U.S.) novelist, short-story writer. *Wise Blood*, "A Good Man Is Hard to Find."

Frank O'Connor (Michael Donovan), 1903-66, (Ire.) short-story writer. "Guests of a Nation."

Clifford Odets, 1906-63, (U.S.) playwright. *Waiting for Lefty*, *Awake and Sing*, *Golden Boy*, *The Country Girl.*

John O'Hara, 1905-70, (U.S.) novelist, short-story writer. *From the Terrace*, *Appointment in Samarra*, *Pal Joey.*

Omar Khayyam, c. 1028-1122, (Per.) poet. *Rubaiyat*.

Eugene O'Neill, 1888-1953, (U.S.) playwright. *Emperor Jones*, *Anna Christie*, *Long Day's Journey Into Night.*

George Orwell (Eric Arthur Blair), 1903-50, (Br.) novelist, essayist. *Animal Farm*, *Nineteen Eighty-Four.*

John Osborne, 1929-95, (Br.) dramatist, novelist. *Look Back in Anger*, *The Entertainer*.

Wilfred Owen, 1893-1918, (Br.) poet. "Dulce et Decorum Est."

Grace Paley, 1922-2007, (U.S.) short-story writer, poet. *The Little Disturbances of Man*.

Dorothy Parker, 1893-1967, (U.S.) poet, short-story writer. *Enough Rope*, *Laments for the Living*.

Robert B. Parker, 1932-2010, (U.S.) crime novelist. "Spenser" novels.

Boris Pasternak, 1890-1960, (Russ.) poet, novelist. *Doctor Zhivago*.

Alan Paton, 1903-88, (S. Africa) novelist. *Cry, the Beloved Country*.

Octavio Paz, 1914-98, (Mex.) poet, essayist. *The Labyrinth of Solitude*, *They Shall Not Pass!*, *The Sun Stone*.

Samuel Pepys, 1633-1703, (Br.) public official, diarist.

S(idney) J(oseph) Perelman, 1904-79, (U.S.) humorist. *The Road to Miltown*, *Under the Spreading Atrophy.*

Charles Perrault, 1628-1703, (Fr.) writer. *Tales From Mother Goose* (*Sleeping Beauty*, *Cinderella*).

Petrarch (Francesco Petrarca), 1304-74, (It.) poet. *Africa*, *Trionfi, Canzoniere*.

Harold Pinter, 1930-2008, (Br.) playwright. *The Birthday Party*, *The Caretaker*, *The Homecoming*.

Luigi Pirandello, 1867-1936, (It.) novelist, dramatist. *Six Characters in Search of an Author.*

Sylvia Plath, 1932-63, (U.S.) author, poet. *The Bell Jar*.

Edgar Allan Poe, 1809-49, (U.S.) poet, short-story writer, critic. "Annabel Lee," "The Raven," "The Purloined Letter."

Alexander Pope, 1688-1744, (Br.) poet. *The Rape of the Lock*, *The Dunciad*, *An Essay on Man.*

Katherine Anne Porter, 1890-1980, (U.S.) novelist, short-story writer. *Ship of Fools*.

Chaim Potok, 1929-2002, (U.S.) novelist. *The Chosen*.

Ezra Pound, 1885-1972, (U.S.) poet. *Cantos.*

Anthony Powell, 1905-2000, (Br.) novelist. *A Dance to the Music of Time* series.

J(ohn) B(oynton) Priestley, 1894-1984, (Br.) novelist, dramatist. *The Good Companions*.

Marcel Proust, 1871-1922, (Fr.) novelist. *Remembrance of Things Past*.

Aleksandr Pushkin, 1799-1837, (Russ.) poet, novelist. *Boris Godunov*, *Eugene Onegin.*

Mario Puzo, 1920-99, (U.S.) novelist. *The Godfather*.

François Rabelais, 1495-1553, (Fr.) writer. *Gargantua*.

Jean Racine, 1639-99, (Fr.) dramatist. *Andromaque*, *Phèdre*, *Bérénice*, *Britannicus.*

Ayn Rand, 1905-82, (Russ.-U.S.) novelist, moral theorist. *The Fountainhead*, *Atlas Shrugged.*

Terence Rattigan, 1911-77, (Br.) playwright. *Separate Tables*, *The Browning Version*.

Erich Maria Remarque, 1898-1970, (Ger.-U.S.) novelist. *All Quiet on the Western Front.*

Samuel Richardson, 1689-1761, (Br.) novelist. *Pamela*; *or Virtue Rewarded.*

Rainer Maria Rilke, 1875-1926, (Ger.) poet. *Life and Songs*, *Duino Elegies*, *Poems From the Book of Hours.*

Arthur Rimbaud, 1854-91, (Fr.) poet. *A Season in Hell.*

Edwin Arlington Robinson, 1869-1935, (U.S.) poet. "Richard Cory," "Miniver Cheevy," *Merlin*.

Theodore Roethke, 1908-63, (U.S.) poet. *Open House*, *The Waking*, *The Far Field.*

Romain Rolland, 1866-1944, (Fr.) novelist, biographer. *Jean-Christophe.*

Pierre de Ronsard, 1524-85, (Fr.) poet. *Sonnets pour Hélène*, *La Franciade.*

Christina Rossetti, 1830-94, (Br.) poet. "When I Am Dead, My Dearest."

Dante Gabriel Rossetti, 1828-82, (Br.) poet, painter. "The Blessed Damozel."

Edmond Rostand, 1868-1918, (Fr.) poet, dramatist. *Cyrano de Bergerac*.

Damon Runyon, 1880-1946, (U.S.) short-story writer, journalist. *Guys and Dolls*, *Blue Plate Special*.

John Ruskin, 1819-1900, (Br.) critic, social theorist. *Modern Painters*, *The Seven Lamps of Architecture*.

François Sagan (Françoise Quoirez), 1935-2004, (Fr.) novelist. *Bonjour Tristesse.*

Antoine de Saint-Exupéry, 1900-44, (Fr.) writer. *Wind*, *Sand and Stars*; *The Little Prince*.

Saki (or H[ector] H[ugh] Munro), 1870-1916, (Br.) writer. *The Chronicles of Clovis.*

J. D. Salinger, 1919-2010, (U.S.) novelist. *The Catcher in the Rye*.

George Sand (Amandine Lucie Aurore Dupin), 1804-76, (Fr.) novelist. *Indiana*, *Consuelo*.

Carl Sandburg, 1878-1967, (U.S.) poet. *The People*, *Yes*; *Chicago Poems*; *Smoke and Steel*; *Harvest Poems.*

Jose Saramago, 1922-2010, (Port.) novelist. *Blindness*.

William Saroyan, 1908-81, (U.S.) playwright, novelist. *The Time of Your Life*, *The Human Comedy.*

Nathalie Sarraute, 1900-99, (Fr.) Nouveau Roman novelist. *Tropismes*.

May Sarton, 1914-95, (Belg.-U.S.) poet, novelist. *Encounter in April*, *Anger*.

Dorothy L. Sayers, 1893-1957, (Br.) mystery writer; created Lord Peter Wimsey.

Richard Scarry, 1920-94, (U.S.) author of children's books. *Richard Scarry's Best Story Book Ever*.

Friedrich von Schiller, 1759-1805, (Ger.) dramatist, poet, historian. *Don Carlos*, *Maria Stuart*, *Wilhelm Tell.*

Sir Walter Scott, 1771-1832, (Sc.) novelist, poet. *Ivanhoe.*

Jaroslav Seifert, 1902-86, (Czech.) poet.

Dr. Seuss (Theodor Seuss Geisel), 1904-91, (U.S.) children's book author and illustrator. *The Cat in the Hat.*

William Shakespeare, 1564-1616, (Br.) dramatist, poet. *Romeo and Juliet*, *Hamlet*, *King Lear*, *Julius Caesar*, sonnets.

Karl Shapiro, 1913-2000, (U.S.) poet. "Elegy for a Dead Soldier."

George Bernard Shaw, 1856-1950, (Ire.- Br.) playwright, critic. *St. Joan*, *Pygmalion*, *Major Barbara*, *Man and Superman.*

Sidney Sheldon, 1917-2007, (U.S.) screenwriter, novelist. *Rage of Angels*, *Memories of Midnight*.

Mary Wollstonecraft Shelley, 1797-1851, (Br.) novelist, feminist. *Frankenstein*, *The Last Man.*

Percy Bysshe Shelley, 1792-1822, (Br.) poet. *Prometheus Unbound*, *Adonais*, "Ode to the West Wind," "To a Skylark."

Richard B. Sheridan, 1751-1816, (Br.) dramatist. *The Rivals*, *School for Scandal*.

Robert Sherwood, 1896-1955, (U.S.) playwright, biographer. *The Petrified Forest*, *Abe Lincoln in Illinois*.

Mikhail Sholokhov, 1906-84, (Russ.) writer. *The Silent Don*.

Shel Silverstein, 1932-99, (U.S.) poet, writer. *The Giving Tree*, *Where the Sidewalk Ends*.

Georges Simenon (Georges Sims), 1903-89, (Belg.-Fr.) mystery writer; created Inspector Maigret.

Upton Sinclair, 1878-1968, (U.S.) novelist. *The Jungle*.

Isaac Bashevis Singer, 1904-91, (Pol.-U.S.) novelist, short-story writer, in Yiddish. *The Magician of Lublin.*

C(harles) P(ercy) Snow, 1905-80, (Br.) novelist, scientist. *Strangers and Brothers*, *Corridors of Power*.

Aleksandr Solzhenitsyn, 1918-2008, (Russ.) novelist, dramatist. *One Day in the Life of Ivan Denisovich*.

Susan Sontag, 1933-2004, (U.S.) critic, essayist, novelist. *Notes on Camp*, *The Volcano Lover*, *In America*.

Stephen Spender, 1909-95, (Br.) poet, critic, novelist. *Twenty Poems*, "Elegy for Margaret."

Edmund Spenser, 1552-99, (Br.) poet. *The Faerie Queen*.

Mickey Spillane, 1918-2006, (U.S.) novelist; series of novels with the character detective Mike Hammer. *The Killing Man*.

Johanna Spyri, 1827-1901, (Switz.) children's author. *Heidi*.

Christina Stead, 1903-83, (Austral.) novelist, short-story writer. *The Man Who Loved Children.*

Richard Steele, 1672-1729, (Br.) essayist, playwright; began the *Tatler* and *Spectator.The Conscious Lovers.*

Gertrude Stein, 1874-1946, (U.S.) writer. *Three Lives.*

John Steinbeck, 1902-68, (U.S.) novelist. *The Grapes of Wrath*, *Of Mice and Men*, *The Winter of Our Discontent.*

Stendhal (Marie Henri Beyle), 1783-1842, (Fr.) novelist. *The Red and the Black*, *The Charterhouse of Parma.*

Laurence Sterne, 1713-68, (Br.) novelist. *Tristram Shandy*.

Wallace Stevens, 1879-1955, (U.S.) poet. *Harmonium*, *The Man With the Blue Guitar*, *Notes Toward a Supreme Fiction.*

Robert Louis Stevenson, 1850-94, (Br.) novelist, poet, essayist. *Treasure Island*, *A Child's Garden of Verses.*

Bram Stoker, 1847-1912, (Br.) writer. *Dracula.*

Rex Stout, 1886-1975, (U.S.) mystery writer; created Nero Wolfe.

Harriet Beecher Stowe, 1811-96, (U.S.) novelist. *Uncle Tom's Cabin*.

Lytton Strachey, 1880-1932, (Br.) biographer, critic. *Eminent Victorians, Queen Victoria*, *Elizabeth and Essex.*

August Strindberg, 1849-1912, (Swed.) dramatist, novelist. *The Father*, *Miss Julie*, *The Creditors.*

William Styron, 1925-2006, (U.S.) novelist, essayist. *The Confessions of Nat Turner*, *Sophie's Choice*, *Darkness Visible: A Memoir of Madness*.

Jonathan Swift, 1667-1745, (Br.) satirist, poet. *Gulliver's Travels*, "A Modest Proposal."

Algernon C. Swinburne, 1837-1909, (Br.) poet, dramatist. *Atalanta in Calydon*.

John M. Synge, 1871-1909, (Ire.) poet, dramatist. *Riders to the Sea*, *The Playboy of the Western World.*

Rabindranath Tagore, 1861-1941, (In.) author, poet. *Sadhana*, *The Realization of Life*, *Gitanjali.*

Booth Tarkington, 1869-1946, (U.S.) novelist. *Seventeen*.

Peter Taylor, 1917-94, (U.S.) novelist. A *Summons to Memphis.*

Sara Teasdale, 1884-1933, (U.S.) poet. *Helen of Troy and Other Poems*, *Rivers to the Sea.*

Alfred, Lord Tennyson, 1809-92, (Br.) poet. *Idylls of the King*, *In Memoriam*, "The Charge of the Light Brigade."

William Makepeace Thackeray, 1811-63, (Br.) novelist. *Vanity Fair*, *Henry Esmond*, *Pendennis.*

Dylan Thomas, 1914-53, (Wales) poet. *Under Milk Wood*, *A Child's Christmas in Wales.*

Hunter S. Thompson, 1937-2005, (U.S.) author, journalist. *Hell's Angels*, *Fear and Loathing in Las Vegas*.

Henry David Thoreau, 1817-62, (U.S.) writer, philosopher, naturalist. *Walden*, "Civil Disobedience."

James Thurber, 1894-1961, (U.S.) humorist. "The Secret Life of Walter Mitty," *My Life and Hard Times*.

J(ohn) R(onald) R(euel) Tolkien, 1892-1973, (Br.) writer. *The Hobbit*, *Lord of the Rings* trilogy.

Leo Tolstoy, 1828-1910, (Russ.) novelist, short-story writer. *War and Peace*, *Anna Karenina*, "The Death of Ivan Ilyich."

Lionel Trilling, 1905-75, (U.S.) critic, author, teacher. *The Liberal Imagination*.

Anthony Trollope, 1815-82, (Br.) novelist. *The Warden*, *Barchester Towers*, the Palliser novels.

Ivan Turgenev, 1818-83, (Russ.) novelist, short-story writer. *Fathers and Sons*, *First Love*, *A Month in the Country.*

Amos Tutuola, 1920-97, (Nigeria) novelist. *The Palm-Wine Drunkard*, *My Life in the Bush of Ghosts.*

Mark Twain (Samuel Clemens), 1835-1910, (U.S.) novelist, humorist. *The Adventures of Huckleberry Finn*.

Sigrid Undset, 1881-1949, (Nor.) novelist. *Kristin Lavransdatter*.

John Updike, 1932-2009, (U.S.) novelist, literary critic. *Rabbit Is Rich*, *The Witches of Eastwick*.

Paul Valéry, 1871-1945, (Fr.) poet, critic. *La Jeune Parque*, *The Graveyard by the Sea.*

Paul Verlaine, 1844-96, (Fr.) Symbolist poet. *Songs Without Words*.

Jules Verne, 1828-1905, (Fr.) novelist. *Twenty Thousand Leagues Under the Sea.*

François Villon, 1431-c. 1463, (Fr.) poet. *The Lays*, *The Grand Testament.*

Voltaire (F. M. Arouet), 1694-1778, (Fr.) writer of "philosophical romances"; philosopher, historian. *Candide*.

Kurt Vonnegut Jr., 1922-2007, (U.S.) novelist, essayist. *Cat's Cradle*, *Slaughterhouse-Five*, *Breakfast of Champions*.

David Foster Wallace, 1962-2008, (U.S.) novelist, essayist. *Infinite Jest*, *A Supposedly Fun Thing I'll Never Do Again*.

Robert Penn Warren, 1905-89, (U.S.) novelist, poet, critic. *All the King's Men*.

Wendy Wasserstein, 1950-2006, (U.S.) playwright. *The Heidi Chronicles*.

Evelyn Waugh, 1903-66, (Br.) novelist. *The Loved One*, *Brideshead Revisited*, *A Handful of Dust*.

H(erbert) G(eorge) Wells, 1866-1946, (Br.) novelist. *The Time Machine*, *The Invisible Man*, *The War of the Worlds.*

Eudora Welty, 1909-2001, (U.S.) Southern short story writer, novelist. "Why I Live at the P.O.", "The Ponder Heart."

Rebecca West, 1893-1983, (Br.) novelist, critic, journalist. *Black Lamb and Grey Falcon.*

Edith Wharton, 1862-1937, (U.S.) novelist. *The Age of Innocence*, *The House of Mirth*, *Ethan Frome*.

Phillis Wheatley, c. 1753-84, (U.S.) poet; 2nd American woman and first black woman to be published, 1770.

E(lwyn) B(rooks) White, 1899-1985, (U.S.) essayist, novelist. *Charlotte's Web*, *Stuart Little*.

Patrick White, 1912-90, (Austral.) novelist. *The Tree of Man*.

T(erence) H(anbury) White, 1906-64, (Br.) author. *The Once and Future King*, *A Book of Beasts*.

Walt Whitman, 1819-92, (U.S.) poet. *Leaves of Grass.*

John Greenleaf Whittier, 1807-92, (U.S.) poet, journalist. *Snow-Bound*.

Oscar Wilde, 1854-1900, (Ire.) novelist, playwright. *The Picture of Dorian Gray*, *The Importance of Being Earnest*.

Laura Ingalls Wilder, 1867-1957, (U.S.) novelist. Little House on the Prairie series of children's books.

Thornton Wilder, 1897-1975, (U.S.) playwright. *Our Town*, *The Skin of Our Teeth*, *The Matchmaker*.

Tennessee Williams, 1911-83, (U.S.) playwright. *A Streetcar Named Desire*, *Cat on a Hot Tin Roof*, *The Glass Menagerie.*

William Carlos Williams, 1883-1963, (U.S.) poet, physician. *Tempers*, *Al Que Quiere! Paterson*, "This Is Just to Say."

Edmund Wilson, 1895-1972, (U.S.) critic, novelist. *Axel's Castle*, *To the Finland Station*.

P(elham) G(renville) Wodehouse, 1881-1975, (Br.-U.S.) humorist. "Jeeves" novels, *Anything Goes.*

Thomas Wolfe, 1900-38, (U.S.) novelist. *Look Homeward*, *Angel*; *You Can't Go Home Again.*

Virginia Woolf, 1882-1941, (Br.) novelist, essayist. *Mrs. Dalloway*, *To the Lighthouse*, *A Room of One's Own.*

William Wordsworth, 1770-1850, (Br.) poet. "Tintern Abbey," "Ode: Intimations of Immortality," *The Prelude.*

Richard Wright, 1908-60, (U.S.) novelist, short-story writer. *Native Son*, *Black Boy*, *Uncle Tom's Children*.

Elinor Wylie, 1885-1928, (U.S.) poet. *Nets to Catch the Wind*.

William Butler Yeats, 1865-1939, (Ire.) poet, playwright. "The Second Coming," *The Wild Swans at Coole.*

Frank Yerby, 1916-91, (U.S.) first best-selling African American novelist. *The Foxes of Harrow*.

Émile Zola, 1840-1902, (Fr.) novelist. *Nana*, *Thérese Raquin*.

Poets Laureate

There is no record of the origin of the office of Poet Laureate of England. Henry III (1216-72) reportedly had a Versificator Regis, or King's Poet, paid 100 shillings per year. Other poets said to have filled the role include Geoffrey Chaucer (d 1400), Edmund Spenser (d 1599), Ben Jonson (d 1637), and Sir William d'Avenant (d 1668). The first official English poet laureate was John Dryden, appointed 1668, for life (as was customary). Then came Thomas Shadwell, in 1689; Nahum Tate, 1692; Nicholas Rowe, 1715; Rev. Laurence Eusden, 1718; Colley Cibber, 1730; William Whitehead, 1757; Rev. Thomas Warton, 1785; Henry James Pye, 1790; Robert Southey, 1813; William Wordsworth, 1843; Alfred, Lord Tennyson, 1850; Alfred Austin, 1896; Robert Bridges, 1913; John Masefield, 1930; C. Day Lewis, 1968; Sir John Betjeman, 1972; Ted Hughes, 1984; Andrew Motion, 1999; Carol Ann Duffy, 2009.

In the U.S., appointment is by the Librarian of Congress and is not for life: Robert Penn Warren, appointed 1986; Richard Wilbur, 1987; Howard Nemerov, 1988; Mark Strand, 1990; Joseph Brodsky, 1991; Mona Van Duyn, 1992; Rita Dove, 1993; Robert Hass, 1995; Robert Pinsky, 1997; Stanley Kunitz, 2000; Billy Collins, 2001; Louise Gluck, 2003; Ted Kooser, 2004; Donald Hall, 2006; Charles Simic, 2007; Kay Ryan, 2008; W. S. Merwin, 2010.

Composers of Classical and Avant Garde Music

John Adams, b 1947, (U.S.) *Nixon in China*, *The Death of Klinghoffer*.

Carl Philipp Emanuel Bach, 1714-88, (Ger.) cantatas, passions, numerous keyboard and instrumental works.

Johann Christian Bach, 1735-82, (Ger.) concertos, operas, sonatas. Known as the "English" Bach.

Johann Sebastian Bach, 1685-1750, (Ger.) *St. Matthew Passion*, *The Well-Tempered Clavier*.

Samuel Barber, 1910-81, (U.S.) *Adagio for Strings*, *Vanessa*.

Béla Bartók, 1881-1945, (Hung.) *Concerto for Orchestra*, *The Miraculous Mandarin*.

Amy Beach (Mrs. H. H. A. Beach), 1867-1944, (U.S.) *The Year's at the Spring*, *Fireflies*, *The Chambered Nautilus*.

Ludwig van Beethoven, 1770-1827, (Ger.) concertos (*Emperor*), sonatas (*Moonlight*, *Pathetique*), 9 symphonies.

Vincenzo Bellini, 1801-35, (It.) *I Puritani*, *La Sonnambula*, *Norma*.

Alban Berg, 1885-1935, (Austria) *Wozzeck*, *Lulu*.

Hector Berlioz, 1803-69, (Fr.) *Damnation of Faust*, *Symphonie Fantastique*, *Requiem*.

Leonard Bernstein, 1918-90, (U.S.) *Chichester Psalms*, *Jeremiah Symphony*, *Mass*.

Georges Bizet, 1838-75, (Fr.) *Carmen*, *Pearl Fishers*.

Ernest Bloch, 1880-1959, (Switz.-U.S.) *Macbeth* (opera), *Schelomo*, *Voice in the Wilderness*.

Luigi Boccherini, 1743-1805, (It.) chamber music and guitar pieces.

Alexander Borodin, 1833-87, (Russ.) *Prince Igor*, *In the Steppes of Central Asia*, *Polovtzian Dances*.

Pierre Boulez, b 1925, (Fr.) *Le Visage* nuptial, *Edats/Multiple*, *Domaines*.

Johannes Brahms, 1833-97, (Ger.) Liebeslieder Waltzes, *Acad. Festival Overture*, chamber music, 4 symphonies.

Henry Brant, 1913-2008, (Can.) spatial music.

Benjamin Britten, 1913-76, (Br.) *Peter Grimes*, *Turn of the Screw*, *A Ceremony of Carols*, *War Requiem*.

Anton Bruckner, 1824-96, (Austria) 9 symphonies.

Dietrich Buxtehude, 1637-1707, (Den.) organ works, vocal music.

William Byrd, 1543-1623, (Br.) masses, motets.

John Cage, 1912-92, (U.S.) *Winter Music*, *Fontana Mix*.

Elliott Carter, b 1908, (U.S.) *Second String Quartet*, *Third String Quartet*.

Emmanuel Chabrier, 1841-94, (Fr.) *Le Roi Malgré Lui*, *España*.

Gustave Charpentier, 1860-1956, (Fr.) *Louise*.

Frédéric Chopin, 1810-49, (Pol.) mazurkas, waltzes, etudes, nocturnes, polonaises, sonatas.

Aaron Copland, 1900-90, (U.S.) *Appalachian Spring*, *Fanfare for the Common Man*, *Lincoln Portrait*.

Claude Debussy, 1862-1918, (Fr.) *Pelleas et Melisande*, *La Mer*, *Prelude to the Afternoon of a Faun*.

David Del Tredici, b 1937, (U.S.) *Child Alice, In Memory of a Summer Day*.

Gaetano Donizetti, 1797-1848, (It.) *Elixir of Love*, *Lucia di Lammermoor*, *Daughter of the Regiment*.

Paul Dukas, 1865-1935, (Fr.) *Sorcerer's Apprentice*.

Antonin Dvorak, 1841-1904, (Czech.) *Songs My Mother Taught Me*, *Symphony in E Minor (From the New World)*.

Edward Elgar, 1857-1934, (Br.) *Enigma Variations*, *Pomp and Circumstance*.

Manuel de Falla, 1876-1946, (Sp.) *El Amor Brujo*, *La Vida Breve*, *The Three-Cornered Hat*.

Gabriel Faurè, 1845-1924, (Fr.) *Requiem*, Elègie for Cello and Piano.

Cesar Franck, 1822-90, (Belg.) Symphony in D minor, Violin Sonata.

George Gershwin, 1898-1937, (U.S.) *Rhapsody in Blue*, *An American in Paris*, *Porgy and Bess*.

Philip Glass, b 1937, (U.S.) *Einstein on the Beach*, *The Voyage*.

Mikhail Glinka, 1804-57, (Russ.) *A Life for the Tsar*, *Ruslan and Ludmilla*.

Christoph W. Gluck, 1714-87, (Ger.) *Alceste*, *Iphigènie en Tauride*.

Charles Gounod, 1818-93, (Fr.) *Faust*, *Romeo and Juliet*.

Edvard Grieg, 1843-1907, (Nor.) *Peer Gynt Suite*, Concerto in A minor for piano.

George Frideric Handel, 1685-1759, (Ger.-Br.) *Messiah*, *Water Music*.

Howard Hanson, 1896-1981, (U.S.) Symphonies No. 1 (Nordic) and No. 2 (Romantic).

Roy Harris, 1898-1979, (U.S.) symphonies.

(Franz) Joseph Haydn, 1732-1809, (Austria) symphonies (*Clock*, *London*, *Toy*), chamber music, oratorios.

Paul Hindemith, 1895-1963, (U.S.) *Mathis der Maler*.

Gustav Holst, 1874-1934, (Br.) *The Planets*.

Arthur Honegger, 1892-1955, (Fr.) *Judith*, *Le Roi David*, *Pacific 231*.

Alan Hovhaness, 1911-2000, (U.S.) symphonies, *Magnificat*.

Engelbert Humperdinck, 1854-1921, (Ger.) *Hansel and Gretel*.

Charles Ives, 1874-1954, (U.S.) *Concord Sonata*, symphonies.

Aram Khachaturian, 1903-78, (Russ.) ballets, piano pieces, *Sabre Dance*.

Zoltán Kodaly, 1882-1967, (Hung.) *Háry János*, *Psalmus Hungaricus*.

Fritz Kreisler, 1875-1962, (Austria) *Caprice Viennois*, *Tambourin Chinois*.

Edouard Lalo, 1823-92, (Fr.) *Symphonie Espagnole*.

David Lang, b 1957, (U.S.) *The Little Match Girl Passion*.

Morten Lauridsen, 1943 (U.S.) *Lux Aeterna*.

Ruggero Leoncavallo, 1857-1919, (It.) *Pagliacci*.

Franz Liszt, 1811-86, (Hung.) 20 Hungarian rhapsodies, symphonic poems.

Edward MacDowell, 1861-1908, (U.S.) *To a Wild Rose*.

Gustav Mahler, 1860-1911, (Austria) *Das Lied von der Erde*; 9 complete symphonies.

Pietro Mascagni, 1863-1945, (It.) *Cavalleria Rusticana*.

Jules Massenet, 1842-1912, (Fr.) *Manon*, *Le Cid*, *Thaïs*.

Felix Mendelssohn, 1809-47, (Ger.) *A Midsummer Night's Dream*, *Songs Without Words*, violin concerto.

Gian Carlo Menotti, 1911-2007, (It.-U.S.) *The Medium*, *The Consul*, *Amahl and the Night Visitors*.

Claudio Monteverdi, 1567-1643, (It.) opera, masses, madrigals.

Wolfgang Amadeus Mozart, 1756-91, (Austria) chamber music, concertos, operas (*Magic Flute*, *Marriage of Figaro*), 41 symphonies.

Modest Mussorgsky, 1839-81, (Russ.) *Boris Godunov*, *Pictures at an Exhibition*.

Jacques Offenbach, 1819-80, (Fr.) *Tales of Hoffmann*.

Carl Orff, 1895-1982, (Ger.) *Carmina Burana*.

Johann Pachelbel, 1653-1706, (Ger.) Canon and Fugue in D major.

Ignacy Paderewski, 1860-1941, (Pol.) Minuet in G.

Niccolò Paganini, 1782-1840, (It.) Caprices for violin solo.

Giovanni Palestrina, c. 1525-94, (It.) masses, madrigals.

Krzysztof Penderecki, b 1933, (Pol.) *Psalmus*, *Polymorphia*, *De natura sonoris*.

Francis Poulenc, 1899-1963, (Fr.) *Dialogues des Carmèlites*.

Mel Powell, 1923-98, (U.S.) *Duplicates: A Concerto for Two Pianos and Orchestra*, *Cantilena Concertante*.

Sergei Prokofiev, 1891-1953, (Russ.) Classical Symphony, *Love for Three Oranges*, *Peter and the Wolf*.

Giacomo Puccini, 1858-1924, (It.) *La Boheme*, *Manon Lescaut*, *Tosca*, *Madama Butterfly*.

Henry Purcell, 1659-95, (Eng.) *Dido and Aeneas*.

Sergei Rachmaninoff, 1873-1943, (Russ.) concertos, preludes (Prelude in C sharp minor), symphonies.

Maurice Ravel, 1875-1937, (Fr.) *Bolèro*, *Daphnis et Chloè*, Piano Concerto in D for Left Hand Alone.

Steve Reich, b 1936, (U.S.) *Double Sextet*, *Three Tales*.

Nikolai Rimsky-Korsakov, 1844-1908, (Russ.) *Golden Cockerel*, *Scheherazade*, *Flight of the Bumblebee*.

Gioacchino Rossini, 1792-1868, (It.) *Barber of Seville*, *Otello*, *William Tell*.

John Rutter, b 1945, (Br.) *Magnificat*, *Requiem*.

Camille Saint-Saëns, 1835-1921, (Fr.) *Carnival of Animals (The Swan)*, *Samson and Delilah*, *Danse Macabre*.

Alessandro Scarlatti, 1660-1725, (It.) cantatas, oratorios, operas.

Domenico Scarlatti, 1685-1757, (It.) harpsichord works.

Alfred Schnittke, 1934-98 (Sov.-Ger.) *Life With an Idiot*.

Arnold Schoenberg, 1874-1951, (Austria) *Pelleas and Melisande*, *Pierrot Lunaire*, *Verklärte Nacht*.

Franz Schubert, 1797-1828, (Austria) chamber music (*Trout Quintet*), lieder, symphonies (Unfinished).

Robert Schumann, 1810-56, (Ger.) *Die Frauenliebe und Leben*, *Träumerei*.

Dmitri Shostakovich, 1906-75, (Russ.) symphonies, *Lady Macbeth of the District Mzensk*.

Jean Sibelius, 1865-1957, (Fin.) *Finlandia*.

Bedrich Smetana, 1824-84, (Czech.) *The Bartered Bride*.

Karlheinz Stockhausen, 1928-2008, (Ger.) *Kontra-Punkte*, *Kontakte for Electronic Instruments*.

Richard Strauss, 1864-1949, (Ger.) *Salome*, *Elektra*, *Der Rosenkavalier*, *Thus Spake Zarathustra*.

Igor Stravinsky, 1882-1971, (Russ.) *Noah and the Flood*, *The Rake's Progress*, *The Rite of Spring*.

Toru Takemitsu, 1930-96, (Jpn.) *Requiem for Strings*, *Dorian Horizon*.

Peter I. Tchaikovsky, 1840-93, (Russ.) *Nutcracker*, *Swan Lake*, *The Sleeping Beauty*.

Georg Philipp Telemann, 1681-1767, (Ger.) church music, orchestral suites, chamber music.

Virgil Thomson, 1896-1989, (U.S.) opera, film music, *Four Saints in Three Acts*.

Dmitri Tiomkin, 1894-1979, (Russ.-U.S.) film scores, including *High Noon*.

Sir Michael Tippett, 1905-98, (Br.) *A Child of Our Time*, *The Midsummer Marriage*, *The Knot Garden*.

Eric Whitacre, b 1970 (U.S.) *Cloudburst*.

Ralph Vaughan Williams, 1872-1958, (Br.) *Fantasia on a Theme by Thomas Tallis*, symphonies, vocal music.

Giuseppe Verdi, 1813-1901, (It.) *Aida*, *Rigoletto*, *Don Carlo*, *Il Trovatore*, *La Traviata*, *Falstaff*, *Macbeth*.

Heitor Villa-Lobos, 1887-1959, (Brazil) *Bachianas Brasileiras*.

Antonio Vivaldi, 1678-1741, (It.) Concerto grossos (*The Four Seasons*).

Richard Wagner, 1813-83, (Ger.) *Rienzi*, *Tannhäuser*, *Lohengrin*, *Tristan und Isolde*.

Carl Maria von Weber, 1786-1826, (Ger.) *Der Freischutz*.

Composers of Operettas, Musicals, and Popular Music

Richard Adler, b 1921, (U.S.) *Pajama Game*; *Damn Yankees*.

Milton Ager, 1893-1979, (U.S.) "I Wonder What's Become of Sally"; "Hard-Hearted Hannah"; "Ain't She Sweet?"

Leroy Anderson, 1908-75, (U.S.) "Sleigh Ride"; "Blue Tango"; "Syncopated Clock."

Paul Anka, b 1941, (Can.) "My Way"; *Tonight Show* theme.

Harold Arlen, 1905-86, (U.S.) "Stormy Weather"; "Over the Rainbow"; "Blues in the Night"; "That Old Black Magic."

Burt Bacharach, b 1928, (U.S.) "Raindrops Keep Fallin' on My Head"; "Walk on By"; "What the World Needs Now Is Love."

Ernest Ball, 1878-1927, (U.S.) "Mother Machree"; "When Irish Eyes Are Smiling."

Irving Berlin, 1888-1989, (U.S.) *Annie Get Your Gun*; *Call Me Madam*; "God Bless America"; "White Christmas."

Leonard Bernstein, 1918-90, (U.S.) *On the Town*; *Wonderful Town*; *Candide*; *West Side Story*.

Eubie Blake, 1883-1983, (U.S.) *Shuffle Along*; "I'm Just Wild About Harry."
Jerry Bock, b 1928, (U.S.) *Mr. Wonderful*; *Fiorello*; *Fiddler on the Roof*; *The Rothschilds*.
Carrie Jacobs Bond, 1862-1946, (U.S.) "I Love You Truly."
Nacio Herb Brown, 1896-1964, (U.S.) "Singing in the Rain"; "You Were Meant for Me"; "All I Do Is Dream of You."
Hoagy Carmichael, 1899-1981, (U.S.) "Stardust"; "Georgia on My Mind"; "Old Buttermilk Sky."
James Cleveland, 1931-91, (U.S.) composer, musician, singer; first black gospel artist to appear at Carnegie Hall.
George M. Cohan, 1878-1942, (U.S.) "Give My Regards to Broadway"; "You're a Grand Old Flag"; "Over There."
Cy Coleman, 1929-2004, (U.S.) *Sweet Charity*; "Witchcraft."
John Frederick Coots, 1895-1985, (U.S.) "Santa Claus Is Coming to Town"; "You Go to My Head"; "For All We Know."
Noel Coward, 1899-1973, (Br.) *Bitter Sweet*; "Mad Dogs and Englishmen"; "Mad About the Boy."
Neil Diamond, b 1941, (U.S.) "I'm a Believer"; "Sweet Caroline."
Walter Donaldson, 1893-1947, (U.S.) "My Buddy"; "Carolina in the Morning"; "Makin' Whoopee."
Vernon Duke, 1903-69, (U.S.) "April in Paris."
Bob Dylan, b 1941, (U.S.) "Blowin' in the Wind"; "Like a Rolling Stone."
Gus Edwards, 1879-1945, (U.S.) "School Days"; "By the Light of the Silvery Moon"; "In My Merry Oldsmobile."
Sherman Edwards, 1919-81, (U.S.) "See You in September"; "Wonderful! Wonderful!"
Duke Ellington, 1899-1974, (U.S.) "Sophisticated Lady"; "Satin Doll"; "It Don't Mean a Thing"; "Solitude."
Sammy Fain, 1902-89, (U.S.) "I'll Be Seeing You"; "Love Is a Many-Splendored Thing."
Fred Fisher, 1875-1942, (U.S.) "Peg O' My Heart"; "Chicago."
Stephen Collins Foster, 1826-64, (U.S.) "My Old Kentucky Home"; "Old Folks at Home"; "Beautiful Dreamer."
Rudolf Friml, 1879-1972, (Czech.-U.S.) *The Firefly*; *Rose Marie*; *Vagabond King*; *Bird of Paradise*.
John Gay, 1685-1732, (Br.) *The Beggar's Opera*.
George Gershwin, 1898-1937, (U.S.) "Someone to Watch Over Me"; "I've Got a Crush on You"; "Embraceable You."
Morton Gould, 1913-96, (U.S.) "Fall River Suite"; "Holocaust Suite"; "Spirituals for Orchestra"; "Stringmusic."
Ferde Grofe, 1892-1972, (U.S.) "Grand Canyon Suite."
Marvin Hamlisch, b 1944, (U.S.) "The Way We Were"; "Nobody Does It Better"; *A Chorus Line*.
Ray Henderson, 1896-1970, (U.S.) *George White's Scandals*; "That Old Gang of Mine"; "Five Foot Two, Eyes of Blue."
Victor Herbert, 1859-1924, (Ire.-U.S.) *Mlle. Modiste*; *Babes in Toyland*; *The Red Mill*; *Naughty Marietta*; *Sweethearts*.
Jerry Herman, b 1931, (U.S.) *Hello Dolly*; *Mame*.
Brian Holland, b 1941, **Lamont Dozier**, b 1941, **Eddie Holland**, b 1939, (all U.S.) "Heat Wave"; "Stop! In the Name of Love"; "Baby, I Need Your Loving."
Rupert Holmes, b 1947, (Eng.-U.S.) *The Mystery of Edwin Drood*; *Curtains*.
Antonio Carlos Jobim, 1927-94, (Brazil) "The Girl from Ipanema"; "Desafinado"; "One Note Samba."
Billy Joel (William Martin), b 1949, (U.S.) "Just the Way You Are"; "Honesty"; "Piano Man."
Elton John, b 1947, (Br.) *The Lion King*; "Candle in the Wind"; "Your Song."
Scott Joplin, 1868-1917, (U.S.) Maple Leaf Rag; *Treemonisha*.
John Kander, b 1927, (U.S.) *Cabaret*; *Chicago*; *Funny Lady*.
Jerome Kern, 1885-1945, (U.S.) *Sally*; *Sunny*; *Show Boat*.
Carole King, b 1942, (U.S.) "Will You Love Me Tomorrow?"; "Natural Woman"; "One Fine Day"; "Up on the Roof."
Burton Lane, 1912-97, (U.S.) *Finian's Rainbow*.
Jonathan Larson, 1960-96, (U.S.) *tick, tick... BOOM!*; *Rent*.
Franz Lehar, 1870-1948, (Hung.) *Merry Widow*.
Jerry Leiber and **Mike Stoller**, both b 1933, (both U.S.) "Hound Dog"; "Searchin'"; "Yakety Yak"; "Love Me Tender."
Mitch Leigh, b 1928, (U.S.) *Man of La Mancha*.
John Lennon, 1940-80, and **Paul McCartney**, b 1942, (both Br.) "I Want to Hold Your Hand"; "She Loves You."
Jay Livingston, 1915-2001, (U.S.) "Mona Lisa"; "Que Sera, Sera."
Andrew Lloyd Webber, b 1948, (Br.) *Jesus Christ Superstar*; *Evita*; *Cats*; *The Phantom of the Opera.*
Frank Loesser, 1910-69, (U.S.) *Guys and Dolls*; *Where's Charley?*; *The Most Happy Fella*; *How to Succeed….*
Frederick Loewe, 1901-88, (Austria-U.S.) *Brigadoon*; *Paint Your Wagon*; *My Fair Lady*; *Camelot.*
Henry Mancini, 1924-94, (U.S.) "Moon River"; "Days of Wine and Roses"; "Pink Panther Theme."
Barry Mann, b 1939, and **Cynthia Weil**, b 1937, (both U.S.) "You've Lost That Loving Feeling."
Jimmy McHugh, 1894-1969, (U.S.) "Don't Blame Me"; "I'm in the Mood for Love"; "I Feel a Song Coming On."
Alan Menken, b 1949, (U.S.) *Little Shop of Horrors*; *Beauty and the Beast*.
Joseph Meyer, 1894-1987, (U.S.) "If You Knew Susie"; "California, Here I Come"; "Crazy Rhythm."
Chauncey Olcott, 1858-1932, (U.S.) "Mother Machree."
Jerome "Doc" Pomus, 1925-91, (U.S.) "Save the Last Dance for Me"; "A Teenager in Love."
Cole Porter, 1893-1964, (U.S.) *Anything Goes*; *Kiss Me Kate*; *Can Can*; *Silk Stockings*.
Smokey Robinson, b 1940, (U.S.) "Shop Around"; "My Guy"; "My Girl"; "Get Ready."
Richard Rodgers, 1902-79, (U.S.) *Oklahoma!*; *Carousel*; *South Pacific*; *The King and I*; *The Sound of Music*.
Sigmund Romberg, 1887-1951, (Hung.) *Maytime*; *The Student Prince*; *Desert Song*; *Blossom Time*.
Harold Rome, 1908-93, (U.S.) *Pins and Needles*; *Call Me Mister*; *Wish You Were Here*; *Fanny*; *Destry Rides Again*.
Vincent Rose, 1880-1944, (U.S.) "Avalon"; "Whispering"; "Blueberry Hill."
Harry Ruby, 1895-1974, (U.S.) "Three Little Words"; "Who's Sorry Now?"
Arthur Schwartz, 1900-84, (U.S.) *The Band Wagon*; "Dancing in the Dark"; "By Myself"; "That's Entertainment."
Steven Schwartz, b 1948, (U.S.) *Godspell*; *Pippin*; *Wicked*.
Neil Sedaka, b 1939, (U.S.) "Breaking Up Is Hard to Do."
Marc Shaiman, b 1959, (U.S.) *Hairspray*.
Paul Simon, b 1942, (U.S.) "Sounds of Silence"; "I Am a Rock"; "Mrs. Robinson"; "Bridge Over Troubled Waters."
Stephen Sondheim, b 1930, (U.S.) *A Little Night Music*; *Company*; *Sweeney Todd*; *Sunday in the Park With George.*
John Philip Sousa, 1854-1932, (U.S.) *El Capitan*; "Stars and Stripes Forever."
Oskar Straus, 1870-1954, (Austrian) *Chocolate Soldier*.
Johann Strauss, 1825-99, (Austrian) *Gypsy Baron*; *Die Fledermaus*; waltzes: Blue Danube; Artist's Life.
Charles Strouse, b 1928, (U.S.) *Bye Bye, Birdie*; *Annie*.
Jule Styne, 1905-94, (Br.-U.S.) *Gentlemen Prefer Blondes*; *Bells Are Ringing*; *Gypsy*; *Funny Girl*.
Arthur S. Sullivan, 1842-1900, (Br.) *H.M.S. Pinafore*; *Pirates of Penzance*; *The Mikado*.
Deems Taylor, 1885-1966, (U.S.) *Peter Ibbetson*.
Harry Tobias, 1905-94, (U.S.) *I'll Keep the Lovelight Burning*.
Egbert van Alstyne, 1882-1951, (U.S.) "In the Shade of the Old Apple Tree"; "Memories"; "Pretty Baby."
Jimmy Van Heusen, 1913-90, (U.S.) "Moonlight Becomes You"; "Swinging on a Star"; "All the Way"; "Love and Marriage."
Albert von Tilzer, 1878-1956, (U.S.) "I'll Be With You in Apple Blossom Time"; "Take Me Out to the Ball Game."
Harry von Tilzer, 1872-1946, (U.S.) "Only a Bird in a Gilded Cage"; "On a Sunday Afternoon."
Fats Waller, 1904-43, (U.S.) "Honeysuckle Rose"; "Ain't Misbehavin."
Harry Warren, 1893-1981, (U.S.) "You're My Everything"; "We're in the Money"; "I Only Have Eyes for You."
Jimmy Webb, b 1946, (U.S.) "Up, Up and Away"; "By the Time I Get to Phoenix"; "Didn't We?"; "Wichita Lineman."
Kurt Weill, 1900-50, (Ger.-U.S.) *Threepenny Opera*; *Lady in the Dark*; *Knickerbocker Holiday*; *One Touch of Venus*.
Percy Wenrich, 1887-1952, (U.S.) "When You Wore a Tulip"; "Moonlight Bay"; "Put On Your Old Gray Bonnet."
Richard A. Whiting, 1891-1938, (U.S.) "Till We Meet Again"; "Sleepytime Gal"; "Beyond the Blue Horizon"; "My Ideal."
Fred Wildhorn, b 1959, (U.S.) *Jekyll and Hyde*; *Victor/Victoria*; *The Civil War*.
John Williams, b 1932, (U.S.) *Jaws; E.T.; Star Wars* series; *Raiders of the Lost Ark* series.
Meredith Willson, 1902-84, (U.S.) *The Music Man.*
Stevie Wonder, b 1950, (U.S.) "You Are the Sunshine of My Life"; "Signed, Sealed, Delivered, I'm Yours."
Vincent Youmans, 1898-1946, (U.S.) *Two Little Girls in Blue*; *Wildflower*; *No, No, Nanette*; *Hit the Deck*; *Rainbow*; *Smiles*.

Lyricists

Howard Ashman, 1950-91, (U.S.) *Little Shop of Horrors*; *The Little Mermaid*.
Johnny Burke, 1908-84, (U.S.) "Misty"; "Imagination."
Irving Caesar, 1895-1996, (U.S.) "Swanee"; "Tea for Two"; "Just a Gigolo."
Sammy Cahn, 1913-93, (U.S.) "High Hopes"; "Love and Marriage"; "The Second Time Around"; "It's Magic."
Leonard Cohen, b 1934, (Can.) "Suzanne"; "Stranger Song."
Betty Comden, 1917-2006, (U.S.) and **Adolph Green**, 1915-2002, (U.S.) "The Party's Over"; "New York, New York."
Hal David, b 1921, (U.S.) "What the World Needs Now Is Love."
Buddy De Sylva, 1895-1950, (U.S.) "When Day Is Done"; "Look for the Silver Lining"; "April Showers."
Howard Dietz, 1896-1983, (U.S.) "Dancing in the Dark"; "That's Entertainment."
Al Dubin, 1891-1945, (U.S.) "Tiptoe Through the Tulips"; "Lullaby of Broadway."
Fred Ebb, 1936-2004, (U.S.) *Cabaret*; *Zorba*; *Woman of the Year*; *Chicago*.

Ray Evans, 1915-2007, (U.S.) "Mona Lisa"; "Que Sera, Sera."
Dorothy Fields, 1905-74, (U.S.) "On the Sunny Side of the Street"; "Don't Blame Me"; "The Way You Look Tonight."
Ira Gershwin, 1896-1983, (U.S.) "The Man I Love"; "S'Wonderful"; "Embraceable You."
William S. Gilbert, 1836-1911, (Br.) *H.M.S. Pinafore*; *Pirates of Penzance*.
Gerry Goffin, b 1939, (U.S.) "Will You Love Me Tomorrow"; "Take Good Care of My Baby"; "Up on the Roof."
Mack Gordon, 1905-59, (Pol.-U.S.) "You'll Never Know"; "The More I See You"; "Chattanooga Choo-Choo."
Oscar Hammerstein II, 1895-1960, (U.S.) *Ol' Man River*; *Oklahoma!*; *Carousel*.
E. Y. (Yip) Harburg, 1898-1981, (U.S.) "Brother, Can You Spare a Dime"; "April in Paris"; "Over the Rainbow."
Sheldon Harnick, b 1924, (U.S.) *Fiddler on the Roof*; *She Loves Me*.
Lorenz Hart, 1895-1943, (U.S.) "Isn't It Romantic"; "Blue Moon"; "Lover"; "Manhattan"; "My Funny Valentine."
DuBose Heyward, 1885-1940, (U.S.) "Summertime."
Gus Kahn, 1886-1941, (U.S.) "Memories"; "Ain't We Got Fun."
Alan J. Lerner, 1918-86, (U.S.) *Brigadoon*; *My Fair Lady*; *Camelot*; *Gigi*; *On a Clear Day You Can See Forever*.
Johnny Mercer, 1909-76, (U.S.) "Blues in the Night"; "Come Rain or Come Shine"; "Laura"; "That Old Black Magic."
Bob Merrill, 1921-98, (U.S.) "People"; "(How Much Is That) Doggie in the Window."
Jack Norworth, 1879-1959, (U.S.) "Take Me Out to the Ball Game"; "Shine On Harvest Moon."
Mitchell Parish, 1901-93, (U.S.) "Stardust"; "Stairway to the Stars."
Andy Razaf, 1895-1973, (U.S.) "Honeysuckle Rose"; "Ain't Misbehavin."
Leo Robin, 1900-84, (U.S.) "Thanks for the Memory"; "Diamonds Are a Girl's Best Friend."
Bernie Taupin, b 1947 (Br.) "Rocket Man"; "Your Song."
Paul Francis Webster, 1907-84, (U.S.) "Secret Love"; "The Shadow of Your Smile"; "Love Is a Many-Splendored Thing."
Jack Yellen, 1892-1991, (U.S.) "Ain't She Sweet"; "Happy Days Are Here Again."

Blues and Jazz Artists of the Past

Julian "Cannonball" Adderley, 1928-75, alto sax.
Nat Adderley, 1931-2000, cornet.
Henry "Red" Allen, 1908-67, trumpet.
Louis "Satchmo" Armstrong, 1901-71, trumpet, singer, bandleader.
Albert Ayler, 1936-70, tenor sax, alto sax.
Mildred Bailey, 1907-51, singer.
Chet Baker, 1929-88, trumpet, singer.
Ray Barretto, 1930-2006, conga drummer.
William "Count" Basie, 1904-84, bandleader, piano, composer.
Sidney Bechet, 1897-1959, soprano sax, clarinet.
Bix Beiderbecke, 1903-31, cornet, composer, piano.
Rowland "Bunny" Berigan, 1908-42, trumpet.
Barney Bigard, 1906-80, clarinet.
Eubie Blake, 1883-1983, composer, piano.
Art Blakey, 1919-90, drums, bandleader.
Jimmy Blanton, 1921-42, bass.
Charles "Buddy" Bolden, 1877-1931, cornet, pioneer bandleader.
Lester Bowie, 1941-99, trumpet, composer, bandleader.
Michael Brecker, 1949-2007, saxophone.
Big Bill Broonzy, 1893-1958, blues singer, guitar.
Clarence "Gatemouth" Brown, 1924-2005, guitar, singer.
Clifford Brown, 1930-56, trumpet.
Ray Brown, 1926-2002, bass.
Don Byas, 1912-72, tenor sax.
Charlie Byrd, 1925-99, guitar; popularized bossa nova.
Cab Calloway, 1907-94, bandleader, singer.
Harry Carney, 1910-74, baritone sax, clarinet.
Benny Carter, 1907-2003, alto sax.
Betty Carter, 1930-98, jazz singer.
Sidney "Big Sid" Catlett, 1910-51, drums.
Adolphus Anthony "Doc" Cheatham, 1905-97, trumpet.
Don Cherry, 1936-95, trumpet.
Charlie Christian, 1916-42, guitar.
Kenny "Klook" Clarke, 1914-85, drums.
Buck Clayton, 1911-91, trumpet.
Al Cohn, 1925-88, tenor sax.
Nat "King" Cole, 1919-65, piano, singer.
William "Cozy" Cole, 1909-81, drums.
Alice Coltrane, 1937-2007, piano, composer.
John Coltrane, 1926-67, tenor sax, soprano sax, composer.
Eddie Condon, 1905-73, guitar, bandleader.
Tadd Dameron, 1917-65, piano, composer.
Eddie "Lockjaw" Davis, 1921-86, tenor sax.
Miles Davis, 1926-91, trumpet, composer.
Wild Bill Davison, 1906-89, cornet.
Blossom Dearie, 1924-2009, singer.
Paul Desmond, 1924-77, alto sax.
Vic Dickenson, 1906-84, trombone.
Willie Dixon, 1915-92, composer, bass.
Johnny Dodds, 1892-1940, clarinet.
Warren "Baby" Dodds, 1898-1959, drums.
Eric Dolphy, 1928-64, alto sax, bass clarinet, flute.
Jimmy Dorsey, 1904-57, alto sax, bandleader.
Tommy Dorsey, 1905-56, trombone, bandleader.
Billy Eckstine, 1914-93, singer, bandleader.
Harry "Sweets" Edison, 1915-99, trumpet.
Roy Eldridge, 1911-89, trumpet, singer.
Duke Ellington, 1899-1974, piano, bandleader, composer.
Bill Evans, 1929-80, piano.
Gil Evans, 1912-88, composer, arranger, piano.
Art Farmer, 1928-99, trumpet, flugelhorn.
Maynard Ferguson, 1926-2006, trumpet, bandleader.
Ella Fitzgerald, 1917-96, singer.
Tommy Flanagan, 1930-2001, piano.
Erroll Garner, 1921-77, piano, composer.
Stan Getz, 1927-91, tenor sax.
Dizzy Gillespie, 1917-93, trumpet, composer, singer.
Benny Goodman, 1909-86, clarinet, bandleader.
Dexter Gordon, 1923-90, tenor sax.
Stéphane Grappelli, 1908-97, violin.
Bobby Hackett, 1915-76, trumpet, cornet.
Lionel Hampton, 1908-2002, vibraphone, bandleader.
W. C. Handy, 1873-1958, composer.
Jimmy Harrison, 1900-31, trombone.
Coleman Hawkins, 1904-69, tenor sax.
Percy Heath, 1923-2005, bass.
Fletcher Henderson, 1898-1952, bandleader, arranger.
Woody Herman, 1913-87, clarinet, alto sax, bandleader.
Jay C. Higginbotham, 1906-73, trombone.
Ruiz Hilton, 1952-2006, piano, composer.
Earl "Fatha" Hines, 1903-83, piano.
Milt Hinton, 1910-2000, bass.
Al Hirt, 1922-99, trumpet.
Johnny Hodges, 1906-70, alto sax.
Billie Holiday, 1915-59, singer.
John Lee Hooker, 1917-2001, blues guitar, singer.
Sam "Lightnin'" Hopkins, 1912-82, blues singer, guitar.
Shirley Horn, 1934-2005, piano, singer.
Howlin' Wolf (Chester Burnett), 1910-1976, blues singer, harmonica, guitar.
Alberta Hunter, 1895-1984, singer.
Mahalia Jackson, 1911-72, gospel singer.
Milt Jackson, 1923-99, vibraphone.
Elmore James, 1918-63, blues singer, guitar.
"Blind" Lemon Jefferson, 1897-1929, blues singer, guitar.
William "Bunk" Johnson, 1879-1949, trumpet.
J. J. Johnson, 1924-2001, trombone.
James P. Johnson, 1891-1955, piano, composer.
Robert Johnson, 1912-38, blues singer, guitar.
Elvin Jones, 1927-2004, drums.
Jo Jones, 1911-85, drums.
Philly Joe Jones, 1923-85, drums.
Thad Jones, 1923-86, cornet, bandleader, composer.
Scott Joplin, 1868-1917, ragtime composer.
Louis Jordan, 1908-75, singer, alto sax.
Stan Kenton, 1911-79, bandleader, composer, piano.
Barney Kessel, 1923-2004, guitar.
Albert King, 1923-92, blues guitar.
John Kirby, 1908-52, bandleader, bass.
Rahsaan Roland Kirk, 1936-77, saxophone, composer.
Gene Krupa, 1909-73, drums, bandleader.
Scott LaFaro, 1936-61, bass.
Lead Belly (Huddie Ledbetter), 1888-1949, folk and blues singer, guitar.
Peggy Lee, 1920-2002, singer.
John Lewis, 1920-2001, piano, Modern Jazz Quartet founder.
Mel Lewis, 1929-90, drums, bandleader.
Jimmie Lunceford, 1902-47, bandleader.
Machito (Frank Grillo), 1908-84, Latin percussion, singer, bandleader.
Shelly Manne, 1920-84, drums, bandleader.
Jackie McLean, 1931-2006, saxophone, composer.
Jimmy McPartland, 1907-91, trumpet.
Carmen McRae, 1920-94, singer.
Glenn Miller, 1904-44, trombone, bandleader.
Charles Mingus, 1922-79, bass, composer, bandleader.
Thelonious Monk, 1917-82, piano, composer.
Wes Montgomery, 1925-68, guitar.
Ferdinand "Jelly Roll" Morton, 1885-1941, composer, piano.
Bennie Moten, 1894-1935, piano, bandleader.
Gerry Mulligan, 1927-96, baritone sax, composer.
Theodore "Fats" Navarro, 1923-50, trumpet.
Red Nichols, 1905-65, cornet, bandleader.
Red Norvo, 1908-99, vibraphone, xylophone, bandleader.
Anita O'Day, 1919-2006, singer.
Arturo "Chico" O'Farrill, 1921-2001, Latin composer, arranger.
King Oliver, 1885-1938, cornet, bandleader.
Sy Oliver, 1910-88, arranger, composer.
Edward "Kid" Ory, 1886-1973, trombone, bandleader.
Oran "Hot Lips" Page, 1908-54, trumpet, singer.
Charlie "Bird" Parker, 1920-55, alto sax, composer.
Joe Pass, 1929-94, guitar.
Art Pepper, 1925-82, alto sax.
Oscar Peterson, 1925-2007, piano.
Oscar Pettiford, 1922-60, bass.

Earl "Bud" Powell, 1924-66, piano.
Chano Pozo, 1915-48, Cuban percussion, singer.
Louis Prima, 1911-78, singer, bandleader.
Tito Puente, 1923-2000, Latin percussion, bandleader.
Gertrude "Ma" Rainey, 1886-1939, blues singer.
Lou Rawls, 1933-2006, singer.
Dewey Redman, 1931-2006, tenor sax.
Don Redman (Robert Rodney Chudnick), 1900-64, composer, arranger.
Django Reinhardt, 1910-53, guitar.
Buddy Rich, 1917-87, drums.
Max Roach, 1924-2007, drums, composer.
Red Rodney (Robert Chudnick), 1927-94, trumpet.
Jimmy Rowles, 1918-96, piano.
Jimmy Rushing, 1903-72, blues and jazz singer.
Charles "Pee Wee" Russell, 1906-69, clarinet.
Artie Shaw, 1910-2004, swing-era bandleader, clarinet.
Nina Simone (Eunice Waymon), 1933-2003, singer.
John "Zoot" Sims, 1925-85, tenor sax.
Zutty Singleton, 1898-1975, drums.
Bessie Smith, 1894-1937, blues singer.
Clarence "Pinetop" Smith, 1904-29, piano, singer, boogie woogie pioneer.
Willie "The Lion" Smith, 1897-1973, piano, composer.
Francis "Muggsy" Spanier, 1906-67, cornet.
Edward "Sonny" Stitt, 1924-82, tenor sax, alto sax.
Billy Strayhorn, 1915-67, composer, piano, Duke Ellington collaborator.
Sun Ra (Herman Blount), 1915?-93, bandleader, piano, composer.
Art Tatum, 1910-56, piano.
Art Taylor, 1929-95, drums.
Jack Teagarden, 1905-64, trombone, singer.
Mel Tormé, 1925-99, singer ("The Velvet Fog").
Dave Tough, 1908-48, drums.
Lennie Tristano, 1919-78, piano, composer.
Joe Turner, 1911-85, blues singer.
Sarah Vaughan, 1924-90, singer.
Joe Venuti, 1903-78, violin.
Aaron "T-Bone" Walker, 1910-75, blues guitar.
Thomas "Fats" Waller, 1904-43, piano, singer, composer.
Dinah Washington (Ruth Jones), 1924-63, singer.
Grover Washington Jr., 1943-99, pop-jazz sax, composer.
Ethel Waters, 1896-1977, jazz and blues singer.
Muddy Waters (McKinley Morganfield), 1915-83, blues singer, songwriter.
Julius Watkins, 1921-77, French horn.
William "Chick" Webb, 1902-39, bandleader, drums.
Ben Webster, 1909-73, tenor sax.
Junior Wells (Amos Blackmore), 1934-98, blues singer, harmonica.
Paul Whiteman, 1890-1967, bandleader.
Charles "Cootie" Williams, 1910-85, trumpet, bandleader.
Joe Williams, 1918-99, singer.
Mary Lou Williams, 1910-81, piano, composer.
Tony Williams, 1945-97, drums.
John Lee "Sonny Boy" Williamson, 1914-48, blues singer, harmonica.
Sonny Boy Williamson (Aleck "Rice" Miller), 1900?-65, blues singer, harmonica.
Teddy Wilson, 1912-86, piano.
Kai Winding, 1922-83, trombone.
Jimmy Yancey, 1894-1951, piano.
Lester "Pres" Young, 1909-59, tenor sax.

Country Music Artists of the Past and Present

Roy Acuff, 1903-92, fiddler, singer, songwriter; "Wabash Cannon Ball."
Alabama (Randy Owen, b 1949; Jeff Cook, b 1949; Teddy Gentry, b 1952; Mark Herndon, b 1955); "Feels So Right."
James "Whispering Bill" Anderson, b 1937, singer, songwriter; "Make Mine Night Time."
Eddy Arnold, 1918-2008, singer, guitarist, known as the "Tennessee Plowboy."
Chet Atkins, 1924-2001, guitarist, composer, producer; helped create the "Nashville sound."
Gene Autry, 1907-98, first great singing movie cowboy; "Back in the Saddle Again."
Clint Black, b 1962, singer, songwriter; "Killin' Time."
Garth Brooks, b 1962, singer, songwriter; "Friends in Low Places."
Brooks & Dunn (Kix Brooks, b 1955; Ronnie Dunn, b 1953); "Hard Workin' Man."
Boudleaux, 1920-87, and **Felice Bryant**, 1925-2003, songwriting team; "Hey Joe."
Mary Chapin Carpenter, b 1958, singer, songwriter; "I Feel Lucky."
Carter Family (original members "Mother" Maybelle, 1909-78; A. P., 1891-1960; Sara, 1898-1979); "Wildwood Flower."
Johnny Cash, 1932-2003, singer, songwriter; "I Walk the Line," "Ring of Fire," "Folsom Prison Blues."
Kenny Chesney, b 1968, guitarist, singer, songwriter; "You Had Me from Hello."
Roy Clark, b 1933, guitarist, banjoist, singer, co-host *Hee Haw*; "Yesterday, When I Was Young."
Patsy Cline, 1932-63, singer; "Walkin' After Midnight," "Crazy," "Sweet Dreams."
Billy Ray Cyrus, b 1961, singer, songwriter; "Achy Breaky Heart."
Charlie Daniels, b 1936, guitarist, fiddler; "The Devil Went Down to Georgia."
Jimmy Dean, 1928-2010, singer; "Big Bad John."
John Denver, 1943-97, singer, songwriter; "Rocky Mountain High."
Dixie Chicks (Natalie Maines, b 1974; Martie Seidel, b 1969; Emily Erwin Robison, b 1972); "Wide Open Spaces."
Dale Evans (Lucille Wood Smith), 1912-2001, singer, actress, married Roy Rogers.
Flatt & Scruggs (Lester Flatt, 1914-79; Earl Scruggs, b 1924), guitar-banjo duo and soloists; "Foggy Mountain Breakdown."
Red Foley, 1910-68, singer; "Chattanoogie Shoe Shine Boy."
Tennessee Ernie Ford, 1919-91, singer, TV host; "Sixteen Tons."
William "Lefty" Frizzell, 1928-75, singer, guitarist; "Long Black Veil."
Vince Gill, b 1957, singer, songwriter; "When I Call Your Name."
Merle Haggard, b 1937, singer, songwriter; "Okie from Muskogee."
Emmylou Harris, b 1947, singer, songwriter, folk-country crossover artist; "If I Could Only Win Your Love."
Faith Hill, b 1967, singer, songwriter; "Breathe."
Alan Jackson, b 1958, singer, songwriter; "Where Were You (When the World Stopped Turning)."
Waylon Jennings, 1937-2002, singer, songwriter, "outlaw country" pioneer; "Luckenbach, Texas."
George Jones, b 1931, singer; "He Stopped Loving Her Today."
The Judds (Naomi, b 1946; Wynonna, b 1964), mother-daughter duo; Wynonna also a solo act.
Toby Keith, b 1961, singer, songwriter; guitarist; "Should've Been a Cowboy."
Alison Krauss, b 1971, bluegrass fiddler, singer, bandleader; "When You Say Nothing at All."
Kris Kristofferson, b 1936, singer, songwriter, actor; "Me and Bobby McGee."
Lady Antebellum (Hillary Scott, b 1984; Charles Kelley, b 1981; Dave Haywood, b 1982); "I Run to You."
Miranda Lambert, b. 1983, singer, guitarist; "The House That Built Me."
Patty Loveless, b 1957, singer, songwriter; "How Can I Help You Say Goodbye."
Lyle Lovett, b 1957, singer, songwriter, bandleader, actor; "Cowboy Man."
Loretta Lynn, b 1948, singer; "Coal Miner's Daughter."
Barbara Mandrell, b 1948, singer; "I Was Country When Country Wasn't Cool."
Kathy Mattea, b 1959, singer, songwriter; "Eighteen Wheels and a Dozen Roses."
Martina McBride, b 1966, singer, songwriter; "Independence Day."
Reba McEntire, b 1955, singer, songwriter, actress; "Whoever's in New England."
Tim McGraw, b 1967, singer; "It's Your Love," "I Like It, I Love It."
Roger Miller, 1936-92, singer, songwriter; "King of the Road."
Ronnie Milsap, b 1944, singer, songwriter; "There's No Gettin' Over Me."
Bill Monroe, 1911-96, singer, songwriter, mandolin player, "father of bluegrass music"; "Mule Skinner Blues."
Willie Nelson, b 1933, singer, songwriter, actor; "On the Road Again."
Mark O'Connor, b 1961, fiddler, country-classical crossover composer.
Brad Paisley, b 1972, singer, songwriter; "Whiskey Lullaby," "When I Get Where I'm Going."
Dolly Parton, b 1946, singer, songwriter, actress; "Here You Come Again," "9 to 5."
Johnny Paycheck, (Don Lytle), 1938-2003, singer, guitarist; "Take This Job and Shove It."
Minnie Pearl, 1912-96, comedienne, Grand Ole Opry star.
Charley Pride, b 1938, singer, 1st African American country star; "Kiss an Angel Good Mornin'."
Eddie Rabbit, 1941-98, singer, songwriter; "I Love A Rainy Night."
Rascal Flatts (Jay DeMarcus, b 1971; Gary LeVox, b 1970; Joe Don Rooney, b 1975); "Life Is A Highway."
Jim Reeves, 1923-64, singer, songwriter; "Four Walls."
Charlie Rich, 1932-95, singer, songwriter called the "Silver Fox"; "The Most Beautiful Girl."
LeAnn Rimes, b 1982, singer; "Blue."
Tex Ritter, 1905-74, singer, songwriter; "Jingle, Jangle, Jingle."
Marty Robbins, 1925-82, singer, songwriter; "A White Sport Coat and a Pink Carnation."
Jimmie Rodgers, 1897-1933, singer, songwriter; "T for Texas."
Kenny Rogers, b 1938, singer, songwriter; "The Gambler."
Roy Rogers (Leonard Slye), 1911-98, singer, actor, "King of the Cowboys," sang with Sons of the Pioneers.
Fred Rose, 1898-1954, songwriter, singer, producer; "Blue Eyes Cryin' in the Rain."
Ricky Skaggs, b 1954, singer, songwriter, bandleader; "Don't Cheat in Our Hometown."
Ralph Stanley, b 1927, singer, banjo player; "Man of Constant Sorrow."
George Strait, b 1952, singer, bandleader; "Ace in the Hole."
Sugarland (Kristian Bush, b 1970; Jennifer Nettles, b 1974); "Stay."
Taylor Swift, b 1989, singer, songwriter; "You Belong With Me."
Lonnie "Mel" Tillis, b 1932, singer, songwriter, bandleader; "I Ain't Never."
Merle Travis, 1917-83, singer, guitarist, songwriter; "Divorce Me C.O.D."
Randy Travis, b 1959, singer, songwriter; "Forever and Ever, Amen."

Ernest Tubb, 1914-84, singer, songwriter, guitarist; "Walking the Floor Over You."

Shania Twain, b 1965, singer, songwriter; "You're Still the One."

Conway Twitty, 1933-93, singer, songwriter; "Hello Darlin'."

Carrie Underwood, b 1983, singer, *American Idol* winner.

Keith Urban, b 1967, guitarist, singer, songwriter; "It's a Love Thing."

Porter Wagoner, 1927-2007, singer, songwriter, guitarist; "I Will Always Love You."

Kitty Wells (Ellen Deason), b 1919, singer, songwriter; "It Wasn't God Who Made Honky-Tonk Angels."

Dottie West, 1932-91, singer, songwriter; "Here Comes My Baby."

Hank Williams Jr., b 1949, singer, songwriter; "Bocephus"; "All My Rowdy Friends (Have Settled Down)."

Hank Williams Sr., 1923-53, singer, songwriter; "Your Cheatin' Heart."

Bob Wills, 1905-75, Western Swing fiddler, singer, bandleader, songwriter; "New San Antonio Rose."

Lee Ann Womack, b 1966, singer, songwriter; "I Hope You Dance."

Tammy Wynette, 1942-98, singer; "Stand By Your Man."

Trisha Yearwood, b 1964, singer, songwriter; "How Do I Live."

Dwight Yoakam, b 1957, singer, songwriter, actor; "Ain't That Lonely Yet."

Zac Brown Band (Coy Bowles, b 1979, Zac Brown, b 1978, Clay Cook, Jimmy De Martini, Chris Fryar, b 1970, and John Driskell Hopkins); "Chicken Fried."

Dance Figures of the Past

Alvin Ailey, 1931-89, (U.S.) modern dancer, choreographer; melded modern dance and Afro-Caribbean techniques.

Frederick Ashton, 1904-88, (Br.) ballet choreographer; director of Great Britain's Royal Ballet, 1963-70.

Fred Astaire, 1899-1987, (U.S.) dancer, actor; teamed with dancer/actress **Ginger Rogers**, 1911-95, (U.S.) in movie musicals.

George Balanchine, 1904-83, (Russ.-U.S.) ballet choreographer, teacher; most influential exponent of neoclassical style; founded, with Lincoln Kirstein, School of American Ballet and New York City Ballet.

Pina Bausch, 1940-2009, (Ger.) modern dance choreographer influencing the Tanztheater style of dance.

Carlo Blasis, 1795-1878, (It.) ballet dancer, choreographer, writer; his teaching methods are standards of classical dance.

August Bournonville, 1805-79, (Den.) ballet dancer, choreographer, teacher; exuberant, light style.

Fernando Bujones, 1955-2005, (Cuba-U.S.) ballet dancer.

Gisella Caccialanza, 1914-98, (U.S.) ballerina; charter member of Balanchine's American Ballet.

Irene, 1893-1969, (U.S.) and **Vernon Castle**, 1887-1918, (Br.) husband-and-wife ballroom dancers.

Enrico Cecchetti, 1850-1928, (It.) ballet dancer, leading dancer of Russia's Imperial Ballet; his technique was basis for Britain's Imperial Soc. of Teachers of Dancing.

Gower Champion, 1921-80, (U.S.) dancer, choreographer, director; with wife **Marge**, b 1923, (U.S.) choreographed, danced in Broadway musicals and films.

John Cranko, 1927-73, (S. Africa) choreographer; created narrative ballets based on literary works.

Merce Cunningham, 1919-2009, (U.S.) dancer, choreographer of avant-garde dance.

Agnes de Mille, 1905-93, (U.S.) ballerina, choreographer; known for using American themes, she choreographed the ballet *Rodeo* and the musical *Oklahoma!*

Alexandra Danilova, 1903-97, (Russ.) ballerina; noted teacher at the School of American Ballet.

Dame Ninette De Valois, 1898-2001, (Br.) choreographer, founding director of London's Royal Ballet; *The Rake's Progress*.

Sergei Diaghilev, 1872-1929, (Russ.) impresario; founded Les Ballet Russes; saw ballet as an art unifying dance, drama, music, and decor.

Isadora Duncan, 1877-1927, (U.S.) expressive dancer who united free movement with serious music; one of the founders of modern dance.

Katherine Dunham, 1910-2006, (U.S.) dancer, choreographer; internationally known for African, Caribbean, and African American dance forms.

Fanny Elssler, 1810-84, (Austria) ballerina of the Romantic era; known for dramatic skill, sensual style.

Michel Fokine, 1880-1942, (Russ.) ballet dancer, choreographer, teacher; rejected strict classicism in favor of dramatically expressive style.

Margot Fonteyn, 1919-91, (Br.) prima ballerina, Royal Ballet of Great Britain; famed performance partner of Rudolf Nureyev.

Bob Fosse, 1927-87, (U.S.) jazz dancer, choreographer, director; Broadway musicals and film.

Serge Golovine, 1924-98, (Fr.) ballet dancer with Grand Ballet du Marquis de Cuevas, choreographer.

Martha Graham, 1894-1991, (U.S.) modern dancer, choreographer; created and codified her own dramatic technique.

Melissa Hayden, 1923-2006, (Can.) ballet dancer.

Martha Hill, 1900-95, (U.S.) educator; leading figure in modern dance; founded American Dance Festival.

Gregory Hines, 1946-2003, (U.S.) tap-dance innovator; master of improvisation.

Doris Humphrey, 1895-1958, (U.S.) modern dancer, choreographer, writer, teacher.

Michael Jackson, 1958-2009, (U.S.) singer and dancer who perfected the "moonwalk."

Robert Joffrey, 1930-88, (U.S.) ballet dancer, choreographer; cofounded with **Gerald Arpino**, 1928-2008, (U.S.) the Joffrey Ballet.

Kurt Jooss, 1901-79, (Ger.) choreographer, teacher; created expressionist works using modern and classical techniques.

Tamara Karsavina, 1885-1978, (Russ.) prima ballerina of Russia's Imperial Ballet and Diaghilev's Ballets Russes; partner of Nijinsky.

Nora Kaye, 1920-87, (U.S.) ballerina with Metropolitan Opera Ballet and Ballet Theater (now American Ballet Theatre).

Gene Kelly, 1912-96, (U.S.) dancer, actor in movie musicals.

Michael Kidd, 1915-2003, (U.S.) dancer, film and theater choreographer.

Lincoln Kirstein, 1907-96 (U.S.) brought ballet as an art form to U.S.; founded, with George Balanchine, School of American Ballet and New York City Ballet.

Serge Lifar, 1905-86, (Russ.-Fr.) prem. danseur, choreographer; director of dance at Paris Opera, 1930-45, 1947-58.

José Limón, 1908-72, (Mex.-U.S.) modern dancer, choreographer, teacher; developed technique based on Humphrey.

Catherine Littlefield, 1908-51, (U.S.) ballerina, choreographer, teacher; pioneer of American ballet.

Kenneth MacMillan, 1929-92, (Br.) dancer, choreographer; directed Royal Ballet of Great Britain, 1970-77.

Dame Alicia Markova, 1910-2004, (Br.) ballerina; helped popularize ballet in U.S. and Britain; known for title role in *Giselle*.

Léonide Massine, 1896-1979, (Russ.-U.S.) ballet dancer, choreographer; known for his "symphonic ballet."

Fayard Nicholas, 1914-2006, (U.S.) tap dancer, choreographer, actor; together with brother **Harold Nicholas**, 1921-2000, (U.S.) formed the "Nicholas Brothers."

Vaslav Nijinsky, 1890-50, (Russ.) prem. danseur, choreographer; leading member of Diaghilev's Ballets Russes; his ballets were revolutionary for their time.

Alwin Nikolais, 1910-93, (U.S.) modern choreographer; created dance theater utilizing mixed media effects.

Jean-George Noverre, 1727-1810, (Fr.) ballet choreographer, teacher, writer; "Shakespeare of the Dance."

Rudolf Nureyev, 1938-93, (Russ.) prem. danseur, choreographer; leading male dancer of his generation; director of dance at Paris Opera, 1983-89.

Ruth Page, 1899-1991, (U.S.) ballerina, choreographer; danced, directed ballet at Chicago Lyric Opera.

Anna Pavlova, 1881-1931, (Russ.) prima ballerina; toured with her own company to world acclaim.

Marius Petipa, 1818-1910, (Fr.) ballet dancer, choreographer; ballet master of the Imperial Ballet; established Russian classicism as leading style of late 19th cent.

Pearl Primus, 1919-95, (Trinidad-U.S.) modern dancer, choreographer, scholar; combined African, Caribbean, and African American styles.

Jerome Robbins, 1918-98, (U.S.) choreographer, director, dancer; *The King and I, West Side Story, Fiddler on the Roof*.

Bill "Bojangles" Robinson, 1878-1949, (U.S.) famed tap dancer; called "King of Tapology" on stage and screen.

Ruth St. Denis, 1877-1968, (U.S.) influential interpretive dancer, choreographer, teacher.

Ted Shawn, 1891-1972, (U.S.) modern dancer, choreographer; formed dance company and school with Ruth St. Denis; established Jacob's Pillow Dance Festival.

Marie Taglioni, 1804-84, (It.) ballerina, teacher; in title role of *La Sylphide* established image of the ethereal ballerina.

Glen Tetley, 1926-2007, (U.S.) dancer, choreographer, ballet director; fused elements of modern dance with ballet.

Antony Tudor, 1908-87, (Br.) choreographer, teacher; exponent of the "psychological ballet."

Galina Ulanova, 1910-98, (Russ.) revered ballerina with Bolshoi Ballet.

Agrippina Vaganova, 1879-1951, (Russ.) ballet teacher, director; codified Soviet ballet technique that developed virtuosity; called "queen of variations."

Mary Wigman, 1886-1973, (Ger.) modern dancer, choreographer, teacher; influenced European expressionist dance.

Opera Singers of the Past

Frances Alda, 1883?-1952, (N.Z.) soprano.
Pasquale Amato, 1878-1942, (It.) baritone.
Marian Anderson, 1897-1993, (U.S.) contralto.
Jussi Björling, 1911-60, (Swed.) tenor.
Lucrezia Bori, 1887-1960, (It.) soprano.
Maria Callas, 1923-77, (U.S.) soprano.
Emma Calvé, 1858-1942, (Fr.) soprano.
Enrico Caruso, 1873-1921, (It.) tenor.
Feodor Chaliapin, 1873-1938, (Russ.) bass.
Boris Christoff, 1914-93, (Bulg.) bass.
Franco Corelli, 1921-2003, (It.) tenor.
Victoria De Los Angeles, 1923-2005, (Sp.) soprano.
Giuseppe De Luca, 1876-1950, (It.) baritone.
Fernando De Lucia, 1860-1925, (It.) tenor.
Edouard De Reszke, 1853-1917, (Pol.) bass.
Jean De Reszke, 1850-1925, (Pol.) tenor.
Emmy Destinn, 1878-1930, (Czech.) soprano.
Emma Eames, 1865-1952, (U.S.) soprano.
(Carlo Broschi) Farinelli, 1705-82, (It.) castrato.
Geraldine Farrar, 1882-1967, (U.S.) soprano.
Eileen Farrell, 1920-2002, (U.S.) soprano.
Kathleen Ferrier, 1912-53, (Eng.) contralto.
Kirsten Flagstad, 1895-1962, (Nor.) soprano.
Olive Fremstad, 1871-1951, (Swed.-U.S.) soprano.
Amelita Galli-Curci, 1882-1963, (It.) soprano.
Mary Garden, 1874-1967, (Br.) soprano.
Nicolai Ghiaurov, 1929-2004, (Bulg.) bass.
Beniamino Gigli, 1890-1957, (It.) tenor.
Tito Gobbi, 1913-84, (It.) baritone.
Giulia Grisi, 1811-69, (It.) soprano.
Frieda Hempel, 1885-1955, (Ger.) soprano.
Jerome Hines, 1921-2003, (U.S.) bass.
Hans Hotter, 1909-2003, (Ger.) bass-baritone.
Maria Jeritza, 1887-1982, (Czech.) soprano.
Alexander Kipnis, 1891-1978, (Russ.-U.S.) bass.
Dorothy Kirsten, 1910-92, (U.S.) soprano.
Alfredo Kraus, 1927-99, (Sp.) tenor.
Luigi Lablache, 1794-1858, (It.) bass.
Lilli Lehmann, 1848-1929, (Ger.) soprano.
Lotte Lehmann, 1888-1976, (Ger.-U.S.) soprano.
Jenny Lind, 1820-87, (Swed.) soprano.
Maria Malibran, 1808-36, (Sp.) mezzo-soprano.
Giovanni Martinelli, 1885-1969, (It.) tenor.
John McCormack, 1884-1945, (Ire.) tenor.
Nellie Melba, 1861-1931, (Austral.) soprano.
Lauritz Melchior, 1890-1973, (Den.) tenor.
Robert Merrill, 1919-2004, (U.S.) baritone.
Zinka Milanov, 1906-89, (Yugo.) soprano.
Birgit Nilsson, 1918-2005, (Swed.) soprano.
Lillian Nordica, 1857-1914, (U.S.) soprano.
Giuditta Pasta, 1797-1865, (It.) soprano.
Adelina Patti, 1843-1919, (It.) soprano.
Luciano Pavarotti, 1935-2007, (It.) tenor.
Peter Pears, 1910-86, (Eng.) tenor.
Jan Peerce, 1904-84, (U.S.) tenor.
Ezio Pinza, 1892-1957, (It.) bass.
Lily Pons, 1898-1976, (Fr.) soprano.
Rosa Ponselle, 1897-1981, (U.S.) soprano.
Hermann Prey, 1929-98, (Ger.) baritone.
Elisabeth Rethberg, 1894-1976, (Ger.) soprano.
Giovanni Battista Rubini, 1794-1854, (It.) tenor.
Leonie Rysanek, 1926-98, (Austria) soprano.
Bidú Sayão, 1902-99, (Braz.) soprano.
Friedrich Schorr, 1888-1953, (Hung.) bass-baritone.
Elisabeth Schwarzkopf, 1915-2006, (Ger.) soprano.
Marcella Sembrich, 1858-1935, (Pol.) soprano.
Beverly Sills, 1929-2007, (U.S.) soprano.
Elisabeth Söderström, 1927-2009, (Swed.) soprano.
Eleanor Steber, 1914-90, (U.S.) soprano.
Joan Sutherland, 1926-2010, (Austral.) soprano.
Ferrucio Tagliavini, 1913-95, (It.) tenor.
Renata Tebaldi, 1922-2004 (It.) soprano.
Luisa Tetrazzini, 1871-1940, (It.) soprano.
Lawrence Tibbett, 1896-1960, (U.S.) baritone.
Tatiana Troyanos, 1938-93, (U.S.) mezzo-soprano.
Richard Tucker, 1913-75, (U.S.) tenor.
Pauline Viardot, 1821-1910, (Fr.) mezzo-soprano.
William Warfield, 1920-2002, (U.S.) bass-baritone.
Leonard Warren, 1911-60, (U.S.) baritone.
Ljuba Welitsch, 1913-96, (Bulg.) soprano.
Wolfgang Windgassen, 1914-74, (Ger.) tenor.

Rock and Roll, Rhythm and Blues, and Rap Artists

Titles in quotation marks are singles; others are albums. *Inducted into Rock and Roll Hall of Fame as performer between 1986 and 2010; year is in parentheses.

Aaliyah: "More than a Woman"
***ABBA (2010):** "Dancing Queen"
Paula Abdul: "Straight Up"
***AC/DC (2003):** "Back in Black"
Bryan Adams: "Cuts Like a Knife"
***Aerosmith (2001):** "Sweet Emotion"
Christina Aguilera: "What a Girl Wants"
Alice In Chains: "Heaven Beside You"
***The Allman Brothers Band (1995):** "Ramblin' Man"
***The Animals (1994):** "House of the Rising Sun"
Paul Anka: "Lonely Boy"
Fiona Apple: "Criminal"
Ashanti: "Foolish"
Frankie Avalon: "Venus"
The B-52s: "Love Shack"
Bachman Turner Overdrive: "Takin' Care of Business"
Backstreet Boys: "I Want It That Way"
Bad Company: "Can't Get Enough"
Erykah Badu: "On and On"
***La Vern Baker (1991):** "I Cried a Tear"
***Hank Ballard[1] and the Midnighters (1990):** "Work With Me, Annie"
***The Band (1994):** "The Weight"
Barenaked Ladies: "One Week"
***The Beach Boys (1988):** "Good Vibrations"
Beastie Boys: "(You Gotta) Fight for Your Right (to Party)"
***The Beatles (1988):** *Sgt. Pepper's Lonely Hearts Club Band*
Beck: "Loser"
***Jeff Beck (2009):** "Escape"
***The Bee Gees (1997):** "Stayin' Alive"
Pat Benatar: "Hit Me With Your Best Shot"
Ben Folds Five: "Brick"
Beyoncé: "Crazy in Love"
***Chuck Berry (1986):** "Johnny B. Goode"
The Big Bopper: "Chantilly Lace"
Björk: "Human Behavior"
The Black Crowes: "Hard to Handle"
Black Eyed Peas: *Elephunk*
***Black Sabbath (2006):** "Paranoid"
***Bobby "Blue" Bland (1992):** "Turn On Your Love Light"
Mary J. Blige: *My Life*
Blind Faith: "Can't Find My Way Home"
Blink-182: "All the Small Things"
***Blondie (2006):** "Heart of Glass"
Blood, Sweat, and Tears: "Spinning Wheel"
Blues Traveler: "Run-Around"
Gary "U.S." Bonds: "Quarter to Three"
Bon Jovi: "Livin' on a Prayer"
***Booker T. and the M.G.'s (1992):** "Green Onions"
Earl Bostic: "Flamingo"
Boston: "More Than A Feeling"
***David Bowie (1996):** "Space Oddity"
Boyz II Men: "I'll Make Love to You"
Toni Braxton: "Un-Break My Heart"
***James Brown (1986):** "Papa's Got a Brand New Bag"
***Ruth Brown (1993):** "Lucky Lips"
***Jackson Browne (2004):** "Doctor My Eyes"
***Buffalo Springfield (1997):** "For What It's Worth"
Jimmy Buffett: "Margaritaville"
***Solomon Burke (2001):** "Over and Over (Huggin' and Lovin')"
Bush: "Glycerine"
***The Byrds (1991):** "Turn! Turn! Turn!"
Mariah Carey: "Vision of Love"
The Carpenters: "(They Long to Be) Close to You"
The Cars: "Shake It Up"
***Johnny Cash (1992):** "I Walk the Line"
***Ray Charles (1986):** "Georgia on My Mind"
Cheap Trick: "Surrender"
Chubby Checker: "The Twist"
Chicago: "Saturday in the Park"
***Eric Clapton (2000):** "Layla"
Kelly Clarkson: "Since U Been Gone"
***The Clash (2003):** "Rock the Casbah"
***Jimmy Cliff (2010):** "I Can See Clearly Now"
***The Coasters (1987):** "Yakety Yak"
***Eddie Cochran (1987):** "Summertime Blues"
Joe Cocker: "With a Little Help From My Friends"
Coldplay: "Clocks"
***Leonard Cohen (2008):** "Suzanne"
Collective Soul: "The World I Know"
Phil Collins: "Against All Odds"
***Sam Cooke (1986):** "You Send Me"
Coolio: "Gangsta's Paradise"
Alice Cooper: "School's Out"
***Elvis Costello and the Attractions (2003):** "Alison"
Counting Crows: "Mr. Jones"
***Cream (1993):** "Sunshine of Your Love"
Creed: "Arms Wide Open"
***Creedence Clearwater Revival (1993):** "Proud Mary"
***Crosby, Stills, and Nash (1997):** "Suite: Judy Blue Eyes"
Sheryl Crow: "All I Want to Do"
The Crystals: "Da Doo Ron Ron"
The Cult: "She Sells Sanctuary"
The Cure: "Boys Don't Cry"
Cypress Hill: "Insane in the Brain"
Danny and the Juniors: "At the Hop"
***Bobby Darin (1990):** "Splish Splash"
***The Dave Clark Five (2008):** "Glad All Over"
Dave Matthews Band: "Don't Drink the Water"
***Miles Davis (2006):** *Bitches Brew*
Spencer Davis Group: "Gimme Some Lovin'"
Daughtry: "It's Not Over"
Deep Purple: "Smoke on the Water"
Def Leppard: "Photograph"
***The Dells (2004):** "Oh, What a Night"
Depeche Mode: "Strange Love"
Destiny's Child: "Survivor"
***Bo Diddley (1987):** "Who Do You Love?"
***Dion[1] and the Belmonts (1989):** "A Teenager in Love"
Celine Dion: "Because You Loved Me"
Dire Straits: "Money for Nothing"
DMX: "What's My Name"
***Fats Domino (1986):** "Blueberry Hill"
Donovan: "Mellow Yellow"
The Doobie Brothers: "What a Fool Believes"
***The Doors (1993):** "Light My Fire"
Dr. Dre: "Nothin' But a 'G' Thang"
***The Drifters (1988):** "Save the Last Dance for Me"
Duran Duran: "Hungry Like the Wolf"

***Bob Dylan (1988):** "Like a Rolling Stone"
***The Eagles (1998):** "Hotel California"
***Earth, Wind, and Fire (2000):** "Shining Star"
***Duane Eddy (1994):** "Rebel-Rouser"
Missy Elliott: "Sock It 2 Me"
Eminem: "The Real Slim Shady"
En Vogue: "Hold On"
The Eurythmics: "Sweet Dreams (Are Made of This)"
Everclear: "Father Of Mine"
***The Everly Brothers (1986):** "Wake Up, Little Susie"
50 Cent (Curtis Jackson): *Get Rich Or Die Tryin'*
The Five Satins: "In the Still of the Night"
Roberta Flack: "The First Time Ever I Saw Your Face"
***The Flamingos (2001):** "I Only Have Eyes for You"
***Fleetwood Mac (1998):** *Rumours*
The Foo Fighters: "I'll Stick Around"
Foreigner: "Double Vision"
***The Four Seasons (1990):** "Sherry"
***The Four Tops (1990):** "I Can't Help Myself (Sugar Pie, Honey Bunch)"
***Aretha Franklin (1987):** "Respect"
Nelly Furtado: "I'm Like a Bird"
Peter Gabriel: "Shock the Monkey"
***Gamble (Kenny) and Huff (Leon) (2008):** "If You Don't Know Me By Now"
***Marvin Gaye (1987):** "I Heard It Through the Grapevine"
***Genesis (2010):** "No Reply at All"
Goo Goo Dolls: "Iris"
Grand Funk Railroad: "We're an American Band"
***Grandmaster Flash and the Furious Five (2007):** "The Message"
***The Grateful Dead (1994):** "Uncle John's Band"
***Al Green (1995):** "Let's Stay Together"
Green Day: "Boulevard of Broken Dreams"
The Guess Who: "American Woman"
Guns N' Roses: "Sweet Child o' Mine"
***Buddy Guy (2005):** *A Man and His Blues*
***Bill Haley[1] and His Comets (1987):** "Rock Around the Clock"
Hall and Oates: "Kiss on My List"
Hanson: "MMMBop"
***George Harrison (2004):** "My Sweet Lord"
***Isaac Hayes (2002):** "Theme from 'Shaft' "
Heart: "Barracuda"
***Jimi Hendrix (1992):** "Purple Haze"
Lauryn Hill: "Doo-Wop (That Thing)"
Hole: "Doll Parts"
***The Hollies (2010):** "Long Cool Woman (In a Black Dress)"
***Buddy Holly (1986):** "Peggy Sue"
***John Lee Hooker (1991):** "Boogie Chillen"
Hootie and the Blowfish: *Cracked Rear View*
Whitney Houston: "I Will Always Love You"
***The Impressions (1991):** "For Your Precious Love"
Indigo Girls: "Closer to Fine"
INXS: "Need You Tonight"
***The Isley Brothers (1992):** "It's Your Thing"
***The Jackson Five (1997):** "ABC"
Janet Jackson: *Rhythm Nation*
***Michael Jackson (2001):** *Thriller*
***Etta James (1993):** "At Last"
Tommy James and the Shondells: "Crimson and Clover"
Jane's Addiction: "Jane Says"
Ja Rule: *Venni, Vetti, Vecci*
Jay and the Americans: "This Magic Moment"
Jay-Z: "Can I Live"
***Jefferson Airplane (1996):** "White Rabbit"
Jethro Tull: *Aqualung*
Joan Jett: "I Love Rock 'n' Roll"
Jewel: "You Were Meant For Me"
***Billy Joel (1999):** "Piano Man"
***Elton John (1994):** "Candle in the Wind"
***Little Willie John (1996):** "Sleep"
Norah Jones: *Come Away With Me*
***Janis Joplin (1995):** "Me and Bobby McGee"
Journey: "Don't Stop Believin' "
K.C. and the Sunshine Band: "Get Down Tonight"
R. Kelly: "I Can't Sleep Baby (If I)"
Alicia Keys: "Fallin'"
Kid Rock: "Cowboy"
***B.B. King (1987):** "The Thrill Is Gone"
Carole King: *Tapestry*
***The Kinks (1990):** "You Really Got Me"
Kiss: "Rock 'n' Roll All Night"
***Gladys Knight and the Pips (1996):** "Midnight Train to Georgia"
Korn: "Blind"
Lenny Kravitz: "Are You Gonna Go My Way?"
***Led Zeppelin (1995):** "Stairway to Heaven"
***Brenda Lee (2002):** "I'm Sorry"
John Legend: "Ordinary People"
***John Lennon (1994):** "Imagine"
***Jerry Lee Lewis (1986):** "Whole Lotta Shakin' Going On"
Lil' Kim: "No Matter What They Say"
Limp Bizkit: "Break Stuff"
Linkin Park: "One Step Closer"
***Little Anthony and the Imperials (2009):** "Tears on My Pillow"
***Little Richard (1986):** "Tutti Frutti"
***Little Walter (2008):** "Juke"
Live: "Lightning Crashes"
L. L. Cool J: "Mama Said Knock You Out"
Jennifer Lopez: "Love Don't Cost a Thing"
***The Lovin' Spoonful (2000):** "Summer in the City"
Ludacris: "Money Maker"
***Frankie Lymon and the Teenagers (1993):** "Why Do Fools Fall in Love?"
***Lynyrd Skynyrd (2006):** "Free Bird"
***Madonna (2008):** "Material Girl"
***The Mamas and the Papas (1998):** "Monday, Monday"
Aimee Mann: "Save Me"
Marilyn Manson: "Beautiful People"
***Bob Marley (1994):** *Exodus*
Maroon 5: *Songs About Jane*
***Martha and the Vandellas (1995):** "Dancin' in the Streets"
The Marvelettes: "Please, Mr. Postman"
Matchbox 20: "Push"
John Mayer: "Daughters"
***Curtis Mayfield (1999):** "Superfly"
***Paul McCartney (1999):** "Band on the Run"
Don McLean: "American Pie"
***Clyde McPhatter (1987):** "A Lover's Question"
Meat Loaf: "Paradise by the Dashboard Light"
***John (Cougar) Mellencamp (2008):** "Jack and Diane"
Men at Work: "Who Can It Be Now?"
***Metallica (2009):** "Enter Sandman"
George Michael: "Faith"
***Joni Mitchell (1997):** "Both Sides Now"
Moby: "Bodyrock"
The Monkees: "I'm a Believer"
Moody Blues: "Nights in White Satin"
***The Moonglows (2000):** "Blue Velvet"
Alanis Morissette: "Ironic"
***Van Morrison (1993):** "Brown-Eyed Girl"
Mötley Crüe: "Live Wire"
Motörhead: "Ace of Spades"
Jason Mraz: "I'm Yours"
Nelly: *Country Grammar*
***Ricky Nelson (1987):** "Hello, Mary Lou"
Nickelback: "Photograph"
Nine Inch Nails: "Closer"
Nirvana: *Nevermind*
No Doubt: *Rock Steady*
The Notorious B.I.G.: "Mo Money Mo Problems"
'N Sync: "Bye, Bye, Bye"
Ted Nugent: "Strangehold"
N.W.A.: "Straight Outta Compton"
Oasis: "Wonderwall"
The Offspring: "Pretty Fly (For a White Guy)"
***The O'Jays (2005):** "Back Stabbers"
***Roy Orbison (1987):** "Oh, Pretty Woman"
OutKast: *Speakerboxxx/The Love Below*
Ozzy Osbourne: "Crazy Train"
***Parliament/Funkadelic (1997):** "One Nation Under a Groove"
Pearl Jam: "Jeremy"
***Carl Perkins (1987):** "Blue Suede Shoes"
Katy Perry: "I Kissed a Girl"
Peter, Paul, and Mary: "Leaving on a Jet Plane"
***Tom Petty and the Heartbreakers (2002):** "Refugee"
Liz Phair: *Exile in Guyville*
Phish: "Sample in a Jar"
***Wilson Pickett (1991):** "Land of 1,000 Dances"
Pink: *Missundazstood!*
***Pink Floyd (1996):** *The Wall*
***Gene Pitney (2002):** "Only Love Can Break a Heart"
***The Platters (1990):** "The Great Pretender"
The Pointer Sisters: "I'm So Excited"
***The Police (2003):** "Every Breath You Take"
Iggy Pop: "Lust for Life"
***Elvis Presley (1986):** "Love Me Tender"
***The Pretenders (2005):** "Back on the Chain Gang"
***Lloyd Price (1998):** "Stagger Lee"
***Prince (The Artist) (2004):** "Purple Rain"
Public Enemy: "Fight the Power"
Puff Daddy and the Family: *No Way Out*
***Queen (2001):** "Bohemian Rhapsody"
Radiohead: *OK Computer*
Rage Against the Machine: "Bulls on Parade"
***Bonnie Raitt (2000):** "Something to Talk About"
***The Ramones (2002):** "I Wanna Be Sedated"
***Otis Redding (1989):** "(Sittin' on) The Dock of the Bay"
Red Hot Chili Peppers: "Under the Bridge"
***Jimmy Reed (1991):** "Ain't That Loving You, Baby?"
Lou Reed: "Walk on the Wild Side"
***R.E.M. (2007):** "Losing My Religion"
REO Speedwagon: "Can't Fight This Feeling"
Busta Rhymes: "What's It Gonna Be?"
***The Righteous Brothers (2003):** "You've Lost That Lovin' Feelin' "
Johnny Rivers: "Poor Side of Town"
***Smokey Robinson[1] and the Miracles (1987):** "Shop Around"
***The Rolling Stones (1989):** "Satisfaction"
***The Ronettes (2007):** "Be My Baby"
Linda Ronstadt: "You're No Good"
Diana Ross: "I'm Coming Out"
***Run-D.M.C. (2009):** "Raisin' Hell"
Rush: "Tom Sawyer"
Sade: "Smooth Operator"
Salt-N-Pepa: "Shoop"
***Sam and Dave (1992):** "Soul Man"
***Santana (1998):** "Black Magic Woman"
Seal: "Kiss From a Rose"
Neil Sedaka: "Breaking Up Is Hard to Do"
***Bob Seger (2004):** "Old Time Rock & Roll"
***Sex Pistols (2006):** "Anarchy in the UK"
Shaggy: "It Wasn't Me"
Shakira: "Whenever, Wherever"
Tupac Shakur: "How Do U Want It"
***Del Shannon (1999):** "Runaway"
***The Shirelles (1996):** "Soldier Boy"
Carly Simon: "You're So Vain"
***Paul Simon (2001):** "50 Ways to Leave Your Lover"
***Simon and Garfunkel (1990):** "Bridge Over Troubled Water"
***Percy Sledge (2005):** "When a Man Loves a Woman"
***Sly and the Family Stone (1993):** "Everyday People"
Smashing Pumpkins: "Today"
***Patti Smith (2007):** "Because the Night"
Will Smith: "Gettin' Jiggy With It"
The Smiths: "This Charming Man"
Snoop Dogg: "Gin and Juice"
Sonic Youth: "Bull in the Heather"
Soundgarden: "Black Hole Sun"
Britney Spears: "Hit Me Baby One More Time"
Spice Girls: "Wannabe"
***Dusty Springfield (1999):** "I Only Want to Be With You"
***Bruce Springsteen (1999):** "Born to Run"
Squeeze: "Tempted"

***Staple Singers (1999):** "I'll Take You There"
***Steely Dan (2001):** "Rikki Don't Lose That Number"
Gwen Stefani: "Hollaback Girl"
Steppenwolf: "Born to Be Wild"
***Rod Stewart (1994):** "Maggie Mae"
Sting: "If You Love Somebody, Set Them Free"
Stone Temple Pilots: "Plush"
***The Stooges (2010):** "I Wanna Be Your Dog"
Styx: "Come Sail Away"
Sublime: "What I Got"
The Sugar Hill Gang: "Rapper's Delight"
Donna Summer: "Bad Girls"
***The Supremes (1988):** "Stop! In the Name of Love"
Taj Mahal: "Going Up to the Country, Paint My Mailbox Blue"
***Talking Heads (2002):** "Once in a Lifetime"
***James Taylor (2001):** "You've Got a Friend"
***The Temptations (1989):** "My Girl"
Three Dog Night: "Joy to the World"
Justin Timberlake: "SexyBack"
TLC: "Waterfalls"
T. Rex: "Bang a Gong (Get It On)"
***Traffic (2004):** *Traffic*
***Big Joe Turner (1987):** "Shake, Rattle & Roll"
***Ike and Tina Turner (1991):** "Proud Mary"
***Tina Turner (1991):** "What's Love Got to Do With It?"
The Turtles: "Happy Together"
***U2 (2005):** "With or Without You"
Usher: "You Make Me Wanna"
***Ritchie Valens (2001):** "La Bamba"
***Van Halen (2007):** "Running With the Devil"
Stevie Ray Vaughan: "Crossfire"
***The Velvet Underground (1996):** "Sweet Jane"
***The Ventures (2008):** "Walk, Don't Run"
***Gene Vincent (1998):** "Be-Bop-A-Lula"
Tom Waits: "Downtown Train"
The Wallflowers: "One Headlight"
Dionne Warwick: "I Say a Little Prayer"
***Muddy Waters (1987):** "I Can't Be Satisfied"
Mary Wells: "My Guy"
Kanye West: "Gold Digger"
Whitesnake: "Here I Go Again"
The White Stripes: "Seven Nation Army"
***The Who (1990):** *Tommy*
Lucinda Williams: *Car Wheels on a Gravel Road*
***Jackie Wilson (1987):** "That's Why"
***Bobby Womack (2009):** "Lookin' for a Love"
***Stevie Wonder (1989):** "You Are the Sunshine of My Life"
Wu-Tang Clan: "Protect Ya Neck"
Weird Al Yankovic: *Dare to Be Stupid*
***The Yardbirds (1992):** "For Your Love"
Yes: "Roundabout"
***Neil Young (1995):** "Down by the River"
***The Young Rascals/The Rascals (1997):** "Good Lovin' "
***Frank Zappa[1]/Mothers of Invention (1995):** *Hot Rats*
John Zorn: *News for Lulu*
***ZZ Top (2004):** "Legs"

(1) Only individual performer is in Rock and Roll Hall of Fame.

Entertainment Personalities of the Present

Living actors, musicians, dancers, singers, producers, directors, radio-TV performers.

Name	Birthplace	Birthdate
Abbado, Claudio	Milan, Italy	6/26/33
Abdul, Paula	San Fernando, CA	6/19/62
Abraham, F. Murray	Pittsburgh, PA	10/24/39
Abrams, J(effrey) J(acob)	New York, NY	6/27/66
Adams, Amy	Aviano, Italy	8/20/74
Adams, Bryan	Kingston, ON, Can.	11/5/59
Adele	London, England, UK	5/5/88
Adjani, Isabelle	Paris, France	6/27/55
Ad-Rock	South Orange, NJ	10/31/66
Affleck, Ben	Berkeley, CA	8/15/72
Affleck, Casey	Falmouth, MA	8/12/75
Aghdashloo, Shohreh	Tehran, Iran	5/11/52
Aguilera, Christina	Staten Island, NY.	12/18/80
Aiello, Danny	New York, NY	6/20/33
Aiken, Clay	Raleigh, NC	11/30/78
Aimee, Anouk	Paris, France	4/27/32
Alba, Jessica	Pomona, CA	4/28/81
Albanese, Licia	Bari, Italy	7/22/13
Alberghetti, Anna Maria	Pesaro, Italy	5/15/36
Albert, Marv	Brooklyn, NY	6/12/41
Alda, Alan	New York, NY	1/28/36
Alexander, Jane	Boston, MA	10/28/39
Alexander, Jason	Newark, NJ	9/23/59
Allen, Debbie	Houston, TX	1/16/50
Allen, Joan	Rochelle, IL	8/20/56
Allen, Karen	Carrollton, IL	10/5/51
Allen, Kris	Jacksonville, AR	6/21/85
Allen, Ted	Columbus, OH	5/20/65
Allen, Tim	Denver, CO	6/13/53
Allen, Woody	Brooklyn, NY	12/1/35
Alley, Kirstie	Wichita, KS	1/12/51
Allman, Gregg	Nashville, TN	12/8/47
Alonso, Maria Conchita	Cienfuegos, Cuba	6/29/57
Alpert, Herb	Los Angeles, CA	3/31/35
Almodóvar, Pedro	Calzada de Calatrava, Spain	9/24/49
Ambrose, Lauren	New Haven, CT	2/20/78
Ames, Ed	Malden, MA	7/9/27
Amos, John	Newark, NJ	12/27/41
Amos, Tori	Newton, NC	8/22/63
André 3000	Atlanta, GA	5/27/75
Anderson, Gillian	Chicago, IL	8/9/68
Anderson, Harry	Newport, RI	10/14/52
Anderson, Ian	Dunfermline, Scotland, UK	8/10/47
Anderson, Kevin	Gurnee, IL	1/13/60
Anderson, Loni	St. Paul, MN	8/5/46
Anderson, Lynn	Grand Forks, ND	9/26/47
Anderson, Melissa Sue	Berkeley, CA	9/26/62
Anderson, Pamela	Ladysmith, BC, Can.	7/1/67
Anderson, Richard	Long Branch, NJ	8/8/26
Anderson, Richard Dean	Minneapolis, MN	1/23/50
Anderson, Wes	Houston, TX	5/1/69
Andersson, Bibi	Stockholm, Sweden	11/11/35
Andress, Ursula	Bern, Switzerland	3/19/36
Andrews, Julie	Walton-on-Thames, Surrey, England, UK	10/1/35
Andrews, Naveen	London, England, UK	1/17/69
Andrews, Patty	Mound, MN	2/16/18
Angel, Criss	East Meadow, NY	12/19/67
Aniston, Jennifer	Sherman Oaks, CA	2/11/69
Anka, Paul	Ottawa, ON, Can.	7/30/41
Ann-Margret	Stockholm, Sweden	4/28/41
Anthony, Marc	New York, NY	9/16/68
Apatow, Judd	Syosset, NY	12/6/67
Apple, Fiona	New York, NY	9/13/77
Applegate, Christina	Los Angeles, CA	11/25/71
Archer, Anne	Los Angeles, CA	8/25/47
Archuleta, David	Miami, FL	12/28/90
Arkin, Adam	Brooklyn, NY	8/19/56
Arkin, Alan	New York, NY	3/26/34
Armisen, Fred	Hattiesburg, MS	12/4/66
Arnaz, Desi, Jr.	Hollywood, CA	1/19/53
Arnaz, Lucie	Hollywood, CA	7/17/51
Arness, James	Minneapolis, MN	5/26/23
Arnett, Will	Toronto, ON, Can.	5/4/70
Arnold, Tom	Ottumwa, IA	3/6/59
Arquette, David	Winchester, VA	9/8/71
Arquette, Patricia	Chicago, IL	4/8/68
Arquette, Rosanna	New York, NY	8/10/59
Arroyo, Martina	New York, NY	2/2/37
Ashanti (Douglas)	Glen Cove, NY.	10/13/80
Ashley, Elizabeth	Ocala, FL	8/30/39
Asner, Ed	Kansas City, KS	11/15/29
Assante, Armand	New York, NY	10/4/49
Astin, John	Baltimore, MD	3/30/30
Astin, Sean	Santa Monica, CA	2/25/71
Atkins, Eileen	London, England, UK	6/16/34
Atkins, Sharif	Pittsburgh, PA	1/29/75
Atkinson, Rowan	Newcastle-Upon-Tyne, England, UK	1/6/55
Attenborough, Richard	Cambridge, England, UK	8/29/23
Auberjonois, Rene	New York, NY	6/1/40
Austin, Patti	New York, NY	8/10/48
Autry, Alan	Shreveport, LA	7/31/52
Avalon, Frankie	Philadelphia, PA	9/18/40
Aykroyd, Dan	Ottawa, ON, Can.	7/1/52
Azaria, Hank	Forest Hills, Queens, NY	4/25/64
Aznavour, Charles	Paris, France	5/22/24
Babyface	Indianapolis, IN	4/10/59
Bacall, Lauren	Bronx, NY	9/16/24
Bacon, Kevin	Philadelphia, PA	7/8/58
Badalucco, Michael	Brooklyn, NY	12/20/54
Bader, Diedrich	Alexandria, VA	12/24/66
Badu, Erykah	Dallas, TX	2/26/71
Baez, Joan	Staten Island, NY.	1/9/41
Bain, Conrad	Lethbridge, AB, Can.	2/4/23
Baio, Scott	Brooklyn, NY	9/22/61
Baker, Anita	Toledo, OH	1/26/58
Baker, Carroll	Johnstown, PA	5/28/31
Baker, Diane	Hollywood, CA	2/25/38
Baker, Joe Don	Groesbeck, TX.	2/12/36
Baker, Kathy	Midland, TX	6/8/50
Baker, Simon	Launceston, Tasmania, Australia	7/30/69
Bakula, Scott	St. Louis, MO	10/9/54
Baldwin, Alec	Massapequa, NY	4/3/58
Baldwin, Daniel	Massapequa, NY	10/5/60
Baldwin, Stephen	Massapequa, NY	5/12/66
Baldwin, William	Massapequa, NY	2/21/63
Bale, Christian	Pembrokeshire, Wales, UK	1/30/74
Ballard, Kaye	Cleveland, OH	11/20/26
Bana, Eric	Melbourne, Australia	8/9/68
Banderas, Antonio	Málaga, Spain	8/10/60
Banks, Elizabeth	Pittsfield, MA	2/10/74

Name	Birthplace	Birthdate
Banks, Tyra	Los Angeles, CA	12/4/73
Bannon, Jack	Los Angeles, CA	6/14/40
Baranski, Christine	Buffalo, NY	5/2/52
Barbeau, Adrienne	Sacramento, CA	6/11/45
Bardem, Javier	Las Palmas, Canary Isl., Spain	3/1/69
Bardot, Brigitte	Paris, France	9/28/34
Barker, Bob	Darrington, WA	12/12/23
Barkin, Ellen	Bronx, NY	4/16/55
Barrie, Barbara	Chicago, IL	5/23/31
Barrino, Fantasia	High Point, NC	6/30/84
Barrymore, Drew	Los Angeles, CA	2/22/75
Bartoli, Cecilia	Rome, Italy	6/4/66
Barton, Misha	London, England, UK	1/24/86
Baryshnikov, Mikhail	Riga, Latvia	1/28/48
Basinger, Kim	Athens, GA	12/8/53
Bass, Lance	Laurel, MS	5/4/79
Bassett, Angela	New York, NY	8/16/58
Bassey, Shirley	Cardiff, Wales, UK	1/8/37
Bateman, Jason	Rye, NY	1/14/69
Bateman, Justine	Rye, NY	2/19/66
Bates, Kathy	Memphis, TN	6/28/48
Batt, Bryan	New Orleans, LA	3/1/63
Battle, Kathleen	Portsmouth, OH	8/13/48
Baxter, Meredith	South Pasadena, CA	6/21/47
Bean, Orson	Burlington, VT	7/22/28
Bean, Sean	Sheffield, England, UK	4/17/59
Beatty, Ned	Louisville, KY	7/6/37
Beatty, Warren	Richmond, VA	3/30/37
Beauvais, Garcelle	St. Marc, Haiti	11/26/66
Beck	Los Angeles, CA	7/8/70
Beck, Jeff	Wallington, Surrey, Eng., UK	6/24/44
Beckham, Victoria	Hertfordshire, England, UK	4/17/74
Beckinsale, Kate	London, England, UK	7/26/73
Bedelia, Bonnie	New York, NY	3/25/48
Begley, Ed, Jr.	Los Angeles, CA	9/16/49
Behar, Joy	Brooklyn, NY	10/7/43
Belafonte, Harry	New York, NY	3/1/27
Bell, Art	Camp Lejeune, NC	6/17/45
Bell, Catherine	London, England, UK	8/14/68
Bell, Kristen	Huntington Woods, MI	7/18/80
Bello, Maria	Norristown, PA	4/18/67
Belmondo, Jean-Paul	Neuilly-sur-Seine, France	4/9/33
Belushi, Jim	Chicago, IL	6/15/54
Belzer, Richard	Bridgeport, CT	8/4/44
Benatar, Pat	Brooklyn, NY	1/10/53
Benedict, Dirk	Helena, MT	3/1/45
Benigni, Roberto	Misericordia, Italy	10/27/52
Bening, Annette	Topeka, KS	5/29/58
Benjamin, Richard	New York, NY	5/22/38
Bennett, Alan	Leeds, England, UK	5/9/34
Bennett, Tony	Astoria, Queens, NY	8/3/26
Benson, George	Pittsburgh, PA	3/22/43
Benson, Robby	Dallas, TX	1/21/56
Berenger, Tom	Chicago, IL	5/31/50
Berfield, Justin	Los Angeles County, CA	2/25/86
Bergen, Candice	Beverly Hills, CA	5/9/46
Bergen, Polly	Knoxville, TN	7/14/30
Bergeron, Tom	Haverhill, MA	5/6/55
Berlinger, Warren	Brooklyn, NY	8/31/37
Berman, Shelley	Chicago, IL	2/3/26
Bernard, Crystal	Garland, TX	9/30/61
Bernhard, Sandra	Flint, MI	6/6/55
Bernsen, Corbin	N. Hollywood, CA	9/7/54
Berry, Chuck	St. Louis, MO	10/18/26
Berry, Halle	Cleveland, OH	8/14/66
Berry, Ken	Moline, IL	11/3/33
Bertinelli, Valerie	Wilmington, DE	4/23/60
Bertolucci, Bernardo	Parma, Italy	3/16/40
Bettany, Paul	London, England, UK	5/27/71
Biafra, Jello	Boulder, CO	6/17/58
Bialik, Mayim	San Diego, CA	12/12/75
Bieber, Justin	Stratford, ON, Can.	3/1/94
Biel, Jessica	Ely, MN	3/3/82
Big Boi	Savannah, GA	2/1/75
Bigelow, Kathryn	San Carlos, CA	11/27/51
Biggs, Jason	Pompton Plains, NJ	5/12/78
Bikel, Theodore	Vienna, Austria	5/2/24
Bilson, Rachel	Los Angeles, CA	8/25/81
Binoche, Juliette	Paris, France	3/9/64
Birch, Thora	Beverly Hills, CA	3/11/82
Birney, David	Washington, DC	4/23/39
Bisset, Jacqueline	Weybridge, England, UK	9/13/44
Bissett, Josie	Seattle, WA	10/5/70
Björk	Reykjavik, Iceland	11/21/65
Black, Clint	Long Branch, NJ	2/4/62
Black, Jack	Santa Monica, CA	4/7/69
Black, Karen	Park Ridge, IL	7/1/42
Blades, Ruben	Panama City, Panama	7/16/48
Blair, Linda	St. Louis, MO	1/22/59
Blair, Selma	Southfield, MI	6/23/72
Blake, Robert	Nutley, NJ	9/18/33
Blanchett, Cate	Melbourne, Australia	5/14/69
Bledsoe, Tempestt	Chicago, IL	8/1/73
Bleeth, Yasmine	New York, NY	6/14/68
Blethyn, Brenda	Ramsgate, Kent, Eng., UK	2/20/46
Blige, Mary J.	Bronx, NY	1/11/71
Bloom, Claire	London, England, UK	2/15/31
Bloom, Orlando	Canterbury, England, UK	1/13/77
Blyth, Ann	Mt. Kisco, NY	8/16/28
Bochco, Steven	New York, NY	12/16/43
Bocelli, Andrea	Lajatico, Italy	9/22/58
Bogdanovich, Peter	Kingston, NY	7/30/39
Bogosian, Eric	Woburn, MA	4/24/53
Bologna, Joseph	Brooklyn, NY	12/30/38
Bolton, Michael	New Haven, CT	2/26/53
Bonet, Lisa	San Francisco, CA	11/16/67
Bonham Carter, Helena	London, England, UK	5/26/66
Bon Jovi, Jon	Sayreville, NJ	3/2/62
Bono	Dublin, Ireland	5/10/60
Boone, Debby	Hackensack, NJ	9/22/56
Boone, Pat	Jacksonville, FL	6/1/34
Boreanaz, David	Buffalo, NY	5/16/69
Borgnine, Ernest	Hamden, CT	1/24/17
Bosco, Philip	Jersey City, NJ	9/26/30
Bosson, Barbara	Charleroi, PA	11/1/39
Bostwick, Barry	San Mateo, CA	2/24/45
Bosworth, Kate	Los Angeles, CA	1/2/83
Bottoms, Timothy	Santa Barbara, CA	8/30/51
Bow Wow	Columbus, OH	3/9/87
Bowen, Julie	Baltimore, MD	3/3/70
Bowie, David	London, England, UK	1/8/47
Bowles, Peter	London, England, UK	10/16/36
Boxleitner, Bruce	Elgin, IL	5/12/50
Boy George	Bexleyheath, England, UK	6/14/61
Boyle, Lara Flynn	Davenport, IA	3/24/70
Bracco, Lorraine	Brooklyn, NY	10/2/55
Brady, Wayne	Orlando, FL	6/2/72
Braff, Zach	S. Orange, NJ	4/6/75
Branagh, Kenneth	Belfast, N. Ireland, UK	12/10/60
Brand, Russell	Grays, Essex, UK	6/4/75
Brandauer, Klaus Maria	Steiermark, Austria	6/22/44
Brandy (Norwood)	McComb, MS	2/11/79
Braschi, Nicoletta	Cesena, Italy	4/19/60
Bratt, Benjamin	San Francisco, CA	12/16/63
Braugher, Andre	Chicago, IL	7/1/62
Braxton, Toni	Severn, MD	10/7/66
Bremner, Ewen	Edinburgh, Scotland, UK	1/23/72
Brendon, Nicholas	Los Angeles, CA	4/12/71
Brennan, Eileen	Los Angeles, CA	9/3/35
Brenneman, Amy	Glastonbury, CT	6/22/64
Brenner, David	Philadelphia, PA	2/4/45
Bridges, Beau	Los Angeles, CA	12/9/41
Bridges, Jeff	Los Angeles, CA	12/4/49
Brightman, Sarah	Berkhamsted, England, UK	8/14/60
Brimley, Wilford	Salt Lake City, UT	9/27/34
Brinkley, Christie	Malibu, CA	2/2/54
Broadbent, Jim	Lincolnshire, England, UK	5/24/49
Broderick, Matthew	New York, NY	3/21/62
Brody, Adam	San Diego, CA	12/15/79
Brody, Adrien	New York, NY	4/14/73
Brolin, James	Los Angeles, CA	7/18/40
Brolin, Josh	Los Angeles, CA	2/12/68
Brooks, Albert	Beverly Hills, CA	7/22/47
Brooks, Garth	Tulsa, OK	2/7/62
Brooks, James L.	North Bergen, NJ	5/9/40
Brooks, Mel	Brooklyn, NY	6/28/26
Brosnan, Pierce	Navan, Co. Meath, Ireland	5/16/53
Brown, Blair	Washington, DC	4/23/46
Brown, Bobby	Roxbury, MA	2/5/69
Brown, Bryan	Panania, Australia	6/23/47
Brown, Chris	Tappahannock, VA	5/5/89
Brown, Foxy	Brooklyn, NY	9/6/79
Browne, Jackson	Heidelberg, Germany	10/9/48
Brubeck, Dave	Concord, CA	12/6/20
Bryant, Cubby (Paul)	Virginia Beach, VA	6/1/71
Bryson, Peabo	Greenville, SC	4/13/51
Bublé, Michael	Burnaby, BC, Can.	9/9/75
Buckley, Betty	Big Spring, TX	7/3/47
Buffett, Jimmy	Pascagoula, MS	12/25/46
Bujold, Genevieve	Montreal, QC, Can.	7/1/42
Bullock, Sandra	Arlington, VA	7/26/64
Bumbry, Grace	St. Louis, MO	1/4/37
Bündchen, Gisele	Horizontina, Brazil	7/20/80
Burghoff, Gary	Bristol, CT	5/24/43
Burke, Delta	Orlando, FL	7/30/56
Burnett, Carol	San Antonio, TX	4/26/33
Burns, Edward	Woodside, Queens, NY	1/29/68
Burrell, Ty	Grants Pass, OR	8/22/67
Burrows, Darren E.	Winfield, KS	9/12/66
Burstyn, Ellen	Detroit, MI	12/7/32
Burton, LeVar	Landstuhl, Germany	2/16/57
Burton, Tim	Burbank, CA	8/25/58
Buscemi, Steve	Brooklyn, NY	12/13/57
Busey, Gary	Goose Creek, TX	6/29/44
Busfield, Timothy	Lansing, MI	6/12/57
Butler, Brett	Montgomery, AL	1/30/58
Butler, Dan	Fort Wayne, IN	12/2/54
Butler, Gerard	Glasgow, Scot., UK	11/13/69
Buzzi, Ruth	Westerly, RI	7/24/36

Name	Birthplace	Birthdate
Bynes, Amanda	Thousand Oaks, CA	4/3/86
Byrne, David	Dumbarton, Scotland, UK	5/14/52
Byrne, Gabriel	Dublin, Ireland	5/12/50
Byrne, Rose	Sydney, NSW, Australia	7/24/79
Caan, James	Bronx, NY	3/26/40
Caballe, Montserrat	Barcelona, Spain	4/12/33
Caesar, Sid	Yonkers, NY	9/8/22
Cage, Nicolas	Long Beach, CA	1/7/64
Cain, Dean	Mt. Clemens, MI	7/31/66
Caine, Michael	London, England, UK	3/14/33
Caldwell, Zoe	Hawthorn, Australia	9/14/33
Callow, Simon	London, England, UK	6/15/49
Cameron, James	Kapuskasing, ON, Can.	8/16/54
Cameron, Kirk	Panorama City, CA	10/12/70
Campanella, Joseph	New York, NY	11/21/27
Campbell, Bruce	Royal Oak, MI	6/22/58
Campbell, Glen	Delight, AR	4/22/36
Campbell, Naomi	South London, Eng., UK	5/22/70
Campbell, Neve	Guelph, ON, Can.	10/3/73
Campion, Jane	Waikanae, New Zealand	4/30/54
Cannell, Stephen J.	Pasadena, CA	2/5/41
Cannon, Dyan	Tacoma, WA	1/4/37
Cannon, Nick	San Diego, CA	10/8/80
Capshaw, Kate	Ft. Worth, TX	11/3/53
Cara, Irene	New York, NY	3/18/59
Carell, Steve	Concord, MA	8/16/62
Cardellini, Linda	Redwood City, CA	6/25/75
Cardinale, Claudia	Tunis, Tunisia	4/15/38
Carey, Drew	Cleveland, OH	5/23/58
Carey, Harry, Jr.	Saugus, CA	5/16/21
Carey, Mariah	Huntington, NY	3/27/70
Cariou, Len	St. Boniface, MB, Can.	9/30/39
Carlton, Vanessa	Milford, PA	8/16/80
Carlyle, Robert	Glasgow, Scotland, UK	4/14/61
Carmen, Eric	Cleveland, OH	8/11/49
Caron, Leslie	Boulogne, France	7/1/31
Carpenter, John	Carthage, NY	1/16/48
Carpenter, Mary Chapin	Princeton, NJ	2/21/58
Carr, Vikki	El Paso, TX	7/19/41
Carreras, Jose	Barcelona, Spain	12/5/46
Carrere, Tia	Honolulu, HI	1/2/67
Carrey, Jim	Newmarket, ON, Can.	1/17/62
Carroll, Diahann	Bronx, NY	7/17/35
Carroll, Pat	Shreveport, LA	5/5/27
Carson, Lisa Nicole	Brooklyn, NY	7/12/69
Carter, Jack	Brooklyn, NY	6/24/23
Carter, Lynda	Phoenix, AZ	7/24/51
Carter, Nick	Jamestown, NY	1/28/80
Carter, Ron	Ferndale, MI	5/4/37
Cartwright, Nancy	Kettering, OH	10/25/59
Caruso, David	Forest Hills, Queens, NY	1/17/56
Carvey, Dana	Missoula, MT	6/2/55
Case, Sharon	Detroit, MI	2/9/71
Cash, Rosanne	Memphis, TN	5/24/55
Cassidy, David	New York, NY	4/12/50
Castellaneta, Dan	Chicago, IL	10/29/57
Castle-Hughes, Keisha	Donnybrook, Australia	3/24/90
Cates, Phoebe	New York, NY	7/16/63
Cattrall, Kim	Liverpool, England, UK	8/21/56
Cavanagh, Tom	Ottawa, ON, Can.	10/26/63
Cavett, Dick	Gibbon, NE	11/19/36
Cavill, Henry	Jersey, Channel Islands	5/5/83
Cedric the Entertainer	Jefferson City, MO	4/24/64
Cera, Michael	Brampton, ON, Can.	6/7/88
Chabert, Lacey	Purvis, MS	9/30/82
Chalke, Sarah	Ottawa, ON, Can.	8/27/76
Chamberlain, Richard	Beverly Hills, CA	3/31/34
Chambers, Justin	Springfield, OH	7/11/70
Chan, Jackie	Hong Kong	4/7/54
Chandler, Kyle	Buffalo, NY	9/17/65
Channing, Carol	Seattle, WA	1/31/21
Channing, Stockard	New York, NY	2/13/44
Chaplin, Geraldine	Santa Monica, CA	7/31/44
Chapman, Tracy	Cleveland, OH	3/30/64
Chappelle, Dave	Washington, DC	8/24/73
Charo	Murcia, Spain	1/15/51?
Chase, Chevy	New York, NY	10/8/43
Chasez, J.C. (Joshua)	Washington, DC	8/8/76
Cheadle, Don	Kansas City, MO	11/29/64
Checker, Chubby	Spring Gulley, SC	10/3/41
Chenoweth, Kristin	Broken Arrow, OK	7/24/68
Cher	El Centro, CA	5/20/46
Chesney, Kenny	Lutrelle, TN	3/26/68
Chianese, Dominic	Bronx, NY	2/24/31
Chiba, Sonny	Fukuoka, Kyushu, Japan	1/23/39
Chiklis, Michael	Lowell, MA	8/30/63
Cho, Margaret	San Francisco, CA	12/5/68
Chong, Rae Dawn	Edmonton, AB, Can.	2/28/61
Chong, Thomas	Edmonton, AB, Can.	5/24/38
Chow Yun-Fat	Lamma Island, Hong Kong	5/18/55
Christensen, Hayden	Vancouver, BC, Can.	4/19/81
Christensen, Helena	Copenhagen, Denmark	12/25/68
Christie, Julie	Chukua, Assam, India	4/14/41
Christopher, William	Evanston, IL	10/20/32
Chuck D	Roosevelt, NY	8/1/60
Church, Charlotte	Llandaff, Cardiff, Wales, UK	2/21/86
Church, Thomas Haden	El Paso, TX	6/17/61
Clapp, Gordon	North Conway, NH	9/24/48
Clapton, Eric	Ripley, Surrey, England, UK	3/30/45
Clark, Anthony	Lynchburg, VA	4/4/64
Clark, Dick	Mt. Vernon, NY	11/30/29
Clark, Petula	Epson, Surrey, England, UK	11/15/32
Clark, Roy	Meherrin, VA	4/15/33
Clarkson, Kelly	Burleson, TX	4/24/82
Clarkson, Patricia	New Orleans, LA	12/29/59
Clay, Andrew Dice	Brooklyn, NY	9/29/57
Clayburgh, Jill	New York, NY	4/30/44
Cleese, John	Weston-super-Mare, Eng., UK	10/27/39
Cliburn, Van	Shreveport, LA	7/12/34
Clooney, George	Lexington, KY	5/6/61
Close, Glenn	Greenwich, CT	3/19/47
Cocker, Joe	Sheffield, England, UK	5/20/44
Coen, Ethan	St. Louis Park, MN	9/21/57
Coen, Joel	St. Louis Park, MN	11/29/54
Cohen, Leonard	Montreal, QC, Can.	9/21/34
Cohen, Sacha Baron	London, England, UK	10/13/71
Colbert, Stephen	Charleston, SC	5/13/64
Cole, Gary	Park Ridge, IL	9/20/56
Cole, Natalie	Los Angeles, CA	2/6/50
Cole, Olivia	Memphis, TN	11/26/42
Cole, Paula	Rockport, MA	4/5/68
Coleman, Dabney	Austin, TX	1/3/32
Coleman, Ornette	Fort Worth, TX	3/19/30
Colfer, Chris	Fresno, CA	5/27/90
Collette, Toni	Blacktown, Australia	11/1/72
Collins, Joan	London, England, UK	5/23/33
Collins, Judy	Seattle, WA	5/1/39
Collins, Pauline	Exmouth, England, UK	9/3/40
Collins, Phil	London, England, UK	1/30/51
Collins, Stephen	Des Moines, IA	10/1/47
Colvin, Shawn	Vermillion, SD	1/10/56
Combs, Sean	New York, NY	11/4/69
Connelly, Jennifer	Round Top, NY	12/12/70
Connery, Sean	Edinburgh, Scotland, UK	8/25/30
Connick, Harry, Jr.	New Orleans, LA	9/11/67
Connolly, Kevin	Patchogue, NY	3/5/74
Connors, Mike	Fresno, CA	8/15/25
Conrad, Robert	Chicago, IL	3/1/35
Conroy, Frances	Monroe, GA	11/13/53
Constantine, Michael	Reading, PA	5/22/27
Conti, Tom	Paisley, Scotland, UK	11/22/41
Conway, Tim	Willoughby, OH	12/15/33
Cook, Barbara	Atlanta, GA	10/25/27
Cook, David	Houston, TX	12/20/82
Coolidge, Rita	Nashville, TN	5/1/45
Coolio	Compton, CA	8/1/63
Cooper, Alice	Detroit, MI	2/4/48
Cooper, Bradley	Philadelphia, PA	1/5/75
Cooper, Chris	Kansas City, MO	7/9/51
Cooper, Jackie	Los Angeles, CA	9/15/22
Copperfield, David	Metuchen, NJ	9/16/56
Coppola, Francis Ford	Detroit, MI	4/7/39
Coppola, Sofia	New York, NY	5/14/71
Corbett, John	Wheeling, WV	5/9/61
Corbin, Barry	Lamesa, TX	10/16/40
Corea, Chick	Chelsea, MA	6/12/41
Corgan, Billy	Elk Grove, IL	3/17/67
Corley, Pat	Dallas, TX	6/1/30
Cornell, Chris	Seattle, WA	7/20/64
Corwin, Jeff	Norwell, MA	7/11/67
Cosby, Bill	Philadelphia, PA	7/12/37
Cosgrove, Miranda	Los Angeles, CA	5/14/93
Costas, Bob	Astoria, Queens, NY	3/22/52
Costello, Elvis	London, England, UK	8/25/54
Costner, Kevin	Compton, CA	1/18/55
Cotillard, Marion	Paris, France	9/30/75
Courtenay, Tom	Hull, England, UK	2/25/37
Cowell, Simon	London, England, UK	10/7/59
Cox, Brian	Dundee, Scotland, UK	6/1/46
Cox, Nikki	Los Angeles, CA	6/2/78
Cox, Ronny	Cloudcroft, NM	7/23/38
Cox Arquette, Courteney	Birmingham, AL	6/15/64
Coyote, Peter	New York, NY	10/10/42
Craig, Daniel	Chester, England, UK	3/2/68
Cranston, Bryan	San Fernando Valley, CA	3/7/56
Crawford, Cindy	DeKalb, IL	2/20/66
Crawford, Michael	Salisbury, England, UK	1/19/42
Cromwell, James	Los Angeles, CA	1/27/40
Crosby, David	Los Angeles, CA	8/14/41
Cross, Ben	London, England, UK	12/16/47
Cross, Marcia	Marlborough, MA	3/25/62
Crouse, Lindsay	New York, NY	5/12/48
Crow, Sheryl	Kennett, MO	2/11/62
Crowe, Cameron	Palm Springs, CA	7/13/57
Crowe, Russell	Wellington, New Zealand	4/7/64
Crowell, Rodney	Houston, TX	8/17/50
Crudup, Billy	Manhasset, NY	7/8/68
Cruise, Tom	Syracuse, NY	7/3/62
Cruz, Penelope	Madrid, Spain	4/28/74
Cryer, Jon	New York, NY	4/16/65
Crystal, Billy	Long Beach, NY	3/14/47
Culkin, Kieran	New York, NY	9/30/82

Name	Birthplace	Birthdate
Culkin, Macaulay	New York, NY	8/26/80
Culkin, Rory	New York, NY	7/21/89
Cullum, John	Knoxville, TN	3/2/30
Cumming, Alan	Aberfeldy, Perthshire, Scotland, UK	1/27/65
Curry, Tim	Grappenhall, Cheshire, England, UK	4/19/46
Curtin, Jane	Cambridge, MA	9/6/47
Curtis, Jamie Lee	Los Angeles, CA	11/22/58
Cusack, Joan	New York, NY	10/11/62
Cusack, John	Evanston, IL	6/28/66
Cyrus, Billy Ray	Flatwoods, KY	8/25/61
Cyrus, Miley	Nashville, TN	11/23/92
Dafoe, Willem	Appleton, WI	7/22/55
Dahl, Arlene	Minneapolis, MN	8/11/28
Dale, Jim	Rothwell, England, UK	8/15/35
Dalton, Timothy	Colwyn Bay, Wales, UK	3/21/46
Daltrey, Roger	London, England, UK	3/1/44
Daly, Carson	Santa Monica, CA	6/22/73
Daly, Timothy	New York, NY	3/1/56
Daly, Tyne	Madison, WI	2/21/46
Damon, Matt	Cambridge, MA	10/8/70
Damone, Vic	Brooklyn, NY	6/12/28
Dane, Eric	San Francisco, CA	11/9/72
Danes, Claire	New York, NY	4/12/79
D'Angelo	Richmond, VA	2/11/74
D'Angelo, Beverly	Columbus, OH	11/15/54
Daniels, Anthony	Salisbury, England, UK	2/21/46
Daniels, Charlie	Wilmington, NC	10/28/36
Daniels, Jeff	Athens, GA	2/19/55
Daniels, William	Brooklyn, NY	3/31/27
Danner, Blythe	Rosemont, PA	2/3/43
Danson, Ted	San Diego, CA	12/29/47
Danza, Tony	Brooklyn, NY	4/21/51
Darby, Kim	Hollywood, CA	7/8/48
Daughtry, Chris	Roanoke Rapids, NC	12/26/79
David, Larry	Brooklyn, NY	7/2/47
Davidson, John	Pittsburgh, PA	12/13/41
Davis, Ann B.	Schenectady, NY	5/5/26
Davis, Clifton	Chicago, IL	10/4/45
Davis, Geena	Wareham, MA	1/21/56
Davis, Hope	Englewood, NJ	3/23/64
Davis, Judy	Perth, Australia	4/23/55
Davis, Kristin	Boulder, CO	2/24/65
Davis, Mac	Lubbock, TX	1/21/42
Dawber, Pam	Farmington Hills, MI	10/18/51
Dawson, Richard	Gosport, Hampshire, Eng., UK	11/20/32
Dawson, Rosario	New York, NY	5/9/79
Day, Doris	Cincinnati, OH	4/3/24
Day-Lewis, Daniel	London, England, UK	4/29/57
Dee, Ruby	Cleveland, OH	10/27/24
DeFranco, Buddy	Camden, NJ	2/17/23
DeGeneres, Ellen	Metairie, LA	1/26/58
DeHaven, Gloria	Los Angeles, CA	7/23/25
De Havilland, Olivia	Tokyo, Japan	7/1/16
Delaney, Kim	Philadelphia, PA	11/29/61
Delany, Dana	New York, NY	3/13/56
De la Rocha, Zack	Long Beach, CA	1/12/70
De Laurentiis, Dino	Torre Annunziata, Italy	8/8/19
Delon, Alain	Sceaux, France	11/8/35
Del Toro, Benicio	Santurce, Puerto Rico	2/19/67
Demme, Jonathan	Baldwin, NY	2/22/44
De Mornay, Rebecca	Santa Rosa, CA	8/29/62
Dempsey, Patrick	Lewiston, ME	1/13/66
Dench, Judi	York, England, UK	12/9/34
Deneuve, Catherine	Paris, France	10/22/43
De Niro, Robert	New York, NY	8/17/43
Dennehy, Brian	Bridgeport, CT	7/9/38
DePalma, Brian	Newark, NJ	9/11/40
Depardieu, Gerard	Chateauroux, France	12/27/48
Depp, Johnny	Owensboro, KY	6/9/63
Derek, Bo	Long Beach, CA	11/20/56
Dern, Bruce	Winnetka, IL	6/4/36
Dern, Laura	Santa Monica, CA	2/10/67
De Rossi, Portia	Melbourne, Victoria, Aust.	1/31/73
DeVito, Danny	Neptune, NJ	11/17/44
DeWitt, Joyce	Wheeling, WV	4/23/49
DeWyze, Lee	Mount Prospect, IL	4/2/86
Dey, Susan	Pekin, IL	12/10/52
Diamond, Neil	Brooklyn, NY	1/24/41
Diaz, Cameron	San Diego, CA	8/30/72
DiCaprio, Leonardo	Hollywood, CA	11/11/74
Dick, Andy	Charleston, SC	12/21/65
Dickinson, Angie	Kulm, ND	9/30/31
Diesel, Vin	New York, NY	7/18/67
Diggs, Taye	Essex Co., NJ	1/2/72
Diller, Phyllis	Lima, OH	7/17/17
Dillman, Bradford	San Francisco, CA	4/14/30
Dillon, Kevin	Mamaroneck, NY	8/19/65
Dillon, Matt	New Rochelle, NY	2/18/64
Dinklage, Peter	Mendham, NJ	6/11/69
Dion, Celine	Charlemagne, QC, Can.	3/30/68
DioGuardi, Kara	Scarsdale, NY	12/9/70
Djalili, Omid	London, England, UK	9/30/65
Dobson, Kevin	Jackson Heights, Queens, NY	3/18/43
Doherty, Shannen	Memphis, TN	4/12/71
Dolenz, Mickey	Los Angeles, CA	3/8/45
Domingo, Placido	Madrid, Spain	1/21/41
Domino, Fats	New Orleans, LA	2/26/28
Donahue, Phil	Cleveland, OH	12/21/35
D'Onofrio, Vincent	Brooklyn, NY	6/30/59
Donovan (Leitch)	Glasgow, Scotland, UK	5/10/46
Donovan, Tate	Tenafly, NJ	9/25/63
Dorn, Michael	Luling, TX	12/9/52
Dorough, Howie	Orlando, FL	8/22/73
Dotrice, Roy	Guernsey, England, UK	5/26/23
Douglas, Kirk	Amsterdam, NY	12/9/16
Douglas, Michael	New Brunswick, NJ	9/25/44
Dourdan, Gary	Philadelphia, PA	12/11/66
Dow, Tony	Hollywood, CA	4/13/45
Down, Lesley-Anne	London, England, UK	3/17/54
Downey, Robert, Jr.	New York, NY	4/4/65
Downey, Roma	Derry, N. Ireland, UK	5/6/60
Downs, Hugh	Akron, OH	2/14/21
Drescher, Fran	Flushing, Queens, NY	9/30/57
Dreyfuss, Richard	Brooklyn, NY	10/29/47
Driver, Minnie	London, England, UK	1/31/70
Dryer, Fred	Hawthorne, CA	7/6/46
Duchovny, David	New York, NY	8/7/60
Duff, Haylie	Houston, TX	2/19/85
Duff, Hilary	Houston, TX	9/28/87
Duffy (Aimee Anne)	Bangor, Gwynedd, Wales, UK	6/23/84
Duffy, Julia	Minneapolis, MN	6/27/51
Duffy, Patrick	Townsend, MT	3/17/49
Duhamel, Josh	Minot, ND	11/14/72
Dukakis, Olympia	Lowell, MA	6/20/31
Duke, Patty	Elmhurst, Queens, NY	12/14/46
Dullea, Keir	Cleveland, OH	5/30/36
Dunaway, Faye	Bascom, FL	1/14/41
Duncan, Lindsay	Edinburgh, Scotland, UK	11/7/50
Duncan, Sandy	Henderson, TX	2/20/46
Dunne, Griffin	New York, NY	6/8/55
Dunst, Kirsten	Point Pleasant, NJ	4/30/82
Durbin, Deanna	Winnipeg, MB, Can.	12/4/21
Durning, Charles	Highland Falls, NY	2/28/23
Dussault, Nancy	Pensacola, FL	6/30/36
Dutton, Charles S.	Baltimore, MD	1/30/51
Duvall, Robert	San Diego, CA	1/5/31
Duvall, Shelley	Houston, TX	7/7/49
Dylan, Bob	Duluth, MN	5/24/41
Dylan, Jakob	New York, NY	12/9/69
Dysart, Richard	Brighton, MA	3/30/29
Dzundza, George	Rosenheim, Germany	7/19/45
Eads, George	Fort Worth, TX	3/1/67
Easton, Sheena	Bellshill, Scotland, UK	4/27/59
Eastwood, Clint	San Francisco, CA	5/31/30
Ebert, Roger	Urbana, IL	6/18/42
Ebersole, Christine	Chicago, IL	2/21/53
Eckhart, Aaron	Cupertino, CA	3/12/68
Eden, Barbara	Tucson, AZ	8/23/34
Edwards, Anthony	Santa Barbara, CA	7/19/62
Edwards, Blake	Tulsa, OK	7/26/22
Efron, Zac	San Luis Obispo, CA	10/18/87
Ehle, Jennifer	Winston-Salem, NC	12/29/69
Eichhorn, Lisa	Reading, PA	2/4/52
Eikenberry, Jill	New Haven, CT	1/21/47
Ekberg, Anita	Malmo, Sweden	9/29/31
Ekland, Britt	Stockholm, Sweden	10/6/42
Electra, Carmen	Cincinnati, OH	4/20/72
Elfman, Jenna	Los Angeles, CA	9/30/71
Elizabeth, Shannon	Houston, TX	9/7/73
Elizondo, Hector	New York, NY	12/22/36
Elliott, Bob	Boston, MA	3/26/23
Elliott, Chris	New York, NY	5/31/60
Elliott, Missy	Portsmouth, VA	7/1/71
Elliott, Sam	Sacramento, CA	8/9/44
Elvira	Manhattan, KS	9/17/51
Emerson, Michael	Cedar Rapids, IA	9/7/54
Eminem	St. Joseph, MO	10/17/72
Enberg, Dick	Mt. Clemens, MI	1/9/35
Englund, Robert	Glendale, CA	6/6/49
Enya	Gweedore, Ireland	5/17/61
Ephron, Nora	New York, NY	5/19/41
Ermey, R. Lee	Emporia, KS	3/24/44
Estefan, Gloria	Havana, Cuba	9/1/57
Estevez, Emilio	New York, NY	5/12/62
Estrada, Erik	New York, NY	3/16/49
Etheridge, Melissa	Leavenworth, KS	5/29/61
Evans, Linda	Hartford, CT	11/18/42
Evans, Robert	New York, NY	6/29/30
Everett, Chad	South Bend, IN	6/11/36
Everett, Rupert	Norfolk, England, UK	5/29/59

Name	Birthplace	Birthdate
Everly, Don	Brownie, KY	2/1/37
Everly, Phil	Chicago, IL	1/19/39
Evigan, Greg	South Amboy, NJ	10/14/53
Fabares, Shelley	Santa Monica, CA	1/19/44
Fabian	Philadelphia, PA	2/6/43
Fabio	Milan, Italy	3/15/61
Fabolous	Brooklyn, NY	11/18/77
Fairchild, Morgan	Dallas, TX	2/3/50
Faison, Donald	New York, NY	6/22/74
Falana, Lola	Philadelphia, PA	9/11/42
Falco, Edie	Brooklyn, NY	7/5/63
Falk, Peter	New York, NY	9/16/27
Fallon, Jimmy	Brooklyn, NY	9/19/74
Fanning, Dakota	Conyers, GA	2/23/94
Farentino, James	Brooklyn, NY	2/24/38
Fargo, Donna	Mt. Airy, NC	11/10/49
Farina, Dennis	Chicago, IL	2/29/44
Farr, Jamie	Toledo, OH	7/1/34
Farrell, Colin	Dublin, Ireland	5/31/76
Farrell, Mike	St. Paul, MN	2/6/39
Farrell, Perry	Bayside, Queens, NY	3/29/59
Farrelly, Bobby	Cumberland, RI	6/17/58
Farrelly, Peter	Phoenixville, PA	12/17/56
Farrow, Mia	Los Angeles, CA	2/9/45
Fatone, Joey	Brooklyn, NY	1/28/77
Feinstein, Michael	Columbus, OH	9/7/56
Feldon, Barbara	Bethel Park, PA	3/12/32
Feldshuh, Tovah	New York, NY	12/27/52
Feliciano, Jose	Lares, Puerto Rico	9/10/45
Fenn, Sherilyn	Detroit, MI	2/1/65
Fergie	Hacienda Heights, CA	3/27/75
Ferguson, Jesse Tyler	Missoula, MT	10/22/75
Ferrara, Jerry	Brooklyn, NY	11/29/79
Ferrell, Conchata	Charleston, WV	3/28/43
Ferrell, Will	Irvine, CA	7/16/67
Ferrera, America	Los Angeles, CA	4/18/84
Feuerstein, Mark	New York, NY	6/8/71
Fey, Tina	Upper Darby, PA	5/18/70
Field, Sally	Pasadena, CA	11/6/46
Fiennes, Joseph	Salisbury, England, UK	5/27/70
Fiennes, Ralph	Suffolk, England, UK	12/22/62
Fierstein, Harvey	Brooklyn, NY	6/6/54
50 Cent	Jamaica, Queens, NY	7/6/76
Filicia, Thom	Syracuse, NY	5/17/69
Fincher, David	Denver, CO	5/10/62
Finney, Albert	Salford, England, UK	5/9/36
Fiorentino, Linda	Philadelphia, PA	3/9/60
Firth, Colin	Grayshott, England, UK	9/10/60
Firth, Peter	Bradford, Yorkshire, Eng., UK	10/27/53
Fischer-Dieskau, Dietrich	Berlin, Germany	5/28/25
Fischer, Jenna	Ft. Wayne, IN	3/7/74
Fishburne, Laurence	Augusta, GA	7/30/61
Fisher, Carrie	Beverly Hills, CA	10/21/56
Flack, Roberta	Black Mountain, NC	2/10/39
Flanagan, Fionnula	Dublin, Ireland	12/10/41
Flavor Flav	Roosevelt, NY	3/16/59
Fleetwood, Mick	Redruth, Cornwall, Eng., UK	6/24/42
Fleming, Rhonda	Hollywood, CA	8/10/23
Fletcher, Louise	Birmingham, AL	7/22/34
Flockhart, Calista	Freeport, IL	11/11/64
Florek, Dann	Flat Rock, MI	5/1/50
Fogerty, John	Berkeley, CA	5/28/45
Foley, Dave	Etobicoke, ON, Can.	1/4/63
Fonda, Bridget	Los Angeles, CA	1/27/64
Fonda, Jane	New York, NY	12/21/37
Fonda, Peter	New York, NY	2/23/40
Fontaine, Joan	Tokyo, Japan	10/22/17
Ford, Faith	Alexandria, LA	9/14/64
Ford, Harrison	Chicago, IL	7/13/42
Forman, Milos	Caslav, Czechoslovakia	2/18/32
Forte, Will	Alameda Co., CA	6/17/70
Foster, Jodie	Los Angeles, CA	11/19/62
Foster, Sutton	Statesboro, GA	3/18/75
Fox, James	London, England, UK	5/19/39
Fox, Jorja	New York, NY	7/7/68
Fox, Matthew	Crowheart, WY	7/14/66
Fox, Megan	Rockwood, TN	5/16/86
Fox, Michael J.	Edmonton, AB, Can.	6/9/61
Fox, Vivica A.	South Bend, IN	7/30/64
Foxworth, Robert	Houston, TX	11/1/41
Foxworthy, Jeff	Atlanta, GA	9/6/58
Foxx, Jamie	Terrell, TX	12/13/67
Frampton, Peter	Kent, England, UK	4/22/50
Francis, Anne	Ossining, NY	9/16/30
Francis, Connie	Newark, NJ	12/12/38
Franco, James	Palo Alto, CA	4/19/78
Franken, Al	New York, NY	5/21/51
Franklin, Aretha	Memphis, TN	3/25/42
Franklin, Bonnie	Santa Monica, CA	1/6/44
Franz, Dennis	Maywood, IL	10/28/44
Fraser, Brendan	Indianapolis, IN	12/3/68
Freeman, Al, Jr.	San Antonio, TX	3/21/34
Freeman, Mona	Baltimore, MD	6/9/26
Freeman, Morgan	Memphis, TN	6/1/37
French, Dawn	Holyhead, Wales, UK	10/11/57
Fricker, Brenda	Dublin, Ireland	2/17/45
Friedkin, William	Chicago, IL	8/29/39
Frost, David	Tenterden, England, UK	4/7/39
Fry, Stephen	London, England, UK	8/24/57
Fuentes, Daisy	Havana, Cuba	11/17/66
Fuller, Robert	Troy, NY	7/29/34
Funicello, Annette	Utica, NY	10/22/42
Furlong, Edward	Pasadena, CA	8/2/77
Furtado, Nelly	Victoria, BC, Can.	12/2/78
Gabor, Zsa Zsa	Budapest, Hungary	2/6/17
Gabriel, Peter	Surrey, England, UK	2/13/50
Gaines, Boyd	Atlanta, GA	5/11/53
Galifianakis, Zach	Wilkesboro, NC	10/1/69
Gallagher, Peter	Armonk, NY	8/19/55
Gallo, Vincent	Buffalo, NY	4/11/62
Galway, James	Belfast, N. Ireland, UK	12/8/39
Gandolfini, James	Westwood, NJ	9/18/61
Garagiola, Joe	St. Louis, MO	2/12/26
Garber, Victor	London, ON, Can.	3/16/49
Garcia, Andy	Havana, Cuba	4/12/56
Garfunkel, Art	Forest Hills, Queens, NY	11/5/41
Garlin, Jeff	Chicago, IL	6/5/62
Garner, James	Norman, OK	4/7/28
Garner, Jennifer	Houston, TX	4/17/72
Garofalo, Janeane	Newton, NJ	9/28/64
Garr, Teri	Lakewood, OH	12/11/49
Garrett, Betty	St. Joseph, MO	5/23/19
Garrett, Brad	Woodland Hills, CA	4/14/60
Garth, Jennie	Urbana, IL	4/3/72
Gatlin, Larry	Seminole, TX	5/2/48
Gavin, John	Los Angeles, CA	4/8/31
Gayle, Crystal	Paintsville, KY	1/9/51
Gaynor, Mitzi	Chicago, IL	9/4/31
Gazzara, Ben	New York, NY	8/28/30
Geary, Anthony	Coalville, UT	5/29/47
Geary, Cynthia	Jackson, MS	3/21/65
Gedda, Nicolai	Stockholm, Sweden	7/11/25
Gellar, Sarah Michelle	New York, NY	4/14/77
Gere, Richard	Philadelphia, PA	8/31/49
Gervais, Ricky	Reading, England, UK	6/25/61
Giannini, Giancarlo	La Spezia, Italy	8/1/42
Gibb, Barry	Isle of Man, England, UK	9/1/46
Gibb, Robin	Isle of Man, England, UK	12/22/49
Gibbons, Leeza	Hartsville, SC	3/26/57
Gibbs, Marla	Chicago, IL	6/14/31
Gibson, Deborah	Brooklyn, NY	8/31/70
Gibson, Mel	Peekskill, NY	1/3/56
Gibson, Thomas	Charleston, SC	7/3/62
Gifford, Frank	Santa Monica, CA	8/16/30
Gifford, Kathie Lee	Neuilly-sur-Seine, France	8/16/53
Gilbert, Melissa	Los Angeles, CA	5/8/64
Gilbert, Sara	Santa Monica, CA	1/29/75
Gilberto, Astrud	Salvador, Brazil	3/30/40
Gill, Vince	Norman, OK	4/12/57
Gillette, Anita	Baltimore, MD	8/16/36
Gilley, Mickey	Natchez, MS	3/9/36
Gilliam, Terry	Minneapolis, MN	11/22/40
Gilmour, David	Cambridge, England, UK	3/6/46
Gilpin, Peri	Waco, TX	5/27/61
Gilsig, Jessalyn	Montreal, QC, Can.	1971
Ginty, Robert	Brooklyn, NY	11/14/48
Givens, Robin	New York, NY	11/27/64
Glaser, Paul Michael	Cambridge, MA	3/25/43
Gleeson, Brendan	Belfast, N. Ireland, UK	11/9/55
Glenn, Scott	Pittsburgh, PA	1/26/42
Gless, Sharon	Los Angeles, CA	5/31/43
Glover, Crispin	New York, NY	4/20/64
Glover, Danny	San Francisco, CA	7/22/47
Glover, John	Kingston, NY	8/7/44
Glover, Julian	London, England, UK	3/27/35
Glover, Savion	Newark, NJ	11/19/73
Godard, Jean Luc	Paris, France	12/3/30
Goldberg, Whoopi	New York, NY	11/13/55
Goldblum, Jeff	Pittsburgh, PA	10/22/52
Goldthwait, Bobcat	Syracuse, NY	5/26/62
Goldwyn, Tony	Los Angeles, CA	5/20/60
Gooding, Cuba, Jr.	Bronx, NY	1/2/68
Goodman, John	Affton, MO	6/20/52
Gordon-Levitt, Joseph	Los Angeles, CA	2/17/81
Gorme, Eydie	Bronx, NY	8/16/32
Gosling, Ryan	London, ON, Can.	11/12/80
Gosselaar, Mark-Paul	Panorama City, CA	3/1/74
Gossett, Louis, Jr.	Brooklyn, NY	5/27/36
Gould, Elliott	Brooklyn, NY	8/29/38
Grace, Topher	New York, NY	7/12/78
Graham, Heather	Milwaukee, WI	1/29/70
Grammer, Kelsey	St. Thomas, U.S. Virgin Isls.	2/21/55
Granger, Farley	San Jose, CA	7/1/25
Grant, Amy	Augusta, GA	11/25/60

Name	Birthplace	Birthdate
Grant, Hugh	London, England, UK	9/9/60
Grant, Lee	New York, NY	10/31/27
Gray, Linda	Santa Monica, CA	9/12/40
Gray, Macy	Canton, OH	9/9/70
Green, Al	Forrest City, AR	4/13/46
Green, Seth	Philadelphia, PA	2/8/74
Green, Tom	Pembroke, ON, Can.	7/30/71
Greene, Shecky	Chicago, IL	4/8/26
Greenwood, Bruce	Noranda, QC, Can.	8/12/56
Gregory, Cynthia	Los Angeles, CA	7/8/46
Gregory, Dick	St. Louis, MO	10/12/32
Grenier, Adrian	Brooklyn, NY	7/10/76
Grey, Jennifer	New York, NY	3/26/60
Grey, Joel	Cleveland, OH	4/11/32
Grier, David Alan	Detroit, MI	6/30/55
Grier, Pam	Winston-Salem, NC	5/26/49
Gries, Jon	Glendale, CA	6/17/57
Griffith, Andy	Mount Airy, NC	6/1/26
Griffith, Melanie	New York, NY	8/9/57
Griffiths, Rachel	Melbourne, Australia	12/18/68
Griffiths, Richard	Stockton-on-Tees, Eng., UK	7/31/47
Grimes, Tammy	Lynn, MA	1/30/34
Grint, Rupert	Walton-at-Stone, Hertfordshire, Eng., UK	8/24/88
Groban, Josh	Los Angeles, CA	2/27/81
Grodin, Charles	Pittsburgh, PA	4/21/35
Groff, Jonathan	Lancaster, PA	3/26/85
Grohl, David	Warren, OH	1/14/69
Grosbard, Ulu	Antwerp, Belgium	1/9/29
Gross, Michael	Chicago, IL	6/21/47
Guest, Christopher	New York, NY	2/5/48
Guillaume, Robert	St. Louis, MO	11/30/37
Gumbel, Greg	New Orleans, LA	5/3/46
Gunn, Tim	Washington, DC	7/29/53
Guthrie, Arlo	Brooklyn, NY	7/10/47
Guttenberg, Steve	Brooklyn, NY	8/24/58
Guy, Buddy	Lettsworth, LA	7/30/36
Guy, Jasmine	Boston, MA	3/10/64
Gyllenhaal, Jake	Los Angeles, CA	12/19/80
Gyllenhaal, Maggie	New York, NY	11/16/77
Hackman, Gene	San Bernardino, CA	1/30/30
Hader, Bill	Tulsa, OK	6/7/78
Hagerty, Julie	Cincinnati, OH	6/15/55
Haggard, Merle	Bakersfield, CA	4/6/37
Hagman, Larry	Fort Worth, TX	9/21/31
Haid, Charles	San Francisco, CA	6/2/43
Hale, Barbara	DeKalb, IL	4/18/22
Hale, Tony	West Point, NY	9/30/70
Hall, Anthony Michael	West Roxbury, MA	4/14/68
Hall, Arsenio	Cleveland, OH	2/12/55
Hall, Daryl	Pottstown, PA	10/11/49
Hall, Deidre	Milwaukee, WI	10/31/47
Hall, Michael C.	Raleigh, NC	2/1/71
Hall, Monty	Winnipeg, MB, Can.	8/25/21
Hall, Tom T.	Olive Hill, KY	5/25/36
Halliwell, Geri	Watford, England, UK	8/6/72
Hamill, Mark	Oakland, CA	9/25/51
Hamilton, George	Memphis, TN	8/12/39
Hamilton, Linda	Salisbury, MD	9/26/56
Hamlin, Harry	Pasadena, CA	10/30/51
Hamm, Jon	St. Louis, MO	3/10/71
Hammer (M.C.)	Oakland, CA	3/30/63
Hammond, Darrell	Melbourne, FL	10/8/55
Hancock, Herbie	Chicago, IL	4/12/40
Hanks, Tom	Concord, CA	7/9/56
Hannah, Daryl	Chicago, IL	12/3/60
Hannigan, Alyson	Washington, DC	3/24/74
Hanson, Curtis	Reno, NV	3/24/45
Hanson, Isaac	Tulsa, OK	11/17/80
Hanson, Taylor	Tulsa, OK	3/14/83
Hanson, Zac	Tulsa, OK	10/22/85
Harden, Marcia Gay	La Jolla, CA	8/14/59
Hardison, Kadeem	Brooklyn, NY	7/24/65
Harewood, Dorian	Dayton, OH	8/6/50
Hargitay, Mariska	Los Angeles, CA	1/23/64
Harmon, Angie	Highland Park, TX	8/10/72
Harmon, Mark	Burbank, CA	9/2/51
Harper, Ben	Claremont, CA	10/28/69
Harper, Tess	Mammoth Spring, AR	8/15/50
Harper, Valerie	Suffern, NY	8/22/40
Harrelson, Woody	Midland, TX	7/23/61
Harrington, Pat	New York, NY	8/13/29
Harris, Barbara	Evanston, IL	7/25/35
Harris, Ed	Tenafly, NJ	11/28/50
Harris, Emmylou	Birmingham, AL	4/2/47
Harris, Julie	Grosse Pointe Park, MI	12/2/25
Harris, Neil Patrick	Albuquerque, NM	6/15/73
Harris, Rosemary	Ashby, England, UK	9/19/27?
Harris, Steve	Chicago, IL	12/3/65
Harrison, Gregory	Avalon, CA	5/31/50
Harry, Deborah	Miami, FL	7/1/45
Hart, Mary	Madison, SD	11/8/50
Hart, Melissa Joan	Smithtown, NY	4/18/76
Hartley, Hal	Lindenhurst, NY	11/3/59
Hartley, Mariette	New York, NY	6/21/40
Hartman, David	Pawtucket, RI	5/19/35
Hartman Black, Lisa	Houston, TX	6/1/56
Hartnett, Josh	San Francisco, CA	7/21/78
Harvey, P. J.	Yeovil, Somerset, Eng., UK	10/9/69
Harvey, Steve	Welch, WV	11/23/56
Hasselbeck, Elisabeth	Cranston, RI	5/28/77
Hasselhoff, David	Baltimore, MD	7/17/52
Hatcher, Teri	Sunnyvale, CA	12/8/64
Hatfield, Juliana	Wiscasset, ME	7/27/67
Hathaway, Anne	Brooklyn, NY	11/12/82
Hauer, Rutger	Breukelen, Netherlands	1/23/44
Hawke, Ethan	Austin, TX	11/6/70
Hawn, Goldie	Washington, DC	11/21/45
Hayek, Salma	Coatzacoalcos, Mexico	9/2/66
Hayes, Sean	Glen Ellyn, IL	6/26/70
Haynes, Roy	Roxbury, MA	3/13/26
Hays, Robert	Bethesda, MD	7/24/47
Head, Anthony	Camden Town, Eng., UK	2/20/54
Heard, John	Washington, DC	3/7/45
Hearn, George	St. Louis, MO	6/18/34
Heaton, Patricia	Bay Village, OH	3/4/58
Heche, Anne	Aurora, OH	5/25/69
Heder, Jon	Fort Collins, CO	10/26/77
Hedren, Tippi	New Ulm, MN	1/19/30?
Heigl, Katherine	Washington, DC	11/24/78
Helfgott, David	Melbourne, Australia	5/19/47
Helgenberger, Marg	Fremont, NE	11/16/58
Helmond, Katherine	Galveston, TX	7/5/34
Hemingway, Mariel	Mill Valley, CA	11/22/61
Hemsley, Sherman	Philadelphia, PA	2/1/38
Henderson, Florence	Dale, IN	2/14/34
Henley, Don	Gilmer, TX	7/22/47
Henner, Marilu	Chicago, IL	4/6/52
Hennessy, Jill	Edmonton, AB, Can.	11/25/68
Henry, Buck	New York, NY	12/9/30
Herman, Pee-Wee	Peekskill, NY	8/27/52
Herrmann, Edward	Washington, DC	7/21/43
Hershey, Barbara	Hollywood, CA	2/5/48
Hesseman, Howard	Lebanon, OR	2/27/40
Hetfield, James	Downey, CA	8/3/63
Hewitt, Jennifer Love	Waco, TX	2/21/79
Hicks, Catherine	Scottsdale, AZ	8/6/51
Higgins, John Michael	Boston, MA	2/12/63
Hill, Dulé	Orange, NJ	5/3/75
Hill, Faith	Jackson, MS	9/21/67
Hill, Lauryn	South Orange, NJ	5/25/75
Hill, Steven	Seattle, WA	2/24/22
Hillerman, John	Denison, TX	12/20/32
Hilton, Paris	New York, NY	2/17/81
Hines, Cheryl	Miami Beach, FL	9/21/65
Hirsch, Emile	Palms, CA	3/13/85
Hirsch, Judd	New York, NY	3/15/35
Hodgman, John	Cambridge, MA	6/3/71
Hoffman, Dustin	Los Angeles, CA	8/8/37
Hoffman, Philip Seymour	Fairport, NY	7/23/67
Hogan, Hulk	Augusta, GA	8/11/53
Hogan, Paul	Lightning Ridge, NSW, Australia	10/8/39
Holbrook, Hal	Cleveland, OH	2/17/25
Holder, Geoffrey	Port of Spain, Trinidad	8/1/30
Holliday, Polly	Jasper, AL	7/2/37
Holliman, Earl	Delhi, LA	9/11/28
Holloway, Josh	San Jose, CA	7/20/69
Holly, Lauren	Bristol, PA	10/28/63
Holm, Celeste	New York, NY	4/29/19
Holm, Ian	Ilford, England, UK	9/12/31
Holmes, Katie	Toledo, OH	12/18/78
Hooks, Jan	Decatur, GA	4/23/57
Hopkins, Anthony	Port Talbot, South Wales, UK	12/31/37
Hopkins, Bo	Greenville, SC	2/2/42
Hopkins, Telma	Louisville, KY	10/28/48
Horne, Marilyn	Bradford, PA	1/16/34
Hornsby, Bruce	Williamsburg, VA	11/23/54
Horsley, Lee	Muleshoe, TX	5/15/55
Horton, Robert	Los Angeles, CA	7/29/24
Hoskins, Bob	Suffolk, England, UK	10/26/42
Hounsou, Djimon	Cotonou, Benin	4/24/64
Houston, Whitney	Newark, NJ	8/9/63
Howard, Ken	El Centro, CA	3/28/44
Howard, Ron	Duncan, OK	3/1/54
Howard, Terrence	Chicago, IL	3/11/69
Howell, C. Thomas	Van Nuys, CA	12/7/66

Name	Birthplace	Birthdate
Howes, Sally Ann	St. John's Wood, London, England, UK	7/20/30
Hudgens, Vanessa	Salinas, CA	12/14/88
Hudson, Kate	Los Angeles, CA	4/19/79
Hudson, Jennifer	Chicago, IL	9/12/81
Huffman, Felicity	Bedford, NY	12/9/62
Hughley, D. L.	Los Angeles, CA	3/6/63
Hulce, Tom	Whitewater, WI	12/6/53
Humperdinck, Engelbert	Madras, India	5/2/36
Humphries, Barry	Melbourne, Australia	2/17/34
Hunt, Bonnie	Chicago, IL	9/22/64
Hunt, Helen	Culver City, CA	6/15/63
Hunt, Linda	Morristown, NJ	4/2/45
Hunter, Holly	Conyers, GA	3/20/58
Hunter, Tab	New York, NY	7/11/31
Hurley, Elizabeth	Hampshire, England, UK	6/10/65
Hurt, John	Chesterfield, England, UK	1/22/40
Hurt, Mary Beth	Marshalltown, IA	9/26/48
Hurt, William	Washington, DC	3/20/50
Huston, Anjelica	Santa Monica, CA	7/8/51
Hutton, Lauren	Charleston, SC	11/17/43
Hutton, Timothy	Malibu, CA	8/16/60
Hyman, Earle	Rocky Mount, NC	10/11/26
Ian, Janis	New York, NY	4/7/51
Ice Cube	Los Angeles, CA	6/15/69
Ice-T	Newark, NJ	2/16/58
Idle, Eric	S. Shields, England, UK	3/29/43
Idol, Billy	Middlesex, England, UK	11/30/55
Iglesias, Enrique	Madrid, Spain	5/8/75
Iglesias, Julio	Madrid, Spain	9/23/43
Iler, Robert	New York, NY	3/2/85
Iman	Mogadishu, Somalia	7/25/55
Imbruglia, Natalie	Sydney, Australia	2/4/75
Imperioli, Michael	Mount Vernon, NY	1/1/66
Imus, Don	Riverside, CA	7/23/40
Ingram, James	Akron, OH	2/16/56
Innes, Laura	Pontiac, MI	8/16/59
Ireland, Kathy	Glendale, CA	3/20/63
Irons, Jeremy	Cowes, Isle of Wight, England, UK	9/19/48
Irving, Amy	Palo Alto, CA	9/10/53
Irving, George S.	Springfield, MA	11/1/22
Irwin, Bill	Santa Monica, CA	4/11/50
Ivanek, Željko	Ljubljana, Yugoslavia	8/15/57
Ivey, Judith	El Paso, TX	9/4/51
Ivory, James	Berkeley, CA	6/7/28
Izzard, Eddie	Aden, Yemen	2/7/62
Jackée (Harry)	Winston-Salem, NC	8/14/56
Jackman, Hugh	Sydney, Australia	10/12/68
Jackson, Anne	Allegheny, PA	9/3/26
Jackson, Cheyenne	Newport, WA	7/12/75
Jackson, Glenda	Birkenhead, England, UK	5/9/36
Jackson, Janet	Gary, IN	5/16/66
Jackson, Jermaine	Gary, IN	12/11/54
Jackson, Jonathan	Orlando, FL	5/11/82
Jackson, Joshua	Vancouver, BC, Can.	6/11/78
Jackson, Kate	Birmingham, AL	10/29/48
Jackson, La Toya	Gary, IN	5/29/56
Jackson, Peter	Wellington, New Zealand	10/31/61
Jackson, Samuel L.	Chattanooga, TN	12/21/48
Jacobi, Derek	London, England, UK	10/22/38
Jagger, Mick	Dartford, England, UK	7/26/43
James, Etta	Los Angeles, CA	1/25/38
James, Kevin	Mineola, NY	4/26/65
Janis, Conrad	New York, NY	2/11/28
Janney, Allison	Dayton, OH	11/19/60
Janssen, Famke	Amsterdam, Netherlands	11/5/65
Jardine, Al	Lima, OH	9/3/42
Jarmusch, Jim	Akron, OH	1/22/53
Jarreau, Al	Milwaukee, WI	3/12/40
Jarrett, Keith	Allentown, PA	5/8/45
Ja Rule	Hollis, Queens, NY	2/29/76
Jay Z	Brooklyn, NY	12/4/69
Jeffreys, Anne	Goldsboro, NC	1/26/23
Jett, Joan	Philadelphia, PA	9/22/60
Jewel	Payson, UT	5/23/74
Jewison, Norman	Toronto, ON, Can.	7/21/26
Jillian, Ann	Cambridge, MA	1/29/50
Jillette, Penn	Greenfield, MA	3/5/55
Joel, Billy	Bronx, NY	5/9/49
Johansson, Scarlett	New York, NY	11/22/84
John, Elton	Pinner, Middlesex, Eng., UK	3/25/47
Johns, Glynis	Durban, S. Africa	10/5/23
Johnson, Arte	Benton Harbor, MI	1/20/34
Johnson, Beverly	Buffalo, NY	10/13/52
Johnson, Don	Flatt Creek, MO	12/15/49
Johnson, Dwayne "The Rock"	Hayward, CA	5/2/72
Johnston, Bruce	Los Angeles, CA	6/24/42
Johnston, Kristen	Washington, DC	9/20/67
Jolie, Angelina	Los Angeles, CA	6/4/75
Jonas, Joe	Casa Grande, AZ	8/15/89
Jonas, Kevin	Teaneck, NJ	11/5/87
Jonas, Nick	Dallas, TX	9/16/92
Jones, Cherry	Paris, TN	11/21/56
Jones, Davy	Manchester, England, UK	12/30/45
Jones, Dean	Decatur, AL	1/25/31
Jones, Gemma	London, England, UK	12/4/42
Jones, George	Saratoga, TX	9/12/31
Jones, Grace	Spanish Town, Jamaica	5/19/48
Jones, Jack	Hollywood, CA	1/14/38
Jones, James Earl	Arkabutla, MS	1/17/31
Jones, January	Sioux Falls, SD	1/5/78
Jones, Mick	London, England, UK	6/26/55
Jones, Norah	New York, NY	3/30/79
Jones, Quincy	Chicago, IL	3/14/33
Jones, Shirley	Charleroi, PA	3/31/34
Jones, Star	Badin, NC	3/24/62
Jones, Tom	Pontypridd, Wales, UK	6/7/40
Jones, Tommy Lee	San Saba, TX	9/15/46
Jonze, Spike	Rockville, MD	10/22/69
Jourdan, Louis	Marseilles, France	6/19/19
Jovovich, Milla	Kiev, Ukraine	12/17/75
Judd, Ashley	Granada Hills, CA	4/19/68
Judd, Naomi	Ashland, KY	1/11/46
Judd, Wynonna	Ashland, KY	5/30/64
Kaczmarek, Jane	Milwaukee, WI	12/21/55
Kanaly, Steve	Burbank, CA	3/14/46
Kane, Carol	Cleveland, OH	6/18/52
Kaplan, Gabe	Brooklyn, NY	3/31/45
Karlen, John	New York, NY	5/28/33
Karn, Richard	Seattle, WA	2/17/56
Karras, Alex	Gary, IN	7/15/35
Kasem, Casey	Detroit, MI	4/27/32
Kattan, Chris	Sherman Oaks, CA	10/19/70
Kavner, Julie	Burbank, CA	9/7/51
Kazan, Lainie	New York, NY	5/15/42
Ke$ha	Los Angeles, CA	3/1/87
Keach, Stacy	Savannah, GA	6/2/41
Keaton, Diane	Santa Ana, CA	1/5/46
Keaton, Michael	Coraopolis, PA	9/9/51
Keener, Catherine	Miami, FL	3/23/59
Keillor, Garrison	Anoka, MN	8/7/42
Keitel, Harvey	Brooklyn, NY	5/13/39
Keith, David	Knoxville, TN	5/8/54
Keith, Penelope	Sutton, Surrey, Eng., UK	4/2/40
Kellerman, Sally	Long Beach, CA	6/2/37
Kelly, Jean Louisa	Worcester, MA	3/9/72
Kelly, Minka	Los Angeles, CA	6/24/80
Kelly, R(obert)	Chicago, IL	1/8/67
Kennedy, George	New York, NY	2/18/25
Kennedy, Jamie	Upper Darby, PA	5/25/70
Kennedy, Jayne	Washington, DC	10/27/51
Kenny G	Seattle, WA	6/5/56
Kent, Allegra	Santa Monica, CA	8/11/37
Keoghan, Phil	Christchurch, New Zealand	5/31/67
Kercheval, Ken	Wolcottville, IN	7/15/35
Kerns, Joanna	San Francisco, CA	2/12/53
Keys, Alicia	New York, NY	1/25/81
Khan, Chaka	Great Lakes, IL	3/23/53
Kidder, Margot	Yellowknife, NT, Can.	10/17/48
Kidman, Nicole	Honolulu, HI	6/20/67
Kiel, Richard	Detroit, MI	9/13/39
Kilborn, Craig	Kansas City, KS	8/24/62
Kilmer, Val	Los Angeles, CA	12/31/59
Kim, Daniel Dae	Pusan, S. Korea	8/4/68
Kimmel, Jimmy	Brooklyn, NY	11/13/67
King, B. B.	Itta Bena, MS	9/16/25
King, Carole	Brooklyn, NY	2/9/42
King, Larry	Brooklyn, NY	11/19/33
King, Perry	Alliance, OH	4/30/48
Kingsley, Ben	Scarborough, England, UK	12/31/43
Kingston, Alex	London, England, UK	3/11/63
Kinnear, Greg	Logansport, IN	6/17/63
Kinney, Kathy	Stevens Point, WI	11/3/53
Kinski, Nastassja	Berlin, W. Germany	1/24/60
Kirkland, Gelsey	Bethlehem, PA	12/29/52
Kirkpatrick, Chris	Clarion, PA	10/17/71
Kirshner, Mia	Toronto, ON, Can.	1/25/75
Klein, Robert	Bronx, NY	2/8/42
Kline, Kevin	St. Louis, MO	10/24/47
Klugman, Jack	Philadelphia, PA	4/27/22
Klum, Heidi	Bergish-Gladbach, Germany	6/1/73
Knight, Gladys	Atlanta, GA	5/28/44
Knight, Shirley	Goessel, KS	7/5/36
Knight, T. R.	Minneapolis, MN	3/26/73
Knight, Wayne	New York, NY	8/7/55
Knightley, Keira	Teddington, England, UK	3/26/85
Knopfler, Mark	Glasgow, Scotland, UK	8/12/49
Knowles, Beyoncé	Houston, TX	9/4/81
Knoxville, Johnny	Knoxville, TN	3/11/71
Konitz, Lee	Chicago, IL	10/13/27
Kopell, Bernie	Brooklyn, NY	6/21/33
Kotto, Yaphet	New York, NY	11/15/37
Krakowski, Jane	Parsippany, NJ	10/11/68
Krasinski, John	Newton, MA	10/20/79
Krause, Peter	Alexandria, MN	8/12/65
Kressley, Carson	Allentown, PA	11/11/69

Name	Birthplace	Birthdate
Kretschmann, Thomas	Dessau, E. Germany	9/8/62
Kristofferson, Kris	Brownsville, TX	6/22/36
Kudrow, Lisa	Encino, CA	7/30/63
Kunis, Mila	Kiev, Ukraine	8/14/83
Kuriyama, Chiaki	Tsuchiura, Ibaraki, Japan	10/10/84
Kurtz, Swoosie	Omaha, NE	9/6/44
Kutcher, Ashton	Cedar Rapids, IA	2/7/78
Kwan, Nancy	Hong Kong	5/19/39
LaBelle, Patti	Philadelphia, PA	5/24/44
LaBeouf, Shia	Los Angeles, CA	6/11/86
Lachey, Nick	Harlan, KY	11/9/73
Ladd, Cheryl	Huron, SD	7/12/51
Ladd, Diane	Meridian, MS	11/29/32
Lady Gaga	New York, NY	3/28/86
Lagasse, Emeril	Fall River, MA	10/15/59
Lahti, Christine	Birmingham, MI	4/4/50
Laine, Cleo	Southall, England, UK	10/28/27
Lake, Ricki	Hastings-on-Hudson, NY	9/21/68
Lamas, Lorenzo	Santa Monica, CA	1/20/58
Lambert, Adam	Indianapolis, IN	1/29/82
Lambert, Christopher	Great Neck, NY	3/29/57
Landau, Martin	Brooklyn, NY	6/20/28
Landis, John	Chicago, IL	8/3/50
Lane, Diane	New York, NY	1/22/65
Lane, Nathan	Jersey City, NJ	2/3/56
lang, k.d.	Consort, AB, Can.	11/2/61
Lang, Stephen	Jamaica Estates, Queens, NY	7/11/52
Lange, Jessica	Cloquet, MN	4/20/49
Langella, Frank	Bayonne, NJ	1/1/40
Lansbury, Angela	London, England, UK	10/16/25
LaPaglia, Anthony	Adelaide, Australia	1/31/59
Larroquette, John	New Orleans, LA	11/25/47
LaSalle, Eriq	Hartford, CT	6/23/62
Lauper, Cyndi	Ozone Park, Queens, NY	6/22/53
Laurie, Hugh	Oxford, England, UK	6/11/59
Laurie, Piper	Detroit, MI	1/22/32
Lautner, Taylor	Grand Rapids, MI	2/11/92
Lavigne, Avril	Belleville, ON, Can.	9/27/84
Lavin, Linda	Portland, ME	10/15/37
Law, Jude	London, England, UK	12/29/72
Lawless, Lucy	Mount Albert, New Zealand	3/29/68
Lawrence, Carol	Melrose Park, IL	9/5/34
Lawrence, Joey	Montgomery, PA	4/20/76
Lawrence, Martin	Frankfurt, Germany	4/16/65
Lawrence, Steve	Brooklyn, NY	7/8/35
Lawrence, Vicki	Inglewood, CA	3/26/49
Leach, Robin	London, England, UK	8/29/41
Leachman, Cloris	Des Moines, IA	4/30/26
Lear, Norman	New Haven, CT	7/27/22
Learned, Michael	Washington, DC	4/9/39
Leary, Denis	Worcester, MA	8/18/57
LeBlanc, Matt	Newton, MA	7/25/67
LeBon, Simon	Bushey, England, UK	10/27/58
Lee, Ang	Pingtung, Taiwan	10/23/54
Lee, Brenda	Lithonia, GA	12/11/44
Lee, Christopher	London, England, UK	5/27/22
Lee, Jason	Huntington Beach, CA	4/25/70
Lee, Michele	Los Angeles, CA	6/24/42
Lee, Spike	Atlanta, GA	3/20/57
Leeves, Jane	Ilford, England, UK	4/18/61
Legrand, Michel	Paris, France	2/24/32
Leguizamo, John	Bogotá, Colombia	7/22/64
Lehmkuhl, Reichen	Cincinnati, OH	12/26/73
Leibman, Ron	New York, NY	10/11/37
Leigh, Jennifer Jason	Hollywood, CA	2/5/62
Leighton, Laura	Iowa City, IA	7/24/68
Lennox, Annie	Aberdeen, Scotland, UK	12/25/54
Leno, Jay	New Rochelle, NY	4/28/50
Leonard, Robert Sean	Westwood, NJ	2/28/69
Leoni, Tea	New York, NY	2/25/66
Leslie, Joan	Detroit, MI	1/26/25
Leto, Jared	Bossier City, LA	12/26/71
Letterman, David	Indianapolis, IN	4/12/47
Levine, Adam	Los Angeles, CA	3/18/79
Levine, James	Cincinnati, OH	6/23/43
Levine, Ted	Bellaire, OH	5/29/57
Levinson, Barry	Baltimore, MD	4/6/42
Levy, Eugene	Hamilton, ON, Can.	12/17/46
Lewis, Huey	New York, NY	7/5/50
Lewis, Jason	Newport Beach, CA	6/25/71
Lewis, Jerry	Newark, NJ	3/16/26
Lewis, Jerry Lee	Ferriday, LA	9/29/35
Lewis, Juliette	San Fernando Valley, CA	6/21/73
Lewis, Leona	London, England, UK	4/3/85
Lewis, Richard	Brooklyn, NY	6/29/47
Li, Jet	Beijing, China	4/26/63
Light, Judith	Trenton, NJ	2/9/49
Lightfoot, Gordon	Orillia, ON, Can.	11/17/38
Lil' Kim	Brooklyn, NY	7/11/75
Lil' Romeo	New Orleans, LA	8/19/89
Lilly, Evangeline	Fort Saskatchewan, AB, Can.	8/3/79
Linden, Hal	Bronx, NY	3/20/31
Ling, Lisa	Sacramento, CA	8/30/73
Linn-Baker, Mark	St. Louis, MO	6/17/54
Linney, Laura	New York, NY	2/5/64
Liotta, Ray	Newark, NJ	12/18/54
Lithgow, John	Rochester, NY	10/19/45
Little, Rich	Ottawa, ON, Can.	11/26/38
Little Richard	Macon, GA	12/5/32
Littrell, Brian	Lexington, KY	2/20/75
Liu, Lucy	Jackson Heights, Queens, NY	12/2/68
L. L. Cool J	St. Albans, Queens, NY	1/14/68
Lloyd, Christopher	Stamford, CT	10/22/38
Lloyd, Emily	North London, Eng., UK	9/29/70
Lloyd Webber, Andrew	London, England, UK	3/22/48
Locke, Sondra	Shelbyville, TN	5/28/47
Lockhart, June	New York, NY	6/25/25
Locklear, Heather	Westwood, CA	9/25/61
Loggia, Robert	Staten Island, NY	1/3/30
Loggins, Kenny	Everett, WA	1/7/48
Logue, Donal	Ottawa, ON, Can.	2/27/66
Lohan, Lindsay	New York, NY	7/2/86
Lollobrigida, Gina	Subiaco, Italy	7/4/27
Lom, Herbert	Prague, Czechoslovakia	1/9/17
Lonergan, Kenneth	New York, NY	10/16/62
Long, Nia	Brooklyn, NY	10/30/70
Long, Shelley	Ft. Wayne, IN	8/23/49
Longoria, Eva	Corpus Christi, TX	3/15/75
Lopez, George	Mission Hills, CA	4/23/61
Lopez, Jennifer	Bronx, NY	7/24/70
Lopez, Mario	San Diego, CA	10/10/73
Loren, Sophia	Rome, Italy	9/20/34
Loring, Gloria	New York, NY	12/10/46
Louis-Dreyfus, Julia	New York, NY	1/13/61
Lovato, Demi	Dallas, TX	8/20/92
Love, Courtney	San Francisco, CA	7/9/64
Love, Mike	Baldwin Hills, CA	3/15/41
Loveless, Patty	Pikeville, KY	1/4/57
Lovett, Lyle	Klein, TX	11/1/57
Lovitz, Jon	Tarzana, CA	7/21/57
Lowe, Rob	Charlottesville, VA	3/17/64
Lowell, Carey	Huntington, NY	2/11/61
Lucas, George	Modesto, CA	5/14/44
Lucci, Susan	Scarsdale, NY	12/23/46
Luckinbill, Laurence	Ft. Smith, AR	11/21/34
Ludacris	Champaign, IL	9/11/77
Ludwig, Christa	Berlin, Germany	3/16/24
Luhrmann, Baz	Sydney, Australia	9/17/62
Lumet, Sidney	Philadelphia, PA	6/25/24
LuPone, Patti	Northport, NY	4/21/49
Lynch, David	Missoula, MT	1/20/46
Lynch, Jane	Dolton, IL	7/14/60
Lynch, Susan	Corrinshego, N. Ireland, UK	6/5/71
Lynley, Carol	New York, NY	2/13/42
Lynn, Loretta	Butcher Hollow, KY	4/14/35
Lynn, Vera	London, England, UK	3/20/17
Lynne, Shelby	Quantico, VA	10/22/68
Lyonne, Natasha	Great Neck, NY	4/4/79
Ma, Yo-Yo	Paris, France	10/7/55
Maazel, Lorin	Neuilly-sur-Seine, France	3/6/30
MacArthur, James	Los Angeles, CA	12/8/37
Macchio, Ralph	Huntington, NY	11/4/62
MacDonald, Kelly	Glasgow, Scotland, UK	2/23/76
MacDowell, Andie	Gaffney, SC	4/21/58
MacFarlane, Seth	Kent, CT	11/26/73
MacGowan, Shane	Tunbridge, Kent, Eng., UK	12/25/57
MacGraw, Ali	Pound Ridge, NY	4/1/38
MacLachlan, Kyle	Yakima, WA	2/22/59
MacLaine, Shirley	Richmond, VA	4/24/34
MacLeod, Gavin	Mt. Kisco, NY	2/28/31
MacNee, Patrick	London, England, UK	2/6/22
MacNeil, Cornell	Minneapolis, MN	9/24/22
MacNicol, Peter	Dallas, TX	4/10/54
MacPherson, Elle	Sydney, Australia	3/29/64
Macy, Bill	Revere, MA	5/18/22
Macy, William H.	Miami, FL	3/13/50
Madden, John	Austin, MN	4/10/36
Madigan, Amy	Chicago, IL	9/11/50
Madonna (Ciccone)	Bay City, MI	8/16/58
Madsen, Michael	Chicago, IL	9/25/58
Maguire, Tobey	Santa Monica, CA	6/27/75
Maher, Bill	New York, NY	1/20/56
Mahoney, John	Blackpool, Lancashire, England, UK	6/20/40
Majors, Lee	Wyandotte, MI	4/23/39
Malick, Terrence	Ottawa, IL	11/30/43
Malick, Wendie	Buffalo, NY	12/13/50
Malina, Joshua	New York, NY	1/17/66
Malkovich, John	Christopher, IL	12/9/53
Malone, Dorothy	Chicago, IL	1/30/25
Mamet, David	Chicago, IL	11/30/47
Manchester, Melissa	Bronx, NY	2/15/51
Mandel, Howie	Toronto, ON, Can.	11/29/55
Mandrell, Barbara	Houston, TX	12/25/48
Mangione, Chuck	Rochester, NY	11/29/40

Name	Birthplace	Birthdate
Manheim, Camryn	Caldwell, NJ	3/8/61
Manilow, Barry	Brooklyn, NY	6/17/46
Mann, Aimee	Richmond, VA	8/9/60
Manoff, Dinah	New York, NY	1/25/58
Manson, Marilyn	Canton, OH	1/5/69
Mantegna, Joe	Chicago, IL	11/13/47
Marcil, Vanessa	Indio, CA	10/15/69
Margulies, Julianna	Spring Valley, NY	6/8/66
Marie, Constance	Hollywood, CA	9/9/69
Marin, Cheech	Los Angeles, CA	7/13/46
Marinaro, Ed	New York, NY	3/31/50
Marriner, Neville	Lincoln, England, UK	4/15/24
Marsalis, Branford	New Orleans, LA	8/26/60
Marsalis, Wynton	New Orleans, LA	10/18/61
Marsh, Jean	London, England, UK	7/1/34
Marshall, Garry	Bronx, NY	11/13/34
Marshall, Penny	Bronx, NY	10/15/42
Marshall, Peter	Huntington, WV	3/30/27
Martin, Chris	Devon, England, UK	3/22/77
Martin, Jesse L.	Rocky Mount, VA	1/18/69
Martin, Kellie	Riverside, CA	10/16/75
Martin, Ricky	San Juan, Puerto Rico	12/24/71
Martin, Steve	Waco, TX	8/14/45
Martin, Tony	Oakland, CA	12/25/13
Martins, Peter	Copenhagen, Denmark	10/27/46
Mason, Jackie	Sheboygan, WI	6/9/34
Mason, Marsha	St. Louis, MO	4/3/42
Masterson, Christopher	Long Island, NY	1/22/80
Masterson, Mary Stuart	New York, NY	6/28/66
Mastrantonio, Mary Elizabeth	Lombard, IL	11/17/58
Masur, Kurt	Brieg, Germany	7/18/27
Masur, Richard	New York, NY	11/20/48
Mathers, Jerry	Sioux City, IA	6/2/48
Matheson, Tim	Glendale, CA	12/31/47
Mathis, Johnny	Gilmer, TX	9/30/35
Matlin, Marlee	Morton Grove, IL	8/24/65
Matthews, Dave	Johannesburg, S. Africa	1/9/67
May, Elaine	Philadelphia, PA	4/21/32
Mayer, John	Bridgeport, CT	10/16/77
Mays, Jayma	Bristol, TN	7/16/79
Mazar, Debi	Jamaica, Queens, NY	8/13/64
Mazursky, Paul	Brooklyn, NY	4/25/30
MCA (Adam Yauch)	Brooklyn, NY	8/5/64
McAdams, Rachel	London, ON, Can.	10/7/86
McArdle, Andrea	Abington, PA	11/5/63
McAvoy, James	Glasgow, Scotland, UK	1/1/79
McBride, Patricia	Teaneck, NJ	8/23/42
McCallum, David	Glasgow, Scotland, UK	9/19/33
McCarthy, Andrew	Westfield, NJ	11/29/62
McCarthy, Jenny	Chicago, IL	11/1/72
McCartney, Paul	Liverpool, England, UK	6/18/42
McCarver, Tim	Memphis, TN	10/16/41
McConaughey, Matthew	Uvalde, TX	11/4/69
McCoo, Marilyn	Jersey City, NJ	9/30/43
McCormack, Eric	Toronto, ON, Can.	4/18/63
McCormack, Mary	Plainsfield, NJ	2/8/69
McCrane, Paul	Philadelphia, PA	1/19/61
McDaniel, James	Washington, DC	3/25/58
McDermott, Dylan	Waterbury, CT	10/26/61
McDiarmid, Ian	Carnoustie, Tayside, Scot., UK	4/17/47
McDonald, Audra	Berlin, Germany	7/3/70
McDonnell, Mary	Wilkes-Barre, PA	4/28/52
McDormand, Frances	Chicago, IL	6/23/57
McDowell, Malcolm	Leeds, England, UK	6/13/43
McEntire, Reba	McAlester, OK	3/28/55
McFerrin, Bobby	New York, NY	3/11/50
McGillis, Kelly	Newport Beach, CA	7/9/57
McGovern, Elizabeth	Evanston, IL	7/18/61
McGovern, Maureen	Youngstown, OH	7/27/49
McGraw, Tim	Delhi, LA	5/1/67
McGregor, Ewan	Crieff, Scotland, UK	3/31/71
McHale, Joel	Rome, Italy	11/20/71
McHale, Kevin	Plano, TX	6/14/88
McKean, Michael	New York, NY	10/17/47
McKechnie, Donna	Pontiac, MI	11/16/42
McKellen, Ian	Burnley, England, UK	5/25/39
McKenzie, Benjamin	Austin, TX	9/12/78
McLachlan, Sarah	Halifax, NS, Can.	1/28/68
McLean, A. J.	West Palm Beach, FL	1/9/78
McNichol, Kristy	Los Angeles, CA	9/11/62
McPartland, Marian	Stough, England, UK	3/20/18
McRaney, Gerald	Collins, MS	8/19/47
McShane, Ian	Blackburn, England, UK	9/29/42
Meadows, Jayne	Wu Chang, China	9/27/20
Meara, Anne	Brooklyn, NY	9/20/29
Meat Loaf	Dallas, TX	9/27/47
Meester, Leighton	Marco Island, FL	4/9/86
Mehta, Zubin	Bombay, India	4/29/36
Mellencamp, John	Seymour, IN	10/7/51
Meloni, Christopher	Washington, DC	4/2/61
Mendes, Sam	Redding, England, UK	8/1/65
Mendes, Sergio	Niteroi, Brazil	2/11/41
Menzel, Idina	Syosset, NY	5/30/71
Mercer, Marian	Akron, OH	11/26/35
Merchant, Natalie	Jamestown, NY	10/26/63
Merkerson, S. Epatha	Saginaw, MI	11/28/52
Merrill, Dina	New York, NY	12/9/25
Messing, Debra	Brooklyn, NY	8/15/68
Metcalf, Laurie	Carbondale, IL	6/16/55
Meyers, Seth	Bedford, NH	12/28/73
Michael, George	London, England, UK	6/25/63
Michaels, Al	Brooklyn, NY	11/12/44
Michaels, Bret	Pittsburgh, PA	3/15/63
Michaels, Lorne	Toronto, ON, Can.	11/17/44
Michele, Lea	Bronx, NY	8/29/86
Midler, Bette	Honolulu, HI	12/1/45
Midori (Goto)	Osaka, Japan	10/25/71
Mike D	Brooklyn, NY	11/20/65
Milano, Alyssa	Brooklyn, NY	12/19/72
Miles, Sarah	Ingatestone, England, UK	12/31/41
Miles, Vera	nr. Boise City, OK	8/23/29
Miller, Dennis	Pittsburgh, PA	11/3/53
Miller, Penelope Ann	Santa Monica, CA	1/13/64
Mills, Donna	Chicago, IL	12/11/43
Mills, Hayley	London, England, UK	4/18/46
Milner, Martin	Detroit, MI	12/28/27
Milnes, Sherrill	Downers Grove, IL	1/10/35
Milsap, Ronnie	Robinsville, NC	1/16/44
Mimieux, Yvette	Hollywood, CA	1/8/42
Ming-Na (Wen)	Macao	11/20/63
Minnelli, Liza	Los Angeles, CA	3/12/46
Minogue, Kylie	Melbourne, Australia	5/28/68
Mirren, Helen	London, England, UK	7/26/45
Mitchell, Brian Stokes	Seattle, WA	10/31/57
Mitchell, Elizabeth	Los Angeles, CA	3/27/70
Mitchell, Jerry	Paw Paw, MI	1/15/60
Mitchell, Joni	Fort McLeod, AB, Can.	11/7/43
Moby	New York, NY	9/11/65
Modine, Matthew	Loma Linda, CA	3/22/59
Moffat, Donald	Plymouth, England, UK	12/26/30
Molina, Alfred	London, England, UK	5/24/53
Molinaro, Al	Kenosha, WI	6/24/19
Moll, Richard	Pasadena, CA	1/13/43
Moloney, Janel	Woodland Hills, CA	10/3/69
Monaghan, Dominic	Berlin, Germany	12/8/76
Monica (Arnold)	College Park, GA	10/24/80
Mo'Nique	Woodlawn, MD	12/11/67
Monteith, Cory	Calgary, AB, Can.	5/11/82
Moody, Ron	London, England, UK	1/8/24
Moore, Demi	Roswell, NM	11/11/62
Moore, Julianne	Fort Bragg, NC	12/3/60
Moore, Mandy	Nashua, NH	4/10/84
Moore, Mary Tyler	Brooklyn, NY	12/29/36
Moore, Melba	New York, NY	10/29/45
Moore, Michael	Flint, MI	4/23/54
Moore, Roger	London, England, UK	10/14/27
Moore, Terry	Los Angeles, CA	1/7/29
Morales, Esai	Brooklyn, NY	10/1/62
Moranis, Rick	Toronto, ON, Can.	4/18/54
Moreau, Jeanne	Paris, France	1/23/28
Moreno, Rita	Humacao, Puerto Rico	12/11/31
Morgan, Harry	Detroit, MI	4/10/15
Morgan, Piers	Guildford, Surrey, UK	3/30/65
Morgan, Tracy	Bronx, NY	11/10/68
Moriarty, Michael	Detroit, MI	4/5/41
Morissette, Alanis	Ottawa, ON, Can.	6/1/74
Morris, Garrett	New Orleans, LA	2/1/37
Morrison, Matthew	Fort Ord, CA	10/30/78
Morrison, Van	Belfast, N. Ireland, UK	8/31/45
Morrissey (Steven Patrick)	Manchester, Eng., UK	5/22/59
Morrow, Rob	New Rochelle, NY	9/21/62
Morse, David	Beverly, MA	10/11/53
Morse, Robert	Newton, MA	5/18/31
Mortensen, Viggo	New York, NY	10/20/58
Mortimer, Emily	London, England, UK	12/1/71
Morton, Joe	New York, NY	10/18/47
Morton, Samantha	Nottingham, England, UK	5/13/77
Moses, William	Los Angeles, CA	11/17/59
Moss, Carrie-Anne	Vancouver, BC, Can.	8/21/67
Moss, Elisabeth	Los Angeles, CA	7/24/82
Moss, Kate	Croydon, Surrey, Eng., UK	1/16/74
Mueller-Stahl, Armin	Tilsit, E. Prussia	12/17/30
Muldaur, Diana	Brooklyn, NY	8/19/38
Mulgrew, Kate	Dubuque, IA	4/29/55
Mull, Martin	Chicago, IL	8/18/43
Mullally, Megan	Los Angeles, CA	11/12/58
Mullan, Peter	Peterhead, Scotland, UK	11/2/59
Mulroney, Dermot	Alexandria, VA	10/31/63
Muniz, Frankie	Ridgewood, NJ	12/5/85
Munsel, Patrice	Spokane, WA	5/14/25
Murphy, Ben	Jonesboro, AR	3/6/42
Murphy, Donna	Corona, Queens, NY	3/7/58
Murphy, Eddie	Brooklyn, NY	4/3/61
Murphy, Michael	Los Angeles, CA	5/5/38
Murray, Anne	Springhill, NS, Can.	6/20/45
Murray, Bill	Wilmette, IL	9/21/50
Murray, Don	Hollywood, CA	7/31/29
Musburger, Brent	Portland, OR	5/26/39

Name	Birthplace	Birthdate
Muti, Riccardo	Naples, Italy	7/28/41
Myers, Mike	Scarborough, ON, Can.	5/25/63
Nabors, Jim	Sylacauga, AL	6/12/30
Nagra, Parminder	Leicester, England, UK	10/5/75
Nash, Graham	Blackpool, England, UK	2/2/42
Naughton, James	Middletown, CT	12/6/45
Navarro, Dave	Santa Monica, CA	6/7/67
Nealon, Kevin	St. Louis, MO	11/18/53
Neeson, Liam	Ballymena, N. Ireland, UK	6/7/52
Neill, Sam	Ulster, N. Ireland, UK	9/14/47
Nelligan, Kate	London, ON, Can.	3/16/51
Nelly	Austin, TX	11/2/74
Nelson, Craig T.	Spokane, WA	4/4/44
Nelson, Ed	New Orleans, LA	12/21/28
Nelson, Judd	Portland, ME	11/28/59
Nelson, Tracy	Santa Monica, CA	10/25/63
Nelson, Willie	Abbott, TX	4/30/33
Nero, Peter	Brooklyn, NY	5/22/34
Nesmith, Mike	Houston, TX	12/30/42
Neuwirth, Bebe	Newark, NJ	12/31/58
Neville, Aaron	New Orleans, LA	1/24/41
Newhart, Bob	Oak Park, IL	9/5/29
Newman, Randy	New Orleans, LA	11/28/43
Newton, Wayne	Norfolk, VA	4/3/42
Newton-John, Olivia	Cambridge, England, UK	9/26/48
Nicholas, Denise	Detroit, MI	7/12/44
Nichols, Mike	Berlin, Germany	11/6/31
Nicholson, Jack	Neptune, NJ	4/22/37
Nicks, Stevie	Phoenix, AZ	5/26/48
Nielsen, Connie	Frederikshavn, Denmark	7/3/65
Nielsen, Leslie	Regina, SK, Can.	2/11/26
Nighy, Bill	Caterham, Surrey, Eng., UK	12/12/49
Nimoy, Leonard	Boston, MA	3/26/31
Nixon, Cynthia	New York, NY	4/9/66
Nolte, Nick	Omaha, NE	2/8/41
Noone, Peter	Manchester, England, UK	11/5/47
Norman, Jessye	Augusta, GA	9/15/45
Norris, Chuck	Ryan, OK	3/10/40
Northam, Jeremy	Cambridge, England, UK	12/1/61
Norton, Edward	Boston, MA	8/18/69
Noth, Christopher	Madison, WI	11/13/54
Novak, Kim	Chicago, IL	2/13/33
Nuyen, France	Marseilles, France	7/31/39
Oates, John	New York, NY	4/7/49
Obradors, Jacqueline	San Fernando Valley, CA	10/6/66
O'Brian, Hugh	Rochester, NY	4/19/25
O'Brien, Conan	Brookline, MA	4/18/63
O'Brien, Margaret	San Diego, CA	1/15/37
Ocean, Billy	Fyzabad, Trinidad	1/21/50
O'Connor, Sinead	Glenageary, Ireland	12/8/66
O'Donnell, Chris	Winnetka, IL	6/26/70
O'Donnell, Rosie	Commack, NY	3/21/62
O'Grady, Gail	Detroit, MI	1/23/63
Oh, Sandra	Nepean, ON, Can.	7/20/71
O'Hara, Catherine	Toronto, ON, Can.	3/4/54
O'Hara, Maureen	Dublin, Ireland	8/17/20
Oka, Masi	Tokyo, Japan	12/27/74
Oldman, Gary	South London, Eng., UK	3/21/58
Olin, Ken	Chicago, IL	7/30/54
Olin, Lena	Stockholm, Sweden	3/22/55
Olmos, Edward James	E. Los Angeles, CA	2/24/47
Olsen, Ashley	Sherman Oaks, CA	6/13/86
Olsen, Mary-Kate	Sherman Oaks, CA	6/13/86
Olson, Nancy	Milwaukee, WI	7/14/28
O'Malley, Mike	Boston, MA	10/31/69
O'Neal, Ryan	Los Angeles, CA	4/20/41
O'Neal, Tatum	Los Angeles, CA	11/5/63
O'Neill, Ed	Youngstown, OH	4/12/46
Ontkean, Michael	Vancouver, BC, Can.	1/24/46
O'Quinn, Terry	Newbury, MI	7/15/52
Orlando, Tony	New York, NY	4/3/44
Ormond, Julia	Epsom, England, UK	1/4/65
Osbourne, Jack	London, England, UK	11/8/85
Osbourne, Kelly	London, England, UK	10/27/84
Osbourne, Ozzy	Birmingham, England, UK	12/3/48
Osbourne, Sharon	London, England, UK	10/9/52
O'Shea, Milo	Dublin, Ireland	6/2/26
Oslin, K.T.	Crossett, AR	5/15/42
Osment, Haley Joel	Los Angeles, CA	4/10/88
Osmond, Donny	Ogden, UT	12/9/57
Osmond, Marie	Ogden, UT	10/13/59
O'Toole, Annette	Houston, TX	4/1/51
O'Toole, Peter	Connemara, Ireland	8/2/32
Otto, Miranda	Brisbane, Australia	12/16/67
Owen, Clive	Keresley, England, UK	10/3/64
Oz, Frank	Herford, England, UK	5/25/44
Ozawa, Seiji	Shenyang, China	9/1/35
Pacino, Al	New York, NY	4/25/40
Packer, Billy	Wellsville, NY	2/25/40
Page, Ellen	Halifax, NS, Can.	2/21/87
Page, Jimmy	Heston, England, UK	1/9/44
Page, Patti	Claremore, OK	11/8/27
Paget, Debra	Denver, CO	8/19/33
Paige, Janis	Tacoma, WA	9/16/22
Paisley, Brad	Glen Dale, WV	10/28/72
Palin, Michael	Sheffield, England, UK	5/5/43
Palmer, Betsy	East Chicago, IN	11/1/26
Palmer, Geoffrey	London, England, UK	6/4/27
Palminteri, Chazz	Bronx, NY	5/15/51
Paltrow, Gwyneth	Los Angeles, CA	9/28/72
Panettiere, Hayden	Palisades, NY	8/21/89
Panjabi, Archie	Edgware, England, UK	5/31/73
Pantoliano, Joe	Hoboken, NJ	9/12/51
Papas, Irene	Chiliomodi, Greece	9/3/26
Paquin, Anna	Winnipeg, MB, Can.	7/24/82
Parker, Alan	Islington, England, UK	2/14/44
Parker, Eleanor	Cedarville, OH	6/26/22
Parker, Jameson	Baltimore, MD	11/18/47
Parker, Mary-Louise	Fort Jackson, SC	8/2/64
Parker, Sarah Jessica	Nelsonville, OH	3/25/65
Parsons, Estelle	Marblehead, MA	11/20/27
Parsons, Jim	Houston, TX	3/24/73
Parton, Dolly	Sevierville, TN	1/19/46
Pasdar, Adrian	Pittsfield, MA	4/30/65
Patinkin, Mandy	Chicago, IL	11/30/52
Patric, Jason	Queens, NY	6/17/66
Pattinson, Robert	London, England, UK	5/13/86
Patton, Will	Charleston, SC	6/14/54
Paul, Aaron	Emmett, ID	8/27/79
Paul, Adrian	London, England, UK	5/29/59
Paulson, Sarah	Tampa, FL	12/17/75
Paxton, Bill	Fort Worth, TX	5/17/55
Pearce, Guy	Ely, England, UK	10/5/67
Peet, Amanda	New York, NY	1/11/72
Penn, Kal	Montclair, NJ	4/23/77
Penn, Sean	Burbank, CA	8/17/60
Perez, Rosie	Brooklyn, NY	9/6/64
Perkins, Elizabeth	Queens, NY	11/18/60
Perlman, Itzhak	Tel Aviv, Israel	8/31/45
Perlman, Rhea	Brooklyn, NY	3/31/48
Perlman, Ron	New York, NY	4/13/50
Perrine, Valerie	Galveston, TX	9/3/43
Perry, Katy	Santa Barbara, CA	10/25/84
Perry, Luke	Mansfield, OH	10/11/65
Perry, Matthew	Williamstown, MA	8/19/69
Persoff, Nehemiah	Jerusalem, Israel	8/2/20
Pesci, Joe	Newark, NJ	2/9/43
Peters, Bernadette	Ozone Park, Queens, NY	2/28/48
Peters, Roberta	Bronx, NY	5/4/30
Petersen, Wolfgang	Emden, Germany	3/14/41
Petty, Lori	Chattanooga, TN	3/23/63
Petty, Tom	Gainesville, FL	10/20/50
Pfeiffer, Michelle	Santa Ana, CA	4/29/58
Phair, Liz	New Haven, CT	4/17/67
Philbin, Regis	New York, NY	8/25/31
Phillippe, Ryan	New Castle, DE	9/10/74
Phillips, Lou Diamond	Subic Bay, Philippines	2/17/62
Phillips, Mackenzie	Alexandria, VA	11/10/59
Phillips, Michelle	Long Beach, CA	6/4/44
Phillips, Sian	Bettws, Wales, UK	5/14/34
Phoenix, Joaquin	San Juan, Puerto Rico	10/28/74
Pierce, David Hyde	Albany, NY	4/3/59
Pinchot, Bronson	New York, NY	5/20/59
Pink	Doylestown, PA	9/8/79
Pinkett Smith, Jada	Baltimore, MD	9/18/71
Pirner, David	Green Bay, WI	4/16/64
Piscopo, Joe	Passaic, NJ	6/17/51
Pitt, Brad	Shawnee, OK	12/18/63
Piven, Jeremy	New York, NY	7/26/65
Plant, Robert	W. Bromwich, England, UK	8/20/48
Plowright, Joan	Brigg, England, UK	10/28/29
Plummer, Amanda	New York, NY	3/23/57
Plummer, Christopher	Toronto, ON, Can.	12/13/27
Poehler, Amy	Burlington, MA	9/16/71
Poitier, Sidney	Miami, FL	2/20/27
Polanski, Roman	Paris, France	8/18/33
Pompeo, Ellen	Everett, MA	11/10/69
Pop, Iggy	Ann Arbor, MI	4/21/47
Portman, Natalie	Jerusalem, Israel	6/9/81
Posey, Parker	Baltimore, MD	11/8/68
Post, Markie	Palo Alto, CA	11/4/50
Potente, Franka	Dulmen bei Munster, Germany	7/22/74
Potts, Annie	Nashville, TN	10/28/52
Povich, Maury	Washington, DC	1/17/39
Powell, Jane	Portland, OR	4/1/28
Powers, Stefanie	Hollywood, CA	11/2/42
Prentiss, Paula	San Antonio, TX	3/4/39
Prepon, Laura	Watchung, NJ	3/7/80
Presley, Priscilla	Brooklyn, NY	5/24/45
Pressly, Jaime	Kinston, NC	7/30/77
Previn, Andre	Berlin, Germany	4/6/29
Price, Leontyne	Laurel, MS	2/10/27
Price, Molly	North Plainfield, NJ	12/15/66

Name	Birthplace	Birthdate
Price, Ray	Perryville, TX	1/12/26
Pride, Charley	Sledge, MS	3/18/38
Priestley, Jason	Vancouver, BC, Can.	8/28/69
Prince (The Artist)	Minneapolis, MN	6/7/58
Prince, Faith	Augusta, GA	8/5/57
Principal, Victoria	Fukuoka, Japan	1/3/50
Prinze, Freddie, Jr.	Albuquerque, NM.	3/8/76
Probst, Jeff	Wichita, KS	11/4/62
Proctor, Emily	Raleigh, NC.	10/8/68
Pryce, Jonathan	Holywell, N. Wales, UK	6/1/47
Puck, Wolfgang	St. Veit, Austria	1/8/49
Pulliam, Keshia Knight	Newark, NJ	4/9/79
Pullman, Bill	Hornell, NY	12/17/53
Purcell, Sarah	Richmond, IN	10/8/48
Quaid, Dennis	Houston, TX	4/9/54
Quaid, Randy	Houston, TX	10/1/50
Queen Latifah	Newark, NJ	3/18/70
Quinn, Aidan	Chicago, IL	3/8/59
Quinn, Colin	Brooklyn, NY	8/15/59
Quinn, Martha	Albany, NY.	5/11/59
Quinto, Zachary	Pittsburgh, PA	6/2/77
Rachins, Alan	Cambridge, MA	10/3/42
Radcliffe, Daniel	London, England, UK	7/23/89
Rae, Charlotte	Milwaukee, WI	4/22/26
Raffi	Cairo, Egypt.	7/8/48
Rainer, Luise	Vienna, Austria	1/12/10
Raitt, Bonnie	Burbank, CA	11/8/49
Ramey, Samuel	Colby, KS.	3/28/42
Ramirez, Efren	Los Angeles, CA	10/2/73
Ramirez, Sara	Mazatlan, Mexico.	8/31/75
Ramone, Tommy	Budapest, Hungary	1/29/52
Randolph, Joyce	Detroit, MI	10/21/24
Raphael, Sally Jessy	Easton, PA.	2/25/35
Rashad, Phylicia	Houston, TX	6/19/48
Ratzenberger, John	Bridgeport, CT.	4/6/47
Raver, Kim	New York, NY	3/15/69
Ray, Rachael	Glen Falls, NY	8/25/68
Reddy, Helen	Melbourne, Australia	10/25/41
Redford, Robert	Santa Monica, CA	8/18/37
Redgrave, Vanessa	London, England, UK	1/30/37
Reed, Lou	Brooklyn, NY	3/2/42
Reed, Rex	Ft. Worth, TX	10/2/38
Reese, Della	Detroit, MI	7/6/31
Reeves, Keanu	Beirut, Lebanon	9/2/64
Reeves, Martha	Eufaula, AL	7/18/41
Regalbuto, Joe	New York, NY	8/24/49
Reid, Tara	Wyckoff, NJ	11/8/75
Reid, Tim	Norfolk, VA	12/19/44
Reid, Vernon	London, England, UK	8/22/58
Reilly, John C.	Chicago, IL	5/24/65
Reiner, Carl	Bronx, NY	3/20/22
Reiner, Rob	Bronx, NY	3/6/47
Reinhold, Judge	Wilmington, DE	5/21/57
Reinking, Ann	Seattle, WA	11/10/49
Reiser, Paul	New York, NY	3/30/57
Reitman, Ivan	Komarno, Czechoslovakia	10/26/46
Remini, Leah	Brooklyn, NY	6/15/70
Resnik, Regina	New York, NY	8/30/22
Reynolds, Burt	Waycross, GA	2/11/36
Reynolds, Debbie	El Paso, TX	4/1/32
Reynolds, Ryan	Vancouver, BC, Can.	10/23/76
Reznor, Trent	Mercer, PA.	5/17/65
Rhames, Ving	New York, NY	5/12/59
Rhys Meyers, Jonathan	Dublin, Ireland	7/27/77
Rhymes, Busta	Brooklyn, NY	5/20/72
Ribisi, Giovanni	Los Angeles, CA	12/17/74
Ricci, Christina	Santa Monica, CA	2/12/80
Richards, Denise	Downers Grove, IL.	2/17/71
Richards, Keith	Dartford, Kent, Eng., UK	12/18/43
Richards, Michael	Culver City, CA	7/24/49
Richardson, Kevin	Lexington, KY	10/3/71
Richardson, Miranda	Lancashire, England, UK	3/3/58
Richardson, Patricia	Bethesda, MD	2/23/51
Richie, Lionel	Tuskegee, AL.	6/20/49
Richie, Nicole	Berkeley, CA	9/21/81
Richter, Andy	Grand Rapids, MI	10/28/66
Rickles, Don	Jackson Heights, Queens, NY.	5/8/26
Rickman, Alan	Hammersmith, Eng., UK	2/21/46
Riegert, Peter	New York, NY	4/11/47
Rigg, Diana	Doncaster, England, UK	7/20/38
Rihanna	St. Michael, Barbados	2/20/88
Riley, Amber	Long Beach, CA	2/15/86
Rimes, LeAnn	Flowood, MS	8/28/82
Ringwald, Molly	Roseville, CA	2/18/68
Ripa, Kelly	Stratford, NJ	10/2/70
Rivera, Chita	Washington, DC	1/23/33
Rivera, Geraldo	New York, NY	7/4/43
Rivers, Joan	Brooklyn, NY	6/8/33
Robbins, Tim	W. Covina, CA	10/16/58
Roberts, Doris	St. Louis, MO.	11/4/30
Roberts, Eric	Biloxi, MS	4/18/56
Roberts, Julia	Smyrna, GA.	10/28/67
Roberts, Tony	New York, NY	10/22/39
Robertson, Cliff	La Jolla, CA	9/9/25
Robertson, Dale	Harrah, OK	7/14/23
Robinson, Smokey	Detroit, MI	2/19/40
Rochon, Lela	Torrance, CA	4/17/64
Rock, Chris	Andrews, SC	2/7/65
Rodgers, Jimmy	Camas, WA	9/18/33
Rodriguez, Jai	Brentwood, NY	6/22/79
Rodriguez, Johnny	Sabinal, TX	12/10/51
Rodriguez, Michelle	Bexar County, TX.	7/12/78
Rogan, Joe	Newark, NJ	8/11/67
Rogen, Seth	Vancouver, BC, Can.	4/15/82
Rogers, Kenny	Houston, TX	8/21/38
Rogers, Mimi	Coral Gables, FL	1/27/56
Rogers, Wayne	Birmingham, AL.	4/7/33
Rohm, Elisabeth	Dusseldorf, Germany.	4/28/73
Rollins, Henry	Washington, DC	2/13/61
Rollins, Sonny	New York, NY	9/7/30
Romano, Ray	Forest Hills, Queens, NY	12/21/57
Romijn, Rebecca	Berkeley, CA	11/6/72
Ronstadt, Linda	Tucson, AZ	7/15/46
Rooney, Mickey	Brooklyn, NY	9/23/20
Root, Stephen	Sarasota, FL	11/17/51
Rose, Axl	Lafayette, IN	2/6/62
Rose Marie	New York, NY	8/15/23
Roseanne	Salt Lake City, UT	11/3/52
Ross, Charlotte	Winnetka, IL	1/21/68
Ross, Diana	Detroit, MI	3/26/44
Ross, Katharine	Hollywood, CA.	1/29/40
Ross, Marion	Albert Lea, MN	10/25/28
Rossdale, Gavin	London, England, UK	10/30/65
Rossellini, Isabella	Rome, Italy	6/18/52
Rossum, Emmy	New York, NY	9/12/86
Roth, David Lee	Bloomington, IN.	10/10/55
Roth, Tim	London, England, UK	5/14/61
Rotten, Johnny	London, England, UK	1/31/56
Rourke, Mickey	Schenectady, NY	9/16/56
Routh, Brandon	Des Moines, IA	10/9/79
Routledge, Patricia	Birkenhead, England, UK	2/17/29
Rowan, Kelly	Ottawa, ON, Can.	10/26/65
Rowlands, Gena	Cambria, WI	6/19/30
Rubinstein, John	Beverly Hills, CA	12/8/46
Rudd, Paul	Passaic, NJ	4/6/1969
Rudner, Rita	Miami, FL	9/17/56
Rudolph, Maya	Gainesville, FL.	7/27/72
Ruehl, Mercedes	Jackson Heights, Queens, NY.	2/28/48
Ruffalo, Mark	Kenosha, WI	11/22/67
Rupp, Debra Jo	Glendale, CA	2/24/51
Rush, Barbara	Denver, CO	1/4/27
Rush, Geoffrey	Toowoomba, Australia	7/6/51
Russell, Jane	Bemidji, MN.	6/21/21
Russell, Ken	Southampton, Eng., UK.	7/3/27
Russell, Keri	Fountain Valley, CA	3/23/76
Russell, Kurt	Springfield, MA	3/17/51
Russell, Leon	Lawton, OK	4/2/41
Russell, Mark	Buffalo, NY	8/23/32
Russell, Theresa	San Diego, CA.	3/20/57
Russo, Rene	Burbank, CA	2/17/54
Rutherford, Ann	Vancouver, BC, Can.	11/2/20
Ruttan, Susan	Oregon City, OR	9/16/50
Ryan, Meg	Fairfield, CT.	11/19/61
Ryan, Roz	Detroit, MI	7/7/51
Rydell, Bobby	Philadelphia, PA	4/26/42
Ryder, Winona	Winona, MN	10/29/71
Sabato, Antonio, Jr.	Rome, Italy	2/29/72
Sade (Adu)	Ibadan, Nigeria	1/16/59
Sagal, Katey	Hollywood, CA.	1/19/54
Saget, Bob	Philadelphia, PA	5/17/56
Sagnier, Ludivine	La Celle-St.-Cloud, France.	7/3/79
Sahl, Mort	Montreal, QC, Can.	5/11/27
Saint, Eva Marie	Newark, NJ	7/4/24
St. James, Susan	Hollywood, CA.	8/14/46
St. John, Jill	Los Angeles, CA	8/19/40
St. Patrick, Mathew	Philadelphia, PA	3/17/68
Sajak, Pat	Chicago, IL	10/26/46
Saks, Gene	New York, NY	11/8/21
Saldana, Zoë	Passaic, NJ	6/19/78
Salonga, Lea	Manila, Philippines	2/22/71
Salling, Mark	Dallas, TX	8/17/82
Samberg, Andy	Berkeley, CA	8/18/78
Samms, Emma	London, England, UK	8/28/60
Sandler, Adam	Brooklyn, NY	9/9/66
Sands, Julian	West Yorkshire, Eng., UK.	1/15/58
San Giacomo, Laura	Hoboken, NJ	11/14/62
Santana, Carlos	Autlan, Mexico	7/20/47
Sara, Mia	Brooklyn, NY	6/19/67
Sarandon, Susan	New York, NY	10/4/46
Sarnoff, Dorothy	New York, NY	5/25/17
Sartain, Gailard	Tulsa, OK	9/18/46
Savage, Ben	Highland Park, IL.	9/13/80
Savage, Fred	Highland Park, IL.	7/9/76

Name	Birthplace	Birthdate
Sawa, Devon	Vancouver, BC, Can.	9/7/78
Saxon, John	Brooklyn, NY	8/5/36
Sayles, John	Schenectady, NY	9/28/50
Scacchi, Greta	Milan, Italy	2/18/60
Scaggs, Boz	Canton, OH	6/8/44
Scales, Prunella	Sutton Abinger, Eng., UK	6/22/32
Scalia, Jack	Brooklyn, NY	11/10/51
Schallert, William	Los Angeles, CA	7/6/22
Schell, Maximilian	Vienna, Austria	12/8/30
Schiff, Richard	Bethesda, MD	5/27/55
Schiffer, Claudia	Rheinbach, Germany	8/25/70
Schneider, John	Mt. Kisco, NY	4/8/54
Schneider, Rob	San Francisco, CA	10/31/63
Schram, Bitty	New York, NY	7/17/68
Schreiber, Liev	San Francisco, CA	10/4/67
Schroder, Rick	Staten Island, NY	4/13/70
Schwarzenegger, Arnold	Thal, Austria	7/30/47
Schwimmer, David	Astoria, Queens, NY	11/2/66
Sciorra, Annabella	Wethersfield, CT	3/24/64
Scolari, Peter	New Rochelle, NY	9/12/54
Scorsese, Martin	Flushing, Queens, NY	11/17/42
Scott, Lizabeth	Scranton, PA	9/29/22
Scott, Ridley	South Shields, Eng., UK	11/30/37
Scott, Seann William	Cottage Grove, MN	10/3/76
Scott-Heron, Gil	Chicago, IL	4/1/49
Scott Thomas, Kristin	Redruth, England, UK	5/24/60
Scotto, Renata	Savona, Italy	2/24/34
Scully, Vin	Bronx, NY	11/29/27
Seacrest, Ryan	Atlanta, GA	12/24/74
Seagal, Steven	Lansing, MI	4/10/51
Secor, Kyle	Tacoma, WA	5/31/57
Sedaka, Neil	Brooklyn, NY	3/13/39
Sedgwick, Kyra	New York, NY	8/19/65
Seeger, Pete	New York, NY	5/3/19
Segal, George	Great Neck, NY	2/13/34
Seidelman, Susan	Abington, PA	12/11/52
Seinfeld, Jerry	Brooklyn, NY	4/29/54
Seldes, Marian	New York, NY	8/23/28
Sellecca, Connie	Bronx, NY	5/25/55
Selleck, Tom	Detroit, MI	1/29/45
Severinsen, Doc	Arlington, OR	7/7/27
Sevigny, Chloë	Springfield, MA	11/18/74
Sewell, Rufus	Twickenham, Middlesex, England, UK	10/29/67
Seymour, Jane	Hillingdon, England, UK	2/15/51
Shackelford, Ted	Oklahoma City, OK	6/23/46
Shaffer, Paul	Thunder Bay, ON, Can.	11/28/49
Shakira (Mebarak Ripoll)	Barranquilla, Colombia	2/2/77
Shalhoub, Tony	Green Bay, WI	10/9/53
Shandling, Garry	Chicago, IL	11/29/49
Shankar, Ravi	Benares, India	4/7/20
Shannon, Molly	Shaker Heights, OH	9/16/64
Sharif, Omar	Alexandria, Egypt	4/10/32
Shatner, William	Montreal, QC, Can.	3/22/31
Shaughnessy, Charles	London, England, UK	2/9/55
Shaver, Helen	St. Thomas, ON, Can.	2/24/51
Shawkat, Alia	Riverside, CA	4/18/89
Shea, John	N. Conway, NH	4/14/49
Shearer, Harry	Los Angeles, CA	12/23/43
Shearing, George	London, England, UK	8/13/19
Sheedy, Ally	New York, NY	6/13/62
Sheen, Charlie	Los Angeles, CA	9/3/65
Sheen, Martin	Dayton, OH	8/3/40
Sheen, Michael	Newport, Wales, UK	2/5/69
Sheindlin, Judy	Brooklyn, NY	10/21/42
Shelley, Carole	London, England, UK	8/16/39
Shepard, Sam	Ft. Sheridan, IL	11/5/43
Shepherd, Cybill	Memphis, TN	2/18/50
Shepherd, Sherri	Chicago, IL	4/22/67
Sheridan, Nicollette	Worthing, England, UK	11/21/63
Shields, Brooke	New York, NY	5/31/65
Shire, Talia	Lake Success, NY	4/25/46
Short, Martin	Hamilton, ON, Can.	3/26/50
Shortz, Will	Crawfordsville, IN	8/26/52
Show, Grant	Detroit, MI	2/27/62
Shue, Andrew	S. Orange, NJ	2/20/67
Shue, Elisabeth	Wilmington, DE	10/6/63
Shyamalan, M. Night	Pondicherry, India	8/6/70
Sidibe, Gabourey	Brooklyn, NY	5/6/83
Siepi, Cesare	Milan, Italy	2/10/23
Sigler, Jamie-Lynn	Jericho, NY	5/15/81
Sikking, James B.	Los Angeles, CA	3/5/34
Silverman, Jonathan	Beverly Hills, CA	8/5/66
Silverman, Sarah	Bedford, NH	12/1/70
Silverstone, Alicia	San Francisco, CA	10/4/76
Simmons, Gene	Haifa, Israel	8/25/49
Simmons, Henry	Stamford, CT	7/1/70
Simmons, Richard	New Orleans, LA	7/12/48
Simon, Carly	New York, NY	6/25/45
Simon, Paul	Newark, NJ	10/13/41
Simpson, Ashlee	Waco, TX	10/3/84
Simpson, Jessica	Abilene, TX	7/10/80
Sinatra, Nancy	Jersey City, NJ	6/8/40
Sinbad	Benton Harbor, MI	11/10/56
Singleton, John	Los Angeles, CA	1/6/68
Sinise, Gary	Blue Island, IL	3/17/55
Sirico, Tony	Brooklyn, NY	7/29/42
Sisto, Jeremy	Grass Valley, CA	10/6/74
Sizemore, Tom	Detroit, MI	9/29/64
Skerritt, Tom	Detroit, MI	8/25/33
Skye, Ione	Hertfordshire, England, UK	9/4/70
Slater, Christian	New York, NY	8/18/69
Slater, Helen	Massapequa, NY	12/15/63
Slattery, John	Boston, MA	8/13/63
Sledge, Percy	Leighton, AL	11/25/40
Slezak, Erika	Hollywood, CA	8/5/46
Slick, Grace	Evanston, IL	10/30/39
Smirnoff, Yakov	Odessa, Ukraine	1/24/51
Smith, Allison	New York, NY	12/9/69
Smith, Jaclyn	Houston, TX	10/26/47
Smith, Jaden	Malibu, CA	7/8/98
Smith, Keely	Norfolk, VA	3/9/32
Smith, Kevin	Red Bank, NJ	8/2/70
Smith, Maggie	Ilford, England, UK	12/28/34
Smith, Patti	Chicago, IL	12/30/46
Smith, Robert	Blackpool, England, UK	4/21/59
Smith, Will	Philadelphia, PA	9/25/68
Smits, Jimmy	Brooklyn, NY	7/9/55
Smothers, Dick	Governor's Island, NY	11/20/38
Smothers, Tom	Governor's Island, NY	2/2/37
Snipes, Wesley	Orlando, FL	7/31/62
Snooki (Nicole Polizzi)	Santiago, Chile	11/23/87
Snoop Dogg	Long Beach, CA	10/20/72
Soderbergh, Steven	Atlanta, GA	1/14/63
Somers, Suzanne	San Bruno, CA	10/16/46
Sommer, Elke	Berlin, Germany	11/5/40
Sorbo, Kevin	Mound, MN	9/24/58
Sorvino, Mira	Tenafly, NJ	9/28/67
Sorvino, Paul	Brooklyn, NY	4/13/39
Soul, David	Chicago, IL	8/28/43
Spacek, Sissy	Quitman, TX	12/25/49
Spacey, Kevin	S. Orange, NJ	7/26/59
Spade, David	Birmingham, MI	7/22/64
Spader, James	Boston, MA	2/7/60
Spano, Joe	San Francisco, CA	7/7/46
Sparks, Jordin	Phoenix, AZ	12/22/89
Spears, Britney	Kentwood, LA	12/2/81
Spears, Jamie-Lynn	McComb, MS	4/4/91
Spector, Phil	Bronx, NY	12/26/40
Spelling, Tori	Los Angeles, CA	5/16/73
Spielberg, Steven	Cincinnati, OH	12/18/46
Spiner, Brent	Houston, TX	2/2/49
Springer, Jerry	London, England, UK	2/13/44
Springfield, Rick	Sydney, Australia	8/23/49
Springsteen, Bruce	Freehold, NJ	9/23/49
Spurlock, Morgan	Parksburg, WV	11/7/70
Stahl, Nick	Harlingen, TX	12/5/79
Stallone, Sylvester	New York, NY	7/6/46
Stamos, John	Cypress, CA	8/19/63
Stamp, Terence	Stepney, England, UK	7/22/39
Stanton, Harry Dean	West Irvine, KY	7/14/26
Stapleton, Jean	New York, NY	1/19/23
Starr, Ringo	Liverpool, England, UK	7/7/40
Steenburgen, Mary	Newport, AR	2/8/53
Stefani, Gwen	Fullerton, CA	10/3/69
Stein, Ben	Washington, DC	11/25/44
Stephens, James	Mt. Kisco, NY	5/18/51
Stern, Daniel	Bethesda, MD	8/28/57
Stern, Howard	Roosevelt, NY	1/12/54
Sternhagen, Frances	Washington, DC	1/13/30
Stevens, Andrew	Memphis, TN	6/10/55
Stevens, Cat (Yusef Islam)	London, England, UK	7/21/48
Stevens, Connie	Brooklyn, NY	8/8/38
Stevens, Rise	Bronx, NY	6/11/13
Stevens, Stella	Hot Coffee, MS	10/1/36
Stevenson, Parker	Philadelphia, PA	6/4/52
Stewart, French	Albuquerque, NM	2/20/64
Stewart, Jon	New York, NY	11/28/62
Stewart, Kristen	Los Angeles, CA	4/9/90
Stewart, Patrick	Mirfield, England, UK	7/13/40
Stewart, Rod	London, England, UK	1/10/45
Stiers, David Ogden	Peoria, IL	10/31/42
Stiles, Julia	New York, NY	3/28/81
Stiller, Ben	New York, NY	11/30/65
Stiller, Jerry	Brooklyn, NY	6/8/27
Stills, Stephen	Dallas, TX	1/3/45
Sting	Newcastle upon-Tyne, England, UK	10/2/51
Stipe, Michael	Decatur, GA	1/4/60
Stockwell, Dean	North Hollywood, CA	3/5/36
Stoltz, Eric	Whittier, CA	9/30/61
Stone, Dee Wallace	Kansas City, KS	12/14/48
Stone, Oliver	New York, NY	9/15/46
Stone, Sharon	Meadville, PA	3/10/58
Stonestreet, Eric	Kansas City, KS	9/9/71
Stookey, Paul	Baltimore, MD	12/30/37
Storch, Larry	New York, NY	1/8/23
Stowe, Madeleine	Eagle Rock, CA	8/18/58
Strait, George	Pearsall, TX	5/18/52

Name	Birthplace	Birthdate
Strasser, Robin	New York, NY	5/7/45
Stratas, Teresa	Toronto, ON, Can.	5/26/38
Strathairn, David	San Francisco, CA	1/26/49
Strauss, Peter	Croton-on-Hudson, NY	2/20/47
Streep, Meryl	Summit, NJ	6/22/49
Streisand, Barbra	Brooklyn, NY	4/24/42
Stringfield, Sherry	Colorado Springs, CO	6/24/67
Stritch, Elaine	Detroit, MI	2/2/26
Stroman, Susan	Wilmington, DE	10/17/54
Struthers, Sally	Portland, OR	7/28/48
Studdard, Ruben	Frankfurt, Germany	9/12/78
Suchet, David	London, England, UK	5/2/46
Sullivan, Erik Per	Worcester, MA	7/12/91
Sullivan, Susan	New York, NY	11/18/42
Summer, Donna	Dorchester, MA	12/31/48
Sutherland, Donald	St. John, NB, Can.	7/17/34
Sutherland, Kiefer	London, England, UK	12/21/66
Suvari, Mena	Newport, RI	2/9/79
Swank, Hilary	Bellingham, WA	7/30/74
Swift, Taylor	Wyomissing, PA	12/13/89
Swinton, Tilda	London, England, UK	11/5/60
Swit, Loretta	Passaic, NJ	11/4/37
Sykes, Wanda	Portsmouth, VA	3/7/64
Szmanda, Eric	Milwaukee, WI	7/24/75
T, Mr.	Chicago, IL	5/21/52
Takei, George	Los Angeles, CA	4/20/37
Tallchief, Maria	Fairfax, OK	1/24/25
Tamblyn, Amber	Santa Monica, CA	5/14/83
Tamblyn, Russ	Los Angeles, CA	12/30/34
Tambor, Jeffrey	San Francisco, CA	7/8/44
Tarantino, Quentin	Knoxville, TN	3/27/63
Tautou, Audrey	Beaumont, France	8/9/78
Taylor, Billy	Greenville, NC	7/24/21
Taylor, Buck	Hollywood, CA	5/13/38
Taylor, Elizabeth	London, England, UK	2/27/32
Taylor, James	Boston, MA	3/12/48
Taylor, Rip	Washington, DC	1/13/34
Taylor, Rod	Sydney, Australia	1/11/30
Taymor, Julie	Newton, MA	12/15/52
Te Kanawa, Kiri	Gisborne, New Zealand	3/6/44
Teller	Philadelphia, PA	2/14/48
Temple Black, Shirley	Santa Monica, CA	4/23/28
Tennant, Victoria	London, England, UK	9/30/50
Tennille, Toni	Montgomery, AL	5/8/43
Tesh, John	Garden City, NY	7/9/52
Tharp, Twyla	Portland, IN	7/1/41
Thaxter, Phyllis	Portland, ME	11/20/21
Theron, Charlize	Benoni, South Africa	8/7/75
Thicke, Alan	Kirkland Lake, ON, Can.	3/1/47
Thiessen, Tiffani	Long Beach, CA	1/23/74
Thomas, Jay	Kermit, TX	7/12/48
Thomas, Jonathan Taylor	Bethlehem, PA	9/8/81
Thomas, Marlo	Deerfield, MI	11/21/37
Thomas, Michael Tilson	Hollywood, CA	12/21/44
Thomas, Philip Michael	Columbus, OH	5/26/49
Thomas, Richard	New York, NY	6/13/51
Thomas, Sean Patrick	Wilmington, DE	12/17/70
Thompson, Emma	London, England, UK	4/15/59
Thompson, Jack	Sydney, Australia	8/31/40
Thompson, Lea	Rochester, MN	5/31/61
Thompson, Sada	Des Moines, IA	9/27/29
Thorne-Smith, Courtney	San Francisco, CA	11/8/67
Thornton, Billy Bob	Hot Springs, AR	8/4/55
Thurman, Uma	Boston, MA	4/29/70
Tiegs, Cheryl	Breckenridge, MN	9/25/47
Tierney, Maura	Boston, MA	2/3/65
Tillis, Mel	Tampa, FL	8/8/32
Tilly, Jennifer	Harbor City, CA	9/16/58
Tilly, Meg	Long Beach, CA	2/14/60
Timberlake, Justin	Memphis, TN	1/31/81
Tisdale, Ashley	West Deal, NJ	7/2/85
Tomei, Marisa	Brooklyn, NY	12/4/64
Tomlin, Lily	Detroit, MI	9/1/39
Tork, Peter	Washington, DC	2/13/42
Torn, Rip	Temple, TX	2/6/31
Townsend, Robert	Chicago, IL	2/6/57
Townshend, Peter	Chiswick, England, UK	5/19/45
Travanti, Daniel J.	Kenosha, WI	3/7/40
Travis, Nancy	Astoria, Queens, NY	9/21/61
Travis, Randy	Marshville, NC	5/4/59
Travolta, John	Englewood, NJ	2/18/54
Trebek, Alex	Sudbury, ON, Can.	7/22/40
Tripplehorn, Jean	Tulsa, OK	6/10/63
Tritt, Travis	Marietta, GA	2/9/63
Tucci, Stanley	Katonah, NY	1/11/60
Tucker, Chris	Decatur, GA	8/31/72
Tucker, Michael	Baltimore, MD	2/6/44
Tucker, Tanya	Seminole, TX	10/10/58
Tune, Tommy	Wichita Falls, TX	2/28/39
Turlington, Christy	Walnut Creek, CA	1/2/69
Turner, Janine	Lincoln, NE	12/6/62
Turner, Kathleen	Springfield, MO	6/19/54
Turner, Tina	Brownsville, TN	11/26/39
Turturro, John	Brooklyn, NY	2/28/57
Twain, Shania	Windsor, ON, Can.	8/28/65
Twiggy (Lawson)	London, England, UK	9/19/49
Tyler, Liv	New York, NY	7/1/77
Tyler, Steven	Yonkers, NY	3/26/48
Tyson, Cicely	New York, NY	12/19/33
Uecker, Bob	Milwaukee, WI	1/26/35
Uggams, Leslie	New York, NY	5/25/43
Ullman, Tracey	Slough, England, UK	12/30/59
Ullmann, Liv	Tokyo, Japan	12/16/38
Ulrich, Skeet	Lynchburg, VA	1/20/70
Underwood, Carrie	Checotah, OK	3/10/83
Underwood, Blair	Tacoma, WA	8/25/64
Urban, Keith	Whangarei, North Island, New Zealand	10/26/67
Urie, Michael	Dallas, TX	8/8/80
Usher (Raymond IV)	Chattanooga, TN	10/14/78
Vaccaro, Brenda	Brooklyn, NY	11/18/39
Vale, Jerry	Bronx, NY	7/8/32
Valente, Caterina	Paris, France	1/14/31
Valley, Mark	Ogdensburg, NY	12/24/64
Valli, Frankie	Newark, NJ	5/3/37
Van Ark, Joan	New York, NY	6/16/43
Vance, Courtney B.	Detroit, MI	3/12/60
Van Damme, Jean-Claude	Brussels, Belgium	10/18/60
Van Der Beek, James	Cheshire, CT	3/8/77
Van Doren, Mamie	Rowena, SD	2/6/31
Van Dyke, Dick	West Plains, MO	12/13/25
Van Dyke, Jerry	Danville, IL	7/27/31
Van Halen, Eddie	Nijmegen, Netherlands	1/26/55
Van Patten, Dick	Kew Gardens, Queens, NY	12/9/28
Van Peebles, Mario	Mexico City, Mexico	1/15/57
Van Sant, Gus	Louisville, KY	7/24/52
Van Zandt, Steven	Winthrop, MA	11/22/50
Vardalos, Nia	Winnipeg, MB, Can.	9/24/62
Vaughn, Robert	New York, NY	11/22/32
Vaughn, Vince	Minneapolis, MN	3/28/70
Vedder, Eddie	Evanston, IL	12/23/64
Vega, Alexa	Miami, FL	8/27/88
Ventimiglia, Milo	Anaheim, CA	7/8/77
Vergara, Sofia	Barranquilla, Colombia	7/10/72
Vereen, Ben	Miami, FL	10/10/46
Verrett, Shirley	New Orleans, LA	5/31/31
Vickers, Jon	Prince Albert, SK, Can.	10/29/26
Vieira, Meredith	Providence, RI	12/30/53
Vigoda, Abe	New York, NY	2/24/21
Vincent, Jan-Michael	Denver, CO	7/15/44
Vinton, Bobby	Canonsburg, PA	4/16/35
Visnjic, Goran	Sibenik, Yugo. (Croatia)	9/9/72
Vitale, Dick	East Rutherford, NJ	6/9/39
Voight, Jon	Yonkers, NY	12/29/38
Von Stade, Frederica	Somerville, NJ	6/1/45
Von Sydow, Max	Lund, Sweden	4/10/29
Von Trier, Lars	Copenhagen, Denmark	4/30/56
Wagner, Jack	Washington, MO	10/3/59
Wagner, Lindsay	Los Angeles, CA	6/22/49
Wagner, Robert	Detroit, MI	2/10/30
Wahl, Ken	Chicago, IL	10/31/54
Wahlberg, Mark	Dorchester, MA	6/5/71
Wain, Bea	Bronx, NY	4/30/17
Waite, Ralph	White Plains, NY	6/22/28
Waits, Tom	Pomona, CA	12/7/49
Walden, Robert	New York, NY	9/25/43
Walken, Christopher	Astoria, Queens, NY	3/31/43
Walker, Clint	Hartford, IL	5/30/27
Wallace, Marcia	Creston, IA	11/1/42
Wallach, Eli	Brooklyn, NY	12/7/15
Walsh, Kate	San Jose, CA	10/13/67
Walter, Jessica	Brooklyn, NY	1/31/41
Ward, Fred	San Diego, CA	12/30/42
Ward, Sela	Meridian, MS	7/11/56
Ward, Simon	Kent, London, Eng., UK	10/19/41
Warfield, Marsha	Chicago, IL	3/5/54
Warner, Malcolm-Jamal	Jersey City, NJ.	8/18/70
Warren, Lesley Ann	New York, NY	8/16/46
Warwick, Dionne	East Orange, NJ	12/12/40
Washington, Denzel	Mt. Vernon, NY	12/28/54
Washington, Isaiah	Houston, TX	8/3/63
Watanabe, Ken	Koide, Niigata, Japan	10/21/59
Waters, John	Baltimore, MD	4/22/46
Waters, Roger	Great Bookham, Eng., UK	9/6/43
Waterston, Sam	Cambridge, MA	11/15/40
Watson, Emily	London, England, UK	1/14/67
Watson, Emma	Paris, France	4/15/90
Watts, Andre	Nuremberg, Germany	6/20/46
Watts, Naomi	Shoreham, England, UK	9/28/68
Wayans, Damon	New York, NY	9/4/60
Wayans, Keenen Ivory	Brooklyn, NY	6/8/58
Wayans, Marlon	New York, NY	7/23/72
Wayans, Shawn	New York, NY	1/19/71
Weathers, Carl	New Orleans, LA	1/14/48

Name	Birthplace	Birthdate
Weaver, Fritz	Pittsburgh, PA	1/19/26
Weaver, Sigourney	New York, NY	10/8/49
Weiland, Scott	Santa Cruz, CA	10/27/67
Weir, Peter	Sydney, Australia	8/21/44
Weisz, Rachel	London, England, UK	3/7/71
Weitz, Bruce	Norwalk, CT	5/27/43
Welch, Raquel	Chicago, IL	9/5/40
Weld, Tuesday	New York, NY	8/27/43
Weller, Peter	Stevens Point, WI	6/24/47
Welling, Tom	Putnam Valley, NY	4/26/77
Wells, Kitty	Nashville, TN	8/30/19
Wendt, George	Chicago, IL	10/17/48
Wentz, Pete	Wilmette, IL	6/5/79
West, Adam	Walla Walla, WA	9/19/28
West, Kayne	Atlanta, GA	6/8/77
West, Shane	Baton Rouge, LA	6/10/78
Wettig, Patricia	Cincinnati, OH	12/4/51
Whalley, Joanne	Manchester, England, UK	8/25/64
Wheaton, Wil	Burbank, CA	7/29/72
Whitaker, Forest	Longview, TX	7/15/61
White, Betty	Oak Park, IL	1/17/22
White, Jack	Detroit, MI	7/9/75
White, Jaleel	Pasadena, CA	11/27/76
White, Vanna	N. Myrtle Beach, SC	2/18/57
Whitford, Bradley	Madison, WI	10/10/59
Whiting, Margaret	Detroit, MI	7/22/24
Whitman, Stuart	San Francisco, CA	2/1/28
Wiest, Dianne	Kansas City, MO	3/28/48
Wiig, Kristen	Canandaigua, NY	8/22/73
Wilder, Gene	Milwaukee, WI	6/11/33
Wilkinson, Tom	Leeds, England, UK	12/12/48
Williams, Andy	Wall Lake, IA	12/3/27
Williams, Armstrong	Marion, SC	2/5/59
Williams, Barry	Santa Monica, CA	9/30/54
Williams, Billy Dee	New York, NY	4/6/37
Williams, Cindy	Van Nuys, CA	8/22/47
Williams, Esther	Los Angeles, CA	8/8/21
Williams, Hal	Columbus, OH	12/14/38
Williams, Hank, Jr.	Shreveport, LA	5/26/49
Williams, JoBeth	Houston, TX	12/6/48
Williams, Kimberly	Rye, NY	9/14/71
Williams, Lucinda	Lake Charles, LA	1/26/53
Williams, Michelle	Kalispell, MT	9/9/80
Williams, Montel	Baltimore, MD	7/3/56
Williams, Paul	Omaha, NE	9/19/40
Williams, Robin	Chicago, IL	7/21/51
Williams, Treat	Rowayton, CT	12/1/51
Williams, Vanessa	Millwood, NY	3/18/63
Williamson, Kevin	New Bern, NC	3/14/65
Williamson, Nicol	Hamilton, Scotland, UK	9/14/38
Willis, Bruce	Idar-Oberstein, W. Germ.	3/19/55
Wilson, Brian	Ingelwood, CA	6/20/42
Wilson, Cassandra	Jackson, MS	12/4/55
Wilson, Chandra	Houston, TX	8/27/69
Wilson, Demond	Valdosta, GA	10/13/46
Wilson, Elizabeth	Grand Rapids, MI	4/4/21
Wilson, Luke	Dallas, TX	9/21/71
Wilson, Nancy	Chillicothe, OH	2/20/37
Wilson, Owen	Dallas, TX	11/18/68
Wilson, Rainn	Seattle, WA	1/20/66
Windom, William	New York, NY	9/28/23
Winehouse, Amy	Enfield, London, Eng., UK	9/14/83
Winfrey, Oprah	Kosciusko, MS	1/29/54
Winger, Debra	Cleveland, OH	5/16/55
Winkler, Henry	New York, NY	10/30/45
Winningham, Mare	Phoenix, AZ	5/16/59
Winokur, Marissa Jaret	New York, NY	2/2/73
Winslet, Kate	Reading, England, UK	10/5/75
Winter, Johnny	Beaumont,TX	2/23/44
Winters, Jonathan	Dayton, OH	11/11/25
Winwood, Steve	Birmingham, England, UK	5/12/48
Withers, Jane	Atlanta, GA	4/12/26
Witherspoon, Reese	New Orleans, LA	3/22/76
Witt, Alicia	Worcester, MA	8/21/75
Wolf, Scott	Boston, MA	6/4/68
Wonder, Stevie	Saginaw, MI	5/13/50
Wong, Faye	Beijing, China	8/8/69
Woo, John	Guangzhou, China	5/1/46
Wood, Elijah	Cedar Rapids, IA	1/28/81
Woodard, Alfre	Tulsa, OK	11/8/53
Woods, James	Vernal, UT	4/18/47
Woodward, Joanne	Thomasville, GA	2/27/30
Wopat, Tom	Lodi, WI	9/9/51
Worthington Sam	Godalming, Surrey, England, UK	8/2/76
Wright, Jeffrey	Washington, DC	12/7/65
Wright, Max	Detroit, MI	8/2/43
Wright, Steven	New York, NY	12/6/55
Wright Penn, Robin	Dallas, TX	4/8/66
Wyle, Noah	Hollywood, CA	6/4/71
Wyman, Bill	London, England, UK	10/24/36
Yankovic, Weird Al	Lynwood, CA	10/23/59
Yanni (Chrysomallis)	Kalamata, Greece	11/14/54
Yarrow, Peter	New York, NY	5/31/38
Yearwood, Trisha	Monticello, GA	9/19/64
Yoakam, Dwight	Pikesville, KY	10/23/56
York, Michael	Fulmer, England, UK	3/27/42
York, Susannah	London, England, UK	1/9/41
Young, Alan	North Shields, Eng., UK	11/19/19
Young, Burt	New York, NY	4/30/40
Young, Neil	Toronto, ON, Can.	11/12/45
Young, Sean	Louisville, KY	11/20/59
Zane, Billy	Chicago, IL	2/24/66
Zeffirelli, Franco	Florence, Italy	2/12/23
Zellweger, Renée	Katy, TX	4/25/69
Zemeckis, Robert	Chicago, IL	5/14/52
Zerbe, Anthony	Long Beach, CA	5/20/36
Zeta-Jones, Catherine	Swansea, Wales, UK	9/25/69
Zimbalist, Efrem, Jr.	New York, NY	11/30/18
Zimbalist, Stephanie	New York, NY	10/8/56
Zimmer, Kim	Grand Rapids, MI	2/2/55
Zhang, Ziyi	Beijing, China	2/9/79
Zukerman, Pinchas	Tel Aviv, Israel	7/16/48
Zuniga, Daphne	Berkeley, CA	10/28/62

Entertainment Personalities of the Past

See also other lists for some deceased entertainers not included here.

Name	Born	Died
Aaliyah	1979	2001
Abbott, Bud	1895	1974
Abbott, George	1887	1995
Acuff, Roy	1903	1992
Adams, Don	1923	2005
Adams, Joey	1911	1999
Adams, Maude	1872	1953
Adler, Jacob P.	1855	1926
Adoree, Renee	1898	1933
Agar, John	1921	2002
Aherne, Brian	1902	1986
Ailey, Alvin	1931	1989
Akins, Claude	1918	1994
Albert, Eddie	1906	2005
Albertson, Frank	1909	1964
Albertson, Jack	1907	1981
Alda, Robert	1914	1986
Allen, Fred	1894	1956
Allen, Gracie	1906	1964
Allen, Mel	1913	1996
Allen, Peter	1944	1992
Allen, Steve	1921	2000
Allgood, Sara	1883	1950
Allyson, June	1917	2006
Altman, Robert	1925	2006
Ameche, Don	1908	1993
Ames, Leon	1903	1993
Amsterdam, Morey	1908	1996
Anderson, G. M. "Bronco Billy"	1882	1971
Anderson, Judith	1897	1992
Anderson, Marian	1897	1993
Andre the Giant	1946	1993
Andrews, Dana	1909	1992
Andrews, Laverne	1913	1967
Andrews, Maxene	1916	1995
Angeli, Pier	1932	1971
Antonioni, Michelangelo	1912	2007
Arbuckle, Fatty (Roscoe)	1887	1933
Archerd, Army	1922	2009
Arden, Eve	1908	1990
Arlen, Richard	1900	1976
Arliss, George	1868	1946
Armstrong, Louis	1901	1971
Arnaz, Desi	1917	1986
Arnold, Eddy	1918	2008
Arnold, Edward	1890	1956
Arquette, Cliff	1905	1974
Arthur, Beatrice	1922	2009
Arthur, Jean	1900	1991
Ashcroft, Peggy	1907	1991
Astaire, Fred	1899	1987
Astor, Mary	1906	1987
Atkins, Chet	1924	2001
Atwill, Lionel	1885	1946
Auer, Mischa	1905	1967
Aumont, Jean-Pierre	1911	2001
Austin, Gene	1900	1972
Autry, Gene	1907	1998
Axton, Hoyt	1938	1999
Ayres, Lew	1908	1996
Backus, Jim	1913	1989
Bailey, Pearl	1918	1990
Bainter, Fay	1892	1968
Baker, Josephine	1906	1975
Balanchine, George	1904	1983
Ball, Lucille	1911	1989

Name	Born	Died
Balsam, Martin	1919	1996
Bancroft, Anne	1931	2005
Bankhead, Tallulah	1902	1968
Bara, Theda	1885?	1955
Barnett, Etta Moten	1902	2004
Barnum, Phineas T.	1810	1891
Barrett, Syd	1946	2006
Barry, Gene	1919	2009
Barrymore, Ethel	1879	1959
Barrymore, John	1882	1942
Barrymore, Lionel	1878	1954
Barrymore, Maurice	1848	1905
Barthelmess, Richard	1895	1963
Bartholomew, Freddie	1924	1992
Barty, Billy	1924	2000
Basehart, Richard	1914	1984
Basie, Count	1904	1984
Bates, Alan	1934	2003
Bavier, Francis	1902	1989
Baxter, Anne	1923	1985
Baxter, Warner	1889	1951
Beaumont, Hugh	1909	1982
Beavers, Louise	1902	1962
Beery, Noah, Sr.	1884	1946
Beery, Noah, Jr.	1913	1994
Beery, Wallace	1885	1949
Begley, Ed	1901	1970
Bel Geddes, Barbara	1922	2005
Bellamy, Ralph	1904	1991
Belushi, John	1949	1982
Benaderet, Bea	1906	1968
Bendix, William	1906	1964
Bennett, Constance	1904	1965
Bennett, Joan	1910	1990
Bennett, Michael	1943	1987
Benny, Jack	1894	1974
Berg, Gertrude	1899	1966
Bergen, Edgar	1903	1978
Bergman, Ingmar	1918	2007
Bergman, Ingrid	1915	1982
Berkeley, Busby	1895	1976
Berle, Milton	1908	2002
Berlin, Irving	1888	1989
Bernardi, Herschel	1923	1986
Bernhardt, Sarah	1844	1923
Bernstein, Leonard	1918	1990
Berry, Jan	1941	2004
Bessell, Ted	1939	1996
Bickford, Charles	1889	1967
Big Bopper, The	1930	1959
Billingsley, Barbara	1915	2010
Bing, Rudolf	1902	1997
Bishop, Joey	1918	2007
Bitzer, Billy	1872	1944
Bixby, Bill	1934	1993
Blackstone, Harry, Jr.	1934	1997
Blackstone, Harry, Sr.	1885	1965
Blaine, Vivian	1921	1995
Blake, Amanda	1931	1989
Blake, Eubie	1883	1983
Blanc, Mel	1908	1989
Blocker, Dan	1928	1972
Blondell, Joan	1909	1979
Blondin, Charles	1824	1897
Blore, Eric	1887	1959
Blue, Ben	1901	1975
Blyden, Larry	1925	1975
Bogarde, Dirk	1921	1999
Bogart, Humphrey	1899	1957
Boland, Mary	1880	1965
Boles, John	1895	1969
Bolger, Ray	1904	1987
Bond, Ward	1903	1960
Bondi, Beulah	1888	1981
Bono, Sonny	1935	1998
Boone, Richard	1917	1981
Booth, Edwin	1833	1893
Booth, John Wilkes	1838	1865
Booth, Junius Brutus	1796	1852
Booth, Shirley	1898	1992
Borge, Victor	1909	2000
Borzage, Frank	1893	1962
Bosley, Tom	1927	2010
Bow, Clara	1905	1965
Bowes, Maj. Edward	1874	1946
Bowman, Lee	1914	1979
Boxcar Willie	1931	1999
Boyd, Stephen	1928	1977
Boyd, William	1898	1972
Boyer, Charles	1899	1978
Boyle, Peter	1935	2006
Bracken, Eddie	1915	2002
Brady, Alice	1892	1939
Brando, Marlon	1924	2004
Branigan, Laura	1957	2004
Brazzi, Rossano	1916	1994
Brennan, Walter	1894	1974
Brent, George	1904	1979
Brett, Jeremy	1935	1995
Brewer, Teresa	1931	2007
Brice, Fanny	1891	1951
Bridges, Lloyd	1913	1998
Broderick, Helen	1891	1959
Bronson, Charles	1921	2003
Brooks, Foster	1912	2001
Brooks, Louise	1906	1985
Brown, Clarence	1890	1987
Brown, James	1933	2006
Brown, Joe E.	1892	1973
Brown, Les	1912	2001
Browne, Roscoe Lee	1925	2007
Bruce, Lenny	1925	1966
Bruce, Nigel	1895	1953
Bruce, Virginia	1910	1982
Brynner, Yul	1915	1985
Buchanan, Edgar	1903	1979
Buchholz, Horst	1933	2003
Buñuel, Luis	1900	1983
Buono, Victor	1938	1982
Burke, Billie	1885	1970
Burnette, Smiley	1911	1967
Burns, George	1896	1996
Burr, Raymond	1917	1993
Burton, Richard	1925	1984
Busch, Mae	1897	1946
Bushman, Francis X.	1883	1966
Buttons, Red	1919	2006
Byington, Spring	1893	1971
Cabot, Bruce	1904	1972
Cabot, Sebastian	1918	1977
Cagney, James	1899	1986
Caldwell, Sarah	1924	2006
Calhern, Louis	1895	1956
Calhoun, Rory	1922	1999
Callas, Maria	1923	1977
Calloway, Cab	1907	1994
Cambridge, Godfrey	1933	1976
Campbell, Mrs. Patrick	1865	1940
Candy, John	1950	1994
Cantinflas	1911	1993
Cantor, Eddie	1892	1964
Capra, Frank	1897	1991
Carey, Harry	1878	1947
Carey, Macdonald	1913	1994
Carle, Frankie	1903	2001
Carlin, George	1937	2008
Carlisle Hart, Kitty	1910	2007
Carney, Art	1918	2003
Carpenter, Karen	1950	1983
Carradine, David	1936	2009
Carradine, John	1906	1988
Carrillo, Leo	1880	1961
Carroll, Leo G.	1892	1972
Carroll, Madeleine	1906	1987
Carson, Jack	1910	1963
Carson, Johnny	1925	2005
Carter, Benny	1907	2003
Carter, Dixie	1939	2010
Carter, Nell	1948	2003
Caruso, Enrico	1873	1921
Casals, Pablo	1876	1973
Cash, Johnny	1932	2003
Cash, June Carter	1929	2003
Cass, Peggy	1924	1999
Cassidy, Jack	1927	1976
Cassavetes, John	1929	1989
Castle, Irene	1893	1969
Castle, Vernon	1887	1918
Chaliapin, Feodor	1873	1938
Champion, Gower	1919	1980
Chandler, Jeff	1918	1961
Chaney, Lon	1883	1930
Chaney, Lon, Jr.	1905	1973
Chapin, Harry	1942	1981
Chaplin, Charles	1889	1977
Chapman, Graham	1941	1989
Charisse, Cyd	1921	2008
Charles, Ray	1930	2004
Chase, Ilka	1905	1978
Chatterton, Ruth	1893	1961
Cherrill, Virginia	1908	1996
Chevalier, Maurice	1888	1972
Child, Julia	1912	2004
Clair, René	1898	1981
Clayton, Jan	1917	1983
Clift, Montgomery	1920	1966
Cline, Patsy	1932	1963
Clooney, Rosemary	1928	2002
Clyde, Andy	1892	1967
Cobain, Kurt	1967	1994
Cobb, Lee J.	1911	1976
Coburn, Charles	1877	1961
Coburn, James	1928	2002
Coca, Imogene	1908	2001
Coco, James	1930	1987
Cody, Buffalo Bill	1846	1917
Cody, Iron Eyes	1907	1999
Cohan, George M.	1878	1942
Cohen, Myron	1902	1986
Colbert, Claudette	1903	1996
Cole, Nat "King"	1919	1965
Coleman, Gary	1968	2010
Collins, Ray	1890	1965
Colman, Ronald	1891	1958
Columbo, Russ	1908	1934
Comden, Betty	1917	2006
Como, Perry	1912	2001
Conniff, Ray	1916	2002
Connors, Chuck	1921	1992
Conrad, William	1920	1994
Conried, Hans	1917	1982
Conte, Richard	1911	1975
Convy, Bert	1933	1991
Conway, Tom	1904	1967
Coogan, Jackie	1914	1984
Cook, Elisha, Jr.	1904	1995
Cooke, Alistair	1908	2004
Cooke, Sam	1931	1964
Cooper, Gary	1901	1961
Cooper, Gladys	1888	1971
Cooper, Melville	1896	1973
Copland, Aaron	1900	1990
Corby, Ellen	1913	1999
Corelli, Franco	1921	2003
Corey, Jeff	1914	2002
Corio, Ann	1914	1999
Corley, Pat	1930	2006
Cornell, Katharine	1893	1974
Correll, Charles ("Andy")	1890	1972
Costello, Dolores	1905	1979
Costello, Lou	1906	1959
Cotten, Joseph	1905	1994
Coward, Noel	1899	1973
Cox, Wally	1924	1973
Crabbe, Buster	1908	1983
Crain, Jeanne	1925	2003
Crane, Bob	1928	1978
Crawford, Broderick	1911	1986
Crawford, Joan	1904	1977
Crenna, Richard	1926	2003
Crews, Laura Hope	1880	1942
Crisp, Donald	1880	1974
Crisp, Quentin	1908	1999
Croce, Jim	1942	1973
Cronyn, Hume	1911	2003
Crosby, Bing	1903	1977
Crothers, Scatman	1910	1986
Cruz, Celia	1925	2003
Cugat, Xavier	1900	1990
Cukor, George	1899	1983
Cullen, Bill	1920	1990
Culp, Robert	1930	2010
Cummings, Constance	1910	2005
Cummings, Robert	1908	1990
Curtis, Ken	1916	1991
Curtis, Tony	1925	2010
Curtiz, Michael	1888	1962
Cushing, Peter	1913	1994
Dailey, Dan	1915	1978
Dandridge, Dorothy	1923	1965
Dangerfield, Rodney	1921	2004

Name	Born	Died
Daniell, Henry	1894	1963
Daniels, Bebe	1901	1971
Darin, Bobby	1936	1973
Darnell, Linda	1923	1965
Darwell, Jane	1879	1967
Da Silva, Howard	1909	1986
Davenport, Harry	1866	1949
Davies, Marion	1897	1961
Davis, Bette	1908	1989
Davis, Joan	1907	1961
Davis, Sammy, Jr.	1925	1990
Davis, Ossie	1917	2005
Day, Dennis	1917	1988
Day, Laraine	1920	2007
Dean, James	1931	1955
Dean, Jimmy	1928	2010
Dearie, Blossom	1924	2009
De Carlo, Yvonne	1922	2007
Dee, Frances	1907	2004
Dee, Sandra	1942	2005
Defore, Don	1917	1993
Dekker, Albert	1905	1968
Del Rio, Dolores	1905	1983
DeLuise, Dom	1933	2009
Demarest, William	1892	1983
de Mille, Agnes	1905	1993
De Mille, Cecil B.	1881	1959
Dennis, Sandy	1937	1992
Denny, Reginald	1891	1967
Denver, Bob	1935	2005
Denver, John	1943	1997
Derek, John	1926	1998
DeSica, Vittorio	1901	1974
Devine, Andy	1905	1977
Dewhurst, Colleen	1924	1991
De Wilde, Brandon	1942	1972
De Wolfe, Billy	1907	1974
Diamond, Selma	1920	1985
Diddley, Bo	1928	2008
Dietrich, Marlene	1901	1992
Disney, Walt	1901	1966
Dix, Richard	1894	1949
Dmytryk, Edward	1908	1999
Donahue, Troy	1936	2001
Donat, Robert	1905	1958
Donlevy, Brian	1901	1972
Dors, Diana	1931	1984
Dorsey, Jimmy	1904	1957
Dorsey, Tommy	1905	1956
Douglas, Melvyn	1901	1981
Douglas, Paul	1907	1959
Dove, Billie	1900	1998
Downey, Morton, Jr.	1933	2001
Doyle, David	1929	1997
Drake, Alfred	1914	1992
Draper, Ruth	1884	1956
Dressler, Marie	1869	1934
Drew, Ellen	1915	2003
Drew, Mrs. John	1820	1897
Dru, Joanne	1923	1996
Duchin, Eddy	1909	1951
Duff, Howard	1917	1990
Duggan, Andrew	1923	1988
Dumbrille, Douglass	1890	1974
Dumont, Margaret	1889	1965
Duncan, Isadora	1878	1927
Dunham, Katherine	1910	2006
Dunn, James	1905	1967
Dunne, Irene	1898	1990
Dunnock, Mildred	1901	1991
Durante, Jimmy	1893	1980
Duryea, Dan	1907	1968
Duse, Eleanora	1858	1924
Dvorak, Ann	1912	1979
Eagels, Jeanne	1894	1929
Ebsen, Buddy	1908	2003
Eckstine, Billy	1914	1993
Eddington, Paul	1927	1995
Eddy, Nelson	1901	1967
Edelman, Herb	1933	1996
Edwards, Cliff	1895	1971
Edwards, Ralph	1913	2005
Edwards, Vince	1928	1996
Egan, Richard	1923	1987
Eisenstein, Sergei	1898	1948
Elam, Jack	1916	2003
Ellington, Duke	1899	1974
Elliot, Cass	1941	1974
Elliott, Denholm	1922	1992
Ellis, Mary	1897	2003
Elman, Mischa	1891	1967
Errol, Leon	1881	1951
Evans, Dale	1912	2001
Evans, Edith	1888	1976
Evans, Maurice	1901	1989
Ewell, Tom	1909	1994
Fadiman, Clifton	1904	1999
Fairbanks, Douglas	1883	1939
Fairbanks, Douglas, Jr.	1909	2000
Farley, Chris	1964	1997
Farmer, Frances	1913	1970
Farnsworth, Richard	1920	2000
Farnum, Dustin	1874	1929
Farnum, William	1876	1953
Farrar, Geraldine	1882	1967
Farrell, Charles	1901	1990
Farrell, Eileen	1920	2002
Fassbinder, Rainer Werner	1946	1982
Fawcett, Farrah	1947	2009
Faye, Alice	1915	1998
Fazenda, Louise	1895	1962
Feld, Fritz	1900	1993
Feldman, Marty	1933	1982
Fell, Norman	1924	1998
Fellini, Federico	1920	1993
Fenneman, George	1919	1997
Ferrer, Jose	1912	1992
Ferrer, Mel	1917	2008
Fetchit, Stepin	1898	1985
Fiedler, Arthur	1894	1979
Fiedler, John	1925	2005
Fields, Gracie	1898	1979
Fields, W. C.	1879	1946
Fields, Totie	1930	1978
Finch, Peter	1916	1977
Fine, Larry	1902	1975
Firkusny, Rudolf	1912	1994
Fisher, Eddie	1928	2010
Fiske, Minnie Maddern	1865	1932
Fitzgerald, Barry	1888	1961
Fitzgerald, Ella	1917	1996
Fitzgerald, Geraldine	1913	2005
Flagstad, Kirsten	1895	1962
Fleischer, Richard	1916	2006
Fleming, Art	1924	1995
Fleming, Victor	1889	1949
Flynn, Errol	1909	1959
Flynn, Joe	1925	1974
Foch, Nina	1924	2008
Fogelberg, Dan	1951	2007
Foley, Red	1910	1968
Fonda, Henry	1905	1982
Fontaine, Frank	1920	1978
Fontanne, Lynn	1887	1983
Fonteyn, Margot	1919	1991
Ford, Glenn	1916	2006
Ford, John	1895	1973
Ford, Paul	1901	1976
Ford, Tennessee Ernie	1919	1991
Forrest, Helen	1917	1999
Forsythe, John	1918	2010
Fosse, Bob	1927	1987
Foster, Phil	1914	1985
Foster, Preston	1901	1970
Foxx, Redd	1922	1991
Foy, Eddie	1856	1928
Franchi, Sergio	1926	1990
Franciosa, Anthony	1928	2006
Francis, Arlene	1907	2001
Francis, Kay	1905	1968
Franciscus, James	1934	1991
Frankenheimer, John	1930	2002
Frann, Mary	1943	1998
Frawley, William	1887	1966
Frederick, Pauline	1885	1938
Freed, Alan	1921	1965
French, Victor	1934	1989
Friganza, Trixie	1870	1955
Froman, Jane	1907	1980
Funt, Allen	1914	1999
Furness, Betty	1916	1994
Gabin, Jean	1904	1976
Gable, Clark	1901	1960
Gabor, Eva	1920	1995
Garbo, Greta	1905	1990
Garcia, Jerry	1942	1995
Gardenia, Vincent	1922	1992
Gardner, Ava	1922	1990
Garfield, John	1913	1952
Garland, Beverly	1926	2008
Garland, Judy	1922	1969
Garson, Greer	1904	1996
Gassman, Vittorio	1922	2000
Gaye, Marvin	1939	1984
Gaynor, Janet	1906	1984
Gebel-Williams, Gunther	1934	2001
Geer, Will	1902	1978
George, Gladys	1904	1954
Gershwin, George	1898	1937
Getty, Estelle	1923	2008
Ghostley, Alice	1926	2007
Gibb, Andy	1958	1988
Gibb, Maurice	1949	2003
Gibson, Henry	1935	2009
Gibson, Hoot	1892	1962
Gielgud, John	1904	2000
Gilbert, Billy	1894	1971
Gilbert, John	1895	1936
Gilford, Jack	1907	1990
Gillespie, Dizzy	1917	1993
Gillette, William	1853	1937
Gingold, Hermione	1897	1987
Gish, Dorothy	1898	1968
Gish, Lillian	1893	1993
Giulini, Carlo Maria	1914	2005
Gleason, Jackie	1916	1987
Gleason, James	1886	1959
Gluck, Alma	1884	1938
Gobel, George	1919	1991
Goddard, Paulette	1905?	1990
Godfrey, Arthur	1903	1983
Godunov, Alexander	1949	1995
Goldwyn, Samuel	1882	1974
Goodman, Benny	1909	1986
Gorcey, Leo	1917	1969
Gordon, Gale	1906	1995
Gordon, Ruth	1896	1985
Gorshin, Frank	1934	2005
Gosden, Freeman ("Amos")	1899	1982
Gottschalk, Louis	1829	1869
Gould, Glenn	1932	1982
Gould, Harold	1923	2010
Gould, Morton	1913	1996
Goulet, Robert	1933	2007
Grable, Betty	1916	1973
Graham, Martha	1894	1991
Graham, Virginia	1912	1998
Grahame, Gloria	1925	1981
Granger, Stewart	1913	1993
Grant, Cary	1904	1986
Granville, Bonita	1923	1988
Grapewin, Charley	1869	1956
Graves, Peter	1926	2010
Gray, Dolores	1924	2002
Gray, Spalding	1941	2004
Grayson, Kathryn	1922	2010
Greco, Jose	1918	2000
Green, Adolph	1915	2002
Greene, Lorne	1915	1987
Greenstreet, Sydney	1879	1954
Greenwood, Charlotte	1890	1978
Gregory, James	1911	2002
Griffin, Merv	1925	2007
Griffith, David Wark	1874	1948
Griffith, Hugh	1912	1980
Grizzard, George	1928	2007
Guardino, Harry	1925	1995
Guinness, Sir Alec	1914	2000
Guthrie, Woody	1912	1967
Gwenn, Edmund	1875	1959
Gwynne, Fred	1926	1993
Hackett, Buddy	1924	2003
Hackett, Joan	1934	1983
Hagen, Uta	1919	2004
Haines, William	1900	1973
Hale, Alan, Jr.	1918	1990
Hale, Alan, Sr.	1892	1950
Haley, Bill	1925	1981
Haley, Jack	1899	1979
Hall, Huntz	1919	1999
Hall, Jon	1915	1979
Hamilton, Margaret	1902	1985

Name	Born	Died
Hammerstein, Oscar	1847	1919
Hammerstein II, Oscar	1895	1960
Hampton, Lionel	1908	2002
Hardwicke, Cedric	1893	1964
Hardy, Oliver	1892	1957
Harlow, Jean	1911	1937
Harris, Phil	1904	1995
Harris, Richard	1930	2002
Harrison, George	1943	2001
Harrison, Rex	1908	1990
Hart, William S.	1864	1946
Hartman, Phil	1948	1998
Harvey, Laurence	1928	1973
Harvey, Paul	1918	2009
Harwell, Ernie	1918	2010
Hatfield, Bobby	1940	2003
Haver, June	1926	2005
Havoc, June	1912	2010
Hawkins, Jack	1910	1973
Hawkins, Screamin' Jay	1929	2000
Hawks, Howard	1896	1977
Hawthorne, Nigel	1929	2001
Hayakawa, Sessue	1890	1973
Hayden, Sterling	1916	1986
Hayes, Gabby	1885	1969
Hayes, Helen	1900	1993
Hayes, Isaac	1942	2008
Hayward, Leland	1902	1971
Hayward, Louis	1909	1985
Hayward, Susan	1917	1975
Hayworth, Rita	1918	1987
Head, Edith	1897	1981
Healy, Ted	1896	1937
Heckart, Eileen	1919	2001
Heflin, Van	1910	1971
Heifetz, Jascha	1901	1987
Held, Anna	1873	1918
Hemingway, Margaux	1955	1996
Hemmings, David	1941	2003
Henderson, Skitch	1918	2005
Hendrix, Jimi	1942	1970
Henie, Sonja	1912	1969
Henreid, Paul	1908	1992
Henson, Jim	1936	1990
Hepburn, Audrey	1929	1993
Hepburn, Katharine	1907	2003
Hersholt, Jean	1886	1956
Heston, Charlton	1923	2008
Hewett, Christopher	1922	2001
Hickey, William	1928	1997
Hickson, Joan	1906	1998
Hildegarde	1906	2005
Hill, Arthur	1922	2006
Hill, Benny	1925	1992
Hill, George Roy	1921	2002
Hiller, Wendy	1912	2003
Hines, Gregory	1946	2003
Hines, Jerome	1921	2003
Hingle, Pat	1924	2009
Hirt, Al	1922	1999
Hitchcock, Alfred	1899	1980
Ho, Don	1930	2007
Hobson, Valerie	1917	1998
Hodiak, John	1914	1955
Holden, William	1918	1981
Holiday, Billie	1915	1959
Holliday, Judy	1921	1965
Holloway, Sterling	1905	1992
Holly, Buddy	1936	1959
Holt, Jack	1888	1951
Holt, Tim	1918	1973
Homolka, Oscar	1898	1978
Hooker, John Lee	1917	2001
Hoon, Shannon	1967	1995
Hope, Bob	1903	2003
Hopkins, Miriam	1902	1972
Hopper, Dennis	1936	2010
Hopper, DeWolf	1858	1935
Hopper, Hedda	1885	1966
Hopper, William	1915	1970
Horowitz, Vladimir	1904	1989
Horne, Lena	1917	2010
Horton, Edward Everett	1886	1970
Houdini, Harry	1874	1926
Houseman, John	1902	1988
Howard (Horwitz), Curly	1903	1952
Howard, Leslie	1890	1943
Howard (Horwitz), Moe	1897	1975
Howard (Horwitz), Shemp	1895	1955
Howard, Trevor	1916	1988
Hudson, Rock	1925	1985
Hughes, Bernard	1915	2006
Hughes, John	1950	2009
Hull, Henry	1890	1977
Hull, Josephine	1886	1957
Humphrey, Doris	1895	1958
Hunter, Jeffrey	1926	1969
Hunter, Kim	1922	2002
Hunter, Ross	1920	1996
Hussey, Ruth	1911	2005
Huston, John	1906	1987
Huston, Walter	1884	1950
Hutchence, Michael	1960	1997
Hutton, Betty	1921	2007
Hutton, Jim	1934	1979
Hyde-White, Wilfrid	1903	1991
Ingram, Rex	1895	1969
Ireland, Jill	1936	1990
Ireland, John	1915	1992
Irving, Henry	1838	1905
Ives, Burl	1909	1995
Irwin, Steve	1962	2006
Iturbi, Jose	1895	1980
Jack, Wolfman	1938	1995
Jackson, Joe	1875	1942
Jackson, Mahalia	1911	1972
Jackson, Michael	1958	2009
Jackson, Milt	1923	1999
Jaeckel, Richard	1926	1997
Jaffe, Sam	1891	1984
Jagger, Dean	1903	1991
Jam Master Jay	1965	2002
James, Dennis	1917	1997
James, Harry	1916	1983
James, Rick	1948	2004
Janis, Elsie	1889	1956
Jannings, Emil	1886	1950
Janssen, David	1930	1980
Jenkins, Allen	1900	1974
Jennings, Waylon	1937	2002
Jessel, George	1898	1981
Jeter, Michael	1952	2003
Johnson, Ben	1918	1996
Johnson, Celia	1908	1982
Johnson, Chic	1892	1962
Johnson, J.J.	1924	2001
Johnson, Robert	1911	1938
Johnson, Van	1916	2008
Jolson, Al	1886	1950
Jones, Brian	1942	1969
Jones, Buck	1889	1942
Jones, Carolyn	1933	1983
Jones, Charlie	1930	2008
Jones, Elvin	1927	2004
Jones, Henry	1912	1999
Jones, Jennifer	1919	2009
Jones, Spike	1911	1965
Joplin, Janis	1943	1970
Joplin, Scott	1868	1917
Jordan, Richard	1937	1993
Jory, Victor	1902	1982
Joslyn, Allyn	1905	1981
Julia, Raul	1940	1994
Jump, Gordon	1932	2003
Jurado, Katy	1924	2002
Jurgens, Curt	1915	1982
Kahn, Madeline	1942	1999
Kane, Helen	1904	1966
Kanin, Garson	1912	1999
Karloff, Boris	1887	1969
Karns, Roscoe	1893	1970
Kaufman, Andy	1949	1984
Kaye, Danny	1913	1987
Kaye, Stubby	1918	1997
Kazan, Elia	1909	2003
Kean, Charles	1811	1868
Kean, Mrs. Charles	1806	1880
Kean, Edmund	1787	1833
Keaton, Buster	1895	1966
Keel, Howard	1919	2004
Keeler, Ruby	1910	1993
Keeshan, Bob (Captain Kangaroo)	1927	2004
Keith, Brian	1921	1997
Kellaway, Cecil	1893	1973
Kelley, DeForest	1920	1999
Kelly, Emmett	1898	1979
Kelly, Gene	1912	1996
Kelly, Grace	1929	1982
Kelly, Jack	1927	1992
Kelly, Patsy	1910	1981
Kennedy, Arthur	1914	1990
Kennedy, Edgar	1890	1948
Kerr, Deborah	1921	2007
Kibbee, Guy	1886	1956
Kilbride, Percy	1888	1964
Kiley, Richard	1922	1999
King, Alan	1927	2004
King, Henry	1896	1982
Kinski, Klaus	1926	1991
Kirby, Bruno	1949	2006
Kirby, George	1923	1995
Kirby, Durward	1912	2000
Kirsten, Dorothy	1910	1992
Kitt, Eartha	1927	2008
Klemperer, Werner	1920	2000
Knight, Ted	1923	1986
Knotts, Don	1924	2006
Korman, Harvey	1927	2008
Kostelanetz, Andre	1901	1980
Kovacs, Ernie	1919	1962
Kramer, Stanley	1913	2001
Kruger, Otto	1885	1974
Kubrick, Stanley	1928	1999
Kulp, Nancy	1921	1991
Kurosawa, Akira	1910	1998
Kyser, Kay	1906	1985
Ladd, Alan	1913	1964
Lahr, Bert	1895	1967
Laine, Frankie	1913	2007
Lake, Arthur	1905	1987
Lake, Veronica	1919	1973
Lamarr, Hedy	1913	2000
Lamas, Fernando	1915	1982
Lamour, Dorothy	1914	1996
Lancaster, Burt	1913	1994
Lanchester, Elsa	1902	1986
Lane, Priscilla	1917	1995
Landis, Carole	1919	1948
Landis, Jessie Royce	1904	1972
Landon, Michael	1936	1991
Lang, Fritz	1890	1976
Langdon, Harry	1884	1944
Lange, Hope	1931	2003
Langford, Frances	1914	2005
Langtry, Lillie	1853	1929
Lanza, Mario	1921	1959
LaRue, Lash (Alfred)	1917	1996
Lauder, Harry	1870	1950
Laughton, Charles	1899	1962
Laurel, Stan	1890	1965
Lawford, Peter	1923	1984
Lawrence, Florence	1886	1938
Lawrence, Gertrude	1898	1952
Lean, David	1908	1991
Ledger, Heath	1979	2008
Lee, Anna	1913	2004
Lee, Bernard	1908	1981
Lee, Bruce	1940	1973
Lee, Canada	1907	1952
Lee, Gypsy Rose	1914	1970
Lee, Peggy	1920	2002
LeGallienne, Eva	1899	1991
Lehmann, Lotte	1888	1976
Leigh, Janet	1927	2004
Leigh, Vivien	1913	1967
Leighton, Margaret	1922	1976
Lemmon, Jack	1925	2001
Lennon, John	1940	1980
Lenya, Lotte	1898	1981
Leonard, Eddie	1870	1941
Leonard, Sheldon	1907	1997
Leone, Sergio	1929	1989
LeRoy, Mervyn	1900	1987
Levant, Oscar	1906	1972
Levene, Sam	1905	1980
Levenson, Sam	1911	1980
Lewis, Al	1923	2006
Lewis, Joe E.	1902	1971
Lewis, Shari	1934	1998
Lewis, Ted	1892	1971
Liberace	1919	1987
Lillie, Beatrice	1894	1989
Lincoln, Elmo	1889	1952

Name	Born	Died
Lind, Jenny	1820	1887
Lindfors, Viveca	1920	1995
Lindley, Audra	1918	1997
Linkletter, Art	1912	2010
Linville, Larry	1939	2000
Little, Cleavon	1939	1992
Llewelyn, Desmond	1914	1999
Lloyd, Harold	1893	1971
Lloyd, Marie	1870	1922
Lockhart, Gene	1891	1957
Logan, Ella	1913	1969
Lombard, Carole	1908	1942
Lombardo, Guy	1902	1977
Long, Richard	1927	1974
Lopes, Lisa	1971	2002
Lopez, Vincent	1895	1975
Lord, Jack	1920	1998
Lorne, Marion	1888	1968
Lorre, Peter	1904	1964
Loudon, Dorothy	1933	2003
Lowe, Edmund	1890	1971
Loy, Myrna	1905	1993
Lubitsch, Ernst	1892	1947
Ludden, Allen	1918	1981
Lugosi, Bela	1882	1956
Lukas, Paul	1894	1971
Lunt, Alfred	1892	1977
Lupino, Ida	1918	1995
Lymon, Frankie	1942	1968
Lynde, Paul	1926	1982
Lynn, Diana	1926	1971
Mac, Bernie	1957	2008
MacCorkindale, Simon	1952	2010
MacDonald, Jeanette	1903	1965
Mack, Ted	1904	1976
MacKenzie, Gisele	1927	2003
MacLane, Barton	1902	1969
MacMurray, Fred	1908	1991
MacRae, Gordon	1921	1986
Macready, George	1909	1973
Madison, Guy	1922	1996
Magnani, Anna	1908	1973
Mancini, Henry	1924	1994
Main, Marjorie	1890	1975
Malden, Karl	1912	2009
Malle, Louis	1932	1995
Mamoulian, Rouben	1897	1987
Mankiewicz, Joseph	1909	1993
Mann, Herbie	1930	2003
Mansfield, Jayne	1932	1967
Mantovani, Annunzio	1905	1980
Marais, Jean	1913	1998
March, Fredric	1897	1975
March, Hal	1920	1970
Marchand, Nancy	1928	2000
Markova, Alicia	1910	2004
Marley, Bob	1945	1981
Marshall, E.G.	1910	1998
Marshall, Herbert	1890	1966
Martin, Barney	1923	2005
Martin, Dean	1917	1995
Martin, Dick	1922	2008
Martin, Mary	1913	1990
Martin, Ross	1920	1981
Marvin, Lee	1924	1987
Marx, Harpo (Arthur)	1888	1964
Marx, Zeppo (Herbert)	1901	1979
Marx, Groucho (Julius)	1890	1977
Marx, Chico (Leonard)	1887	1961
Marx, Gummo (Milton)	1893	1977
Mason, James	1909	1984
Massey, Raymond	1896	1983
Mastroianni, Marcello	1924	1996
Matthau, Walter	1920	2000
Mature, Victor	1913	1999
Maxwell, Marilyn	1921	1972
Mayer, Louis B.	1885	1957
Mayfield, Curtis	1942	1999
Mayo, Virginia	1920	2005
Mazurki, Mike	1909	1990
McCambridge, Mercedes	1916	2004
McCarey, Leo	1898	1969
McCarthy, Kevin	1914	2010
McCartney, Linda	1941	1998
McClanahan, Rue	1934	2010
McClure, Doug	1935	1995
McCormack, John	1884	1945
McCrary, Tex	1910	2003
McCrea, Joel	1905	1990
McDaniel, Hattie	1895	1952
McDowall, Roddy	1928	1998
McFarland, Spanky (George)	1928	1993
McGoohan, Patrick	1928	2009
McGuire, Al	1931	2001
McGuire, Dorothy	1916	2001
McHugh, Frank	1898	1981
McIntire, John	1907	1991
McKern, Leo	1920	2002
McLaglen, Victor	1886	1959
McMahon, Ed	1923	2009
McNeill, Don	1907	1996
McQueen, Butterfly	1911	1995
McQueen, Steve	1930	1980
Meader, Vaughn	1936	2004
Meadows, Audrey	1924	1996
Meek, Donald	1880	1946
Meeker, Ralph	1920	1988
Melba, Nellie	1861	1931
Melchior, Lauritz	1890	1973
Menjou, Adolphe	1890	1963
Menken, Helen	1902	1966
Menuhin, Yehudi	1916	1999
Mercouri, Melina	1925	1994
Mercury, Freddie	1946	1991
Meredith, Burgess	1909	1997
Merman, Ethel	1908	1984
Merrick, David	1911	2000
Merrill, Gary	1915	1990
Milestone, Lewis	1895	1980
Mifune, Toshiro	1920	1997
Milland, Ray	1905	1986
Miller, Ann	1923	2004
Miller, Glenn	1904	1944
Miller, Marilyn	1898	1936
Miller, Mitch	1911	2010
Miller, Roger	1936	1992
Mills, Donald	1915	1999
Mills, Harry	1913	1982
Mills, Herbert	1912	1989
Mills, John	1889	1967
Mills, Sir John	1908	2005
Mineo, Sal	1939	1976
Miner, Jan	1917	2004
Minghella, Anthony	1954	2008
Mingus, Charles	1922	1979
Minnelli, Vincente	1903	1986
Miranda, Carmen	1909	1955
Mitchell, Cameron	1918	1994
Mitchell, Thomas	1892	1962
Mitchum, Robert	1917	1997
Mix, Tom	1880	1940
Monica, Corbett	1930	1998
Moffo, Anna	1932	2006
Monroe, Marilyn	1926	1962
Monroe, Vaughn	1911	1973
Montalban, Ricardo	1920	2009
Montand, Yves	1921	1991
Montez, Maria	1917	1951
Montgomery, Elizabeth	1933	1995
Montgomery, George	1916	2000
Montgomery, Robert	1904	1981
Moore, Clayton	1914	1999
Moore, Colleen	1900	1988
Moore, Dudley	1935	2002
Moore, Garry	1915	1993
Moore, Grace	1898	1947
Moorehead, Agnes	1906	1974
Moreland, Mantan	1902	1973
Morgan, Dennis	1910	1994
Morgan, Frank	1890	1949
Morgan, Helen	1900	1941
Morgan, Henry	1915	1994
Morita, Pat	1932	2005
Morley, Robert	1908	1992
Morris, Chester	1901	1970
Morris, Greg	1934	1996
Morris, Howard	1919	2005
Morris, Wayne	1914	1959
Morrison, Jim	1943	1971
Morrow, Vic	1929	1982
Morton, Jelly Roll	1885	1941
Mostel, Zero	1915	1977
Mowbray, Alan	1897	1969
Mulhare, Edward	1923	1997
Mulligan, Gerry	1927	1996
Mulligan, Richard	1932	2000
Muni, Paul	1895	1967
Munshin, Jules	1915	1970
Murnau, F.W.	1888	1931
Murphy, Audie	1924	1971
Murphy, Brittany	1977	2009
Murphy, George	1902	1992
Murray, Arthur	1895	1991
Murray, Kathryn	1906	1999
Murray, Mae	1889	1965
Nagel, Conrad	1897	1970
Naish, J. Carroll	1900	1973
Naldi, Nita	1898	1961
Nance, Jack	1943	1996
Natwick, Mildred	1908	1994
Nazimova, Alla	1879	1945
Neal, Patricia	1926	2010
Negri, Pola	1897	1987
Nelson, Harriet (Hilliard)	1909	1994
Nelson, Ozzie	1906	1975
Nelson, Rick	1940	1985
Nesbit, Evelyn	1884	1967
Nettleton, Lois	1927	2008
Newley, Anthony	1931	1999
Newman, Edwin	1919	2010
Newman, Paul	1925	2008
Newton, Robert	1905	1956
Nicholas, Fayard	1914	2006
Nicholas, Harold	1924	2000
Nijinsky, Vaslav	1890	1950
Nilsson, Anna Q.	1888	1974
Niven, David	1910	1983
Nolan, Lloyd	1902	1985
Normand, Mabel	1894	1930
North, Sheree	1933	2005
Notorious B.I.G.	1972	1997
Novarro, Ramon	1899	1968
Nureyev, Rudolf	1938	1993
Oakie, Jack	1903	1978
Oakley, Annie	1860	1926
Oates, Warren	1928	1982
Oberon, Merle	1911	1979
O'Brien, Edmond	1915	1985
O'Brien, Pat	1899	1983
O'Connell, Arthur	1908	1981
O'Connell, Helen	1921	1993
O'Connor, Carroll	1924	2001
O'Connor, Donald	1925	2003
O'Connor, Una	1880	1959
Odetta	1930	2008
O'Keefe, Dennis	1908	1968
O'Herlihy, Daniel	1919	2005
Oland, Warner	1880	1938
Olcott, Chauncey	1860	1932
Oliver, Edna May	1883	1942
Olivier, Laurence	1907	1989
Olsen, Merlin	1940	2010
Olsen, Ole	1892	1963
O'Neal, Ron	1937	2004
O'Neill, James	1849	1920
Ophuls, Max	1902	1957
Orbach, Jerry	1935	2004
Orbison, Roy	1936	1988
Ormandy, Eugene	1899	1985
O'Sullivan, Maureen	1911	1998
Ouspenskaya, Maria	1876	1949
Owen, Reginald	1887	1972
Owens, Buck	1929	2006
Paar, Jack	1918	2004
Paderewski, Ignace	1860	1941
Page, Bettie	1923	2008
Page, Geraldine	1924	1987
Pakula, Alan	1928	1998
Palance, Jack	1919	2006
Pallette, Eugene	1889	1954
Palmer, Lilli	1914	1986
Palmer, Robert	1949	2003
Pangborn, Franklin	1894	1958
Parker, Fess	1925	2010
Parker, Jean	1915	2005
Parks, Bert	1914	1992
Parks, Larry	1914	1975
Pasternack, Josef A.	1881	1940
Pastor, Tony (vaudevillian)	1837	1908
Pastor, Tony (bandleader)	1907	1969
Patrick, Gail	1911	1980
Patti, Adelina	1843	1919
Patti, Carlotta	1840	1889
Paul, Les	1915	2009
Pavarotti, Luciano	1935	2007
Pavlova, Anna	1885	1931
Paycheck, Johnny	1938	2003
Payne, John	1912	1989
Pearl, Minnie	1912	1996
Peck, Gregory	1916	2003
Peckinpah, Sam	1925	1984
Peerce, Jan	1904	1984
Pendergrass, Teddy	1950	2010
Penn, Arthur	1922	2010
Penn, Chris	1965	2006
Penner, Joe	1905	1941
Peppard, George	1928	1994

Name	Born	Died
Perkins, Anthony	1932	1992
Perkins, Carl	1932	1998
Perkins, Marlin	1905	1986
Peters, Brock	1927	2005
Peters, Jean	1926	2000
Peters, Susan	1921	1952
Peterson, Oscar	1925	2007
Phillips, John	1935	2001
Phoenix, River	1970	1993
Piaf, Edith	1915	1963
Pickens, Slim	1919	1983
Pickett, Wilson	1941	2006
Pickford, Mary	1893	1979
Picon, Molly	1898	1992
Pidgeon, Walter	1897	1984
Pinza, Ezio	1892	1957
Pitney, Gene	1941	2006
Pitts, Zasu	1898	1963
Plato, Dana	1964	1999
Pleasence, Donald	1919	1995
Pleshette, Suzanne	1937	2008
Pollack, Sydney	1934	2008
Pons, Lily	1904	1976
Ponselle, Rosa	1897	1981
Ponti, Carlo	1912	2007
Porter, Eric	1928	1995
Porter, Edwin S.	1870	1941
Porter, Nyree Dawn	1940	2001
Poston, Tom	1921	2007
Powell, Dick	1904	1963
Powell, Eleanor	1912	1982
Powell, William	1892	1984
Power, Tyrone	1914	1958
Preminger, Otto	1905	1986
Presley, Elvis	1935	1977
Preston, Billy	1946	2006
Preston, Robert	1918	1987
Price, Vincent	1911	1993
Prima, Louis	1911	1978
Prinze, Freddie	1954	1977
Prosky, Robert	1930	2008
Provine, Dorothy	1937	2010
Prowse, Juliet	1936	1996
Pryor, Richard	1940	2005
Puente, Tito	1923	2000
Pyle, Denver	1920	1997
Quayle, Anthony	1913	1989
Questel, Mae	1908	1998
Quinn, Anthony	1915	2001
Quintero, José	1924	1999
Rabb, Ellis	1930	1998
Rabbit, Eddie	1941	1998
Radner, Gilda	1946	1989
Raft, George	1895	1980
Rains, Claude	1889	1967
Raitt, John	1917	2005
Ralston, Esther	1902	1994
Ramone, Dee Dee	1952	2002
Ramone, Joey	1951	2001
Ramone, Johnny	1948	2004
Rampal, Jean-Pierre	1922	2000
Randall, Tony	1920	2004
Randolph, John	1915	2004
Rathbone, Basil	1892	1967
Ratoff, Gregory	1897	1960
Rawls, Lou	1933	2006
Ray, Aldo	1926	1991
Ray, Johnnie	1927	1990
Ray, Nicholas	1911	1979
Rayburn, Gene	1917	1999
Raye, Martha	1916	1994
Raymond, Gene	1908	1998
Reagan, Ronald	1911	2004
Redding, Otis	1941	1967
Redgrave, Corin	1939	2010
Redgrave, Lynn	1943	2010
Redgrave, Michael	1908	1985
Reed, Donna	1921	1986
Reed, Jerry	1937	2008
Reed, Oliver	1938	1999
Reed, Robert	1932	1992
Reeve, Christopher	1952	2004
Reeves, George	1914	1959
Reeves, Steve	1926	2000
Reid, Wallace	1891	1923
Reilly, Charles Nelson	1931	2007
Reinhardt, Max	1873	1943
Remick, Lee	1935	1991
Renaldo, Duncan	1904	1980
Rennie, Michael	1909	1971
Renoir, Jean	1894	1979
Rettig, Tommy	1941	1996
Reynolds, Marjorie	1921	1997
Rich, Charlie	1932	1995
Richardson, Ian	1934	2007
Richardson, Natasha	1963	2009
Richardson, Ralph	1902	1983
Riddle, Nelson	1921	1985
Riefenstahl, Leni	1902	2003
Ripperton, Minnie	1947	1979
Ritchard, Cyril	1898	1977
Ritter, John	1948	2003
Ritter, Tex	1905	1974
Ritter, Thelma	1905	1969
Ritz, Al	1901	1965
Ritz, Harry	1906	1986
Ritz, Jimmy	1903	1985
Roach, Hall	1892	1992
Roach, Max	1924	2007
Robards, Jason	1922	2000
Robbins, Jerome	1918	1998
Robbins, Marty	1925	1982
Roberts, Pernell	1928	2010
Roberts, Rachel	1927	1980
Robeson, Paul	1898	1976
Robinson, Bill	1878	1949
Robinson, Edward G.	1893	1973
Robson, Flora	1902	1984
Roche, Eugene	1928	2004
Rochester (Eddie Anderson)	1905	1977
Roddenberry, Gene	1921	1991
Rodgers, Jimmie	1897	1933
Rogers, Buddy	1904	1999
Rogers, Fred	1928	2003
Rogers, Ginger	1911	1995
Rogers, Roy	1911	1998
Rogers, Will	1879	1935
Roland, Gilbert	1905	1994
Rolle, Esther	1920?	1998
Rollins, Howard	1950	1996
Roman, Ruth	1924	1999
Romero, Cesar	1907	1994
Rose, Billy	1899	1966
Rossellini, Roberto	1906	1977
Rostropovich, Mstislav	1927	2007
Rowan, Dan	1922	1987
Rubinstein, Artur	1887	1982
Rubenstein, Zelda	1933	2010
Ruggles, Charles	1886	1970
Russell, Harold	1914	2002
Russell, Lillian	1861	1922
Russell, Nipsey	1923	2005
Russell, Rosalind	1911	1976
Rutherford, Margaret	1892	1972
Ryan, Irene	1903	1973
Ryan, Robert	1909	1973
Sabu (Dastagir)	1924	1963
St. Cyr, Lili	1917	1999
St. Denis, Ruth	1877	1968
Sakall, S. Z.	1883	1955
Sale (Chic), Charles	1885	1936
Sales, Soupy	1926	2009
Sanders, George	1906	1972
Sanford, Isabel	1917	2004
Sargent, Dick	1933	1994
Savalas, Telly	1924	1994
Scheider, Roy	1935	2008
Schell, Maria	1926	2005
Schenkel, Chris	1923	2005
Schiavelli, Vincent	1948	2005
Schildkraut, Joseph	1896	1964
Schipa, Tito	1888	1965
Schlesinger, John	1926	2003
Schnabel, Artur	1882	1951
Schneider, Romy	1938	1982
Schwartzkopf, Elizabeth	1915	2006
Scott, George C.	1927	1999
Scott, Gordon	1926	2007
Scott, Hazel	1920	1981
Scott, Martha	1914	2003
Scott, Randolph	1898	1987
Scott, Zachary	1914	1965
Scott-Siddons, Mrs.	1843	1896
Scofield, Paul	1922	2008
Seberg, Jean	1938	1979
Seeley, Blossom	1892	1974
Segovia, Andres	1893	1987
Selena	1971	1995
Sellers, Peter	1925	1980
Selznick, David O.	1902	1965
Sennett, Mack	1880	1960
Señor Wences	1896	1999
Serling, Rod	1924	1975
Shakur, Tupac	1971	1996
Shaw, Artie	1910	2004
Shaw, Robert (actor)	1927	1978
Shaw, Robert (conductor)	1916	1999
Shawn, Ted	1891	1972
Shean, Al	1868	1949
Shearer, Moira	1926	2006
Shearer, Norma	1902	1983
Sheppard, Bob	1910	2010
Sheridan, Ann	1915	1967
Shore, Dinah	1917	1994
Short, Bobby	1924	2005
Shubert, Lee	1875	1953
Shull, Richard B.	1929	1999
Siddons, Sarah	1755	1831
Sidney, Sylvia	1910	1999
Siegel, Don	1912	1991
Signoret, Simone	1921	1985
Sills, Beverly	1929	2007
Silver, Ron	1946	2009
Silverheels, Jay	1912	1980
Silvers, Phil	1912	1985
Sim, Alastair	1900	1976
Simone, Nina	1933	2003
Simmons, Jean	1929	2010
Sinatra, Frank	1915	1998
Sinclair, Madge	1938	1995
Singleton, Penny	1908	2003
Sirk, Douglas	1900	1987
Siskel, Gene	1946	1999
Sitka, Emil	1914	1998
Sjostrom, Victor	1879	1960
Skelton, Red	1913	1997
Skinner, Otis	1858	1942
Smith, Alexis	1921	1993
Smith, Bessie	1894?	1937
Smith, Buffalo Bob	1917	1998
Smith, C. Aubrey	1863	1948
Smith, Elliott	1969	2003
Smith, Jeff	1939	2004
Smith, Kate	1907	1986
Smith, Kent	1907	1985
Snodgress, Carrie	1946	2004
Snow, Hank	1914	1999
Snyder, Tom	1936	2007
Solti, George	1912	1997
Sondergaard, Gale	1899	1985
Sothern, Ann	1909	2001
Sousa, John Philip	1854	1932
Sparks, Ned	1884	1957
Spelling, Aaron	1923	2006
Spencer, John	1946	2005
Sperber, Wendy Jo	1958	2005
Springfield, Dusty	1939	1999
Stack, Robert	1919	2003
Stafford, Jo	1917	2008
Stander, Lionel	1908	1994
Stang, Arnold	1918	2009
Stanley, Kim	1925	2001
Stanwyck, Barbara	1907	1990
Stapleton, Maureen	1925	2006
Steiger, Rod	1925	2002
Sterling, Jan	1921	2004
Stern, Isaac	1920	2001
Stevens, Craig	1918	2000
Stevens, George	1904	1975
Stevens, Inger	1934	1970
Stevens, Mark	1916	1994
Stevenson, McLean	1929	1996
Stewart, James	1908	1997
Stickney, Dorothy	1896	1998
Stokowski, Leopold	1882	1977
Stone, Fred	1873	1959
Stone, Lewis	1879	1953
Stone, Milburn	1904	1980
Storm, Gale	1922	2009
Straight, Beatrice	1918	2001
Strasberg, Lee	1901	1982
Strasberg, Susan	1938	1999
Strode, Woody	1914	1994
Strummer, Joe	1952	2002
Stuart, Gloria	1910	2010
Stuarti, Enzo	1919	2005
Sturges, Preston	1898	1959
Sullavan, Margaret	1911	1960
Sullivan, Barry	1912	1994
Sullivan, Ed	1902	1974
Sullivan, Francis L.	1903	1956
Sumac, Yma	1922	2008

Name	Born	Died
Summerville, Slim	1892	1946
Sutherland, Joan	1926	2010
Swanson, Gloria	1899	1983
Swarthout, Gladys	1904	1969
Swayze, Patrick	1952	2009
Sweet, Blanche	1896	1986
Switzer, Carl "Alfalfa"	1927	1959
Talbot, Lyle	1902	1996
Talmadge, Constance	1900	1973
Talmadge, Norma	1893	1957
Tamiroff, Akim	1899	1972
Tandy, Jessica	1909	1994
Tanguay, Eva	1878	1947
Tati, Jacques	1908	1982
Taylor, Deems	1885	1966
Taylor, Dub	1907	1994
Taylor, Estelle	1899	1958
Taylor, Laurette	1887	1946
Taylor, Robert	1911	1969
Tebaldi, Renata	1922	2004
Terry, Ellen	1847	1928
Thalberg, Irving	1899	1936
Thaw, John	1942	2002
Thigpen, Lynne	1948	2003
Thomas, Danny	1912	1991
Thomas, John Charles	1891	1960
Thorndike, Sybil	1882	1976
Thulin, Ingrid	1926	2004
Tibbett, Lawrence	1896	1960
Tierney, Gene	1920	1991
Tiny Tim	1932	1996
Tippett, Sir Michael	1905	1998
Todd, Michael	1909	1958
Todd, Richard	1919	2009
Tomlinson, David	1917	2000
Tone, Franchot	1905	1968
Torme, Mel	1925	1999
Toscanini, Arturo	1867	1957
Tracy, Lee	1898	1968
Tracy, Spencer	1900	1967
Traubel, Helen	1899	1972
Travers, Henry	1874	1965
Travers, Mary	1936	2009
Treacher, Arthur	1894	1975
Tree, Herbert Beerbohm	1853	1917
Trevor, Claire	1909	2000
Truex, Ernest	1890	1973
Truffaut, Francois	1932	1984
Tucker, Forrest	1919	1986
Tucker, Richard	1913	1975
Tucker, Sophie	1884	1966
Turner, Ike	1931	2008
Turner, Big Joe	1911	1985
Turner, Lana	1920	1995
Turpin, Ben	1869	1940
Twelvetrees, Helen	1908	1958
Twitty, Conway	1933	1993
Urich, Robert	1946	2002
Ustinov, Peter	1921	2004
Valens, Ritchie	1941	1959
Valentino, Rudolph	1895	1926
Vallee, Rudy	1901	1986
Van, Bobby	1928	1980
Vance, Vivian	1912	1979
Van Cleef, Lee	1925	1989
Vandross, Luther	1951	2005
Van Fleet, Jo	1922	1996
Varney, Jim	1949	2000
Vaughan, Sarah	1924	1990
Veidt, Conrad	1893	1943
Velez, Lupe	1908	1944
Vera-Ellen (Rohe)	1926	1981
Verdon, Gwen	1925	2000
Vernon, Jackie	1925	1987
Vernon, John	1932	2005
Vidor, King	1894	1982
Villechaize, Herve	1943	1993
Vincent, Gene	1935	1971
Vicious, Sid	1957	1979
Vinson, Helen	1907	1999
Von Stroheim, Erich	1885	1957
Von Zell, Harry	1906	1981
Walker, Junior	1942	1995
Walker, Nancy	1922	1992
Walker, Robert	1918	1951
Wallenda, Karl	1905	1978
Walsh, J. T.	1943	1998
Walsh, Raoul	1887	1980
Walston, Ray	1914	2001
Walter, Bruno	1876	1962
Ward, Helen	1916	1998
Warden, Jack	1920	2006
Waring, Fred	1900	1984
Warner, H. B.	1876	1958
Warrick, Ruth	1915	2005
Washington, Dinah	1924	1963
Waters, Ethel	1896	1977
Waters. Muddy	1915	1983
Waxman, Al	1935	2001
Wayne, David	1914	1995
Wayne, John	1907	1979
Weaver, Dennis	1924	2006
Webb, Clifton	1891	1966
Webb, Jack	1920	1982
Weems, Ted	1901	1963
Weissmuller, Johnny	1904	1984
Welk, Lawrence	1903	1992
Welles, Orson	1915	1985
Wellman, William	1896	1975
Werner, Oskar	1922	1984
West, Mae	1893	1980
Weston, Jack	1924	1996
Whale, James	1889	1957
Wheeler, Bert	1895	1968
White, Barry	1944	2003
White, Jesse	1919	1997
White, Pearl	1889	1938
Whiteman, Paul	1891	1967
Whitmore, James	1921	2009
Whitty, May	1865	1948
Wickes, Mary	1910	1995
Widmark, Richard	1914	2008
Wilde, Cornel	1915	1989
Wilder, Billy	1906	2002
Wilding, Michael	1912	1979
Williams, Bert	1874	1922
Williams, Guy	1924	1989
Williams, Hank, Sr.	1923	1953
Wills, Bob	1905	1975
Wills, Chill	1902	1978
Wilson, Carl	1946	1998
Wilson, Dennis	1944	1983
Wilson, Dooley	1894	1953
Wilson, Flip	1933	1998
Wilson, Jackie	1934	1984
Wilson, Marie	1917	1972
Windsor, Marie	1919	2000
Winfield, Paul	1941	2004
Winninger, Charles	1884	1969
Winters, Shelley	1920	2006
Wise, Robert	1914	2005
Wiseman, Joseph	1918	2009
Wong, Anna May	1907	1961
Wood, Natalie	1938	1981
Wood, Peggy	1892	1978
Wood, Sam	1884	1949
Woodard, Edward	1930	2009
Wooley, Sheb	1921	2003
Woolley, Monty	1888	1963
Worth, Irene	1916	2002
Wray, Fay	1907	2004
Wright, Teresa	1918	2005
Wyatt, Jane	1910	2006
Wyler, William	1902	1981
Wyman, Jane	1914?	2007
Wynette, Tammy	1942	1998
Wynn, Ed	1886	1966
Wynn, Keenan	1916	1986
Yankovic, Frank	1915	1998
York, Dick	1928	1992
Young, Clara Kimball	1890	1960
Young, Gig	1913	1978
Young, Loretta	1913	2000
Young, Robert	1907	1998
Young, Roland	1887	1953
Youngman, Henny	1906	1998
Zanuck, Darryl F.	1902	1979
Zappa, Frank	1940	1993
Zevon, Warren	1947	2003
Ziegfeld, Florenz	1869	1932
Zinneman, Fred	1907	1997
Zukor, Adolph	1873	1976

Original Names of Selected Entertainers

Aaliyah: Aaliyah Haughton
Adele: Adele Laurie Blue Adkins
Ad-Rock: Adam Horovitz
Clay Aiken: Clayton Grissom
Ali G: Sacha Baron Cohen
Eddie Albert: Edward Albert Heimberger
Alan Alda: Alphonso D'Abruzzo
Jason Alexander: Jay Greenspan
Fred Allen: John Sullivan
Woody Allen: Allen Konigsberg
June Allyson: Ella Geisman
André 3000: Andre Benjamin
Julie Andrews: Julia Wells
Criss Angel: Christopher Sarantakos
Eve Arden: Eunice Quedens
Beatrice Arthur: Bernice Frankel
Jean Arthur: Gladys Greene
Ashanti: Ashanti Douglas
Fred Astaire: Frederick Austerlitz
Babyface: Kenneth Edmonds
Lauren Bacall: Betty Joan Perske
Erykah Badu: Erica Wright
Eric Bana: Eric Banadinovich
Anne Bancroft: Anna Maria Italiano
Theda Bara: Theodosia Goodman
Beck: Beck Hensen
Pat Benatar: Patricia Andrejewski
Tony Bennett: Anthony Benedetto
Irving Berlin: Israel Baline
Jack Benny: Benjamin Kubelsky
Milton Berle: Mendel Berlinger
Sarah Bernhardt: Henriette-Rosine Bernard
Jello Biafra: Eric Reed Boucher
Joey Bishop: Joseph Gottlieb
Robert Blake: Michael James Vijencio Gubitosi
Big Boi: Antwan Patton
Jon Bon Jovi: John Francis Bongiovi
The Big Bopper: Jiles Perry "J.P." Richardson
Björk: Björk Gudmundsdottir
Bono: Paul Hewson
Bow Wow: Shad Gregory Moss
David Bowie: David Robert Jones
Boy George: George Alan O'Dowd
Fanny Brice: Fanny Borach
Charles Bronson: Charles Buchinski
Albert Brooks: Albert Einstein
Mel Brooks: Melvin Kaminsky
Foxy Brown: Inga Marchand
George Burns: Nathan Birnbaum
Ellen Burstyn: Edna Gilhooley
Richard Burton: Richard Jenkins
Red Buttons: Aaron Chwatt
Nicolas Cage: Nicholas Coppola
Michael Caine: Maurice Micklewhite
Maria Callas: Maria Kalogeropoulos
Cedric The Entertainer: Cedric Kyles
Jackie Chan: Chan Kwong-Sung
Cyd Charisse: Tula Finklea
Ray Charles: Ray Charles Robinson
Charo: Maria Rosario Pilar Martinez Molina Baeza
Chubby Checker: Ernest Evans
Cher: Cherilyn Sarkisian
Chuck D: Carlton Ridenhour
Patsy Cline: Virginia Patterson Hensley
Claudette Colbert: Lily Chauchoin
Coolio: Artis Leon Ivey Jr.
Alice Cooper: Vincent Furnier
David Copperfield: David Kotkin
Howard Cosell: Howard Cohen
Elvis Costello: Declan McManus
Lou Costello: Louis Cristillo
Peter Coyote: Peter Cohon
Quentin Crisp: Denis Pratt
Tom Cruise: Thomas Cruise Mapother IV
Tony Curtis: Bernard Schwartz
Vic Damone: Vito Farinola
D'Angelo: Michael D'Angelo Archer
Rodney Dangerfield: Jacob Cohen
Bobby Darin: Walden Robert Cassotto
Doris Day: Doris von Kappelhoff

Yvonne De Carlo: Peggy Middleton
Sandra Dee: Alexandra Zuck
John Denver: Henry John Deutschendorf Jr.
Bo Derek: Mary Cathleen Collins
Divine: Harris Glenn Milstead
Danny Devito: Daniel Michaeli
Angie Dickinson: Angeline Brown
Bo Diddley: Elias Bates
Phyllis Diller: Phyllis Driver
Dmx: Earl Simmons
Troy Donahue: Merle Johnson Jr.
Kirk Douglas: Issur Danielovitch
Melvyn Douglas: Melvyn Hesselberg
Duffy: Aimee Anne Duffy
Bob Dylan: Robert Zimmerman
Barbara Eden: Barbara Huffman
Carmen Electra: Tara Leigh Patrick
Elvira: Cassandra Peterson
Eminem: Marshall Mathers
Enya: Eithne Ni Bhraonian
Dale Evans: Frances Smith
Chad Everett: Raymon Cramton
Fabian: Fabian Anthony Forte
Fabio: Fabio Lanzoni
Fabolous: John Jackson
Douglas Fairbanks: Douglas Ullman
Morgan Fairchild: Patsy McClenny
Jamie Farr: Jameel Farah
Alice Faye: Alice Jeanne Leppert
Fergie: Stacy Ferguson
Stepin Fetchit: Lincoln Perry
W. C. Fields: William Claude Dukenfield
50 Cent: Curtis Jackson
Barry Fitzgerald: William Shields
Flavor Flav: William Drayton
Joan Fontaine: Joan de Havilland
Jodie Foster: Alicia Christian Foster
Redd Foxx: John Sanford
Arlene Francis: Arlene Kazanjian
Connie Francis: Concetta Franconero
Kenny G: Kenneth Gorelick
Crystal Gayle: Brenda Gail Webb
Greta Garbo: Greta Gustafsson
Vincent Gardenia: Vincent Scognamiglio
John Garfield: Julius Garfinkle
Judy Garland: Frances Gumm
James Garner: James Bumgarner
George Gershwin: Jacob Gershowitz
Kathie Lee Gifford: Kathie Epstein
Whoopi Goldberg: Caryn Johnson
Eydie Gorme: Edith Gormezano
Stewart Granger: James Stewart
Cary Grant: Archibald Leach
Lee Grant: Lyova Rosenthal
Robert Guillaume: Robert Williams
Buddy Hackett: Leonard Hacker
Hammer: Stanley Kirk Burrell
Jean Harlow: Harlean Carpenter
Rex Harrison: Reginald Carey Harrison
Laurence Harvey: Larushka Skikne
Helen Hayes: Helen Brown
Susan Hayward: Edythe Marrener
Rita Hayworth: Margarita Cansino
Pee-Wee Herman: Paul Reubenfeld
Charlton Heston: John Charles Carter
Hulk Hogan: Terry Gene Bollea
William Holden: William Beedle
Billie Holiday: Eleanora Fagan
Buddy Holly: Charles Hardin Holley
Judy Holliday: Judith Tuvim
Bob Hope: Leslie Townes Hope
Harry Houdini: Erik Weisz
Leslie Howard: Leslie Stainer
Howlin' Wolf: Chester Burnett
Rock Hudson: Roy Scherer Jr. (later Fitzgerald)
Engelbert Humperdinck: Arnold Dorsey
Kim Hunter: Janet Cole
Ice Cube: O'Shea Jackson
Ice-T: Tracy Morrow
Billy Idol: William Broad
Ja Rule: Jeffrey Atkins
Etta James: Jamesetta Hawkins
Jay-Z: Shawn Carter
Jewel: Jewel Kilcher
Elton John: Reginald Dwight
Angelina Jolie: Angelina Jolie Voight
Al Jolson: Asa Yoelson
Jennifer Jones: Phylis Isley
Tom Jones: Thomas Woodward
Spike Jonze: Adam Spiegel
Louis Jourdan: Louis Gendre
Wynonna Judd: Christina Ciminella
Boris Karloff: William Henry Pratt
Danny Kaye: David Kaminsky
Ke$ha: Kesha Rose Sebert
Diane Keaton: Diane Hall
Michael Keaton: Michael Douglas
Alicia Keys: Alicia Augello Cook
Chaka Khan: Yvette Stevens
Carole King: Carole Klein
Larry King: Larry Zeiger
Ben Kingsley: Krishna Banji
Ted Knight: Tadewurz Wladziu Konopka
Cheryl Ladd: Cheryl Stoppelmoor
Lady Gaga: Stefani Germanotta
Veronica Lake: Constance Ockleman
Hedy Lamarr: Hedwig Kiesler
Dorothy Lamour: Mary Leta Dorothy Slaton
Michael Landon: Eugene Orowitz
k.d. lang: Kathryn Dawn Lang
Mario Lanza: Alfredo Cocozza
Queen Latifah: Dana Owens
Stan Laurel: Arthur Jefferson
Steve Lawrence: Sidney Leibowitz
Brenda Lee: Brenda Mae Tarpley
Gypsy Rose Lee: Rose Louise Hovick
Michelle Lee: Michelle Dusiak
Peggy Lee: Norma Egstrom
Janet Leigh: Jeanette Morrison
Vivien Leigh: Vivian Hartley
Huey Lewis: Hugh Cregg
Jerry Lewis: Joseph Levitch
Lil' Kim: Kimberly Denise Jones
Lil' Romeo: Percy Romeo Miller Jr.
Little Richard: Richard Penniman
L.L. Cool J: James Todd Smith
Carole Lombard: Jane Peters
Sophia Loren: Sophia Scicolone
Peter Lorre: Laszlo Lowenstein
Myrna Loy: Myrna Williams
Bela Lugosi: Bela Ferenc Blasko
Moms Mabley: Loretta Mary Aiken
Shirley Maclaine: Shirley Beaty
Elle Macpherson: Eleanor Gow
Madonna: Madonna Louise Veronica Ciccone
Lee Majors: Harvey Lee Yeary
Karl Malden: Mladen Sekulovich
Barry Manilow: Barry Alan Pincus
Jayne Mansfield: Vera Jane Palmer
Marilyn Manson: Brian Warner
Fredric March: Frederick Bickel
Ricky Martin: Enrique Jose Martin Morales
Groucho Marx: Julius Henry Marx
Dean Martin: Dino Crocetti
MCA: Adam Yauch
Meat Loaf: Marvin Lee Aday
Freddie Mercury: Frederick Bulsara
Ethel Merman: Ethel Zimmermann
George Michael: Georgios Panayiotou
Midori: Midori Goto
Mike D: Michael Diamond
Ray Milland: Reginald Truscott-Jones
Ann Miller: Lucille Collier
Helen Mirren: Ilynea Lydia Mironoff
Joni Mitchell: Roberta Joan Anderson
Moby: Richard Melville Hall
Mo'Nique: Monique Imes
Marilyn Monroe: Norma Jean Mortenson (later Baker)
Yves Montand: Ivo Livi
Demi Moore: Demetria Guynes
Rita Moreno: Rosita Alverio
Harry Morgan: Harry Bratsburg
Morrissey: Steven Patrick Morrissey
Mr. T: Lawrence Tureaud
Paul Muni: Mehilem Weisenfreund
Nelly: Cornell Haynes Jr.
Mike Nichols: Michael Igor Peschowsky
Chuck Norris: Carlos Ray Norris
Notorious B.I.G.: Christopher Wallace
Hugh O'Brian: Hugh Krampke
Maureen O'Hara: Maureen FitzSimons
Odetta: Odetta Holmes
Ozzy Osbourne: John Michael Osbourne
Jack Palance: Vladimir Palanuik
Minnie Pearl: Sarah Ophelia Cannon
Katy Perry: Kathryn Hudson
Bernadette Peters: Bernadette Lazzara
Edith Piaf: Edith Gassion
Slim Pickens: Louis Lindley
Mary Pickford: Gladys Smith
Pink: Alecia Moore
Iggy Pop: James Newell Osterberg
Robert Preston: Robert Preston Meservey
Prince: Prince Rogers Nelson
Raffi: Raffi Cavoukian
Dee Dee Ramone: Douglas Colvin
Joey Ramone: Jeffrey Hyman
Johnny Ramone: John Cummings
Tommy Ramone: Tom Erdelyi
Tony Randall: Leonard Rosenberg
Martha Raye: Margaret O'Reed
Della Reese: Delloreese Patricia Early
Busta Rhymes: Trevor Smith Jr.
Joan Rivers: Joan Sandra Molinsky
Edward G. Robinson: Emmanuel Goldenberg
The Rock: Dwayne Johnson
Ginger Rogers: Virginia McMath
Roy Rogers: Leonard Franklin Slye
Mickey Rooney: Joe Yule Jr.
Johnny Rotten: John Lydon
Lillian Russell: Helen Leonard
Meg Ryan: Margaret Hyra
Winona Ryder: Winona Horowitz
Sabu: Sabu Dastagir
Sade: Helen Folsade Abu
Soupy Sales: Milton Supman
Susan Sarandon: Susan Tomaling
Seal: Seal Henry Olusegun Olumide Adeola Samuel
Randolph Scott: George Randolph Crane
Selena: Selena Quintanilla
Jane Seymour: Joyce Frankenberg
Shakira: Shakira Isabel Mebarak Ripoll
Omar Sharif: Michael Shalhoub
Charlie Sheen: Carlos Irwin Estevez
Martin Sheen: Ramon Estevez
Talia Shire: Talia Coppola
Beverly Sills: Belle Silverman
Gene Simmons: Chaim Witz
Phil Silvers: Philip Silversmith
Sinbad: David Adkins
Snoop Dogg: Calvin Broadus
Anna Nicole Smith: Vickie Lynn Hogan
Ann Sothern: Harriette Lake
Barbara Stanwyck: Ruby Stevens
Jean Stapleton: Jeanne Murray
Ringo Starr: Richard Starkey
Cat Stevens: Stephen Demetre Georgiou
Connie Stevens: Concetta Ingolia
Sting: Gordon Sumner
Joe Strummer: John Graham Mellor
Donna Summer: La Donna Gaines
Rip Taylor: Charles Elmer Taylor Jr.
Robert Taylor: Spangler Brugh
Danny Thomas: Muzyad Yakhoob, later Amos Jacobs
Tiny Tim: Herbert Khaury
Rip Torn: Elmore Rual Torn Jr.
Randy Travis: Randy Traywick
Sophie Tucker: Sophia Kalish
Tina Turner: Annie Mae Bullock
Shania Twain: Eilleen Regina Edwards
Twiggy: Lesley Hornby
Conway Twitty: Harold Lloyd Jenkins
Usher: Usher Raymond IV
Rudolph Valentino: Rudolpho D'Antonguolla
Frankie Valli: Frank Castelluccio
Eddie Vedder: Edward Louis Severs en III
Sid Vicious: John Simon Ritchie
John Wayne: Marion Morrison
Raquel Welch: Raquel Tejada
Gene Wilder: Jerome Silberman
Shelley Winters: Shirley Schrift
Stevie Wonder: Stevland Morris
Jane Wyman: Sarah Jane Mayfield
Yanni: Yanni Chrysomallis
Loretta Young: Gretchen Michaels Young
Buckwheat Zydeco: Stanley Dural Jr.

ARTS AND MEDIA

Some Notable Movies, Sept. 2009-Aug. 2010

Film	Stars	Director
2012 (PG-13)	John Cusack, Chiwetel Ejiofor, Danny Glover, Oliver Platt	Roland Emmerich
Alice in Wonderland (PG)	Mia Wasikowska, Johnny Depp, Helena Bonham Carter	Tim Burton
The A-Team (PG-13)	Liam Neeson, Bradley Cooper, Quinton Jackson, Sharlto Copley	Joe Carnahan
Avatar (PG-13)	Sam Worthington, Zoë Saldana, Sigourney Weaver	James Cameron
The Blind Side (PG-13)	Sandra Bullock, Tim McGraw, Quinton Aaron	John Lee Hancock
The Book of Eli (R)	Denzel Washington, Gary Oldman, Mila Kunis, Michael Gambon	Allen Hughes, Albert Hughes
The Bounty Hunter (PG-13)	Jennifer Aniston, Gerard Butler	Andy Tennant
A Christmas Carol (PG)	Jim Carrey, Gary Oldman, Robin Wright Penn	Robert Zemeckis
City Island (PG-13)	Andy Garcia, Julianna Margulies, Steven Strait	Raymond De Felitta
Clash of the Titans (PG-13)	Sam Worthington, Ralph Fiennes, Liam Neeson	Louis Leterrier
Coco Before Chanel (PG-13)	Audrey Tautou, Alessandro Nivola, Benoît Poelvoorde	Anne Fontaine
Crazy Heart (R)	Jeff Bridges, Maggie Gyllenhaal, Colin Farrell, Robert Duvall	Scott Cooper
Cyrus (R)	John C. Reilly, Jonah Hill, Marisa Tomei	Mark Duplass, Jay Duplass
Date Night (PG-13)	Steve Carell, Tina Fey	Shawn Levy
Dear John (PG-13)	Channing Tatum, Amanda Seyfried	Lasse Hallström
Death at a Funeral (R)	Chris Rock, Tracy Morgan, Martin Lawrence	Neil LaBute
Despicable Me (PG)	Steve Carell, Jason Segel, Russell Brand	Chris Renaud, Pierre Coffin
Diary of a Wimpy Kid (PG)	Zachary Gordon, Robert Capron, Devon Bostick	Thor Freudenthal
Dinner for Schmucks (PG-13)	Steve Carell, Paul Rudd	Jay Roach
Eat Pray Love (PG-13)	Julia Roberts	Ryan Murphy
An Education (PG-13)	Carey Mulligan, Peter Sarsgaard	Lone Scherfig
The Expendables (R)	Sylvester Stallone, Jason Statham, Jet Li, Dolph Lundgren	Sylvester Stallone
Fantastic Mr. Fox (PG)	George Clooney, Meryl Streep, Bill Murray, Jason Schwartzman	Wes Anderson
Get Him to the Greek (R)	Jonah Hill, Russell Brand	Nicholas Stoller
Get Low (PG-13)	Bill Murray, Robert Duvall, Sissy Spacek	Aaron Schneider
The Girl with the Dragon Tattoo (R)	Michael Nyqvist, Noomi Rapace, Lena Endre	Niels Arden Oplev
Green Zone (R)	Matt Damon, Amy Ryan, Greg Kinnear	Paul Greengrass
Grown Ups (PG-13)	Adam Sandler, Kevin James, Chris Rock, David Spade	Dennis Dugan
Hot Tub Time Machine (R)	John Cusack, Rob Corddry, Craig Robinson, Clark Duke	Steve Pink
How to Train Your Dragon (PG)	Jay Baruchel, Gerard Butler, Christopher Mintz-Plasse	Dean DeBlois, Chris Sanders
The Imaginarium of Doctor Parnassus (PG-13)	Heath Ledger, Christopher Plummer, Tom Waits	Terry Gilliam
Inception (PG-13)	Leonardo DiCaprio, Joseph Gordon-Levitt, Ellen Page	Christopher Nolan
Invictus (PG-13)	Morgan Freeman, Matt Damon	Clint Eastwood
Iron Man 2 (PG-13)	Robert Downey Jr., Mickey Rourke, Gwyneth Paltrow, Don Cheadle	Jon Favreau
It's Complicated (R)	Meryl Streep, Steve Martin, Alec Baldwin	Nancy Meyers
The Karate Kid (PG)	Jackie Chan, Jaden Smith, Taraji P. Henson	Harald Zwart
The Kids Are All Right (R)	Annette Bening, Julianne Moore, Mark Ruffalo	Lisa Cholodenko
Knight and Day (PG-13)	Tom Cruise, Cameron Diaz	James Mangold
The Last Airbender (PG)	Dev Patel, Noah Ringer, Nicola Peltz, Jackson Rathbone	M. Night Shyamalan
The Last Song (PG)	Miley Cyrus, Liam Hemsworth, Greg Kinnear, Kelly Preston	Julie Anne Robinson
The Last Station (R)	Christopher Plummer, Helen Mirren, James McAvoy	Michael Hoffman
Letters to Juliet (PG)	Amanda Seyfried, Vanessa Redgrave, Christopher Egan	Gary Winick
The Lovely Bones (PG-13)	Saoirse Ronan, Stanley Tucci, Rachel Weisz, Mark Wahlberg	Peter Jackson
The Messenger (R)	Ben Foster, Woody Harrelson, Samantha Morton, Jena Malone	Oren Moverman
Michael Jackson's This Is It (PG)	documentary	Kenny Ortega
Nanny McPhee Returns (PG)	Emma Thompson, Maggie Gyllenhaal	Susanna White
A Nightmare on Elm Street (R)	Jackie Earle Haley, Kyle Gallner, Rooney Mara	Samuel Bayer
Nine (PG-13)	Daniel Day-Lewis, Nicole Kidman, Penélope Cruz, Marion Cotillard	Rob Marshall
The Other Guys (PG-13)	Will Ferrell, Mark Wahlberg	Adam McKay
Paranormal Activity (R)	Katie Featherston, Micah Sloat	Oren Peli
Percy Jackson & the Olympians: The Lightning Thief (PG)	Logan Lerman, Brandon T. Jackson, Alexandra Daddario	Chris Columbus
Precious: Based on the Novel 'Push' by Sapphire (R)	Gabourey Sidibe, Mo'Nique, Mariah Carey	Lee Daniels
Prince of Persia: The Sands of Time (PG-13)	Jake Gyllenhaal, Gemma Arterton, Ben Kingsley	Mike Newell
The Princess and the Frog (G)	Anika Noni Rose, Bruno Campos, Keith David	Ron Clements, John Musker
Restrepo (R)	documentary	Tim Hetherington, Sebastian Junger
Robin Hood (PG-13)	Russell Crowe, Cate Blanchett, Mark Strong	Ridley Scott
Salt (PG-13)	Angelina Jolie, Liev Schreiber, Chiwetel Ejiofor, Daniel Olbrychski	Phillip Noyce
Scott Pilgrim vs. the World (PG-13)	Michael Cera, Mary Elizabeth Winstead	Edgar Wright
A Serious Man (R)	Michael Stuhlbarg, Sari Lennick, Richard Kind	Joel Coen, Ethan Coen
Sex and the City 2 (R)	Sarah Jessica Parker, Kim Cattrall, Cynthia Nixon, Kristin Davis	Michael Patrick King
Sherlock Holmes (PG-13)	Robert Downey Jr., Jude Law, Rachel McAdams, Eddie Marsan	Guy Ritchie
Shrek Forever After (PG)	Mike Myers, Cameron Diaz, Eddie Murphy, Antonio Banderas	Mike Mitchell
Shutter Island (R)	Leonardo DiCaprio, Mark Ruffalo, Ben Kingsley, Michelle Williams	Martin Scorsese
The Sorcerer's Apprentice (PG)	Nicolas Cage, Jay Baruchel, Alfred Molina	Jon Turteltaub
The Switch (PG-13)	Jennifer Aniston, Jason Bateman, Jeff Goldblum	Will Speck, Josh Gordon
Takers (PG-13)	Matt Dillon, Paul Walker, Idris Elba, Chris Brown, T.I.	John Luessenhop
The Tillman Story (R)	documentary	Amir Bar-Lev
Tooth Fairy (PG)	Dwayne Johnson, Ashley Judd, Julie Andrews, Billy Crystal	Michael Lembeck
Toy Story 3 (G)	Tom Hanks, Tim Allen, Joan Cusack	Lee Unkrich
The Twilight Saga: Eclipse (PG-13)	Kristen Stewart, Robert Pattinson, Taylor Lautner	David Slade
The Twilight Saga: New Moon (PG-13)	Kristen Stewart, Robert Pattinson, Taylor Lautner	Chris Weitz
Tyler Perry's Why Did I Get Married Too? (PG-13)	Tyler Perry, Janet Jackson, Jill Scott	Tyler Perry
Up in the Air (R)	George Clooney, Vera Farmiga, Anna Kendrick	Jason Reitman
Valentine's Day (PG-13)	Jessica Alba, Bradley Cooper, Ashton Kutcher, Julia Roberts	Garry Marshall
Where the Wild Things Are (PG)	Max Records, James Gandolfini, Lauren Ambrose, Paul Dano	Spike Jonze
Winter's Bone (R)	Jennifer Lawrence	Debra Granik
The Wolfman (R)	Benicio Del Toro, Anthony Hopkins, Emily Blunt	Joe Johnston
The Young Victoria (PG)	Emily Blunt, Rupert Friend	Jean-Marc Vallée
Zombieland (R)	Woody Harrelson, Jesse Eisenberg, Emma Stone, Abigail Breslin	Ruben Fleischer

50 Top-Grossing Movies, 2009

Source: Rentrak Corporation; box-office grosses in the U.S. and Canada, Jan. 2-Dec. 31, 2009

Rank	Title	Gross (mil)
1.	Transformers: Revenge of the Fallen	$402.1
2.	Harry Potter and the Half-Blood Prince	302.0
3.	Up	293.0
4.	The Twilight Saga: New Moon	284.5
5.	Avatar	283.6
6.	The Hangover	277.3
7.	Star Trek	257.7
8.	Monsters vs. Aliens	198.4
9.	Ice Age: Dawn of the Dinosaurs	196.6
10.	The Blind Side	196.6
11.	X-Men Origins: Wolverine	179.9
12.	Night at the Museum: Battle of the Smithsonian	177.2
13.	The Proposal	164.0
14.	2012	162.3
15.	Fast & Furious	155.2
16.	G.I. Joe: The Rise of Cobra	150.2
17.	Paul Blart: Mall Cop	146.3
18.	Taken	145.0
19.	Gran Torino	141.2
20.	A Christmas Carol	136.9
21.	Angels & Demons	133.4
22.	Terminator Salvation	125.3
23.	Cloudy With a Chance of Meatballs	123.8
24.	Alvin and the Chipmunks: The Squeakquel	120.7
25.	Inglourious Basterds	120.5
26.	G-Force	$119.4
27.	Slumdog Millionaire	117.3
28.	District 9	115.6
29.	Couples Retreat	108.3
30.	Paranormal Activity	107.8
31.	Watchmen	107.5
32.	Sherlock Holmes	102.1
33.	Public Enemies	97.1
34.	Julie & Julia	94.1
35.	He's Just Not That Into You	94.0
36.	Tyler Perry's Madea Goes to Jail	90.5
37.	The Ugly Truth	88.9
38.	Knowing	80.0
39.	Hannah Montana: The Movie	79.6
40.	Where the Wild Things Are	76.3
41.	The Princess and the Frog	76.0
42.	Zombieland	75.6
43.	Coraline	75.3
44.	Hotel For Dogs	73.0
45.	Law Abiding Citizen	72.8
46.	Michael Jackson's This Is It	72.1
47.	I Love You, Man	71.4
48.	Obsessed	68.3
49.	Race to Witch Mountain	67.2
50.	The Curious Case of Benjamin Button	66.9

All-Time Top-Grossing American Movies

Source: Rentrak Corporation; box-office grosses in the U.S. and Canada through Aug. 22, 2010

Rank	Title (original release)	Gross[1]
1.	Avatar (2009)	$749.8
2.	Titanic (1997)	600.8
3.	The Dark Knight (2008)	533.3
4.	Star Wars (1977)	461.0
5.	Shrek 2 (2004)	436.7
6.	E.T. The Extra-Terrestrial (1982)	435.0
7.	Star Wars: Episode I—The Phantom Menace (1999)	431.1
8.	Pirates of the Caribbean: Dead Man's Chest (2006)	423.3
9.	Toy Story 3 (2010)	403.8
10.	Spider-Man (2002)	403.7
11.	Transformers: Revenge of the Fallen (2009)	402.1
12.	Star Wars: Episode III—Revenge of the Sith (2005)	380.3
13.	The Lord of the Rings: The Return of the King (2003)	377.0
14.	Spider-Man 2 (2004)	373.4
15.	The Passion of the Christ (2004)	370.3
16.	Jurassic Park (1993)	357.1
17.	The Lord of the Rings: The Two Towers (2002)	341.7
18.	Finding Nemo (2003)	339.7
19.	Spider-Man 3 (2007)	336.5
20.	Alice in Wonderland (2010)	334.2
21.	Forrest Gump (1994)	329.7
22.	Shrek the Third (2007)	322.7
23.	Transformers (2007)	319.2
24.	Iron Man (2008)	318.6
25.	Harry Potter and the Sorcerer's Stone (2001)	317.6
26.	Indiana Jones and the Kingdom of the Crystal Skull (2008)	317.1
27.	The Lord of the Rings: The Fellowship of the Ring (2001)	$314.2
28.	The Lion King (1994)	312.9
29.	Iron Man 2 (2010)	312.1
30.	Star Wars: Episode II—Attack of the Clones (2002)	310.7
31.	Pirates of the Caribbean: At World's End (2007)	309.4
32.	Star Wars: Episode VI—Return of the Jedi (1983)	309.2
33.	Independence Day (1996)	306.2
34.	Pirates of the Caribbean: The Curse of the Black Pearl (2003)	305.4
35.	Harry Potter and the Half-Blood Prince (2009)	302.0
36.	The Twilight Saga: Eclipse (2010)	297.2
37.	The Twilight Saga: New Moon (2009)	296.6
38.	The Sixth Sense (1999)	293.5
39.	Up (2009)	293.0
40.	Harry Potter and the Order of the Phoenix (2007)	292.0
41.	The Chronicles of Narnia: The Lion, the Witch, and the Wardrobe (2005)	291.7
42.	Star Wars: Episode V—The Empire Strikes Back (1980)	290.3
43.	Harry Potter and the Goblet of Fire (2005)	290.0
44.	Home Alone (1990)	285.8
45.	The Matrix Reloaded (2003)	281.5
46.	Meet the Fockers (2004)	279.2
47.	The Hangover (2009)	277.3
48.	Shrek (2001)	267.7
49.	Inception (2010)	262.0
50.	Harry Potter and the Chamber of Secrets (2002)	262.0

(1) Gross is in millions of absolute dollars based on box office sales. Rising ticket prices favor newer films. Revenues from re-releases are included.

100 Best American Movies of All Time

Source: American Film Institute

First unveiled in 1998 based on ballots sent to 1,500 individuals, mostly from the film world, in 1997. Updated in 2007 (the version shown here) to include newly eligible films and reflect shifting cultural perspectives. Criteria for judging included historical significance, cultural impact, critical recognition and awards, and popularity. The year each film was first released is in parentheses.

1. Citizen Kane (1941)
2. The Godfather (1972)
3. Casablanca (1942)
4. Raging Bull (1980)
5. Singin' in the Rain (1952)
6. Gone With the Wind (1939)
7. Lawrence of Arabia (1962)
8. Schindler's List (1993)
9. Vertigo (1958)
10. The Wizard of Oz (1939)
11. City Lights (1931)
12. The Searchers (1956)
13. Star Wars (1977)
14. Psycho (1960)
15. 2001: A Space Odyssey (1968)
16. Sunset Boulevard (1950)
17. The Graduate (1967)
18. The General (1927)
19. On the Waterfront (1954)
20. It's a Wonderful Life (1946)
21. Chinatown (1974)
22. Some Like It Hot (1959)
23. The Grapes of Wrath (1940)
24. E.T.: The Extra-Terrestrial (1982)
25. To Kill a Mockingbird (1962)
26. Mr. Smith Goes to Washington (1939)
27. High Noon (1952)
28. All About Eve (1950)
29. Double Indemnity (1944)
30. Apocalypse Now (1979)
31. The Maltese Falcon (1941)
32. The Godfather Part II (1974)
33. One Flew Over the Cuckoo's Nest (1975)
34. Snow White and the Seven Dwarfs (1937)
35. Annie Hall (1977)
36. The Bridge on the River Kwai (1957)
37. The Best Years of Our Lives (1946)

38. The Treasure of the Sierra Madre (1948)
39. Dr. Strangelove (1964)
40. The Sound of Music (1965)
41. King Kong (1933)
42. Bonnie and Clyde (1967)
43. Midnight Cowboy (1969)
44. The Philadelphia Story (1940)
45. Shane (1953)
46. It Happened One Night (1934)
47. A Streetcar Named Desire (1951)
48. Rear Window (1954)
49. Intolerance (1916)
50. The Lord of the Rings: The Fellowship of the Ring (2001)
51. West Side Story (1961)
52. Taxi Driver (1976)
53. The Deer Hunter (1978)
54. M*A*S*H (1970)
55. North By Northwest (1959)
56. Jaws (1975)
57. Rocky (1976)
58. The Gold Rush (1925)
59. Nashville (1975)
60. Duck Soup (1933)
61. Sullivan's Travels (1941)
62. American Graffiti (1973)
63. Cabaret (1972)
64. Network (1976)
65. The African Queen (1951)
66. Raiders of the Lost Ark (1981)
67. Who's Afraid of Virginia Woolf? (1966)
68. Unforgiven (1992)
69. Tootsie (1982)
70. A Clockwork Orange (1971)
71. Saving Private Ryan (1998)
72. The Shawshank Redemption (1994)
73. Butch Cassidy and the Sundance Kid (1969)
74. The Silence of the Lambs (1991)
75. In the Heat of the Night (1967)
76. Forrest Gump (1994)
77. All the President's Men (1976)
78. Modern Times (1936)
79. The Wild Bunch (1969)
80. The Apartment (1960)
81. Spartacus (1960)
82. Sunrise (1927)
83. Titanic (1997)
84. Easy Rider (1969)
85. A Night at the Opera (1935)
86. Platoon (1986)
87. 12 Angry Men (1957)
88. Bringing Up Baby (1938)
89. The Sixth Sense (1999)
90. Swing Time (1936)
91. Sophie's Choice (1982)
92. Goodfellas (1990)
93. The French Connection (1971)
94. Pulp Fiction (1994)
95. The Last Picture Show (1971)
96. Do the Right Thing (1989)
97. Blade Runner (1982)
98. Yankee Doodle Dandy (1942)
99. Toy Story (1995)
100. Ben-Hur (1959)

National Film Registry, 2010

Source: National Film Registry, Library of Congress

The Library of Congress adds up to 25 "culturally, historically, or aesthetically significant" American films to the National Film Registry annually.

Dog Day Afternoon (1975)
The Exiles (1961)
Heroes All (1920)
Hot Dogs for Gauguin (1972)
The Incredible Shrinking Man (1957)
Jezebel (1938)
The Jungle (1967)
The Lead Shoes (1949)
Little Nemo (1911)
Mabel's Blunder (1914)
The Mark of Zorro (1940)
Mrs. Miniver (1942)
The Muppet Movie (1979)
Once Upon a Time in the West (1968)
Pillow Talk (1959)
Precious Images (1986)
Quasi at the Quackadero (1975)
The Red Book (1994)
The Revenge of Pancho Villa (1930-36)
Scratch and Crow (1995)
Stark Love (1927)
The Story of G.I. Joe (1945)
A Study in Reds (1932)
Thriller (1983)
Under Western Stars (1938)

U.S. Movie Theaters, 1946-2009

Source: Motion Picture Association of America; Rentrak Corporation

Year	Box office (mil)	Admissions (mil)	Admissions per week (mil)	Screens	Avg. ticket price	Films produced	Films released
1946	$1,692.0	4,067.3	78.2	NA	$0.42	NA	400
1950	1,379.0	3,017.5	58.0	NA	0.46	NA	483
1955	1,204.0	2,072.3	39.9	NA	0.58	NA	319
1960	984.4	1,304.5	25.1	NA	0.76	NA	248
1965	1,041.8	1,031.5	19.8	NA	1.01	NA	279
1970	1,429.2	920.6	17.7	NA	1.55	279	306
1975	2,114.8	1,032.8	19.9	15,030	2.05	258	233
1980	2,748.5	1,021.5	19.6	17,590	2.69	214	233
1985	3,749.4	1,056.1	20.3	21,147	3.55	264	470
1990	5,021.8	1,188.6	22.9	23,689	4.23	346	410
1995	5,269.0	1,211.0	23.3	27,805	4.35	631	411
2000	7,468.0	1,383.0	26.6	37,396	5.39	683	475
2001	8,125.0	1,438.0	27.7	36,764	5.66	611	482
2002	9,272.0	1,599.0	30.8	35,280	5.81	546	466
2003	9,165.0	1,521.0	29.3	35,786	6.03	593	473
2004	9,215.0	1,484.0	28.5	36,594	6.21	611	528
2005	8,832.0	1,376.0	26.5	38,852	6.41	920	507
2006	9,138.0	1,395.0	26.8	39,668	6.55	928	594
2007	9,629.0	1,400.0	26.9	40,077	6.88	909	609
2008	9,791.0	1,364.0	26.2	40,194	7.18	716	633
2009	10,543.6[1]	1,415.0	27.2	39,717	7.50	677	558

NA = Not available. (1) Box-office grosses in the U.S. and Canada, Jan. 2-Dec. 31, 2009.

Top Film Websites, June 2010

Source: comScore Media Metrix

Rank		Visitors[1]	% change[2]	Rank		Visitors[1]	% change[2]
1.	Yahoo! Movies	26,616	70.7%	11.	AMC Entertainment Inc.	2,116	13.8%
2.	IMDb.com	25,091	14.7	12.	LetMeWatchThis.com	1,624	NA
3.	Fandango Movies Network	15,713	76.2	13.	Disney Movies	1,510	–32.2
4.	Moviefone	14,378	13.0	14.	WarnerBros.com	1,492	–32.9
5.	MSN Movies	10,929	80.6	15.	HollywoodReporter.com	1,414	NA
6.	Hollywood.com Network	9,097	44.3	16.	SlashFilm.com	1,409	NA
7.	Flixster.com	6,666	130.0	17.	Moviediction.com	1,379	NA
8.	The Movie Network	5,163	NA	18.	Regal Entertainment	1,378	–1.2
9.	Film.com	4,491	43.0	19.	Zamm.com	1,247	NA
10.	UGO Film-TV	4,230	20.7	20.	Paramount Online	1,244	–25.9

NA = Not applicable. (1) Number of unique visitors, in thousands, who visited website at least once in June 2010. (2) Percent change over June 2009.

Most Popular DVDs, 2009

Source: Rentrak Corporation

Top Rentals, 2009

Rank	Title
1.	Taken
2.	The Curious Case of Benjamin Button
3.	Seven Pounds
4.	Paul Blart: Mall Cop
5.	Gran Torino
6.	Marley & Me
7.	Knowing
8.	Eagle Eye
9.	Twilight
10.	Role Models
11.	Valkyrie
12.	Slumdog Millionaire
13.	Bride Wars
14.	The Day the Earth Stood Still
15.	Pineapple Express
16.	Lakeview Terrace
17.	Changeling
18.	Bedtime Stories
19.	Righteous Kill
20.	I Love You, Man

Top Selling DVDs, 2009

Rank	Title
1.	Twilight
2.	Harry Potter and the Half-Blood Prince
3.	Transformers: Revenge of the Fallen
4.	The Hangover
5.	Up
6.	Star Trek
7.	Bolt
8.	Beverly Hills Chihuahua
9.	The Proposal
10.	Gran Torino
11.	Madagascar: Escape 2 Africa
12.	Marley & Me
13.	Santa Buddies
14.	Ice Age: Dawn of the Dinosaurs
15.	High School Musical 3: Senior Year
16.	G.I. Joe: The Rise of Cobra
17.	Fast & Furious
18.	Madagascar 2: Move It! Move It! (double pack)
19.	Pinocchio
20.	Hannah Montana: The Movie

Top-Selling Video Games, 2009

Source: The NPD Group/Retail Tracking Service; ranked by units sold, in millions

The video game industry (which includes hardware, software, and accessories) generated U.S. retail sales in 2009 of close to $19.7 bil, an 8 percent decline over $21.4 bil in 2008. Consoles: 360 = Microsoft Xbox 360; NDS = Nintendo DS; PS3 = PlayStation 3; Wii = Nintendo Wii.

Rank	Title (console)	Units sold
1.	Call of Duty: Modern Warfare 2* (360)	5.84 mil
2.	Wii Sports Resort w/ Wii Motion Plus* (Wii)	4.54
3.	New Super Mario Bros. Wii (Wii)	4.22
4.	Wii Fit w/ balance board* (Wii)	3.60
5.	Wii Fit Plus* (Wii)	3.53
6.	Wii Mario Kart w/ wheel (Wii)	3.16 mil
7.	Wii Play w/ remote* (Wii)	3.14
8.	Call of Duty: Modern Warfare 2* (PS3)	2.98
9.	Halo 3: ODST (360)	2.24
10.	Pokémon Platinum Version (NDS)	2.05

*Includes collector's, limited, legendary, and bundle (guitar) editions.

All-Time Top-Selling Video Games, 1995-2010

Source: The NPD Group/Retail Tracking Service

Sales of video games through July 2010. Consoles: 360 = Microsoft Xbox 360; NDS = Nintendo DS; PS2 = PlayStation 2; PS3 = PlayStation 3; Wii = Nintendo Wii.

Rank	Title (console)
1.	Wii Play w/ remote* (Wii)
2.	Wii Mario Kart w/ wheel (Wii)
3.	Grand Theft Auto: San Andreas (PS2)
4.	Wii Fit w/ balance board* (Wii)
5.	New Super Mario Bros. (NDS)
6.	Call of Duty: Modern Warfare 2* (360)
7.	Grand Theft Auto: Vice City (PS2)
8.	New Super Mario Bros. Wii (Wii)
9.	Halo 3* (360)
10.	Mario Kart DS (NDS)

*Includes collector's, limited, legendary, and bundle (guitar) editions.

Film and TV Content Ratings

The Motion Picture Association of America (MPAA) began rating movies in 1968. The system was heavily revised in 1984 and again in 1990. The MPAA, National Cable Television Association, and National Association of Broadcasters developed and revised the TV ratings system in 1997, in accordance with the Telecommunications Act of 1996; it was implemented in Oct. 1997.

Film Ratings

G: General Audience. All ages admitted. Does not contain themes, language, nudity, sex, or violence that the MPAA ratings board believes would offend parents whose younger children see the film. Does not necessarily denote a "certificate of approval" nor "children's" movie. No nudity, sex scenes, or drug use depicted.

PG: Parental Guidance Suggested. Some material may not be suited for children. The MPAA ratings board recommends that parents determine whether the content of the film is appropriate for their children. The film may contain more mature themes, some profanity, violence, or brief nudity. No drug use depicted.

PG-13: Parents Strongly Cautioned. Some material may be inappropriate for children under 13. The MPAA urges more strongly that parents vet the movie to see if its content is appropriate for their children. Any movie depicting drug use or more than brief nudity is automatically rated at least PG-13. Violence is permitted, though it is generally not both realistic or extreme and persistent violence. The single use of one sexually-derived expletive rates a PG-13; more than one use requires at least an R rating.

R: Restricted. Under 17 requires accompanying parent or adult guardian. Movies given R ratings contain some adult material, defined as adult themes or activity, hard language, intense or persistent violence, sexually-oriented nudity, or drug abuse.

NC-17: No One 17 and Under Admitted. The ratings board considers NC-17 films those that most parents would consider too adult for children under 17. An NC-17 rating does not mean the film is obscene or pornographic. The rating can be based on violence, sex, aberrational behavior, drug abuse, or any other element that most parents would consider too adult for children.

TV Ratings

Y: All Children. Program designed to be acceptable for children of all ages. Its themes and elements are designed for a very young audience.

Y7: Directed to Older Children. Program designed for children ages 7 and older, and more appropriate for those who have the skills to distinguish between make-believe and reality. May include mild fantasy/comedic violence. Programs with more than mild fantasy violence are denoted with FV.

G: General Audience. Program not necessarily designed for children, but most parents would find it suitable for all ages. Little or no violence, no strong language, and little or no sexual dialogue or situations.

PG: Parental Guidance Suggested. Program might contain material that parents would consider inappropriate for children, such as an adult theme or one or more of the following: suggestive dialogue (D), infrequent coarse language (L), some sexual situations (S), or moderate violence (V).

TV-14: Parents Strongly Cautioned. Program contains material that many parents would consider inappropriate for children under 14, such as one or more of the following: intensely suggestive dialogue (D), strong coarse language (L), intense sexual situations (S), or intense violence.

TV-MA: Mature Audience Only. Program specifically designed for adults and may be unsuitable for children under 17. Contains one or more of the following: crude indecent language (L), explicit sexual activity (S), or graphic violence (V).

Arts Participation, 2008

Source: *2008 Survey of Public Participation in the Arts*, National Endowment for the Arts
U.S. adults participating in an activity at least once in past 12 months. * = Benchmark arts activity.

Performing arts	Percent of adults attending/ visiting/reading 1982	1992	2002	2008	Adults participating (mil) 2008
Music					
Jazz*	9.6%	10.6%	10.8%	7.8%	17.6
Classical music*	13.0	12.5	11.6	9.3	20.9
Opera*	3.0	3.3	3.2	2.1	4.8
Latin music	NA	NA	NA	4.9	10.9
Performing arts festivals	NA	NA	NA	20.8	46.7
Plays					
Musical plays*	18.6	17.4	17.1	16.7	37.6
Non-musical plays*	11.9	13.5	12.3	9.4	21.2
Dance					
Ballet*	4.2	4.7	3.9	2.9	6.6
Other dance	NA	7.1	6.3	5.2	11.7
Visual arts					
Art exhibitions					
Art museums/galleries	22.1	26.7	26.5	22.7	51.1
Art/craft fairs and festivals	39.0	40.7	33.4	24.5	55.1
Parks and historic sites					
Parks/monuments/historic buildings/neighborhoods	37.0	34.5	31.6	24.9	56.0
Literature					
Plays/poetry/novels/short stories	56.9	54.0	46.7	50.2	112.8
All benchmark arts activities	**39.0**	**41.0**	**39.4**	**34.6**	**77.8**

NA = Not asked.

Arts Participation Through Technology, 2008

Source: *Audience 2.0: How Technology Influences Arts Participation*, National Endowment for the Arts
Percent of U.S. adult population that participated in different arts activities through electronic or digital media, which includes radio, audio recordings, television, video recordings, Internet, and portable media devices.

Activity	Percentage
Listen to/watch jazz	14.0%
Listen to/watch classical music	17.8
Listen to/watch opera	4.9
Listen to/watch Latin music	14.8
Listen to/watch musical plays	7.9
Listen to/watch non-musical plays	6.7
Watch dance (including ballet)	7.9
Programs about artists, artworks, or art museums	14.9
Programs about books or writers	15.0%
Use the Internet to view visual art online	14.1
Use the Internet to view or download an arts performance	21.0
Use the Internet to create or post art	5.0
Use the Internet to read novels, short stories, or poetry	14.9

Longest-Running Broadway Plays

Source: The Broadway League, New York, NY

	Title (run)[1]	Performances[2]
1.	*The Phantom of the Opera (1988-)	9,395
2.	Cats (1982-2000)	7,485
3.	Les Misérables (1987-2003)	6,680
4.	A Chorus Line (1975-90)	6,137
5.	Oh! Calcutta! (revival, 1976-89)	5,959
6.	*Chicago (revival, 1996-)	5,724
7.	Beauty and the Beast (1994-2007)	5,461
8.	*The Lion King (1997-)	5,309
9.	Rent (1996-2008)	5,123
10.	Miss Saigon (1991-2001)	4,092
11.	*Mamma Mia! (2001-)	3,672
12.	42nd Street (1980-89)	3,486
13.	Grease (1972-80)	3,388
14.	Fiddler on the Roof (1964-72)	3,242
15.	Life With Father (1939-47)	3,224
16.	Tobacco Road (1933-41)	3,182
17.	Hello, Dolly! (1964-70)	2,844
18.	*Wicked (2003-)	2,830
19.	My Fair Lady (1956-62)	2,717
20.	Hairspray (2002-09)	2,642
21.	Avenue Q (2003-09)	2,534
22.	The Producers (2001-07)	2,502
23.	Cabaret (revival, 1998-2004)	2,377
24.	Annie (1977-83)	2,377
25.	Man of La Mancha (1965-71)	2,328
26.	Abie's Irish Rose (1922-27)	2,327
27.	Oklahoma! (1943-48)	2,212
28.	Smokey Joe's Cafe (1995-2000)	2,036
29.	*Jersey Boys (2005-)	1,985
30.	Pippin (1972-77)	1,944
31.	South Pacific (1949-54)	1,925
32.	The Magic Show (1974-78)	1,920
33.	Aida (2000-04)	1,852
34.	Gemini (1977-81)	1,819
35.	Deathtrap (1978-82)	1,793
36.	Harvey (1944-49)	1,775
37.	Dancin' (1978-82)	1,774
38.	La Cage aux Folles (1983-87)	1,761
39.	Hair (1968-72)	1,750
40.	The Wiz (1975-79)	1,672
41.	Born Yesterday (1946-49)	1,642
42.	Crazy For You (1992-96)	1,622
43.	Ain't Misbehavin' (1978-82)	1,604
44.	The Best Little Whorehouse in Texas (1978-82)	1,584
45.	Spamalot (2005-09)	1,575
46.	Mary, Mary (1961-64)	1,572
47.	Evita (1979-83)	1,567
48.	The Voice of the Turtle (1943-48)	1,557
49.	Jekyll & Hyde (1997-2001)	1,543
50.	Barefoot in the Park (1963-67)	1,530

*Still running as of Aug. 29, 2010. (1) Unless noted, listings reflect a play's first run on Broadway. (2) Number of performances through Aug. 29, 2010.

Broadway Season Statistics, 1959-2010

Source: The Broadway League, New York, NY

Season	Gross (mil $)	Attendance (mil)	Playing weeks	New productions
1959-1960	$46	7.9	1,156	58
1964-1965	50	8.2	1,250	67
1969-1970	53	7.1	1,047	62
1974-1975	57	6.6	1,101	54
1979-1980	146	9.6	1,540	61
1984-1985	209	7.3	1,078	33
1989-1990	282	8.0	1,070	40
1994-1995	406	9.0	1,120	33
1999-2000	$603	11.4	1,464	37
2004-2005	769	11.5	1,494	39
2005-2006	862	12.0	1,501	39
2006-2007	939	12.3	1,509	35
2007-2008	938	12.3	1,560	36
2008-2009	943	12.2	1,548	43
2009-2010	1,020	11.9	1,464	39

Notable U.S. Museums

This unofficial list of some of the largest (by budget) museums in the U.S. was compiled with the assistance of the American Association of Museums, a national association representing the concerns of the museum community. Association members also include zoos, aquariums, arboretums, botanical gardens, and planetariums, but these are not included in *The World Almanac* listing.

Museum	City	State
American Museum of Natural History	New York	NY
Amon Carter Museum of Western Art	Ft. Worth	TX
The Art Institute of Chicago	Chicago	IL
Brooklyn Museum of Art	Brooklyn	NY
Busch-Reisinger Museum	Cambridge	MA
California Academy of Sciences	San Francisco	CA
California Science Center	Los Angeles	CA
Carnegie Museums of Pittsburgh	Pittsburgh	PA
Chicago Historical Society	Chicago	IL
Children's Museum of Indianapolis	Indianapolis	IN
Cincinnati Art Museum	Cincinnati	OH
Cincinnati Museum Center	Cincinnati	OH
Cleveland Museum of Art	Cleveland	OH
Colonial Williamsburg	Williamsburg	VA
Corning Museum of Glass	Corning	NY
Dallas Museum of Art	Dallas	TX
Denver Art Museum	Denver	CO
Denver Museum of Nature and Science	Denver	CO
Detroit Institute of Arts	Detroit	MI
Exploratorium	San Francisco	CA
The Field Museum	Chicago	IL
Fine Arts Museums of San Francisco	San Francisco	CA
Franklin Institute	Philadelphia	PA
The Frick Collection	New York	NY
J. Paul Getty Museum	Los Angeles	CA
Harvard University Art Museums	Cambridge	MA
Henry F. Dupont Winterthur Museum	Winterthur	DE
Henry Ford Museum/Greenfield Village	Dearborn	MI
High Museum of Art	Atlanta	GA
Houston Museum of Natural Science	Houston	TX
Jamestown-Yorktown Foundation	Williamsburg	VA
Jewish Museum	New York	NY
L.A. County Museum of Art	Los Angeles	CA
Liberty Science Center, Liberty State Park	Jersey City	NJ
Maryland Science Center	Baltimore	MD
Mashantucket Pequot Museum and Research Center	Mashantucket	CT
Metropolitan Museum of Art	New York	NY
Milwaukee Public Museum	Milwaukee	WI
Minneapolis Institute of Art	Minneapolis	MN
Museum of African American History	Detroit	MI
Museum of the American West	Los Angeles	CA
Museum of Contemporary Art	Los Angeles	CA
Museum of Fine Arts	Boston	MA
Museum of Fine Arts	Houston	TX
Museum of Modern Art	New York	NY
Museum of New Mexico	Santa Fe	NM
Museum of Science	Boston	MA
Mystic Seaport Museum	Mystic	CT
National Air and Space Museum	Washington	DC
National Baseball Hall of Fame and Museum, Inc.	Cooperstown	NY
National Gallery of Art	Washington	DC
National Museum of American History	Washington	DC
National Museum of the American Indian	Washington	DC
National Museum of Natural History	Washington	DC
Nelson-Atkins Museum of Art	Kansas City	MO
New York Historical Society	New York	NY
New York State Museum	Albany	NY
Peabody Essex Museum	Salem	MA
Pennsylvania Historical and Museum Commission	Harrisburg	PA
Philadelphia Museum of Art	Philadelphia	PA
Public Museum of Grand Rapids	Grand Rapids	MI
Rock and Roll Hall of Fame and Museum, Inc.	Cleveland	OH
San Diego Museum of Art	San Diego	CA
San Francisco Museum of Modern Art	San Francisco	CA
Science Museum of Minnesota	Saint Paul	MN
Scottsdale Museum of Contemp. Art	Scottsdale	AZ
St. Louis Science Center	St. Louis	MO
Solomon R. Guggenheim Museum of Art	New York	NY
Toledo Museum of Art	Toledo	OH
U.S. Holocaust Memorial Museum	Washington	DC
Univ. of Pennsylvania Museum of Archaeology and Anthropology	Philadelphia	PA
Virginia Museum of Fine Arts	Richmond	VA
Wadsworth Atheneum	Hartford	CT
Walker Art Center	Minneapolis	MN
Whitney Museum of American Art	New York	NY

Symphony Orchestras: Most Performed Composers, 2008-09

Source: League of American Orchestras

Composer	Performances	Composer	Performances	Composer	Performances
Ludwig Van Beethoven	872	Igor Stravinsky	265	Johann Sebastian Bach	205
Wolfgang Amadeus Mozart	705	Sergei Rachmaninoff	253	Leonard Bernstein	183
Johannes Brahms	481	Franz Joseph Haydn	237	Gustav Mahler	182
Piotr Ilyich Tchaikovsky	449	Richard Strauss	230	Samuel Barber	173
Antonin Dvořák	380	Aaron Copland	216	Dmitri Shostakovich	173
Felix Mendelssohn	330	Jean Sibelius	216	Richard Wagner	161
Maurice Ravel	323	Sergei Prokofiev	212		

Note: Scheduled performances of a given composer's work(s) during the 2008-09 season (generally Oct.-Sept.) by members of the League of American Orchestras.

Opera: Most Produced Works, 2009-10

Source: OPERA America

Work, composer	Productions	Work, composer	Productions	Work, composer	Productions
Le nozze di Figaro [*The Marriage of Figaro*], Wolfgang Amadeus Mozart	20	*La traviata*, Giuseppe Verdi	12	*Il barbiere di Siviglia* [*The Barber of Seville*], Gioachino Rossini	9
La bohème, Giacomo Puccini	19	*Madama Butterfly*, Giacomo Puccini	11	*Die Zauberflöte* [*The Magic Flute*], Wolfgang Amadeus Mozart	9
Carmen, Georges Bizet	16	*Hansel and Gretel*, Engelbert Humperdinck	10		
Tosca, Giacomo Puccini	13	*L'elisir d'amore* [*The Elixir of Love*], Gaetano Donizetti	9		

Note: Scheduled productions of a given work during the 2009-10 season (generally Oct.-Sept.) by members of OPERA America and Opera.ca.

Best-Selling U.S. Magazines, 2010

Source: Audit Bureau of Circulations

General magazines, exclusive of comics; also excluding magazines that failed to file reports to ABC by press time. Based on total average paid and verified circulation during the six months ending June 30, 2010, ranked by paid circulation size.

Publication	Paid circ.	Publication	Paid circ.	Publication	Paid circ.
1. AARP The Magazine	23,721,626	6. Good Housekeeping	4,427,964	12. Time	3,312,484
2. AARP Bulletin	23,574,328	7. Game Informer	4,364,170	13. Taste of Home	3,257,200
3. Better Homes and Gardens	7,644,011	8. Woman's Day	3,919,488	14. Sports Illustrated	3,212,278
4. Reader's Digest	6,112,811	9. Family Circle	3,849,673	15. Cosmopolitan	3,046,229
5. National Geographic	4,493,110	10. Ladies' Home Journal	3,831,072	16. Prevention	2,927,638
		11. People	3,553,420	17. Southern Living	2,841,894

	Publication	Paid circ.
18.	AAA Via	2,740,176
19.	Maxim	2,549,893
20.	Remedy/Remedy MD	2,515,433
21.	AAA Living	2,460,455
22.	O, The Oprah Magazine	2,415,336
23.	American Legion Magazine	2,346,264
24.	Glamour	2,320,325
25.	Parenting	2,229,253
26.	Redbook	2,226,356
27.	FamilyFun	2,117,159
28.	TV Guide	2,093,124
29.	ESPN The Magazine	2,073,813
30.	AAA World	2,072,502
31.	Martha Stewart Living	2,057,960
32.	Parents	2,057,324
33.	Smithsonian	2,054,696
34.	Seventeen	2,048,781
35.	Guideposts	2,026,433
36.	Real Simple	2,014,781
37.	US Weekly	1,952,885
38.	Money	1,928,179
39.	Men's Health	1,917,411
40.	Entertainment Weekly	1,798,643
41.	American Rifleman	1,794,633
42.	Cooking Light	1,783,139
43.	In Style	1,760,365
44.	Every Day with Rachel Ray	1,709,636
45.	Golf Digest	1,675,232
46.	Birds & Blooms	1,655,052
47.	Shape	1,650,752
48.	Playboy	1,628,567
49.	Country Living	1,614,398
50.	Bon Appetit	1,611,930
51.	Newsweek	1,610,632
52.	Women's Health	1,588,260
53.	Self	1,519,016
54.	Fitness	1,515,065
55.	Golf Magazine	1,455,190
56.	Rolling Stone	1,453,158
57.	Food Network Magazine	1,399,894
58.	Health	1,391,627
59.	Woman's World	1,366,748
60.	VFW Magazine	1,362,177
61.	Car and Driver	1,326,350
62.	Weight Watchers	1,313,239
63.	Popular Science	1,312,175
64.	More	1,307,215
65.	First	1,278,380
66.	Sunset	1,265,934
67.	Field & Stream	1,260,769
68.	Popular Mechanics	1,219,094
69.	Vogue	1,215,027
70.	Country	1,200,104
71.	Vanity Fair	1,198,618
72.	Reminisce	1,186,338
73.	Boys' Life	1,166,871
74.	Family Handyman	1,142,799
75.	Motor Trend	1,122,273
76.	U.S. News & World Report	1,121,618
77.	Lucky	1,107,075
78.	All You	1,098,858
79.	Elle	1,095,702
80.	Food & Family	1,084,503
81.	Allure	1,082,873
82.	Essence	1,066,482
83.	American Hunter	1,059,317
84.	Everyday Food	1,058,821
85.	New Yorker	1,034,602
86.	Teen Vogue	1,026,053
87.	Scouting	1,011,593
88.	Marie Claire	1,007,712
89.	Traditional Home	1,001,765
90.	This Old House	992,621
91.	Travel + Leisure	973,821
92.	Midwest Living	966,784
93.	Food & Wine	961,050
94.	GQ	947,519
95.	Star Magazine	946,480
96.	Forbes	922,888
97.	Bloomberg Businessweek	921,340
98.	House Beautiful	906,349
99.	People Stylewatch	882,683
100.	National Geographic International	874,243

Most Challenged Books, 2009

Source: Office for Intellectual Freedom, American Library Association (ALA)

A challenge is a formal, written complaint filed with a library or school requesting that materials be removed because of content or appropriateness. From 2001-09, 4,312 challenges were reported to the ALA: 1,413 challenges due to "sexually explicit" material; 1,125 for "offensive language"; 897 for material deemed "unsuited to age group"; 514 for "violence"; 344 challenges for "homosexuality"; 269 for "religious viewpoints"; and 109 for being "anti-family." Approximately 34% of challenges were to material in classrooms; 33% in school libraries; 23% in public libraries. ALA estimates that for every challenge it received, 4-5 were not reported.

Rank	Title, author	Common reasons given for challenge
1.	*TTYL*; *TTFN*; and *L8R, G8R*; by Lauren Myracle	Nudity, sexually explicit, offensive language, unsuited to age group, drugs
2.	*And Tango Makes Three*, by Peter Parnell and Justin Richardson	Homosexuality
3.	*The Perks of Being a Wallflower*, by Stephen Chbosky	Homosexuality, sexually explicit, anti-family, offensive language, religious viewpoint, unsuited to age group, drugs, suicide
4.	*To Kill a Mockingbird*, by Harper Lee	Racism, offensive language, unsuited to age group
5.	*Twilight* (series), by Stephenie Meyer	Sexually explicit, religious viewpoint, unsuited to age group
6.	*Catcher in the Rye*, by J. D. Salinger	Sexually explicit, offensive language, unsuited to age group
7.	*My Sister's Keeper*, by Jodi Picoult	Sexism, homosexuality, sexually explicit, offensive language, religious viewpoint, unsuited to age group, drugs, suicide, violence
8.	*The Earth, My Butt, and Other Big, Round Things*, by Carolyn Mackler	Sexually explicit, offensive language, unsuited to age group
9.	*The Color Purple*, Alice Walker	Sexually explicit, offensive language, unsuited to age group
10.	*The Chocolate War*, by Robert Cormier	Nudity, sexually explicit, offensive language, unsuited to age group

Some Notable New Books, 2010

Source: Reference and User Services Assn., Young Adult Library Services Assn., American Library Association (ALA)

Fiction

The Convalescent, Jessica Anthony
The Year of the Flood: A Novel, Margaret Atwood
The Anthologist: A Novel, Nicholson Baker
Await Your Reply: A Novel, Dan Chaon
Little Bee: A Novel, Chris Cleave
Spooner, Pete Dexter
Tinkers, Paul Harding
The Vagrants: A Novel, Yiyun Li
Let the Great World Spin: A Novel, Colum McCann
A Mercy: A Novel, Toni Morrison
Generosity: An Enhancement, Richard Powers
Brooklyn: A Novel, Colm Tóibín

Non-Fiction

Columbine, Dave Cullen
Zeitoun, Dave Eggers
The Good Soldiers, David Finkel
The Lost City of Z: A Tale of Deadly Obsession in the Amazon, David Grann
The Photographer: Into War-torn Afghanistan with Doctors Without Borders, Emmanuel Guibert
The Age of Wonder: How the Romantic Generation Discovered the Beauty and Terror of Science, Richard Holmes
The Snakehead: An Epic Tale of the Chinatown Underworld and the American Dream, Patrick Radden Keefe
Born to Run: A Hidden Tribe, Superathletes, and the Greatest Race the World Has Never Seen, Christopher McDougall
Tears in the Darkness: The Story of the Bataan Death March and Its Aftermath, Michael Norman and Elizabeth M. Norman
Provenance: How a Con Man and a Forger Rewrote the History of Modern Art, Lainey Salisbury and Aly Sujo
Stitches: A Memoir, David Small
The Hawk and the Dove: Paul Nitze, George Kennan, and the History of the Cold War, Nicholas Thompson

Poetry

Face, Sherman Alexie
What Goes On: Selected and New Poems 1995-2009, Stephen Dunn

Some Notable New Books for Children, 2010

Source: Association for Library Service to Children, American Library Association (ALA)

Younger Readers

All the World, Liz Garton Scanlon
Benny and Penny in the Big No-No!, Geoffrey Hayes
Big Wolf and Little Wolf, Nadine Brun-Cosme
Birds, Kevin Henkes
A Book, Mordicai Gerstein
Book Fiesta!: Celebrate Children's Day/Book Day; Celebremos El día de los niños/El día de los libros, Pat Mora
The Curious Garden, Peter Brown
*Gracias * Thanks*, Pat Mora
Higher! Higher!, Leslie Patricelli
I Spy Fly Guy!, Tedd Arnold
Little Mouse Gets Ready, Jeff Smith
Listen to the Wind: The Story of Dr. Greg and Three Cups of Tea, Greg Mortenson and Susan L. Roth
Mommy, Mama, and Me, Lesléa Newman
Mouse and Mole: Fine Feathered Friends, Wong Herbert Yee
My Abuelita, Tony Johnston
Pearl and Wagner: One Funny Day, Kate McMullan
Posy, Linda Newbery
Red Sings from Treetops: A Year in Colors, Joyce Sidman
Thunder-Boomer!, Shutta Crum
Waiting for Winter, Sebastian Meschenmoser
Yummy: Eight Favorite Fairy Tales, Lucy Cousins

Middle Readers

Adventures in Cartooning, James Sturm, Andrew Arnold, and Alexis Frederick-Frost
An Eye for Color: The Story of Josef Albers, Natasha Wing
Anne Frank: Her life in words and pictures from the archives of The Anne Frank House, Menno Metselaar and Ruud van der Rol
Bad News for Outlaws: The Remarkable Life of Bass Reeves, Deputy U.S. Marshal, Vaunda Micheaux Nelson
Crow Call, Lois Lowry
The Day-Glo Brothers: The True Story of Bob and Joe Switzer's Bright Ideas and Brand-New Colors, Chris Barton
Diego: Bigger Than Life, Carmen T. Bernier-Grand
Down, Down, Down: A Journey to the Bottom of the Sea, Steve Jenkins
Eidi, Bodil Bredsdorff; trans. by Kathryn Mahaffy
The Evolution of Calpurnia Tate, Jacqueline Kelly
A Faraway Island, Annika Thor; trans. by Linda Schenck
Federico García Lorca, Georgina Lázaro
The Frog Scientist, Pamela S. Turner
The Grand Mosque of Paris: A Story of How Muslims Rescued Jews During the Holocaust, Karen Gray Ruelle and Deborah Durland DeSaix
How Oliver Olson Changed the World, Claudia Mills
In the Belly of an Ox: The Unexpected Photographic Adventures of Richard and Cherry Kearton, Rebecca Bond
The Magician's Elephant, Kate DiCamillo
The Mostly True Adventures of Homer P. Figg, by Rodman Philbrick
Pharaoh's Boat, David L. Weitzman
River of Dreams: The Story of the Hudson River, Hudson Talbott
The Small Adventure of Popeye and Elvis, Barbara O'Connor
The Storm in the Barn, Matt Phelan
Tsunami!, Kimiko Kajikawa
When You Reach Me, Rebecca Stead
Where the Mountain Meets the Moon, Grace Lin
A Whiff of Pine, A Hint of Skunk: A Forest of Poems, Deborah Ruddell
You Never Heard of Sandy Koufax?!, Jonah Winter

Older Readers

Anything But Typical, Nora Raleigh Baskin
Almost Astronauts: 13 Women Who Dared to Dream, Tanya Lee Stone
Claudette Colvin: Twice Toward Justice, Phillip Hoose
The Giant-Slayer, Iain Lawrence
The Great and Only Barnum: The Tremendous, Stupendous Life of Showman P. T. Barnum, Candace Fleming
Leviathan, Scott Westerfeld
The Lost Conspiracy, Frances Hardinge
Marching for Freedom: Walk Together, Children, and Don't You Grow Weary, Elizabeth Partridge
Moribito II: Guardian of the Darkness, Nahoko Uehashi; trans. by Cathy Hirano
Mother Poems, Hope Anita Smith
Mr. Lincoln's High-Tech War: How the North Used the Telegraph, Railroads, Surveillance Balloons, Ironclads, High-Powered Weapons, and More to Win the Civil War, Thomas B. Allen and Roger MacBride Allen
Return to Sender, Julia Alvarez
The Rock and the River, Kekla Magoon
Sweethearts of Rhythm: The Story of the Greatest All-Girl Swing Band in the World, Marilyn Nelson
Tales from Outer Suburbia, Shaun Tan
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Troll's Eye View: A Book of Villainous Tales, edited by Ellen Datlow and Terri Windling
Truce: The Day the Soldiers Stopped Fighting, Jim Murphy
Wild Things, Clay Carmichael
Written in Bone: Buried Lives of Jamestown and Colonial Maryland, Sally M. Walker
Years of Dust: The Story of the Dust Bowl, Albert Marrin

All Ages

Ashley Bryan: Words to My Life's Song, Ashley Bryan
Duck! Rabbit!, Amy Krouse Rosenthal
The Lion & the Mouse, Jerry Pinkney
Moonshot: The Flight of Apollo 11, Brian Floca
My People, Langston Hughes
Redwoods, Jason Chin
Shades of People, Shelley Rotner and Sheila M. Kelly

Best-Selling Books, 2009

Source: Publishers Weekly

Hardcover Fiction

1. *The Lost Symbol: A Novel*, Dan Brown
2. *The Associate: A Novel*, John Grisham
3. *The Help*, Kathryn Stockett
4. *I, Alex Cross*, James Patterson
5. *The Last Song*, Nicholas Sparks
6. *Ford County*, John Grisham
7. *Finger Lickin' Fifteen*, Janet Evanovich
8. *The Host: A Novel*, Stephenie Meyer
9. *Under the Dome*, Stephen King
10. *Pirate Latitudes*, Michael Crichton
11. *Scarpetta*, Patricia Cornwell
12. *U Is for Undertow*, Sue Grafton
13. *The Scarpetta Factor*, Patricia Cornwell
14. *Shadowland*, Alyson Noel
15. *The 8th Confession*, James Patterson

Hardcover Nonfiction

1. *Going Rogue: An American Life*, Sarah Palin
2. *Act Like a Lady, Think Like a Man: What Men Really Think About Love, Relationships, Intimacy, and Commitment*, Steve Harvey
3. *Arguing with Idiots: How to Stop Small Minds and Big Government*, Glenn Beck
4. *Liberty and Tyranny: A Conservative Manifesto*, Mark R. Levin
5. *True Compass: A Memoir*, Edward M. Kennedy
6. *Have a Little Faith: A True Story*, Mitch Albom
7. *It's Your Time: Activate Your Faith, Achieve Your Dreams, and Increase in God's Favor*, Joel Osteen
8. *The Last Lecture*, Randy Pausch with Jeffrey Zaslow
9. *Stones into Schools: Promoting Peace with Books Not Bombs*, Greg Mortenson
10. *Superfreakonomics*, Steven D. Levitt and Stephen J. Dubner
11. *Mastering the Art of French Cooking*, Julia Child
12. *Master Your Metabolism: The 3 Diet Secrets to Naturally Balancing Your Hormones for a Hot and Healthy Body!*, Jillian Michaels
13. *The Yankee Years*, Joe Torre and Tom Verducci
14. *Open*, Andre Agassi
15. *Time of My Life*, Patrick Swayze and Lisa Niemi

Trade Paperback

1. *The Shack: Where Tragedy Confronts Eternity*, William P. Young
2. *Glenn Beck's Common Sense: The Case Against an Out-of-Control Government, Inspired by Thomas Paine*, Glenn Beck
3. *The Time Traveler's Wife*, Audrey Niffenegger
4. *Push*, Sapphire
5. *The Guernsey Literary and Potato Peel Pie Society*, Mary Ann Shaffer and Annie Barrows
6. *Vision in White*, Nora Roberts
7. *Three Cups of Tea: One Man's Mission to Promote Peace ... One School at a Time*, Greg Mortenson
8. *Bed of Roses*, Nora Roberts
9. *Eat This, Not That! Supermarkets*, David Zinczenko
10. *Pride and Prejudice and Zombies*, Jane Austen and Seth Grahame-Smith

Mass Market

1. *The Associate: A Novel*, John Grisham
2. *Cross Country*, James Patterson
3. *Sail*, James Patterson
4. *Tribute*, Nora Roberts
5. *Fearless Fourteen*, Janet Evanovich
6. *The Quickie*, James Patterson
7. *Scarpetta*, Patricia Cornwell
8. *The Whole Truth*, David Baldacci
9. *Divine Justice*, David Baldacci
10. *Sooner or Later*, Debbie Macomber
    Mrs. Miracle, Debbie Macomber
    Dark Summer, Iris Johansen

Children's Hardcover

1. *Dog Days* (Diary of a Wimpy Kid #4), Jeff Kinney
2. *The Last Straw* (Diary of a Wimpy Kid #3), Jeff Kinney
3. *Tempted* (House of Night #6), P. C. Cast and Kristin Cast
4. *The Last Olympian* (Percy Jackson and the Olympians #5), Rick Riordan
5. *Breaking Dawn Special Edition*, Stephenie Meyer
6. *Hunted* (House of Night #5), P. C. Cast and Kristin Cast
7. *Twilight: Director's Notebook: The Story of How We Made the Movie Based on the Novel by Stephenie Meyer*, Catherine Hardwicke
8. *Witch & Wizard*, James Patterson and Gabrielle Charbonnet
9. *Shadowland* (The Immortals #3), Alyson Noël
10. *Max* (Maximum Ride #5), James Patterson

Almanacs, Atlases, and Annuals

1. *The World Almanac and Book of Facts 2010*
2. *2009 AAA Road Atlas*

Leading U.S. Daily Newspapers, 2009

Source: *Editor & Publisher International Yearbook*, 2010

As of Feb. 1, 2010, the number of U.S. daily newspapers had fallen to 1,397, for a net loss of 11 since Feb. 1, 2009. Average daily circulation fell by 2.3 mil, from 48.6 mil in 2008 to about 46.3 mil in 2009. The overall number of Sunday papers rose by 17, to 919. Average Sunday circulation as of Feb. 1, 2010, had fallen 2.2 mil, from 49.1 mil in 2009, to 46.9 mil in 2010.

(ranked by circulation as of Sept. 30, 2009; m = morning, e = evening, d = all day)

Newspaper (edition)	Circulation
1. New York (NY) *Wall Street Journal* (m)	2,011,999
2. Arlington (VA) *USA Today* (m)	1,900,116
3. New York (NY) *Times* (m)	927,851
4. Los Angeles (CA) *Times* (m)	657,467
5. Washington (DC) *Post* (m)	582,844
6. New York (NY) *Daily News* (m)	544,167
7. New York (NY) *Post* (m)	508,042
8. Chicago (IL) *Tribune* (m)	465,892
9. Houston (TX) *Chronicle* (m)	384,419
10. Philadelphia (PA) *Inquirer* (m)	361,480
11. Long Island (NY) *Newsday* (m)	357,124
12. Denver (CO) *Post* (m)	340,949
13. Phoenix (AZ) *Republic* (m)	316,874
14. Minneapolis (MN) *Star Tribune* (m)	304,543
15. Detroit (MI) *Free Press* (m)	298,243
16. St. Petersburg (FL) *Times* (m)	292,471
17. Chicago (IL) *Sun-Times* (m)	275,641
18. Cleveland (OH) *Plain Dealer* (m)	271,180
19. New York (NY) *am New York* (m)	266,852
20. Boston (MA) *Globe* (m)	264,105
21. Dallas (TX) *Morning News* (m)	263,810
22. Washington (DC) *Examiner* (m)	259,906
23. San Francisco (CA) *Chronicle* (d)	251,782
24. Portland (OR) *Oregonian* (d)	249,163
25. Newark (NJ) *Star-Ledger* (m)	246,006
26. San Diego (CA) *Union-Tribune* (m)	242,705
27. Miami (FL) *Herald* (m)	225,554
28. San Jose (CA) *Mercury News* (m)	224,199
29. Orlando (FL) *Sentinel* (d)	216,978
30. Kansas City (MO) *Star* (m)	216,226
31. Sacramento (CA) *Bee* (m)	215,820
32. St. Louis (MO) *Post-Dispatch* (m)	213,472
33. Orange County (CA) *Register* (m)	212,293
34. Atlanta (GA) *Journal-Constitution* (m)	211,420
35. Tampa (FL) *Tribune* (m)	204,106
36. Indianapolis (IN) *Star* (m)	201,823
37. Ft. Lauderdale (FL) *South Florida Sun-Sentinel* (m)	200,924
38. Milwaukee (WI) *Journal Sentinel* (m)	190,841
39. Baltimore (MD) *Sun* (m)	186,639
40. San Francisco (CA) *Examiner* (m)	186,335
41. St. Paul (MN) *Pioneer Press* (m)	185,220
42. Pittsburgh (PA) *Post-Gazette* (m)	184,234
43. Columbus (OH) *Dispatch* (m)	183,742
44. Detroit (MI) *News* (m)	178,280
45. Louisville (KY) *Courier-Journal* (m)	176,654
46. Las Vegas (NV) *Review-Journal* (m)	175,841
47. Walnut Creek (CA) *Contra Costa Times* (m)	174,852
48. Little Rock (AR) *Democrat-Gazette* (m)	169,458
49. Cincinnati (OH) *Enquirer* (m)	168,511
50. Greensburg (PA) *Tribune-Review* (m)	168,218
51. Charlotte (NC) *Observer* (m)	167,585
52. Fort Worth (TX) *Star-Telegram* (m)	167,364
53. Buffalo (NY) *News* (d)	165,511
54. Norfolk (VA) *Virginian-Pilot* (m)	164,454
55. New Orleans (LA) *Times-Picayune* (m)	159,655
56. Omaha (NE) *World-Herald* (d)	153,340
57. Bergen Co. (NJ) *Record* (m)	152,848
58. San Antonio (TX) *Express-News* (m)	152,156
59. West Palm Beach (FL) *Post* (m)	149,412
60. Oklahoma City (OK) *Oklahoman* (m)	147,212
61. Hartford (CT) *Courant* (m)	143,758
62. Memphis (TN) *Commercial Appeal* (m)	142,164
63. Austin (TX) *American-Statesman* (m)	140,602
64. Raleigh (NC) *News & Observer* (m)	139,826
65. Los Angeles (CA) *Investor's Business Daily* (m)	138,732
66. Boston (MA) *Herald* (m)	138,260
67. Jacksonville (FL) *Times-Union* (m)	136,026
68. Richmond (VA) *Times-Dispatch* (m)	133,179
69. Nashville (TN) *Tennessean* (m)	131,960
70. Fresno (CA) *Bee* (m)	126,398
71. Rochester (NY) *Democrat and Chronicle* (m)	124,987
72. Neptune (NJ) *Asbury Park Press* (m)	118,868
73. Seattle (WA) *Times* (m)	117,572
74. Birmingham (AL) *News* (m)	116,937
75. Des Moines (IA) *Register* (m)	116,876
76. Honolulu (HI) *Advertiser* (d)	113,947
77. Riverside (CA) *Press-Enterprise* (m)	113,182
78. Salt Lake City (UT) *Tribune* (m)	112,585
79. Chicago (IL) *Daily Herald* (m)	111,539
80. Providence (RI) *Journal* (m)	106,875
81. Toledo (OH) *Blade* (m)	104,148
82. Dayton (OH) *Daily News* (m)	104,138
83. Grand Rapids (MI) *Press* (e)	103,422
84. Tulsa (OK) *World* (m)	102,392
85. Allentown (PA) *Morning Call* (m)	100,617
86. Knoxville (TN) *News Sentinel* (m)	99,733
87. Lexington (KY) *Herald-Leader* (m)	99,707
88. Sarasota (FL) *Herald-Tribune* (m)	99,598
89. Akron (OH) *Beacon Journal* (m)	99,298
90. Stuart (FL) *Treasure Coast News/ Press-Tribune* (m)	99,116
91. Philadelphia (PA) *Daily News* (m)	97,694
92. Los Angeles (CA) *Daily News* (m)	95,938
93. Albuquerque (NM) *Journal* (m)	94,066
94. Tuscon (AZ) *Daily Star* (m)	93,770
95. Syracuse (NY) *Post-Standard* (m)	93,688
96. Mobile (AL) *Press-Register* (m)	92,849
97. Oakland (CA) *Tribune* (m)	92,794
98. Madison (WI) *Wisconsin State Journal* (m)	92,213
99. Los Angeles (CA) *La Opinion* (m)	91,977
100. Wilmington (DE) *News Journal* (d)	91,962

Leading Canadian Daily Newspapers, 2009

Source: *Editor & Publisher International Yearbook*, 2010

(ranked by circulation as of Sept. 30, 2009; all morning papers)

Newspaper	Circulation	Newspaper	Circulation
1. Toronto (ON) *Star*	430,931	6. Vancouver (BC) *Sun*	159,438
2. Toronto (ON) *Globe and Mail*	301,820	7. Vancouver (BC) *Province*	152,924
3. Montreal (QC) *Le Journal de Montreal*	265,764	8. Toronto (ON) *National Post*	150,884
4. Montreal (QC) *La Presse*	198,306	9. Montreal (QC) *Gazette*	147,668
5. Toronto (ON) *Sun*	195,211	10. Calgary (AB) *Herald*	119,131

Paid U.S. Newspaper Circulation, 1940-2009

Source: *Editor & Publisher International Yearbook*, 2010

(circulation figures in thousands)

	Number of daily newspapers			Circulation of daily newspapers			Sunday newspapers	
Year	Morning	Evening	Total	Morning	Evening	Total	Number	Circulation
1940	380	1,498	1,878	16,114	25,018	41,132	525	32,371
1945	330	1,419	1,749	19,240	29,144	48,384	485	39,860
1950	322	1,450	1,772	21,266	32,563	53,829	549	46,582
1955	316	1,454	1,760	22,183	33,964	56,147	541	46,448
1960	312	1,459	1,763	24,029	34,853	58,882	563	47,699
1965	320	1,444	1,751	24,107	36,251	60,358	562	48,600
1970	334	1,429	1,748	25,934	36,174	62,108	586	49,217
1975	339	1,436	1,756	25,490	35,165	60,655	639	51,096
1980	387	1,388	1,745	29,414	32,787	62,202	736	54,676
1985	482	1,220	1,676	36,362	26,405	62,766	798	58,826
1990	559	1,084	1,611	41,311	21,017	62,328	863	62,635
1995	656	891	1,533	44,310	13,883	58,193	888	61,229
2000	766	727	1,480	46,772	9,000	55,773	917	59,421
2005	817	645	1,452	46,122	7,222	53,345	914	55,270
2006	833	614	1,437	45,441	6,888	52,329	907	53,179
2007	867	565	1,422	44,548	6,194	50,742	907	51,246
2008	872	546	1,408	42,758	5,840	48,598	902	49,115
2009	869	528	1,397	40,796	5,482	46,278	919	46,850

Newspaper Advertising Revenues, 1950-2009

Source: *Editor & Publisher International Yearbook*, 2010

(in millions of dollars)

	National ad revenue	Retail ad revenue	Classified ad revenue	Print advertising total revenue		Online advertising total revenue		Total advertising revenue	
Year	(mil $)	(mil $)	(mil $)	(mil $)	% change[1]	(mil $)	% change	(mil $)	% change
1950	$518	$1,175	$377	$2,070	—	—	—	—	—
1955	712	1,755	610	3,077	48.7%	—	—	—	—
1960	778	2,100	803	3,681	19.6	—	—	—	—
1965	783	2,429	1,214	4,426	20.2	—	—	—	—
1970	891	3,292	1,521	5,704	28.9	—	—	—	—
1975	1,109	4,966	2,159	8,234	44.4	—	—	—	—
1980	1,963	8,609	4,222	14,794	79.7	—	—	—	—
1985	3,352	13,443	8,375	25,170	70.1	—	—	—	—
1990	4,122	16,652	11,506	32,280	28.3	—	—	—	—
1995	4,251	18,099	13,742	36,092	11.8	—	—	—	—
2000	7,653	21,409	19,608	48,670	5.1	—	—	—	—
2005	7,910	22,187	17,312	47,408	1.5	$2,027	31.5%	$49,435	2.5%
2006	7,505	22,121	16,986	46,611	–1.7	2,664	31.5	49,275	–0.3
2007	7,005	21,018	14,186	42,209	–9.4	3,166	18.8	45,375	–7.9
2008	5,996	18,769	9,975	34,740	–17.7	3,109	–1.8	37,848	–16.6
2009	4,424	14,218	6,179	24,821	–28.6	2,743	–11.8	27,564	–27.2

(1) Percent change for years 1950-2000 refers to the rate of change over the preceding 5-year period; 2005-09 figures represent the rate of change over the past year.

Top Newspaper Websites, June 2010

Source: comScore Media Metrix, Inc.

Rank	Website	Visitors[1]	% change[2]	Rank	Website	Visitors[1]	% change[2]
1.	The New York Times Brand	32,360	186.1%	11.	Mail Online	10,613	165.8%
2.	Tribune Newspapers	23,907	101.1	12.	Topix	7,877	28.8
3.	Advance Internet	16,409	88.4	13.	CSMonitor.com	6,711	NA
4.	WashingtonPost.com	16,369	106.8	14.	NYPost.com	6,695	124.6
5.	USA Today Sites	15,285	141.1	15.	Boston.com	5,172	43.4
6.	Hearst Newspapers	13,764	103.1	16.	Lee Enterprises, Incorporated	4,773	3.5
7.	McClatchy Corporation	12,521	53.7	17.	AH Belo	3,979	NA
8.	NYDailyNews.com	12,457	92.8	18.	Scripps Interactive Newspaper Group	3,845	NA
9.	MediaNews Group	11,844	98.4	19.	Telegraph Media Group	3,726	22.4
10.	Wall Street Journal Online	11,481	75.1	20.	Guardian.co.uk	3,632	26.1

NA = Not applicable. (1) Number of unique visitors, in thousands, who visited website at least once in June 2010. (2) Percent change over June 2009.

Top News/Information Websites, June 2010

Source: comScore Media Metrix, Inc.

Rank	Website	Visitors[1]	% change[2]	Rank	Website	Visitors[1]	% change[2]
1.	New York Times Digital	68,912	50.6%	11.	Huffington Post	24,393	NA
2.	CNN Network	67,647	102.5	12.	Tribune Newspapers	23,907	101.1%
3.	Yahoo! News	56,038	18.6	13.	CBS News Digital	16,446	138.3
4.	MSNBC	47,950	51.1	14.	Advance Internet	16,409	88.4
5.	The Weather Channel	44,291	6.3	15.	Examiner.com Sites	14,445	NA
6.	Gannett Sites	35,017	65.2	16.	Hearst Newspapers	13,764	NA
7.	Weatherbug Property	32,827	41.6	17.	BBC	13,501	NA
8.	AOL News	29,858	9.1	18.	Weather Underground	12,673	30.1
9.	The Washington Post Company	25,770	60.4	19.	McClatchy Corporation	12,521	53.7
10.	WorldNow Sites	24,620	44.3	20.	MediaNews Group	11,844	NA

NA = Not available. (1) Number of unique visitors, in thousands, who visited website at least once in June 2010. (2) Percent change over June 2009.

Multi-Platinum and Platinum Awards for Recorded Music and Music Videos, 2009-10

Source: Recording Industry Assn. of America

To achieve platinum status, an **album** must reach minimum total sales of 1 mil units in LPs, CDs, and digital with a manufacturer's dollar volume of at least $2 mil based on one-third of the suggested retail list price for each record, CD, or digital copy sold. To achieve multi-platinum status, an album must reach minimum total sales of at least 2 mil units in LPs, CDs, and digital with a manufacturer's dollar volume of at least $4 mil based on one-third of the list price.

Singles must sell 1 mil units to achieve a platinum award and 2 mil to achieve a multi-platinum award. **Digital singles** are certified at the same levels; the digital sales award was first created in 2004. In 1999, the Diamond Award, honoring sales of 10 mil or more copies of an album or single, was introduced. EP singles count as 2 units. Double-CD sets count as 2 units. **Music videos** (long form) must sell 100,000 units to qualify for a platinum award, more than 200,000 units for a multi-platinum award. As of July 2006, master **ringtones**—the original recording and not synthesized versions of songs—could be awarded gold (500,000 downloads), platinum (1 mil), and multi-platinum (2 mil+) status.

Awards listed here are for albums and digital singles (released Sept. 2008-Aug. 2010) and for music videos (released at any time) that were certified Sept. 2009-Aug. 2010. Number in parentheses = number of millions sold. V = Various artists. Alphabetized by artist name.

Albums, Multi-Platinum

Beatles in Stereo boxed set, The Beatles (3)
The E.N.D., The Black Eyed Peas (2)
My Christmas, Andrea Bocelli (2)
I Dreamed a Dream, Susan Boyle (4)
The Foundation, The Zac Brown Band (2)
El Patrón, Tito El Bambino (2)
Michael Jackson's This Is It, Michael Jackson (2)
Need You Now, Lady Antebellum (2)
Death Magnetic, Metallica (2)
Dark Horse, Nickelback (2)
Fearless, Taylor Swift (6)

Albums, Platinum

Wide Open, Jason Aldean
¡Ando Bien Pedo!, Banda Los Recoditos
The Beatles in Mono boxed set, The Beatles
My World, Justin Bieber
My World 2.0, Justin Bieber
Crazy Love, Michael Bublé
Dejarte de Amar, Camila
The Time of Our Lives, Miley Cyrus
Leave This Town, Daughtry
Thank Me Later, Drake
Primera Fila, Vicente Fernández
Mi Plan, Nelly Furtado
16 Narco Corridos, Larry Hernández
I Look to You, Whitney Houston
The Blueprint 3, Jay Z
The Fall, Norah Jones
The Element of Freedom, Alicia Keys
The Fame Monster, Lady Gaga
La Granja, Los Tigres Del Norte
BLACKsummers'night, Maxwell
Battle Studies, John Mayer
Ocean Eyes, Owl City
Quiereme Mas, Patrulla 81
Yo No Canto, Pero Lo Intentamos, Espinoza Paz
Rated R, Rihanna
La Gran Señora, Jenni Rivera
Soldier of Love, Sade
The Twilight Saga: New Moon soundtrack (V)
No Line on the Horizon, U2
Play On, Carrie Underwood
Raymond v. Raymond, Usher
WOW Hits 2009 (V)

Longform Videos, Multi-Platinum

I Am...Yours: An Intimate Performance at Wynn Las Vegas, Beyoncé (2)
Caught in the Act, Michael Bublé (4)
Live From Madison Square Garden, Eric Clapton and Steve Winwood (2)
Hot August Night/NYC, Neil Diamond (2)
Elvis: '68 Comeback Special Deluxe Edition, Elvis Presley (2)
Elvis: Aloha From Hawaii Deluxe Edition, Elvis Presley (4)
Snakes & Arrows, Rush (2)
Rock & Roll Hall of Fame Live (V) (3)
The Ultimate Rat Pack Collection: Live & Swingin', (V) (2)

Digital Singles, Platinum and Multi-Platinum

"Starstrukk," 3OH!3
"I'm So Paid," "Right Now (Na Na Na)" (2), Akon
"Big Green Tractor," "She's Country," Jason Aldean
"Nothin' on You," B.O.B. feat. Bruno Mars
"Airplanes" (2), B.O.B. feat. Hayley Williams
"Halo," "If I Were a Boy" (2), "Single Ladies (Put a Ring on It)" (4), "Sweet Dreams," Beyoncé
"Baby" (2), Justin Bieber feat. Ludacris
"One Time," Justin Bieber
"Boom Boom Pow" (5), "I Got a Feeling" (6), "Imma Be," "Meet Me Halfway," The Black Eyed Peas
"Love Drunk," "Two Is Better Than One," Boys Like Girls
"Toes," The Zac Brown Band
"Haven't Met You Yet," Michael Bublé
"Fallin' for You," Colbie Caillat
"Obsessed," Mariah Carey
"Evacuate the Dancefloor," Cascada
"Good Girls Go Bad," Cobra Starship feat. Leighton Meester
"Light On," David Cook
"Break Your Heart" (2), Taio Cruz feat. Ludacris
"Party in the U.S.A." (3), Miley Cyrus
"Whatcha Say" (2), Jason Derülo
"Ice Cream Paint Job," Dorrough
"Best I Ever Had," Drake
"I Don't Care," Fall Out Boy
"Right Round" (4), Flo Rida
"Never Say Never," The Fray
"Naturally," Selena Gomez & the Scene
"21 Guns," Green Day
"Sexy Bitch" (2), David Guetta
"Replay" (3), Iyaz
"Empire State of Mind" (3), Jay Z and Alicia Keys
"Run This Town" (2), Jay Z, Rihanna, and Kanye West
"Birthday Sex," Jeremih
"Human," The Killers
"Fire Burning" (2), Sean Kingston
"Eenie Meenie," Sean Kingston and Justin Bieber
"I Run to You," "Need You Now" (4), Lady Antebellum
"Bad Romance," "LoveGame," "Paparazzi," "Poker Face" (4), Lady Gaga
"Drop the World," "Mrs. Officer," Lil Wayne
"How Low," "My Chick Bad," Ludacris
"All the Above," Maino feat. T-Pain
"Billionaire" (2), Travie McCoy feat. Bruno Mars
"Kids," MGMT
"Mad," Ne-Yo

"Tie Me Down," "You're a Jerk," New Boyz feat. Ray J
"According to You," Orianthi
"Fireflies" (3), Owl City
"Then," Brad Paisley
"Decode," Paramore
"Hot 'N' Cold" (4), Katy Perry
"Best Days of Your Life," Kellie Pickler
"I Know You Want Me (Calle Ocho)" (2), "Hotel Room Service," Pitbull
"I Hate This Part," Pussycat Dolls
"Hard," "Rude Boy" (2), Rihanna
"Down" (3), "Do You Remember," Jay Sean
"She Wolf," Shakira
"Second Chance," Shinedown
"Love Story" (4), "Today Was a Fairytale," "White Horse," "You Belong with Me" (2), Taylor Swift
"I'm on a Boat," The Lonely Island
"Breakeven," The Script
"Hey, Soul Sister" (4), Train
"Say Aah," Trey Songz feat. Fabolous
"Smile," Uncle Kracker
"Cowboy Casanova," Carrie Underwood
"Love Lockdown" (3), Kanye West

Top-Selling Albums of All-Time

Source: Recording Industry Assn. of America

(As of Sept. 1, 2010; sales figures represent RIAA multi-platinum certifications, albums ranked by latest sales certification.)

Rank	Title, artist	Unit sales (mil)
1.	*Thriller*, Michael Jackson	29.0
	Eagles/Their Greatest Hits 1971-1975, Eagles	29.0
3.	*The Wall*, Pink Floyd	23.0
	Led Zeppelin IV, Led Zeppelin	23.0
5.	*Back in Black*, AC/DC	22.0
6.	*Double Live*, Garth Brooks	21.0
	Greatest Hits Volume I & Volume II, Billy Joel	21.0
8.	*Come on Over*, Shania Twain	20.0
9.	*Rumours*, Fleetwood Mac	19.0
	The Beatles, The Beatles	19.0
11.	*Appetite for Destruction*, Guns N' Roses	18.0
12.	*No Fences*, Garth Brooks	17.0
	Boston, Boston	17.0
	The Bodyguard (soundtrack), Whitney Houston	17.0
15.	*Cracked Rear View*, Hootie & the Blowfish	16.0
	The Beatles 1967-1970, The Beatles	16.0
	Physical Graffiti, Led Zeppelin	16.0
	Jagged Little Pill, Alanis Morissette	16.0
	Hotel California, Eagles	16.0
	Greatest Hits, Elton John	16.0
21.	*The Beatles 1962-1966*, The Beatles	15.0
	Supernatural, Santana	15.0
	Saturday Night Fever (soundtrack), Bee Gees	15.0
	Greatest Hits, Journey	15.0
	Metallica, Metallica	15.0
	Dark Side of the Moon, Pink Floyd	15.0
	Born in the U.S.A., Bruce Springsteen	15.0

U.S. Commercial Radio Stations, by Format, 2001-10

Source: The M Street Radio Directory, M Street Corporation © 2010; as of June of each year; ranked by 2010 numbers

Primary format	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
1. Country	1,992	1,997	2,028	2,034	2,035	2,019	2,047	2,088	2,131	2,190
2. News/Talk	1,438	1,401	1,363	1,370	1,336	1,324	1,282	1,224	1,179	1,139
3. Spanish	806	800	799	777	705	703	665	628	603	574
4. Sports	661	635	587	557	530	497	469	429	388	338
5. Oldies	642	669	711	711	727	773	816	807	813	786
6. Adult Contemporary (AC)	635	626	665	661	660	684	703	692	713	709
7. Top 40	489	483	467	473	485	502	497	491	474	468
8. Classic Rock	482	479	468	456	454	461	450	425	384	338
9. Hot AC	422	407	370	377	375	380	416	399	395	369
10. Classic Hits	404	367	311	296	276	262	229	237	258	265
11. Religion (Teaching, Variety)	325	328	296	290	312	318	336	347	332	356
12. Rock	295	294	290	282	278	270	280	273	278	282
13. Adult Standards	272	330	362	370	366	405	460	497	547	569
14. Black Gospel	233	241	246	255	266	286	273	253	254	264
15. Adult Hits	214	207	200	171	149	54	0	0	0	0
16. Southern Gospel	193	212	207	206	208	207	208	207	240	255
17. Soft AC	176	207	228	243	302	324	322	336	340	375
18. Contemporary Christian	165	153	143	151	150	174	159	167	164	164
19. Urban AC	161	161	157	162	166	153	136	128	121	118
20. R&B	126	129	135	134	138	150	159	189	193	183
Off air	242	202	138	88	93	70	79	123	110	113
Total operating stations[1]	**10,997**	**10,956**	**10,843**	**10,755**	**10,696**	**10,729**	**10,727**	**10,728**	**10,679**	**10,629**

(1) Totals include stations that are changing or did not report format.

Top-Grossing North American Concert Tours, 1985-2009

Source: Pollstar; ranked by total gross

Artist (year)	Total gross[1]	Cities/ shows
1. The Rolling Stones (2005)	$162.0	38/42
2. U2 (2005)	138.9	43/78
3. The Rolling Stones (2006)	138.5	35/39
4. The Police (2007)	133.2	41/54
5. U2 (2009)	123.0	16/20
6. The Rolling Stones (1994)	121.2	43/60
7. Bruce Springsteen & The E Street Band (2003)	115.9	30/47
8. U2 (2001)	109.7	56/80
9. Madonna (2008)	105.3	19/30
10. Pink Floyd (1994)	103.5	39/59
11. Paul McCartney (2002)	103.3	43/53
12. The Rolling Stones (1989)	98.0	33/60
13. Bruce Springsteen & The E Street Band (2009)	94.5	44/58
14. Céline Dion (2008)	$94.0	31/47
15. Barbra Streisand (2006)	92.5	16/20
16. The Rolling Stones (1997)	89.3	26/33
17. Tim McGraw/Faith Hill (2006)	88.8	55/73
18. Elton John and Billy Joel (2009)	88.0	27/31
19. The Rolling Stones (2002)	87.9	33/34
20. Prince (2004)	87.4	69/96
21. 'N Sync (2001)	86.8	36/43
22. Madonna (2006)	85.9	14/34
23. Britney Spears (2009)	82.5	51/61
24. Backstreet Boys (2001)	82.1	73/98
Cirque du Soleil: Delirium (2006)	82.1	61/156
25. Céline Dion (2005)	81.3	1/155

(1) In millions. Not adjusted for inflation.

Sales of Recorded Music and Music Videos, by Units Shipped and Value, 2000-09

Source: Recording Industry Assn. of America
(in millions, net after returns)

	2000	2003	2004	2005	2006	2007	2008	2009	% change 2008-09
Physical units shipped	**1,079.2**	**798.4**	**814.1**	**748.7**	**648.2**	**543.9**	**385.5**	**309.5**	**–19.7%**
Dollar value	**$14,323.7**	**11,854.4**	**12,154.7**	**11,195.0**	**9,868.6**	**7,985.8**	**5,758.5**	**4,562.0**	**–20.8**
Compact discs (CD)	942.5	746.0	767.0	705.4	619.7	511.1	368.4	292.9	–20.5
Dollar value	$13,214.5	11,232.9	11,446.5	10,520.2	9,372.6	7,452.3	5,471.3	4,274.1	–21.9
Cassettes	76.0	17.2	5.2	2.5	0.7	0.4	0.1	0.0	–102.8
Dollar value	$626.0	108.1	23.7	13.1	3.7	3.0	0.9	0.0	–104.9
LP/EP	2.2	1.5	1.4	1.0	0.9	1.3	2.9	3.2	10.8
Dollar value	$27.7	21.7	19.3	14.2	15.7	22.9	56.7	60.2	6.2
CD singles	34.2	8.3	3.1	2.8	1.7	2.6	0.7	0.9	17.8
Dollar value	$142.7	36.0	15.0	10.9	7.7	12.2	3.5	3.1	–12.5
Vinyl singles	4.8	3.8	3.5	2.3	1.5	0.6	0.4	0.3	–30.2
Dollar value	$26.3	21.5	19.9	13.2	9.9	4.0	2.9	2.5	–15.3
Music videos[1]	18.2	19.9	32.8	33.8	23.2	27.5	25.1	23.6	–6.0
Dollar value	$281.9	399.9	607.2	602.2	451.1	484.9	434.6	431.0	–0.8
Digital formats[2]	—	—	**143.9**	**383.1**	**625.3**	**868.4**	**1,128.6**	**1,236.8**	**9.6**
Dollar value	—	—	**$183.4**	**503.6**	**878.0**	**1,257.5**	**1,711.5**	**2,030.7**	**18.7**
Download albums	—	—	4.6	13.6	27.6	42.5	63.6	76.4	20.2
Dollar value	—	—	$45.5	135.7	275.9	424.9	635.3	763.4	20.2
Download singles	—	—	139.4	366.9	586.4	809.9	1,042.7	1,138.3	9.2
Dollar value	—	—	$138.0	363.3	580.6	801.6	1,032.2	1,220.3	18.2
Music videos	—	—	—	1.9	9.9	14.2	20.8	20.4	–1.9
Dollar value	—	—	—	$3.7	19.7	28.2	41.3	40.6	–1.9
Mobile formats[3]	—	—	—	170.0	315.0	362.0	405.1	305.8	–24.5
Dollar value	—	—	—	$421.6	773.8	880.8	977.1	728.8	–25.4
Subscription formats[4]	—	—	—	1.3	1.3	1.8	1.6	1.2	–25.5
Dollar value	—	—	—	$149.2	206.2	201.3	221.4	213.1	–3.7
Digital performances[5]	—	—	6.9	27.4	31.5	47.0	100.0	155.5	55.5
Total units[6]	**1,079.2**	**798.4**	**958.0**	**1,301.8**	**1,588.5**	**1,774.3**	**1,919.2**	**1,852.1**	**–3.5**
Total value	**$14,323.7**	**11,854.4**	**12,345.0**	**12,296.9**	**11,758.2**	**10,372.1**	**8,768.4**	**7,690.0**	**–12.3**

(1) Includes DVD videos. (2) Includes kiosk singles and albums. (3) Includes master ringtones, ringbacks, music videos, full-length downloads, and other mobile music. (4) Weighted annual average. (5) Estimated royalty payments in dollars to artists and copyright holders distributed by SoundExchange. (6) Includes albums and singles, excludes subscriptions and royalties.

Top Cable TV Networks, 2009

Source: SNL Kagan; ranked by number of subscribers at the end of 2009

	Network (year began)	Subscribers (mil)
1.	TBS (1976)	100.1
2.	Discovery Channel (1985)	99.8
3.	Nickelodeon/Nick At Nite (1979)	99.6
4.	The Weather Channel (1982)	99.3
	CNN/HLN (1980)	99.3
6.	Food Network (1993)	99.2
	USA Network (1980)	99.2
8.	TNT (1988)	99.1
	ESPN/ESPN HD (1979)	99.1
10.	A&E (1984)	98.9
11.	TLC–The Learning Channel (1980)	98.8
	Lifetime Television (1984)	98.8
	ESPN2 (1993)	98.8
	Spike TV (2003)	98.8
15.	HGTV (1994)	98.7
16.	Disney Channel (1983)	98.6
17.	MTV (1981)	98.5
18.	ABC Family (2001)	98.4
19.	Cartoon Network (1992)	98.3
20.	History (1995)	98.2
21.	Comedy Central (1991)	98.1
22.	Fox News (1996)	98.0
23.	VH1 (1985)	97.9
24.	CNBC (1989)	97.6
25.	TV Land (1996)	97.3

U.S. Households With Cable Television, 1978-2010

Source: Nielsen Media Research

Year[1]	Subscribers[2] (mil)	As % of households with TVs	Year[1]	Subscribers[2] (mil)	As % of households with TVs	Year[1]	Subscribers[2] (mil)	As % of households with TVs
1978	13.4	17.9%	1989	50.2	55.6%	2000	78.6	77.9%
1979	14.9	19.4	1990	53.9	58.6	2001	81.5	79.8
1980	17.7	22.6	1991	56.1	60.3	2002	87.8	83.8
1981	23.2	28.3	1992	56.2	61.1	2003	88.4	82.9
1982	27.4	33.4	1993	57.6	61.9	2004	92.4	85.3
1983	31.8	37.9	1994	59.7	63.4	2005	94.0	85.7
1984	35.8	42.5	1995	62.1	65.1	2006	95.0	86.2
1985	38.7	45.3	1996	63.6	66.3	2007	94.5	83.8
1986	40.9	47.4	1997	65.1	67.2	2008	99.7	88.2
1987	43.3	49.2	1998	65.9	67.2	2009	103.0	89.7
1988	46.3	52.0	1999	76.4	76.9	2010	104.1	90.6

(1) After 1998, figures include wired-cable households as well as households that receive TV programming via alternate delivery systems (including satellite receivers, SMATV, MMDS). (2) Households that subscribe to basic cable service.

U.S. Television Set Owners, 2010

Source: Nielsen Media Research, Sept. 2010

Of the 114.9 million U.S. households that owned at least one TV set in 2010:

84% had 2 or more TV sets	65% had a VCR	91% received basic cable
56% had 3 or more TV sets	88% had a DVD player	51% received premium cable

TV Viewing Shares by Broadcast Year, 1990-2009[1]

Source: *Cable TV Facts*, Cable Advertising Bureau

	All television households[2]							All cable households[2]							Pay + cable households[2]						
	'90	'95	'00	'05	'07	'08	'09	'90	'95	'00	'05	'07	'08	'09	'90	'95	'00	'05	'07	'08	'09
Network affiliates[3]	55	48	44	30	38	26	24	46	41	40	27	25	23	22	43	38	37	24	23	21	21
Ind. TV stations[4]	20	22	12	9	6	4	5	16	17	9	7	4	3	4	16	17	9	6	4	3	3
Public TV stations	3	3	3	2	2	1	1	3	3	2	2	1	1	1	2	2	2	1	1	1	1
Basic cable[5]	21	30	46	48	51	50	57	32	42	55	54	57	54	61	30	41	55	52	55	52	59
Pay cable	6	6	6	5	4	4	4	10	8	7	5	5	5	5	18	15	11	10	9	8	8

(1) Broadcast years represent the 12-month period of the preceding Oct. through Sept. of the year listed. (2) Share figures refer to percentage of the viewing audience for all television viewing, 24 hours/day. As a result of multiset use and rounding, share figures may add up to more than 100. (3) Includes CBS, NBC, ABC, and FOX after 1998. (4) Varies year-to-year; 2008 includes ION, MNT, and CW. (5) Includes ad-supported cable and all other cable (non-pay and non-ad-supported channels).

Average U.S. Television Viewing Time, 2009-10

Source: Nielsen Media Research (hours: minutes per week), Sept. 21, 2009-Aug. 29, 2010

Group	Age	Total per week	M-F 7-10 AM	M-F 10 AM-4 PM	M-Sun. 8-11 PM	Sat. 7 AM-1 PM	M-F 11:30 PM-1 AM	Sunday 1-7 PM
Men	18+	34:24	1:55	4:27	8:30	1:00	1:45	1:53
	18-24	23:59	1:03	3:26	5:08	0:35	1:32	1:13
	25-54	32:41	1:45	3:51	8:07	0:59	1:49	1:49
	55+	42:07	2:35	6:00	10:41	1:11	1:43	2:19
Women	18+	38:46	2:31	5:49	9:18	1:06	1:54	1:46
	18-24	27:57	1:28	4:37	5:59	0:43	1:36	1:14
	25-54	35:52	2:20	4:57	8:40	1:04	1:54	1:39
	55+	47:12	3:10	7:36	11:28	1:18	1:59	2:09
Children	2-11	25:42	1:52	4:20	5:15	1:13	0:49	1:19
Teens	12-17	24:29	1:04	2:57	5:42	0:48	1:17	1:14
All viewers		**34:05**	**2:05**	**4:51**	**8:07**	**1:03**	**1:38**	**1:42**

Selected Reality TV Show Winners, 2000-10

Numbers in parentheses represent the season, edition, or cycle of the show. As of Oct. 2010.

The Amazing Race. Debuted Aug. 2001 on CBS. Rob Frisbee & Brennan Swain (1); Chris Luca & Alex Boylan (2); Flo Pesenti & Zach Behr (3); Reichen Lehmkuhl & Chip Arndt (4); Chip & Kim McAllister (5); Freddy Holliday & Kendra Bentley (6); Uchenna & Joyce Agu (7); The Linz Family (8); B. J. Averell & Tyler MacNiven (9); Tyler Denk & James Branaman (10); All-Stars: Eric Sanchez & Danielle Turner (11); TK Erwin & Rachel Morales (12); Nick & Starr Spangler (13); Tammy & Victor Jih (14); Meghan Rickey and Cheyne Whitney (15); Dan and Jordan Pious (16).

American Idol. Debuted July 2002 on Fox. Kelly Clarkson (1); Ruben Studdard (2); Fantasia Barrino (3); Carrie Underwood (4); Taylor Hicks (5); Jordin Sparks (6); David Cook (7); Kris Allen (8); Lee DeWyze (9).

America's Got Talent. Debuted June 2006 on NBC. Bianca Ryan (1); Terry Fator (2); Neil E. Boyd (3); Kevin Skinner (4); Michael Grimm (5).

America's Next Top Model. Debuted May 2003. Adrianne Curry (1); Yoanna House (2); Eva Pigford (3); Naima Mora (4); Nicole Linkletter (5); Danielle Evans (6); CariDee English (7); Jaslene Gonzalez (8); Saleisha Stowers (9); Whitney Thompson (10); McKey Sullivan (11); Teyona Anderson (12); Nicole Fox (13); Krista White (14).

The Apprentice. Debuted Jan. 2004 on NBC. Bill Rancic (1); Kelly Perdew (2); Kendra Todd (3); Randal Pinkett (4); Sean Yazbeck (5); Stefani Schaeffer (6). Celebrity Apprentice: Piers Morgan (1); Joan Rivers (2); Bret Michaels (3).

The Bachelor. Debuted Mar. 2002 on ABC. Alex Michel chose Amanda Marsh (1); Aaron Buerge chose Helene Eksterowicz (2); Andrew Firestone chose Jen Schefft (3); Bob Guiney chose Estella Gardinier (4); Jesse Palmer chose Jessica Bowlin (5); Byron Velvick chose Mary Delgado (6); Charlie O'Connell chose Sarah Brice (7); Travis Stork chose Sarah Stone (8); Lorenzo Borghese chose Jennifer Wilson (9); Andy Baldwin chose Tessa Horst (10); Brad Womack chose no one (11); Matt Grant chose Shayne Lamas (12); Jason Mesnick chose Melissa Rycroft (13); Jake Pavelka chose Vienna Girardi (14).

The Bachelorette. Debuted Jan. 2003 on ABC. Trista Rehn chose Ryan Sutter (1); Meredith Phillips chose Ian McKee (2); Jen Schefft chose Jerry Ferris (3); DeAnna Pappas chose Jesse Csincsak (4); Jillian Harris chose Ed Swiderski (5); Ali Fedotowsky chose Roberto Martinez (6).

The Biggest Loser. Debuted Oct. 2004 on NBC. Ryan Benson (1); Matt Hoover (2); Erik Chopin (3); Bill Germanakos (4); Ali Vincent (5); Michelle Aguilar (6); Helen Phillips (7); Danny Cahill (8); Michael Ventrella (9).

Big Brother. Debuted July 2000 on CBS. Eddie McGee (1); Will Kirby (2); Lisa Donahue (3); Jun Song (4); Drew Daniel (5); Maggie Ausburn (6); Mike Malinto (7); Dick Donato (8); Adam Jasinski (9); Dan Gheesling (10); Jordan Lloyd (11); Hayden Moss (12).

Dancing With the Stars. Debuted June 2005 on ABC. Kelly Monaco & Alex Mazo (1); Drew Lachey & Cheryl Burke (2); Emmitt Smith & Cheryl Burke (3); Apolo Anton Ohno & Julianne Hough (4); Helio Castroneves & Julianne Hough (5); Kristi Yamaguchi & Mark Ballas (6); Brooke Burke & Derek Hough (7); Shawn Johnson & Mark Ballas (8); Donny Osmond & Kym Johnson (9); Nicole Scherzinger & Derek Hough (10).

Hell's Kitchen. Debuted Mar. 2005 on FOX. Michael Wray (1); Heather West (2); Rock Harper (3); Christina Machamer (4); Danny Veltri (5); Dave Levey (6); Holli Ugalde (7).

Last Comic Standing. Debuted June 2003 on NBC. Dat Phan (1); John Heffron (2); Alonzo Bodden (3); Josh Blue (4); Jon Reep (5); Iliza Shlesinger (6); Felipe Esparza (7).

The Next Food Network Star. Debuted June 2005 on Food Network. Steve McDonagh & Dan Smith (1); Guy Fieri (2); Amy Finley (3); Aaron McCargo Jr. (4); Melissa d'Arabian (5); Aarti Sequeria (6).

Project Runway. Debuted Dec. 2004 on Bravo. Jay McCarroll (1); Chloe Dao (2); Jeffrey Sebelia (3); Christian Siriano (4); Leanne Marshall (5); Irina Shabayeva (6); Seth Aaron Henderson (7); Gretchen Jones (8).

So You Think You Can Dance. Debuted July 2005 on FOX. Nick Lazzarini (1); Benji Schwimmer (2); Sabra Johnson (3); Joshua Allen (4); Jeanine Mason (5); Russell Ferguson (6); Lauren Froderman (7).

Survivor. Debuted May 2000 on CBS. Borneo: Richard Hatch (1); Outback: Tina Wesson (2); Africa: Ethan Zohn (3); Marquesas: Vecepia Towery (4); Thailand: Brian Heidik (5); The Amazon: Jenna Morasca (6); Pearl Islands: Sandra Diaz-Twine (7); All-Stars, Panama: Amber Brkich (8); Vanuatu: Chris Daugherty (9); Palau: Tom Westman (10); Guatemala: Danni Boatwright (11); Panama: Aras Baskauskas (12); Cook Islands: Yul Kwon (13); Fiji: Earl Cole (14); China: Todd Herzog (15); Micronesia: Parvati Shallow (16); Gabon: Robert Crowley (17); Tocantins: James "JT" Thomas (18); Samoa: Natalie White (19); Heroes vs. Villains: Sandra Diaz-Twine (20).

Top Chef. Debuted Mar. 2006 on Bravo. Harold Dieterle (1); Ilan Hall (2); Hung Huynh (3); Stephanie Izard (4); Hosea Rosenberg (5); Michael Voltaggio (6); Kevin Sbraga (7). Top Chef Masters: Rick Bayless (1); Marcus Samuelsson (2).

Favorite Prime-Time Television Programs, 2009-10

Source: Nielsen Media Research

Data are for regularly scheduled network programs in 2009-10; ranked by average audience percentage. Ratings, or average audience percentages, are estimates of the percentage of all TV-owning households that are watching a particular program. Audience share percentages are estimates of the percentage of those watching TV that are tuned into a particular program.

Rank	Program	Rating	Audience share
1.	American Idol-Tuesday	13.7%	21%
2.	American Idol-Wednesday	13.3	21
3.	Dancing with the Stars	12.6	19
4.	NBC Sunday Night Football	11.3	18
5.	NCIS	10.3	16
6.	Dancing with the Stars: Results	9.9	15
7.	The Mentalist	9.1	15
8.	Grey's Anatomy	9.0	14
9.	Desperate Housewives	8.8	13
10.	NCIS: Los Angeles	8.7	13
11.	Sunday Night NFL Pre-Kickoff	8.3	13
12.	CSI	8.2	13
	Two and a Half Men	8.2	12
14.	The Big Bang Theory	7.9	12
	Survivor: Heroes vs. Villians	7.9	13
	Undercover Boss	7.9	12
17.	The Bachelor	7.8	11
	Survivor: Samoa	7.8	12
19.	60 Minutes	7.7	13
	The OT	7.7	13
21.	Criminal Minds	7.6	12
22.	House	7.5	11
23.	CSI: Miami	7.4	12
	The Good Wife	7.4	12
25.	V	7.1	11
	CSI: NY	7.1	12
27.	Brothers & Sisters	7.0%	11%
	America's Got Talent-Tuesday	7.0	12
29.	Castle	6.9	11
	Lost	6.9	10
	America's Got Talent-Wednesday	6.9	12
32.	The Amazing Race 15	6.8	10
33.	The Bachelorette	6.5	11
	Bones	6.5	11
35.	Romantically Challenged	6.4	10
	The Amazing Race 16	6.4	10
	24	6.4	10
38.	Private Practice	6.3	10
	Biggest Loser 8	6.3	10
40.	Glee	6.0	9
	Football Night in America Part 3	6.0	10
42.	Cold Case	5.8	10
	Biggest Loser 9	5.8	9
44.	Human Target	5.7	9
45.	Three Rivers	5.5	9
	Law & Order: SVU	5.5	9
47.	FlashForward	5.4	9
48.	Numb3rs	5.3	9
49.	Parenthood	5.2	9
50.	The Ghost Whisperer	5.1	9

Favorite Syndicated Programs, 2009-10

Source: Nielsen Media Research, Aug. 31, 2009-Aug. 29, 2010

Ratings, or average audience percentages, are estimates of the percentage of TV-owning households watching a program.

Rank	Program	Rating
1.	ESPN NFL Regular Season	9.6%
2.	ESPN NFL Regular Season 2	8.0
3.	2009 NFL Regular Season Saturday	6.6
	Wheel of Fortune	6.6
5.	Jeopardy	5.6
6.	Two and a Half Men	4.8
7.	Judge Judy	4.5
	The Oprah Winfrey Show	4.5
9.	Entertainment Tonight	4.2
10.	2009 NFL Regular Season Friday	3.6
11.	2009 NFL Regular Season Pre-Kickoff Saturday	3.5
12.	Family Guy	3.4
13.	2009 NFL Regular Season Games	3.3
14.	CSI: NY	3.2
15.	Inside Edition	3.0%
	Wheel of Fortune (weekend)	3.0
17.	Law & Order: Criminal Intent	2.9
	The Office	2.9
19.	Everybody Loves Raymond	2.8
20.	Dr. Phil	2.7
	ESPN NFL Preseason Thursday	2.7
	Seinfeld	2.7
23.	George Lopez	2.6
	Law & Order: SVU	2.6
25.	The Dr. Oz Show	2.5
	Live with Regis and Kelly	2.5
	Seinfeld (weekend)	2.5
	Two and a Half Men (weekend)	2.5

All-Time Most Watched Television Programs

Source: Nielsen Media Research, Jan. 1961-Aug. 2010

Estimates exclude unsponsored or joint network telecasts (e.g., presidential addresses) or programs under 30 minutes long. Ranked by number of TV-owning households tuned in to the program.

Rank	Program	Telecast date	Network	Rating	Avg. audience (thous.)
1.	Super Bowl XLIV	2/7/10	CBS	45.2%	51,873
2.	M*A*S*H (last episode)	2/28/83	CBS	60.2	50,150
3.	Super Bowl XLII	2/3/08	FOX	43.2	48,721
4.	Super Bowl XLIII	2/1/09	NBC	42.1	48,239
5.	Super Bowl XLI	2/4/07	CBS	42.7	47,535
6.	Super Bowl XL	2/5/06	ABC	41.6	45,869
7.	XVII Winter Olympics (Women's figure skating)	2/23/94	CBS	48.5	45,690
8.	Super Bowl XXXIX	2/6/05	FOX	41.1	45,080
9.	Super Bowl XXXVIII	2/1/04	CBS	41.4	44,910
10.	Super Bowl XXX	1/28/96	NBC	46.0	44,150
11.	Super Bowl XXXII	1/25/98	NBC	44.5	43,630
12.	Super Bowl XXXIV	1/30/00	ABC	43.3	43,620
13.	Super Bowl XXXVII	1/26/03	ABC	40.7	43,430
14.	Super Bowl XXVIII	1/30/94	NBC	45.5	42,860
15.	Super Bowl XXXVI	2/3/02	FOX	40.4	42,660
16.	Cheers	5/20/93	NBC	45.5	42,360
17.	Super Bowl XXXI	1/26/97	FOX	43.3	42,000
18.	Super Bowl XXVII	1/31/93	NBC	45.1	41,990
19.	XVII Winter Olympics (Women's figure skating)	2/25/94	CBS	44.1	41,540
20.	Super Bowl XX	1/26/86	NBC	48.3	41,490

Highest-Rated TV Programs by Season, 1950-2010

Source: Nielsen Media Research; regular series programs, Sept.-May season

Rating is percent of TV-owning households tuned in to the program. Data prior to 1988-89 exclude Alaska and Hawaii.

Season	Program	Rating	TV-owning households (thous.)	Season	Program	Rating	TV-owning households (thous.)
1950-51	Texaco Star Theatre	61.6%	10,320	1980-81	Dallas	31.2%	79,900
1951-52	Godfrey's Talent Scouts	53.8	15,300	1981-82	Dallas	28.4	81,500
1952-53	I Love Lucy	67.3	20,400	1982-83	60 Minutes	25.5	83,300
1953-54	I Love Lucy	58.8	26,000	1983-84	Dallas	25.7	83,800
1954-55	I Love Lucy	49.3	30,700	1984-85	Dynasty	25.0	84,900
1955-56	$64,000 Question	47.5	34,900	1985-86	Cosby Show	33.8	85,900
1956-57	I Love Lucy	43.7	38,900	1986-87	Cosby Show	34.9	87,400
1957-58	Gunsmoke	43.1	41,920	1987-88	Cosby Show	27.8	88,600
1958-59	Gunsmoke	39.6	43,950	1988-89	Roseanne	25.5	90,400
1959-60	Gunsmoke	40.3	45,750	1989-90	Roseanne	23.4	92,100
1960-61	Gunsmoke	37.3	47,200	1990-91	Cheers	21.6	93,100
1961-62	Wagon Train	32.1	48,555	1991-92	60 Minutes	21.7	92,100
1962-63	Beverly Hillbillies	36.0	50,300	1992-93	60 Minutes	21.6	93,100
1963-64	Beverly Hillbillies	39.1	51,600	1993-94	Home Improvement	21.9	94,200
1964-65	Bonanza	36.3	52,700	1994-95	Seinfeld	20.5	95,400
1965-66	Bonanza	31.8	53,850	1995-96	E.R.	22.0	95,900
1966-67	Bonanza	29.1	55,130	1996-97	E.R.	21.2	97,000
1967-68	Andy Griffith	27.6	56,670	1997-98	Seinfeld	22.0	98,000
1968-69	Rowan & Martin's Laugh-In	31.8	58,250	1998-99	E.R.	17.8	99,400
1969-70	Rowan & Martin's Laugh-In	26.3	58,500	1999-2000	Who Wants to Be a Millionaire	18.6	100,800
1970-71	Marcus Welby, M.D.	29.6	60,100	2000-01	Survivor II	17.4	102,200
1971-72	All in the Family	34.0	62,100	2001-02	Friends	15.3	105,500
1972-73	All in the Family	33.3	64,800	2002-03	CSI	16.1	106,700
1973-74	All in the Family	31.2	66,200	2003-04	CSI	15.9	108,400
1974-75	All in the Family	30.2	68,500	2004-05	CSI	16.3	106,900
1975-76	All in the Family	30.1	69,600	2005-06	American Idol-Tuesday	17.6	110,200
1976-77	Happy Days	31.5	71,200	2006-07	American Idol-Wednesday	17.3	112,800
1977-78	Laverne & Shirley	31.6	72,900	2007-08	American Idol-Tuesday	16.1	113,050
1978-79	Laverne & Shirley	30.5	74,500	2008-09	American Idol-Wednesday	15.1	114,900
1979-80	60 Minutes	28.2	76,300	2009-10	American Idol-Tuesday	13.7	114,900

All-Time Highest-Rated Television Programs

Source: Nielsen Media Research, Jan. 1961-Aug. 2010

Estimates exclude unsponsored or joint network telecasts (e.g., presidential addresses) and programs under 30 minutes long. Ranked by rating (percentage of TV-owning households tuned in to the program). Average audience is number of TV-owning households tuned in.

Rank	Program	Telecast date	Network	Rating (%)	Avg. audience (thous.)
1.	M*A*S*H (last episode)	2/28/83	CBS	60.2%	50,150
2.	Dallas (Who Shot J.R.?)	11/21/80	CBS	53.3	41,470
3.	Roots-Pt. 8	1/30/77	ABC	51.1	36,380
4.	Super Bowl XVI	1/24/82	CBS	49.1	40,020
5.	Super Bowl XVII	1/30/83	NBC	48.6	40,480
6.	XVII Winter Olympics (Women's figure skating)	2/23/94	CBS	48.5	45,690
7.	Super Bowl XX	1/26/86	NBC	48.3	41,490
8.	Gone With the Wind-Pt. 1	11/7/76	NBC	47.7	33,960
9.	Gone With the Wind-Pt. 2	11/8/76	NBC	47.4	33,750
10.	Super Bowl XII	1/15/78	CBS	47.2	34,410
11.	Super Bowl XIII	1/21/79	NBC	47.1	35,090
12.	Bob Hope Christmas Show	1/15/70	NBC	46.6	27,260
13.	Super Bowl XIX	1/20/85	ABC	46.4	39,390
	Super Bowl XVIII	1/22/84	CBS	46.4	38,800
15.	Super Bowl XIV	1/20/80	CBS	46.3	35,330
16.	Super Bowl XXX	1/28/96	NBC	46.0	44,150
	ABC Theater (The Day After)	11/20/83	ABC	46.0	38,550
18.	Roots-Pt. 6	1/28/77	ABC	45.9	32,680
	The Fugitive	8/29/67	ABC	45.9	25,700
20.	Super Bowl XXI	1/25/87	CBS	45.8	40,030
21.	Roots-Pt. 5	1/27/77	ABC	45.7	32,540
22.	Super Bowl XXVIII	1/30/94	NBC	45.5	42,860
	Cheers (last episode)	5/20/93	NBC	45.5	42,360
24.	Ed Sullivan	2/9/64	CBS	45.3	23,240
25.	Super Bowl XLIV	2/7/10	CBS	45.2	51,873

AWARDS — MEDALS — PRIZES

Alfred B. Nobel Prizes, 1901-2010

Alfred B. Nobel (1833-96) bequeathed $9 mil, the interest on which was to be distributed yearly to those judged to have most benefited humankind in chemistry, literature, promotion of peace, physics, and physiology or medicine. Prizes were first awarded in 1901. The 1st prize in economics was awarded in 1969, funded by Sweden's central bank. Each prize is now worth 10 mil Swedish krona (about $1.5 mil). If year is omitted, no award was given. The Royal Swedish Academy selects prize winners for chemistry, economics, and physics; the Nobel Assembly at Karolinska Institutet, physiology or medicine; the Swedish Academy, literature; and the Norwegian Nobel Committee, the peace prize. The 2010 Nobel Prizes were announced Oct. 4-11.

Nobel Prizes, 2010

Chemistry: Richard F. Heck, U.S., and Ei-ichi Negishi, Jpn.-U.S., and Akira Suzuki, Jpn., shared the prize for their independent work developing techniques for organic synthesis using the metal palladium as a catalyst. Their work had practical applications in the manufacture of pharmaceuticals, fungicides, sunscreens, and light-emitting diodes (LEDs).

Economics: Peter A. Diamond and Dale T. Mortensen, U.S., and Christopher A. Pissarides, Cyprus-UK, shared the prize "for their analysis of markets with search frictions." Their work in particular examined the labor market and how employment is affected by regulation and economic policy.

Literature: Peruvian Mario Vargas Llosa was awarded the prize "for his cartography of structures of power and his trenchant images of the individual's resistance, revolt, and defeat." Vargas Llosa, whose novels illuminate politics and culture, was the first South American writer to win the prize since 1982.

Peace: Chinese dissident Liu Xiaobo was recognized for his long, non-violent campaign for human rights. Liu, a literary critic and democracy advocate currently serving an 11-year sentence on subversion charges, is one of three to have been awarded the prize while incarcerated by his own government.

Physics: Andre Geim, Russia-Neth., and Konstantin Novoselov, Russia-UK, shared the prize for their experiments with graphene, an ultra-strong, ultra-thin form of carbon. Graphene conducts heat better than any other known material; it also conducts electricity better than most known materials.

Physiology or Medicine: British physiologist Robert G. Edwards was awarded the prize for work developing in vitro fertilization (IVF), a procedure for treating infertility. Edwards worked with Patrick Steptoe, a physician who died in 1988, to develop the technique, which has been instrumental in an estimated 4 mil live births since 1978.

Physics

1901 Wilhelm C. Röntgen, Ger.
1902 Hendrik A. Lorentz, Pieter Zeeman, Neth.
1903 Antoine Henri Becquerel, Pierre Curie, Fr.; Marie Curie, Pol.-Fr.
1904 Lord Rayleigh (John W. Strutt), UK
1905 Philipp E. A. von Lenard, Ger.
1906 Sir Joseph J. Thomson, UK
1907 Albert A. Michelson, U.S.
1908 Gabriel Lippmann, Fr.
1909 Carl F. Braun, Ger.; Guglielmo Marconi, It.
1910 Johannes D. van der Waals, Neth.
1911 Wilhelm Wien, Ger.
1912 Nils G. Dalén, Swed.
1913 Heike Kamerlingh Onnes, Neth.
1914 Max von Laue, Ger.
1915 Sir William H. Bragg, William L. Bragg, UK
1917 Charles G. Barkla, UK
1918 Max K. E. L. Planck, Ger.
1919 Johannes Stark, Ger.
1920 Charles E. Guillaume, Fr.-Switz.
1921 Albert Einstein, Ger.-U.S.
1922 Niels Bohr, Den.
1923 Robert A. Millikan, U.S.
1924 Karl M. G. Siegbahn, Swed.
1925 James Franck, Gustav Hertz, Ger.
1926 Jean B. Perrin, Fr.
1927 Arthur H. Compton, U.S.; Charles T. R. Wilson, UK
1928 Owen W. Richardson, UK
1929 Prince Louis-Victor de Broglie, Fr.
1930 Sir Chandrasekhara V. Raman, India
1932 Werner Heisenberg, Ger.
1933 Paul A. M. Dirac, UK; Erwin Schrödinger, Austria
1935 Sir James Chadwick, UK
1936 Carl D. Anderson, U.S.; Victor F. Hess, Austria
1937 Clinton J. Davisson, U.S.; Sir George P. Thomson, UK
1938 Enrico Fermi, It.-U.S.
1939 Ernest O. Lawrence, U.S.
1943 Otto Stern, U.S.
1944 Isidor Isaac Rabi, U.S.
1945 Wolfgang Pauli, U.S.-Austria
1946 Percy W. Bridgman, U.S.
1947 Sir Edward V. Appleton, UK
1948 Patrick M. S. Blackett, UK
1949 Hideki Yukawa, Jpn.
1950 Cecil F. Powell, UK
1951 Sir John D. Cockcroft, UK; Ernest T. S. Walton, Ire.
1952 Felix Bloch, Edward M. Purcell, U.S.
1953 Frits Zernike, Neth.
1954 Max Born, UK; Walter Bothe, Ger.
1955 Polykarp Kusch, Willis E. Lamb, U.S.
1956 John Bardeen, Walter H. Brattain, William Shockley, U.S.
1957 Tsung-Dao Lee, Chen Ning Yang, U.S.-China
1958 Pavel Cherenkov, Il'ja Frank, Igor Y. Tamm, USSR
1959 Owen Chamberlain, Emilio G. Segre, U.S.
1960 Donald A. Glaser, U.S.
1961 Robert Hofstadter, U.S.; Rudolf L. Mossbauer, Ger.
1962 Lev D. Landau, USSR
1963 Maria Goeppert-Mayer, Eugene P. Wigner, U.S.; J. Hans D. Jensen, Ger.
1964 Nicolay G. Basov, Aleksandr M. Prokhorov, USSR; Charles H. Townes, U.S.
1965 Richard P. Feynman, Julian S. Schwinger, U.S.; Sin-Itiro Tomonaga, Jpn.
1966 Alfred Kastler, Fr.
1967 Hans A. Bethe, U.S.
1968 Luis W. Alvarez, U.S.
1969 Murray Gell-Mann, U.S.
1970 Louis Néel, Fr.; Hannes Alfvén, Swed.
1971 Dennis Gabor, UK
1972 John Bardeen, Leon N. Cooper, John R. Schrieffer, U.S.
1973 Ivar Giaever, U.S.; Leo Esaki, Jpn.; Brian D. Josephson, UK
1974 Sir Martin Ryle, Antony Hewish, UK
1975 Leo James Rainwater, U.S.; Ben Mottelson, U.S.-Den.; Aage Bohr, Den.
1976 Burton Richter, Samuel C. C. Ting, U.S.
1977 John H. van Vleck, Philip W. Anderson, U.S.; Sir Nevill F. Mott, UK
1978 Pyotr Kapitsa, USSR; Arno Penzias, Robert Wilson, U.S.
1979 Steven Weinberg, Sheldon L. Glashow, U.S.; Abdus Salam, Pakistan
1980 James W. Cronin, Val L. Fitch, U.S.
1981 Nicolaas Bloembergen, Arthur Schawlow, U.S.; Kai M. Siegbahn, Swed.
1982 Kenneth G. Wilson, U.S.
1983 Subramanyan Chandrasekhar, William A. Fowler, U.S.
1984 Carlo Rubbia, It.; Simon van der Meer, Neth.
1985 Klaus von Klitzing, Ger.
1986 Ernest Ruska, Gerd Binnig, Ger.; Heinrich Rohrer, Switz.
1987 K. Alex Müller, Switz.; J. Georg Bednorz, Ger.
1988 Leon M. Lederman, Melvin Schwartz, Jack Steinberger, U.S.
1989 Norman F. Ramsey, U.S.; Hans G. Dehmelt, Ger.-U.S.; Wolfgang Paul, Ger.
1990 Richard E. Taylor, Can.; Jerome I. Friedman, Henry W. Kendall, U.S.
1991 Pierre-Gilles de Gennes, Fr.
1992 Georges Charpak, Pol.-Fr.
1993 Joseph H. Taylor, Russell A. Hulse, U.S.
1994 Bertram N. Brockhouse, Can.; Clifford G. Shull, U.S.
1995 Martin Perl, Frederick Reines, U.S.
1996 David M. Lee, Douglas D. Osheroff, Robert C. Richardson, U.S.
1997 Steven Chu, William D. Phillips, U.S.; Claude Cohen-Tannoudji, Fr.
1998 Robert B. Laughlin, U.S.; Horst L. Störmer, Ger.-U.S; Daniel C. Tsui, China-U.S.
1999 Gerardus 't Hooft, Martinus J. G. Veltman, Netherlands
2000 Jack S. Kilby, U.S.; Herbert Kroemer, Ger.-U.S.; Zhores I. Alferov, Russ.
2001 Eric A. Cornell, Carl E. Wieman, U.S.; Wolfgang Ketterle, Ger.
2002 Raymond Davis Jr., Riccardo Giacconi, U.S.; Masatoshi Koshiba, Jpn.
2003 Vitaly L. Ginzburg, Alexei A. Abrikosov, Russ.; Anthony J. Leggett, UK
2004 David J. Gross, H. David Politzer, Frank Wilczek, U.S.
2005 Roy J. Glauber, John L. Hall, U.S.; Theodor W. Hänsch, Ger.
2006 John C. Mather, George F. Smoot, U.S.
2007 Albert Fert, Fr.; Peter Grünberg, Ger.
2008 Yoichiro Nambu, U.S.; Makoto Kobayashi, Toshihide Maskawa, Jpn.
2009 Charles K. Kao, U.S.-UK; Willard S. Boyle, U.S.-Can.; George E. Smith, U.S.

Chemistry

1901 Jacobus H. van 't Hoff, Neth.
1902 Emil Fischer, Ger.
1903 Svante A. Arrhenius, Swed.
1904 Sir William Ramsay, UK
1905 Adolf von Baeyer, Ger.
1906 Henri Moissan, Fr.
1907 Eduard Buchner, Ger.
1908 Ernest Rutherford, UK
1909 Wilhelm Ostwald, Ger.
1910 Otto Wallach, Ger.
1911 Marie Curie, Pol.-Fr.
1912 Victor Grignard, Paul Sabatier, Fr.
1913 Alfred Werner, Switz.
1914 Theodore W. Richards, U.S.
1915 Richard M. Willstätter, Ger.
1918 Fritz Haber, Ger.
1920 Walther H. Nernst, Ger.
1921 Frederick Soddy, UK
1922 Francis W. Aston, UK
1923 Fritz Pregl, Austria
1925 Richard A. Zsigmondy, Ger.
1926 Theodor Svedberg, Swed.
1927 Heinrich O. Wieland, Ger.
1928 Adolf O. R. Windaus, Ger.
1929 Sir Arthur Harden, UK; Hans von Euler-Chelpin, Swed.
1930 Hans Fischer, Ger.
1931 Friedrich Bergius, Carl Bosch, Ger.
1932 Irving Langmuir, U.S.
1934 Harold C. Urey, U.S.
1935 Frédéric and Irene Joliot-Curie, Fr.
1936 Peter J. W. Debye, Neth.
1937 Walter N. Haworth, UK; Paul Karrer, Switz.
1938 Richard Kuhn, Ger.
1939 Adolf F. J. Butenandt, Ger.; Leopold Ruzicka, Switz.
1943 George de Hevesy, Hung.
1944 Otto Hahn, Ger.
1945 Artturi I. Virtanen, Fin.
1946 James B. Sumner, John H. Northrop, Wendell M. Stanley, U.S.
1947 Sir Robert Robinson, UK
1948 Arne W. K. Tiselius, Swed.
1949 William F. Giauque, U.S.
1950 Kurt Alder, Otto P. H. Diels, Ger.
1951 Edwin M. McMillan, Glenn T. Seaborg, U.S.
1952 Archer J. P. Martin, Richard L. M. Synge, UK
1953 Hermann Staudinger, Ger.
1954 Linus C. Pauling, U.S.
1955 Vincent du Vigneaud, U.S.
1956 Sir Cyril N. Hinshelwood, UK; Nikolay N. Semenov, USSR
1957 Lord (Alexander R.) Todd, UK
1958 Frederick Sanger, UK
1959 Jaroslav Heyrovsky, Czech.
1960 Willard F. Libby, U.S.
1961 Melvin Calvin, U.S.
1962 John C. Kendrew, Max F. Perutz, UK
1963 Giulio Natta, It.; Karl Ziegler, Ger.
1964 Dorothy C. Hodgkin, UK
1965 Robert B. Woodward, U.S.
1966 Robert S. Mulliken, U.S.
1967 Manfred Eigen, Ger.; Ronald G. W. Norrish, George Porter, UK
1968 Lars Onsager, U.S.
1969 Derek H. R. Barton, UK; Odd Hassel, Nor.
1970 Luis F. Leloir, Arg.
1971 Gerhard Herzberg, Can.
1972 Christian B. Anfinsen, Stanford Moore, William H. Stein, U.S.
1973 Ernst Otto Fischer, Ger.; Geoffrey Wilkinson, UK
1974 Paul J. Flory, U.S.
1975 John Cornforth, Austral.-UK; Vladimir Prelog, Bosnia-Switz.
1976 William N. Lipscomb, U.S.
1977 Ilya Prigogine, Belg.
1978 Peter Mitchell, UK
1979 Herbert C. Brown, U.S.; Georg Wittig, Ger.
1980 Paul Berg, Walter Gilbert, U.S.; Frederick Sanger, UK
1981 Kenichi Fukui, Jpn.; Roald Hoffmann, U.S.
1982 Aaron Klug, UK-Lith.
1983 Henry Taube, Can.
1984 Robert Bruce Merrifield, U.S.
1985 Herbert A. Hauptman, Jerome Karle, U.S.
1986 Dudley Herschbach, Yuan T. Lee, U.S.; John C. Polanyi, Can.
1987 Donald J. Cram, Charles J. Pedersen, U.S.; Jean-Marie Lehn, Fr.
1988 Johann Deisenhofer, Robert Huber, Hartmut Michel, Ger.
1989 Thomas R. Cech, Sidney Altman, U.S.
1990 Elias James Corey, U.S.
1991 Richard R. Ernst, Switz.
1992 Rudolph A. Marcus, Can.-U.S.
1993 Kary B. Mullis, U.S.; Michael Smith, UK-Can.
1994 George A. Olah, U.S.
1995 Paul Crutzen, Neth.; Mario Molina, Mex.-U.S.; Sherwood Rowland, U.S.
1996 Sir Harold W. Kroto, UK; Robert F. Curl Jr., Richard E. Smalley, U.S.
1997 Paul D. Boyer, U.S.; John E. Walker, UK; Jens C. Skou, Den.
1998 Walter Kohn, U.S.; John A. Pople, UK
1999 Ahmed H. Zewail, U.S.
2000 Alan J. Heeger, U.S.; Alan G. MacDiarmid, N. Zea.-U.S.; Hideki Shirakawa, Jpn.
2001 K. Barry Sharpless, William S. Knowles, U.S.; Ryoji Noyori, Jpn.
2002 John B. Fenn, U.S.; Koichi Tanaka, Jpn.; Kurt Wüthrich, Switz.
2003 Peter Agre, Roderick MacKinnon, U.S.
2004 Aaron Ciechanover, Avram Hershko, Isr.; Irwin Rose, U.S.
2005 Yves Chauvin, Fr.; Robert H. Grubbs, Richard R. Schrock, U.S.
2006 Roger D. Kornberg, U.S.
2007 Gerhard Ertl, Ger.
2008 Martin Chalfie, Roger Y. Tsien, Osamu Shimomura, U.S.
2009 Venkatraman Ramakrishnan, UK; Thomas A. Steitz, U.S.; Ada E. Yonath, Isr.

Physiology or Medicine

1901 Emil A. von Behring, Ger.
1902 Sir Ronald Ross, UK
1903 Niels R. Finsen, Den.
1904 Ivan P. Pavlov, Russ.
1905 Robert Koch, Ger.
1906 Camillo Golgi, It.; Santiago Ramon y Cajal, Spain
1907 Charles L. A. Laveran, Fr.
1908 Paul Ehrlich, Ger.; Ilya Mechnikov, Fr.
1909 Emil T. Kocher, Switz.
1910 Albrecht Kossel, Ger.
1911 Allvar Gullstrand, Swed.
1912 Alexis Carrel, Fr.
1913 Charles R. Richet, Fr.
1914 Robert Bárány, Austria
1919 Jules Bordet, Belg.
1920 Schack A. S. Krogh, Den.
1922 Archibald V. Hill, UK; Otto F. Meyerhof, Ger.
1923 Frederick G. Banting, Can.; John J. R. Macleod, UK
1924 Willem Einthoven, Neth.
1926 Johannes A. G. Fibiger, Den.
1927 Julius Wagner-Jauregg, Austria
1928 Charles J. H. Nicolle, Fr.
1929 Christiaan Eijkman, Neth.; Sir Frederick G. Hopkins, UK
1930 Karl Landsteiner, U.S.
1931 Otto H. Warburg, Ger.
1932 Edgar D. Adrian, Sir Charles S. Sherrington, UK
1933 Thomas H. Morgan, U.S.
1934 George R. Minot, William P. Murphy, G. H. Whipple, U.S.
1935 Hans Spemann, Ger.
1936 Sir Henry H. Dale, UK; Otto Loewi, U.S.
1937 Albert Szent-Gyorgyi, Hung.-U.S.
1938 Corneille J. F. Heymans, Belg.
1939 Gerhard Domagk, Ger.
1943 Henrik C. P. Dam, Den.; Edward A. Doisy, U.S.
1944 Joseph Erlanger, Herbert S. Gasser, U.S.
1945 Ernst B. Chain, Sir Alexander Fleming, Sir Howard W. Florey, UK
1946 Hermann J. Muller, U.S.
1947 Carl F. Cori, Gerty T. Cori, U.S.; Bernardo A. Houssay, Arg.
1948 Paul H. Müller, Switz.
1949 Walter R. Hess, Switz.; Antonio Moniz, Port.
1950 Philip S. Hench, Edward C. Kendall, U.S.; Tadeus Reichstein, Switz.
1951 Max Theiler, U.S.
1952 Selman A. Waksman, U.S.
1953 Hans A. Krebs, UK; Fritz A. Lipmann, U.S.
1954 John F. Enders, Frederick C. Robbins, Thomas H. Weller, U.S.
1955 Alex H. T. Theorell, Swed.
1956 André F. Cournand, Dickinson W. Richards, U.S.; Werner Forssmann, Ger.
1957 Daniel Bovet, It.
1958 George W. Beadle, Edward L. Tatum, Joshua Lederberg, U.S.
1959 Arthur Kornberg, Severo Ochoa, U.S.
1960 Sir Frank Macfarlane Burnet, Austral.; Peter B. Medawar, UK
1961 Georg von Békésy, U.S.
1962 Francis H. C. Crick, Maurice H. F. Wilkins, UK; James D. Watson, U.S.
1963 Sir John C. Eccles, Austral.; Alan L. Hodgkin, Andrew F. Huxley, UK
1964 Konrad E. Bloch, U.S.; Feodor Lynen, Ger.
1965 François Jacob, André Lwoff, Jacques Monod, Fr.
1966 Charles B. Huggins, Peyton Rous, U.S.
1967 Ragnar Granit, Swed.; Haldan Keffer Hartline, George Wald, U.S.

1968 Robert W. Holley, H. Gobind Khorana, Marshall W. Nirenberg, U.S.
1969 Max Delbrück, Alfred D. Hershey, Salvador Luria, U.S.
1970 Julius Axelrod, U.S.; Sir Bernard Katz, UK; Ulf von Euler, Swed.
1971 Earl W. Sutherland Jr., U.S.
1972 Gerald M. Edelman, U.S.; Rodney R. Porter, UK
1973 Karl von Frisch, Ger.; Konrad Lorenz, Austria; Nikolaas Tinbergen, UK
1974 Albert Claude, Lux.-U.S.; George Emil Palade, Rom.-U.S.; Christian de Duve, Belg.
1975 David Baltimore, Howard Temin, U.S.; Renato Dulbecco, It.-U.S.
1976 Baruch S. Blumberg, Daniel Carleton Gajdusek, U.S.
1977 Rosalyn S. Yalow, Roger C.L. Guillemin, Andrew V. Schally, U.S.
1978 Daniel Nathans, Hamilton O. Smith, U.S.; Werner Arber, Switz.
1979 Allan M. Cormack, U.S.; Godfrey N. Hounsfield, UK
1980 Baruj Benacerraf, George Snell, U.S.; Jean Dausset, Fr.
1981 Roger W. Sperry, David H. Hubel, Torsten N. Wiesel, U.S.
1982 Sune K. Bergström, Bengt I. Samuelsson, Swed.; John R. Vane, UK
1983 Barbara McClintock, U.S.
1984 César Milstein, UK-Arg.; Georges J. F. Köhler, Ger.; Niels K. Jerne, UK-Den.
1985 Michael S. Brown, Joseph L. Goldstein, U.S.
1986 Rita Levi-Montalcini, It.-U.S.; Stanley Cohen, U.S.
1987 Susumu Tonegawa, Jpn.
1988 Gertrude B. Elion, George H. Hitchings, U.S; Sir James Black, UK
1989 J. Michael Bishop, Harold E. Varmus, U.S.
1990 Joseph E. Murray, E. Donnall Thomas, U.S.
1991 Edwin Neher, Bert Sakmann, Ger.
1992 Edmond H. Fisher, Edwin G. Krebs, U.S.
1993 Phillip A. Sharp, U.S.; Richard J. Roberts, UK
1994 Alfred G. Gilman, Martin Rodbell, U.S.
1995 Edward B. Lewis, Eric F. Wieschaus, U.S.; Christiane Nüsslein-Volhard, Ger.
1996 Peter C. Doherty, Austral.; Rolf M. Zinkernagel, Switz.
1997 Stanley B. Prusiner, U.S.
1998 Robert F. Furchgott, Louis J. Ignarro, Ferid Murad, U.S.
1999 Günter Blobel, U.S.
2000 Arvid Carlsson, Swed.; Paul Greengard, U.S.; Eric R. Kandel, Austria-U.S.
2001 Leland H. Hartwell, U.S.; R. Timothy (Tim) Hunt, Sir Paul M. Nurse, UK
2002 Sydney Brenner, John E. Sulston, UK; H. Robert Horvitz, U.S.
2003 Paul C. Lauterbur, U.S.; Sir Peter Mansfield, UK
2004 Richard Axel, Linda B. Buck, U.S.
2005 Barry J. Marshall, J. Robin Warren, Australia
2006 Andrew Z. Fire, Craig C. Mello, U.S.
2007 Mario R. Capecchi, Oliver Smithies, U.S.; Sir Martin J. Evans, UK
2008 Harald zur Hausen, Ger.; Françoise Barré-Sinoussi, Luc Montagnier, Fr.
2009 Elizabeth H. Blackburn, Carol W. Greider, Jack W. Szostak, U.S.

Literature

1901 Rene F. A. Sully Prudhomme, Fr.
1902 Theodor Mommsen, Ger.
1903 Bjørnstjerne Bjørnson, Nor.
1904 Fréderic Mistral, Fr.; José Echegaray y Eizaguirre, Spain
1905 Henryk Sienkiewicz, Pol.
1906 Giosuè Carducci, It.
1907 Rudyard Kipling, UK
1908 Rudolf C. Eucken, Ger.
1909 Selma Lagerlöf, Swed.
1910 Paul J. L. Heyse, Ger.
1911 Maurice Maeterlinck, Belg.
1912 Gerhart Hauptmann, Ger.
1913 Rabindranath Tagore, India
1915 Romain Rolland, Fr.
1916 Verner von Heidenstam, Swed.
1917 Karl A. Gjellerup, Henrik Pontoppidan, Den.
1919 Carl F. G. Spitteler, Switz.
1920 Knut Hamsun, Nor.
1921 Anatole France, Fr.
1922 Jacinto Benavente, Spain
1923 William Butler Yeats, Ire.
1924 Wladyslaw S. Reymont, Pol.
1925 George Bernard Shaw, Ire.-UK
1926 Grazia Deledda, It.
1927 Henri Bergson, Fr.
1928 Sigrid Undset, Nor.
1929 Thomas Mann, Ger.
1930 Sinclair Lewis, U.S.
1931 Erik A. Karlfeldt, Swed.
1932 John Galsworthy, UK
1933 Ivan A. Bunin, USSR
1934 Luigi Pirandello, It.
1936 Eugene O'Neill, U.S.
1937 Roger Martin du Gard, Fr.
1938 Pearl S. Buck, U.S.
1939 Frans E. Sillanpää, Fin.
1944 Johannes V. Jensen, Den.
1945 Gabriela Mistral, Chile
1946 Hermann Hesse, Ger.-Switz.
1947 André Gide, Fr.
1948 T. S. Eliot, UK
1949 William Faulkner, U.S.
1950 Bertrand Russell, UK
1951 Pär F. Lagerkvist, Swed.
1952 François Mauriac, Fr.
1953 Sir Winston Churchill, UK
1954 Ernest Hemingway, U.S.
1955 Halldór K. Laxness, Ice.
1956 Juan Ramón Jiménez, Spain
1957 Albert Camus, Fr.
1958 Boris L. Pasternak, USSR (declined)
1959 Salvatore Quasimodo, It.
1960 Saint-John Perse, Fr.
1961 Ivo Andric, Yugo.
1962 John Steinbeck, U.S.
1963 Giorgos Seferis, Greece
1964 Jean-Paul Sartre, Fr. (declined)
1965 Mikhail Sholokhov, USSR
1966 Shmuel Yosef Agnon, Isr.; Nelly Sachs, Swed.
1967 Miguel Angel Asturias, Guat.
1968 Yasunari Kawabata, Jpn.
1969 Samuel Beckett, Ire.
1970 Aleksandr I. Solzhenitsyn, USSR
1971 Pablo Neruda, Chile
1972 Heinrich Böll, Ger.
1973 Patrick White, Austral.
1974 Eyvind Johnson, Harry Edmund Martinson, Swed.
1975 Eugenio Montale, It.
1976 Saul Bellow, U.S.
1977 Vicente Aleixandre, Spain
1978 Isaac Bashevis Singer, U.S.
1979 Odysseus Elytis, Greece
1980 Czeslaw Milosz, Pol.-U.S.
1981 Elias Canetti, Bulg.-UK
1982 Gabriel García Márquez, Colombia
1983 William Golding, UK
1984 Jaroslav Siefert, Czech.
1985 Claude Simon, Fr.
1986 Wole Soyinka, Nigeria
1987 Joseph Brodsky, USSR-U.S.
1988 Naguib Mahfouz, Egypt
1989 Camilo José Cela, Spain
1990 Octavio Paz, Mex.
1991 Nadine Gordimer, S. Afr.
1992 Derek Walcott, St. Lucia
1993 Toni Morrison, U.S.
1994 Kenzaburo Oe, Jpn.
1995 Seamus Heaney, Ire.
1996 Wislawa Szymborska, Pol.
1997 Dario Fo, It.
1998 Jose Saramago, Por.
1999 Günter Grass, Ger.
2000 Gao Xingjian, China-Fr.
2001 Sir V.S. Naipaul, UK
2002 Imre Kertész, Hung.
2003 J. M. Coetzee, S. Afr.
2004 Elfriede Jelinek, Austria
2005 Harold Pinter, UK
2006 Orhan Pamuk, Turk.
2007 Doris Lessing, UK
2008 Jean-Marie Gustave Le Clézio, Fr.
2009 Herta Müller, Ger.

Peace

1901 Jean H. Dunant, Switz.; Frédéric Passy, Fr.
1902 Élie Ducommun, Charles A. Gobat, Switz.
1903 Sir William R. Cremer, UK
1904 Institute of International Law
1905 Baroness Bertha von Suttner, Austria
1906 Theodore Roosevelt, U.S.
1907 Ernesto T. Moneta, It.; Louis Renault, Fr.
1908 Klas P. Arnoldson, Swed.; Fredrik Bajer, Den.
1909 Auguste M. F. Beernaert, Belg.; Paul H. B. B. d'Estournelles de Constant, Fr.
1910 Permanent Intl. Peace Bureau
1911 Tobias M. C. Asser, Neth.; Alfred H. Fried, Austria
1912 Elihu Root, U.S.
1913 Henri La Fontaine, Belg.
1917 International Red Cross
1919 Woodrow Wilson, U.S.
1920 Léon V. A. Bourgeois, Fr.
1921 Karl H. Branting, Swed.; Christian L. Lange, Nor.
1922 Fridtjof Nansen, Nor.
1925 Sir J. Austen Chamberlain, UK; Charles G. Dawes, U.S.
1926 Aristide Briand, Fr.; Gustav Stresemann, Ger.
1927 Ferdinand E. Buisson, Fr.; Ludwig Quidde, Ger.

1929 Frank B. Kellogg, U.S.
1930 Nathan Söderblom, Swed.
1931 Jane Addams, Nicholas Murray Butler, U.S.
1933 Sir Norman Angell, UK
1934 Arthur Henderson, UK
1935 Carl von Ossietzky, Ger.
1936 Carlos Saavedra Lamas, Arg.
1937 Viscount Cecil of Chelwood, UK
1938 Nansen International Office for Refugees
1944 International Red Cross
1945 Cordell Hull, U.S.
1946 Emily G. Balch, John R. Mott, U.S.
1947 Friends Service Council, UK; Amer. Friends Service Committee, U.S.
1949 Lord John Boyd Orr of Brechin, UK
1950 Ralph J. Bunche, U.S.
1951 Léon Jouhaux, Fr.
1952 Albert Schweitzer, Fr.
1953 George C. Marshall, U.S.
1954 Office of UN High Com. for Refugees
1957 Lester B. Pearson, Can.
1958 Georges Pire, Belg.
1959 Philip J. Noel-Baker, UK
1960 Albert J. Lutuli, S. Afr.
1961 Dag Hammarskjöld, Swed.
1962 Linus C. Pauling, U.S.
1963 International Red Cross, League of Red Cross Societies
1964 Martin Luther King Jr., U.S.
1965 UN Children's Fund (UNICEF)
1968 René Cassin, Fr.
1969 Intl. Labor Organization
1970 Norman E. Borlaug, U.S.
1971 Willy Brandt, Ger.
1973 Henry Kissinger, U.S.; Le Duc Tho, N. Viet. (Tho declined)
1974 Eisaku Sato, Jpn.; Seán MacBride, Ire.
1975 Andrei Sakharov, USSR
1976 Mairead Corrigan, Betty Williams, N. Ire.
1977 Amnesty International
1978 Anwar al-Sadat, Egypt; Menachem Begin, Isr.
1979 Mother Teresa of Calcutta, Alb.-Ind.
1980 Adolfo Pérez Esquivel, Arg.
1981 Office of UN High Com. for Refugees
1982 Alva Myrdal, Swed.; Alfonso García Robles, Mex.
1983 Lech Walesa, Pol.
1984 Bishop Desmond Tutu, S. Afr.
1985 Intl. Physicians for the Prevention of Nuclear War, U.S.
1986 Elie Wiesel, Rom.-U.S.
1987 Oscar Arias Sánchez, Costa Rica
1988 UN Peacekeeping Forces
1989 Dalai Lama (Tenzin Gyatso), Tibet
1990 Mikhail S. Gorbachev, USSR
1991 Aung San Suu Kyi, Burma
1992 Rigoberta Menchú Tum, Guat.
1993 Frederik W. de Klerk, Nelson Mandela, S. Afr.
1994 Yasser Arafat, Pal.; Shimon Peres, Yitzhak Rabin, Isr.
1995 Joseph Rotblat, Pol.-UK; Pugwash Conferences
1996 Bishop Carlos Ximenes Belo, José Ramos-Horta, Timor-Leste
1997 Jody Williams, U.S.; International Campaign to Ban Landmines
1998 John Hume, David Trimble, N. Ire.
1999 Doctors Without Borders (Médecins Sans Frontières), Fr.
2000 Kim Dae-Jung, S. Kor.
2001 UN; Kofi Annan, Ghana
2002 Jimmy Carter, U.S.
2003 Shirin Ebadi, Iran
2004 Wangari Maathai, Kenya
2005 Mohamed ElBaradei, Egypt; International Atomic Energy Agency, Austria
2006 Muhammad Yunus, Grameen Bank, Bang.
2007 Intergovernmental Panel on Climate Change, Switz.; Albert Arnold Gore Jr., U.S.
2008 Martti Ahtisaari, Finland
2009 Barack H. Obama, U.S.

Nobel Memorial Prize in Economic Sciences

1969 Ragnar Frisch, Nor.; Jan Tinbergen, Neth.
1970 Paul A. Samuelson, U.S.
1971 Simon Kuznets, U.S.
1972 Kenneth J. Arrow, U.S.; John R. Hicks, UK
1973 Wassily Leontief, U.S.
1974 Gunnar Myrdal, Swed.; Friedrich A. von Hayek, Austria
1975 Tjalling Koopmans, Neth.-U.S.; Leonid Kantorovich, USSR
1976 Milton Friedman, U.S.
1977 Bertil Ohlin, Swed.; James E. Meade, UK
1978 Herbert A. Simon, U.S.
1979 Theodore W. Schultz, U.S.; Sir Arthur Lewis, UK
1980 Lawrence R. Klein, U.S.
1981 James Tobin, U.S.
1982 George J. Stigler, U.S.
1983 Gerard Debreu, Fr.-U.S.
1984 Richard Stone, UK
1985 Franco Modigliani, It.-U.S.
1986 James M. Buchanan, U.S.
1987 Robert M. Solow, U.S.
1988 Maurice Allais, Fr.
1989 Trygve Haavelmo, Nor.
1990 Harry M. Markowitz, William F. Sharpe, Merton H. Miller, U.S.
1991 Ronald H. Coase, UK-U.S.
1992 Gary S. Becker, U.S.
1993 Robert W. Fogel, Douglass C. North, U.S.
1994 John C. Harsanyi, John F. Nash, U.S.; Reinhard Selten, Ger.
1995 Robert E. Lucas Jr., U.S.
1996 James A. Mirrlees, UK; William Vickrey, Can.-U.S.
1997 Robert C. Merton, U.S.; Myron S. Scholes, Can.-U.S.
1998 Amartya Sen, India
1999 Robert A. Mundell, Can.
2000 James J. Heckman, Daniel L. McFadden, U.S.
2001 George A. Akerlof, A. Michael Spence, Joseph E. Stiglitz, U.S.
2002 Daniel Kahneman, U.S.-Isr.; Vernon L. Smith, U.S.
2003 Robert F. Engle, U.S.; Clive W. J. Granger, UK
2004 Finn E. Kydland, Nor.; Edward C. Prescott, U.S.
2005 Robert J. Aumann, Israel-U.S.; Thomas C. Schelling, U.S.
2006 Edmund S. Phelps, U.S.
2007 Leonid Hurwicz, Eric S. Maskin, Roger B. Myerson, U.S.
2008 Paul Krugman, U.S.
2009 Elinor Ostrom, Oliver E. Williamson, U.S.

Pulitzer Prizes in Journalism, Letters, and Music, 1917-2010

Endowed by Joseph Pulitzer (1847-1911), publisher of the *New York World*, in a bequest to Columbia Univ. and awarded annually, in years shown, for work published the previous year. Prizes are now $10,000 in each category, except Public Service (in Journalism), for which a medal is given. The prize board began considering submissions from online-only publications in 2009. For letters and music, prizes in past years are listed; if a year is omitted, no award was given that year.

Pulitzer Prizes in Journalism, 2010

Public Service: *Bristol Herald Courier* (VA), for Daniel Gilbert's exposé of natural-gas royalties mismanagement that spurred action by state lawmakers.

Breaking News Reporting: *Seattle Times* staff, for coverage of the shooting deaths of 4 police officers and ensuing 40-hour manhunt.

Investigative Reporting: Barbara Laker and Wendy Ruderman, *Philadelphia Daily News*, for exposing a rogue police narcotics squad; and Sheri Fink, ProPublica (with *NY Times Magazine*), for chronicling decisions made by exhausted doctors in Hurricane Katrina's aftermath.

Explanatory Reporting: Michael Moss and *NY Times* staff, for stories on contaminated meat and food safety issues.

Local Reporting: Raquel Rutledge, *Milwaukee Journal Sentinel*, for reports on fraud and abuse in a taxpayer-subsidized child care system.

National Reporting: Matt Richtel and *NY Times* staff, for work exposing the dangers of operating cell phones and other devices while driving.

International Reporting: Anthony Shadid, *Washington Post*, for reports on Iraq's future and the U.S. departure.

Feature Writing: Gene Weingarten, *Washington Post*, for haunting story about parents who accidentally kill their children by forgetting them in cars.

Commentary: Kathleen Parker, *Washington Post*, for perceptive, witty columns on political and moral issues.

Criticism: Sarah Kaufman, *Washington Post*, for imaginative dance criticism.

Editorial Writing: Tod Robberson, Colleen McCain Nelson, and William McKenzie, *Dallas Morning News*, for editorials deploring the social and economic disparity in their city.

Editorial Cartooning: Mark Fiore (self-syndicated), for animated cartoons appearing on SFGate.com, the *San Francisco Chronicle* web site.

Breaking News Photography: Mary Chind, *Des Moines Register*, for photograph of a person in a makeshift harness trying to save a woman trapped in water beneath a dam.

Feature Photography: Craig F. Walker, *Denver Post*, for portraits of a teenager transitioning from high-school student to soldier.

Pulitzer Prizes in Letters, 1917-2010

Fiction

1918 Ernest Poole, *His Family*
1919 Booth Tarkington, *The Magnificent Ambersons*
1921 Edith Wharton, *The Age of Innocence*
1922 Booth Tarkington, *Alice Adams*
1923 Willa Cather, *One of Ours*
1924 Margaret Wilson, *The Able McLaughlins*
1925 Edna Ferber, *So Big*
1926 Sinclair Lewis, *Arrowsmith* (refused prize)
1927 Louis Bromfield, *Early Autumn*
1928 Thornton Wilder, *Bridge of San Luis Rey*
1929 Julia M. Peterkin, *Scarlet Sister Mary*
1930 Oliver LaFarge, *Laughing Boy*
1931 Margaret Ayer Barnes, *Years of Grace*
1932 Pearl S. Buck, *The Good Earth*
1933 T. S. Stribling, *The Store*
1934 Caroline Miller, *Lamb in His Bosom*
1935 Josephine W. Johnson, *Now in November*
1936 Harold L. Davis, *Honey in the Horn*
1937 Margaret Mitchell, *Gone With the Wind*
1938 John P. Marquand, *The Late George Apley*
1939 Marjorie Kinnan Rawlings, *The Yearling*
1940 John Steinbeck, *The Grapes of Wrath*
1942 Ellen Glasgow, *In This Our Life*
1943 Upton Sinclair, *Dragon's Teeth*
1944 Martin Flavin, *Journey in the Dark*
1945 John Hersey, *A Bell for Adano*
1947 Robert Penn Warren, *All the King's Men*
1948 James A. Michener, *Tales of the South Pacific*
1949 James Gould Cozzens, *Guard of Honor*
1950 A. B. Guthrie Jr., *The Way West*
1951 Conrad Richter, *The Town*
1952 Herman Wouk, *The Caine Mutiny*
1953 Ernest Hemingway, *The Old Man and the Sea*
1955 William Faulkner, *A Fable*
1956 MacKinlay Kantor, *Andersonville*
1958 James Agee, *A Death in the Family*
1959 Robert Lewis Taylor, *The Travels of Jaimie McPheeters*
1960 Allen Drury, *Advise and Consent*
1961 Harper Lee, *To Kill a Mockingbird*
1962 Edwin O'Connor, *The Edge of Sadness*
1963 William Faulkner, *The Reivers*
1965 Shirley Ann Grau, *The Keepers of the House*
1966 Katherine Anne Porter, *Collected Stories*
1967 Bernard Malamud, *The Fixer*
1968 William Styron, *The Confessions of Nat Turner*
1969 N. Scott Momaday, *House Made of Dawn*
1970 Jean Stafford, *Collected Stories*
1972 Wallace Stegner, *Angle of Repose*
1973 Eudora Welty, *The Optimist's Daughter*
1975 Michael Shaara, *The Killer Angels*
1976 Saul Bellow, *Humboldt's Gift*
1978 James Alan McPherson, *Elbow Room*
1979 John Cheever, *The Stories of John Cheever*
1980 Norman Mailer, *The Executioner's Song*
1981 John Kennedy Toole, *A Confederacy of Dunces*
1982 John Updike, *Rabbit Is Rich*
1983 Alice Walker, *The Color Purple*
1984 William Kennedy, *Ironweed*
1985 Alison Lurie, *Foreign Affairs*
1986 Larry McMurtry, *Lonesome Dove*
1987 Peter Taylor, *A Summons to Memphis*
1988 Toni Morrison, *Beloved*
1989 Anne Tyler, *Breathing Lessons*
1990 Oscar Hijuelos, *The Mambo Kings Play Songs of Love*
1991 John Updike, *Rabbit at Rest*
1992 Jane Smiley, *A Thousand Acres*
1993 Robert Olen Butler, *A Good Scent From a Strange Mountain*
1994 E. Annie Proulx, *The Shipping News*
1995 Carol Shields, *The Stone Diaries*
1996 Richard Ford, *Independence Day*
1997 Steven Millhauser, *Martin Dressler: The Tale of an American Dreamer*
1998 Philip Roth, *American Pastoral*
1999 Michael Cunningham, *The Hours*
2000 Jhumpa Lahiri, *Interpreter of Maladies*
2001 Michael Chabon, *The Amazing Adventures of Kavalier & Clay*
2002 Richard Russo, *Empire Falls*
2003 Jeffrey Eugenides, *Middlesex*
2004 Edward P. Jones, *The Known World*
2005 Marilynne Robinson, *Gilead*
2006 Geraldine Brooks, *March*
2007 Cormac McCarthy, *The Road*
2008 Junot Díaz, *The Brief Wondrous Life of Oscar Wao*
2009 Elizabeth Strout, *Olive Kitteridge*
2010 Paul Harding, *Tinkers*

Drama

1918 Jesse Lynch Williams, *Why Marry?*
1920 Eugene O'Neill, *Beyond the Horizon*
1921 Zona Gale, *Miss Lulu Bett*
1922 Eugene O'Neill, *Anna Christie*
1923 Owen Davis, *Icebound*
1924 Hatcher Hughes, *Hell-Bent for Heaven*
1925 Sidney Howard, *They Knew What They Wanted*
1926 George Kelly, *Craig's Wife*
1927 Paul Green, *In Abraham's Bosom*
1928 Eugene O'Neill, *Strange Interlude*
1929 Elmer Rice, *Street Scene*
1930 Marc Connelly, *The Green Pastures*
1931 Susan Glaspell, *Alison's House*
1932 George S. Kaufman, Morrie Ryskind, and Ira Gershwin, *Of Thee I Sing*
1933 Maxwell Anderson, *Both Your Houses*
1934 Sidney Kingsley, *Men in White*
1935 Zoe Akins, *The Old Maid*
1936 Robert E. Sherwood, *Idiot's Delight*
1937 George S. Kaufman and Moss Hart, *You Can't Take It With You*
1938 Thornton Wilder, *Our Town*
1939 Robert E. Sherwood, *Abe Lincoln in Illinois*
1940 William Saroyan, *The Time of Your Life*
1941 Robert E. Sherwood, *There Shall Be No Night*
1943 Thornton Wilder, *The Skin of Our Teeth*
1945 Mary Chase, *Harvey*
1946 Russel Crouse and Howard Lindsay, *State of the Union*
1948 Tennessee Williams, *A Streetcar Named Desire*
1949 Arthur Miller, *Death of a Salesman*
1950 Richard Rodgers, Oscar Hammerstein II, and Joshua Logan, *South Pacific*
1952 Joseph Kramm, *The Shrike*
1953 William Inge, *Picnic*
1954 John Patrick, *Teahouse of the August Moon*
1955 Tennessee Williams, *Cat on a Hot Tin Roof*
1956 Frances Goodrich and Albert Hackett, *The Diary of Anne Frank*
1957 Eugene O'Neill, *Long Day's Journey Into Night*
1958 Ketti Frings, *Look Homeward, Angel*
1959 Archibald MacLeish, *J. B.*
1960 George Abbott, Jerome Weidman, Sheldon Harnick, and Jerry Bock, *Fiorello!*
1961 Tad Mosel, *All the Way Home*
1962 Frank Loesser and Abe Burrows, *How to Succeed in Business Without Really Trying*
1965 Frank D. Gilroy, *The Subject Was Roses*
1967 Edward Albee, *A Delicate Balance*
1969 Howard Sackler, *The Great White Hope*
1970 Charles Gordone, *No Place to Be Somebody*
1971 Paul Zindel, *The Effect of Gamma Rays on Man-in-the-Moon Marigolds*
1973 Jason Miller, *That Championship Season*
1975 Edward Albee, *Seascape*
1976 Michael Bennett, James Kirkwood, Nicholas Dante, Marvin Hamlisch, and Edward Kleban, *A Chorus Line*
1977 Michael Cristofer, *The Shadow Box*
1978 Donald L. Coburn, *The Gin Game*
1979 Sam Shepard, *Buried Child*
1980 Lanford Wilson, *Talley's Folly*
1981 Beth Henley, *Crimes of the Heart*
1982 Charles Fuller, *A Soldier's Play*
1983 Marsha Norman, *'night, Mother*
1984 David Mamet, *Glengarry Glen Ross*
1985 Stephen Sondheim and James Lapine, *Sunday in the Park With George*
1987 August Wilson, *Fences*
1988 Alfred Uhry, *Driving Miss Daisy*
1989 Wendy Wasserstein, *The Heidi Chronicles*
1990 August Wilson, *The Piano Lesson*
1991 Neil Simon, *Lost in Yonkers*
1992 Robert Schenkkan, *The Kentucky Cycle*
1993 Tony Kushner, *Angels in America: Millennium Approaches*
1994 Edward Albee, *Three Tall Women*
1995 Horton Foote, *The Young Man From Atlanta*
1996 Jonathan Larson, *Rent*
1998 Paula Vogel, *How I Learned to Drive*
1999 Margaret Edson, *Wit*
2000 Donald Margulies, *Dinner With Friends*
2001 David Auburn, *Proof*
2002 Suzan-Lori Parks, *Topdog/Underdog*
2003 Nilo Cruz, *Anna in the Tropics*
2004 Doug Wright, *I Am My Own Wife*
2005 John Patrick Shanley, *Doubt, a parable*
2007 David Lindsay-Abaire, *Rabbit Hole*
2008 Tracy Letts, *August: Osage County*
2009 Lynn Nottage, *Ruined*
2010 Tom Kitt and Brian Yorkey, *Next to Normal*

History (U.S.)

1917 J. J. Jusserand, *With Americans of Past and Present Days*
1918 James Ford Rhodes, *History of the Civil War*
1920 Justin H. Smith, *The War With Mexico*
1921 William Sowden Sims, *The Victory at Sea*
1922 James Truslow Adams, *The Founding of New England*
1923 Charles Warren, *The Supreme Court in United States History*
1924 Charles Howard McIlwain, *The American Revolution: A Constitutional Interpretation*
1925 Frederick L. Paxton, *A History of the American Frontier*
1926 Edward Channing, *A History of the U.S.*
1927 Samuel Flagg Bemis, *Pinckney's Treaty*
1928 V. L. Parrington, *Main Currents in American Thought*
1929 Fred A. Shannon, *The Organization and Administration of the Union Army, 1861-65*
1930 Claude H. Van Tyne, *The War of Independence*
1931 Bernadotte E. Schmitt, *The Coming of the War, 1914*
1932 Gen. John J. Pershing, *My Experiences in the World War*
1933 Frederick J. Turner, *The Significance of Sections in American History*
1934 Herbert Agar, *The People's Choice*
1935 Charles McLean Andrews, *The Colonial Period of American History*
1936 Andrew C. McLaughlin, *The Constitutional History of the United States*
1937 Van Wyck Brooks, *The Flowering of New England*
1938 Paul Herman Buck, *The Road to Reunion, 1865-1900*
1939 Frank Luther Mott, *A History of American Magazines*
1940 Carl Sandburg, *Abraham Lincoln: The War Years*
1941 Marcus Lee Hansen, *The Atlantic Migration, 1607-1860*
1942 Margaret Leech, *Reveille in Washington*
1943 Esther Forbes, *Paul Revere and the World He Lived In*
1944 Merle Curti, *The Growth of American Thought*
1945 Stephen Bonsal, *Unfinished Business*
1946 Arthur M. Schlesinger Jr., *The Age of Jackson*
1947 James Phinney Baxter III, *Scientists Against Time*
1948 Bernard De Voto, *Across the Wide Missouri*
1949 Roy F. Nichols, *The Disruption of American Democracy*
1950 O. W. Larkin, *Art and Life in America*
1951 R. Carlyle Buley, *The Old Northwest: Pioneer Period 1815-1840*
1952 Oscar Handlin, *The Uprooted*
1953 George Dangerfield, *The Era of Good Feelings*
1954 Bruce Catton, *A Stillness at Appomattox*
1955 Paul Horgan, *Great River: The Rio Grande in North American History*
1956 Richard Hofstadter, *The Age of Reform*
1957 George F. Kennan, *Russia Leaves the War*
1958 Bray Hammond, *Banks and Politics in America—From the Revolution to the Civil War*
1959 Leonard D. White and Jean Schneider, *The Republican Era; 1869-1901*
1960 Margaret Leech, *In the Days of McKinley*
1961 Herbert Feis, *Between War and Peace: The Potsdam Conference*
1962 Lawrence H. Gibson, *The Triumphant Empire: Thunderclouds Gather in the West*
1963 Constance McLaughlin Green, *Washington: Village and Capital, 1800-1878*
1964 Sumner Chilton Powell, *Puritan Village: The Formation of a New England Town*
1965 Irwin Unger, *The Greenback Era*
1966 Perry Miller, *Life of the Mind in America*
1967 William H. Goetzmann, *Exploration and Empire: The Explorer and Scientist in the Winning of the American West*
1968 Bernard Bailyn, *The Ideological Origins of the American Revolution*
1969 Leonard W. Levy, *Origin of the Fifth Amendment*
1970 Dean Acheson, *Present at the Creation: My Years in the State Department*
1971 James McGregor Burns, *Roosevelt: The Soldier of Freedom*
1972 Carl N. Degler, *Neither Black nor White*
1973 Michael Kammen, *People of Paradox: An Inquiry Concerning the Origins of American Civilization*
1974 Daniel J. Boorstin, *The Americans: The Democratic Experience*
1975 Dumas Malone, *Jefferson and His Time*
1976 Paul Horgan, *Lamy of Santa Fe*
1977 David M. Potter, *The Impending Crisis*
1978 Alfred D. Chandler Jr., *The Visible Hand: The Managerial Revolution in American Business*
1979 Don E. Fehrenbacher, *The Dred Scott Case: Its Significance in American Law and Politics*
1980 Leon F. Litwack, *Been in the Storm So Long*
1981 Lawrence A. Cremin, *American Education: The National Experience, 1783-1876*
1982 C. Vann Woodward, ed., *Mary Chesnut's Civil War*
1983 Rhys L. Issac, *The Transformation of Virginia, 1740-1790*
1985 Thomas K. McCraw, *Prophets of Regulation*
1986 Walter A. McDougall, *The Heavens and the Earth*
1987 Bernard Bailyn, *Voyagers to the West*
1988 Robert V. Bruce, *The Launching of Modern American Science, 1846-1876*
1989 Taylor Branch, *Parting the Waters: America in the King Years, 1954-63*; and James M. McPherson, *Battle Cry of Freedom: The Civil War Era*
1990 Stanley Karnow, *In Our Image: America's Empire in the Philippines*
1991 Laurel Thatcher Ulrich, *A Midwife's Tale: The Life of Martha Ballard,* based on her diary, 1785-1812
1992 Mark E. Neely Jr., *The Fate of Liberty: Abraham Lincoln and Civil Liberties*
1993 Gordon S. Wood, *The Radicalism of the American Revolution*
1995 Doris Kearns Goodwin, *No Ordinary Time: Franklin and Eleanor Roosevelt: The Home Front in World War II*
1996 Alan Taylor, *William Cooper's Town: Power and Persuasion on the Frontier of the Early American Republic*
1997 Jack N. Rakove, *Original Meanings: Politics and Ideas in the Making of the Constitution*
1998 Edward J. Larson, *Summer for the Gods: The Scopes Trial and America's Continuing Debate Over Science and Religion*
1999 Edwin G. Burrows and Mike Wallace, *Gotham: A History of New York City to 1898*
2000 David M. Kennedy, *Freedom From Fear: The American People in Depression and War, 1929-1945*
2001 Joseph J. Ellis, *Founding Brothers: The Revolutionary Generation*
2002 Louis Menand, *The Metaphysical Club: A Story of Ideas in America*
2003 Rick Atkinson, *An Army at Dawn: The War in North Africa, 1942-1943*
2004 Steven Hahn, *A Nation Under Our Feet: Black Political Struggles in the Rural South from Slavery to the Great Migration*
2005 David Hackett Fischer, *Washington's Crossing*
2006 David M. Oshinsky, *Polio: An American Story*
2007 Gene Roberts and Hank Klibanoff, *The Race Beat: The Press, the Civil Rights Struggle, and the Awakening of a Nation*
2008 Daniel Walker Howe, *What Hath God Wrought: The Transformation of America, 1815-1848*
2009 Annette Gordon-Reed, *The Hemingses of Monticello: An American Family*
2010 Liaquat Ahamed, *Lords of Finance: The Bankers Who Broke the World*

Biography or Autobiography

1917 Laura E. Richards and Maude Howe Elliott, assisted by Florence Howe Hall, *Julia Ward Howe*
1918 William Cabell Bruce, *Benjamin Franklin, Self-Revealed*
1919 Henry Adams, *The Education of Henry Adams*
1920 Albert J. Beveridge, *The Life of John Marshall*
1921 Edward Bok, *The Americanization of Edward Bok*
1922 Hamlin Garland, *A Daughter of the Middle Border*
1923 Burton J. Hendrick, *The Life and Letters of Walter H. Page*
1924 Michael Pupin, *From Immigrant to Inventor*
1925 M. A. DeWolfe Howe, *Barrett Wendell and His Letters*
1926 Harvey Cushing, *Life of Sir William Osler*
1927 Emory Holloway, *Whitman: An Interpretation in Narrative*
1928 Charles Edward Russell, *The American Orchestra and Theodore Thomas*
1929 Burton J. Hendrick, *The Training of an American: The Earlier Life and Letters of Walter H. Page*
1930 Marquis James, *The Raven*
1931 Henry James, *Charles W. Eliot*
1932 Henry F. Pringle, *Theodore Roosevelt*
1933 Allan Nevins, *Grover Cleveland*
1934 Tyler Dennett, *John Hay*
1935 Douglas Southall Freeman, *R. E. Lee*
1936 Ralph Barton Perry, *The Thought and Character of William James*
1937 Allan Nevins, *Hamilton Fish: The Inner History of the Grant Administration*
1938 Odell Shepard, *Pedlar's Progress*; Marquis James, *Andrew Jackson, 2 vols.*
1939 Carl Van Doren, *Benjamin Franklin*
1940 Ray Stannard Baker, *Woodrow Wilson, Life and Letters*
1941 Ola Elizabeth Winslow, *Jonathan Edwards*
1942 Forrest Wilson, *Crusader in Crinoline*

1943 Samuel Eliot Morison, *Admiral of the Ocean Sea* (Christopher Columbus)
1944 Carleton Mabee, *The American Leonardo: The Life of Samuel F. B. Morse*
1945 Russell Blaine Nye, *George Bancroft: Brahmin Rebel*
1946 Linny Marsh Wolfe, *Son of the Wilderness*
1947 William Allen White, *Autobiography of William Allen White*
1948 Margaret Clapp, *Forgotten First Citizen: John Bigelow*
1949 Robert E. Sherwood, *Roosevelt and Hopkins*
1950 Samuel Flagg Bemis, *John Quincy Adams and the Foundations of American Foreign Policy*
1951 Margaret Louise Coit, *John C. Calhoun: American Portrait*
1952 Merlo J. Pusey, *Charles Evans Hughes*
1953 David J. Mays, *Edmund Pendleton, 1721-1803*
1954 Charles A. Lindbergh, *The Spirit of St. Louis*
1955 William S. White, *The Taft Story*
1956 Talbot F. Hamlin, *Benjamin Henry Latrobe*
1957 John F. Kennedy, *Profiles in Courage*
1958 Douglas Southall Freeman, *George Washington*, Vols. 1-VI
1959 Arthur Walworth, *Woodrow Wilson: American Prophet*
1960 Samuel Eliot Morison, *John Paul Jones*
1961 David Donald, *Charles Sumner and the Coming of the Civil War*
1963 Leon Edel, *Henry James: Vols. 2-3*
1964 Walter Jackson Bate, *John Keats*
1965 Ernest Samuels, *Henry Adams*
1966 Arthur M. Schlesinger Jr., *A Thousand Days*
1967 Justin Kaplan, *Mr. Clemens and Mark Twain*
1968 George F. Kennan, *Memoirs (1925-1950)*
1969 B. L. Reid, *The Man From New York: John Quinn and His Friends*
1970 T. Harry Williams, *Huey Long*
1971 Lawrence Thompson, *Robert Frost: The Years of Triumph, 1915-1938*
1972 Joseph P. Lash, *Eleanor and Franklin*
1973 W. A. Swanberg, *Luce and His Empire*
1974 Louis Sheaffer, *O'Neill, Son and Artist*
1975 Robert A. Caro, *The Power Broker: Robert Moses and the Fall of New York*
1976 R. W. B. Lewis, *Edith Wharton: A Biography*
1977 John E. Mack, *A Prince of Our Disorder: The Life of T. E. Lawrence*
1978 Walter Jackson Bate, *Samuel Johnson*
1979 Leonard Baker, *Days of Sorrow and Pain: Leo Baeck and the Berlin Jews*
1980 Edmund Morris, *The Rise of Theodore Roosevelt*
1981 Robert K. Massie, *Peter the Great: His Life and World*
1982 William S. McFeely, *Grant: A Biography*
1983 Russell Baker, *Growing Up*
1984 Louis R. Harlan, *Booker T. Washington*
1985 Kenneth Silverman, *The Life and Times of Cotton Mather*
1986 Elizabeth Frank, *Louise Bogan: A Portrait*
1987 David J. Garrow, *Bearing the Cross: Martin Luther King Jr. and the Southern Christian Leadership Conference*
1988 David Herbert Donald, *Look Homeward: A Life of Thomas Wolfe*
1989 Richard Ellmann, *Oscar Wilde*
1990 Sebastian de Grazia, *Machiavelli in Hell*
1991 Steven Naifeh and Gregory White Smith, *Jackson Pollock: An American Saga*
1992 Lewis B. Puller Jr., *Fortunate Son: The Healing of a Vietnam Vet*
1993 David McCullough, *Truman*
1994 David Levering Lewis, *W.E.B. DuBois: Biography of a Race, 1868-1919*
1995 Joan D. Hedrick, *Harriet Beecher Stowe: A Life*
1996 Jack Miles, *God: A Biography*
1997 Frank McCourt, *Angela's Ashes: A Memoir*
1998 Katharine Graham, *Personal History*
1999 A. Scott Berg, *Lindbergh*
2000 Stacy Schiff, *Véra (Mrs. Vladimir Nabokov)*
2001 David Levering Lewis, *W.E.B. Du Bois: The Fight for Equality and the American Century, 1919-1963*
2002 David McCullough, *John Adams*
2003 Robert Caro, *The Years of Lyndon Johnson: Master of the Senate*
2004 William Taubman, *Khrushchev: The Man and His Era*
2005 Mark Stevens and Annalyn Swan, *de Kooning: An American Master*
2006 Kai Bird and Martin J. Sherwin, *American Prometheus: The Triumph and Tragedy of J. Robert Oppenheimer*
2007 Debby Applegate, *The Most Famous Man in America: The Biography of Henry Ward Beecher*
2008 John Matteson, *Eden's Outcasts: The Story of Louisa May Alcott and Her Father*
2009 Jon Meacham, *American Lion: Andrew Jackson in the White House*
2010 T. J. Stiles, *The First Tycoon: The Epic Life of Cornelius Vanderbilt*

American Poetry

Before 1922, awards were funded by the Poetry Society.

1918 Sara Teasdale, *Love Songs*
1919 Margaret Widdemer, *Old Road to Paradise*; Carl Sandburg, *Corn Huskers*
1922 Edwin Arlington Robinson, *Collected Poems*
1923 Edna St. Vincent Millay, *The Ballad of the Harp-Weaver*; *A Few Figs From Thistles*; other works
1924 Robert Frost, *New Hampshire: A Poem With Notes and Grace Notes*
1925 Edwin Arlington Robinson, *The Man Who Died Twice*
1926 Amy Lowell, *What's O'Clock*
1927 Leonora Speyer, *Fiddler's Farewell*
1928 Edwin Arlington Robinson, *Tristram*
1929 Stephen Vincent Benet, *John Brown's Body*
1930 Conrad Aiken, *Selected Poems*
1931 Robert Frost, *Collected Poems*
1932 George Dillon, *The Flowering Stone*
1933 Archibald MacLeish, *Conquistador*
1934 Robert Hillyer, *Collected Verse*
1935 Audrey Wurdemann, *Bright Ambush*
1936 Robert P. Tristram Coffin, *Strange Holiness*
1937 Robert Frost, *A Further Range*
1938 Marya Zaturenska, *Cold Morning Sky*
1939 John Gould Fletcher, *Selected Poems*
1940 Mark Van Doren, *Collected Poems*
1941 Leonard Bacon, *Sunderland Capture*
1942 William Rose Benet, *The Dust Which Is God*
1943 Robert Frost, *A Witness Tree*
1944 Stephen Vincent Benet, *Western Star*
1945 Karl Shapiro, *V-Letter and Other Poems*
1947 Robert Lowell, *Lord Weary's Castle*
1948 W. H. Auden, *The Age of Anxiety*
1949 Peter Viereck, *Terror and Decorum*
1950 Gwendolyn Brooks, *Annie Allen*
1951 Carl Sandburg, *Complete Poems*
1952 Marianne Moore, *Collected Poems*
1953 Archibald MacLeish, *Collected Poems*
1954 Theodore Roethke, *The Waking*
1955 Wallace Stevens, *Collected Poems*
1956 Elizabeth Bishop, *Poems, North and South*
1957 Richard Wilbur, *Things of This World*
1958 Robert Penn Warren, *Promises: Poems 1954-1956*
1959 Stanley Kunitz, *Selected Poems 1928-1958*
1960 W. D. Snodgrass, *Heart's Needle*
1961 Phyllis McGinley, *Times Three: Selected Verse From Three Decades*
1962 Alan Dugan, *Poems*
1963 William Carlos Williams, *Pictures From Breughel*
1964 Louis Simpson, *At the End of the Open Road*
1965 John Berryman, *77 Dream Songs*
1966 Richard Eberhart, *Selected Poems*
1967 Anne Sexton, *Live or Die*
1968 Anthony Hecht, *The Hard Hours*
1969 George Oppen, *Of Being Numerous*
1970 Richard Howard, *Untitled Subjects*
1971 William S. Merwin, *The Carrier of Ladders*
1972 James Wright, *Collected Poems*
1973 Maxine Winokur Kumin, *Up Country*
1974 Robert Lowell, *The Dolphin*
1975 Gary Snyder, *Turtle Island*
1976 John Ashbery, *Self-Portrait in a Convex Mirror*
1977 James Merrill, *Divine Comedies*
1978 Howard Nemerov, *Collected Poems*
1979 Robert Penn Warren, *Now and Then: Poems 1976-1978*
1980 Donald Justice, *Selected Poems*
1981 James Schuyler, *The Morning of the Poem*
1982 Sylvia Plath, *The Collected Poems*
1983 Galway Kinnell, *Selected Poems*
1984 Mary Oliver, *American Primitive*
1985 Carolyn Kizer, *Yin*
1986 Henry Taylor, *The Flying Change*
1987 Rita Dove, *Thomas and Beulah*
1988 William Meredith, *Partial Accounts*
1989 Richard Wilbur, *New and Collected Poems*
1990 Charles Simic, *The World Doesn't End*
1991 Mona Van Duyn, *Near Changes*
1992 James Tate, *Selected Poems*
1993 Louise Glück, *The Wild Iris*
1994 Yusef Komunyakaa, *Neon Vernacular*
1995 Philip Levine, *The Simple Truth*
1996 Jorie Graham, *The Dream of the Unified Field*
1997 Lisel Mueller, *Alive Together: New and Selected Poems*
1998 Charles Wright, *Black Zodiac*
1999 Mark Strand, *Blizzard of One*
2000 C. K. Williams, *Repair*
2001 Stephen Dunn, *Different Hours*

2002 Carl Dennis, *Practical Gods*
2003 Paul Muldoon, *Moy Sand and Gravel*
2004 Franz Wright, *Walking to Martha's Vineyard*
2005 Ted Kooser, *Delights & Shadows*
2006 Claudia Emerson, *Late Wife*
2007 Natasha Trethewey, *Native Guard*
2008 Robert Hass, *Time and Materials*; Philip Schultz, *Failure*
2009 W. S. Merwin, *The Shadow of Sirius*
2010 Rae Armantrout, *Versed*

General Nonfiction

1962 Theodore H. White, *The Making of the President 1960*
1963 Barbara W. Tuchman, *The Guns of August*
1964 Richard Hofstadter, *Anti-Intellectualism in American Life*
1965 Howard Mumford Jones, *O Strange New World*
1966 Edwin Way Teale, *Wandering Through Winter*
1967 David Brion Davis, *The Problem of Slavery in Western Culture*
1968 Will and Ariel Durant, *Rousseau and Revolution*
1969 Norman Mailer, *The Armies of the Night;* Rene Jules Dubos, *So Human an Animal: How We Are Shaped by Surroundings and Events*
1970 Eric H. Erikson, *Gandhi's Truth*
1971 John Toland, *The Rising Sun*
1972 Barbara W. Tuchman, *Stilwell and the American Experience in China, 1911-1945*
1973 Frances FitzGerald, *Fire in the Lake: The Vietnamese and the Americans in Vietnam*; Robert Coles, *Children of Crisis, Vols. II and III*
1974 Ernest Becker, *The Denial of Death*
1975 Annie Dillard, *Pilgrim at Tinker Creek*
1976 Robert N. Butler, *Why Survive? Being Old in America*
1977 William W. Warner, *Beautiful Swimmers*
1978 Carl Sagan, *The Dragons of Eden*
1979 Edward O. Wilson, *On Human Nature*
1980 Douglas R. Hofstadter, *Gödel, Escher, Bach: An Eternal Golden Braid*
1981 Carl E. Schorske, *Fin-de-Siecle Vienna: Politics and Culture*
1982 Tracy Kidder, *The Soul of a New Machine*
1983 Susan Sheehan, *Is There No Place on Earth for Me?*
1984 Paul Starr, *Social Transformation of American Medicine*
1985 Studs Terkel, *The Good War*
1986 Joseph Lelyveld, *Move Your Shadow*; J. Anthony Lukas, *Common Ground*
1987 David K. Shipler, *Arab and Jew*
1988 Richard Rhodes, *The Making of the Atomic Bomb*
1989 Neil Sheehan, *A Bright Shining Lie: John Paul Vann and America in Vietnam*
1990 Dale Maharidge and Michael Williamson, *And Their Children After Them*
1991 Bert Holldobler and Edward O. Wilson, *The Ants*
1992 Daniel Yergin, *The Prize: The Epic Quest for Oil*
1993 Garry Wills, *Lincoln at Gettysburg*
1994 David Remnick, *Lenin's Tomb: The Last Days of the Soviet Empire*
1995 Jonathan Weiner, *The Beak of the Finch: A Story of Evolution in Our Time*
1996 Tina Rosenberg, *The Haunted Land: Facing Europe's Ghosts After Communism*
1997 Richard Kluger, *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*
1998 Jared Diamond, *Guns, Germs, and Steel: The Fates of Human Societies*
1999 John McPhee, *Annals of the Former World*
2000 John W. Dower, *Embracing Defeat: Japan in the Wake of World War II*
2001 Herbert P. Bix, *Hirohito and the Making of Modern Japan*
2002 Diane McWhorter, *Carry Me Home: Birmingham, Alabama, the Climactic Battle of the Civil Rights Revolution*
2003 Samantha Power, *A Problem From Hell: America and the Age of Genocide*
2004 Anne Applebaum, *Gulag: A History*
2005 Steve Coll, *Ghost Wars*
2006 Caroline Elkins, *Imperial Reckoning: The Untold Story of Britain's Gulag in Kenya*
2007 Lawrence Wright, *The Looming Tower: Al-Qaeda and the Road to 9/11*
2008 Saul Friedländer, *The Years of Extermination: Nazi Germany and the Jews, 1939-1945*
2009 Douglas A. Blackmon, *Slavery by Another Name: The Re-Enslavement of Black Americans from the Civil War to World War II*
2010 David E. Hoffman, *The Dead Hand: The Untold Story of the Cold War Arms Race and Its Dangerous Legacy*

Special Citation in Letters

1944 Richard Rodgers and Oscar Hammerstein II, for *Oklahoma!*
1957 Kenneth Roberts, for his historical novels
1960 *The Armada*, by Garrett Mattingly
1961 *American Heritage Picture History of the Civil War*
1973 *George Washington, Vols. I-IV*, by James Thomas Flexner
1977 Alex Haley, for *Roots*
1978 E. B. White
1984 Theodore Seuss Geisel (Dr. Seuss)
1992 Art Spiegelman, for *Maus*
2006 Edmund S. Morgan
2007 Ray Bradbury

Pulitzer Prizes in Music, 1943-2010

1943 William Schuman, *Secular Cantata No. 2, A Free Song*
1944 Howard Hanson, *Symphony No. 4, Op. 34*
1945 Aaron Copland, *Appalachian Spring*
1946 Leo Sowerby, *The Canticle of the Sun*
1947 Charles E. Ives, *Symphony No. 3*
1948 Walter Piston, *Symphony No. 3*
1949 Virgil Thomson, *Louisiana Story*
1950 Gian-Carlo Menotti, *The Consul*
1951 Douglas Moore, *Giants in the Earth*
1952 Gail Kubik, *Symphony Concertante*
1954 Quincy Porter, *Concerto for Two Pianos and Orchestra*
1955 Gian-Carlo Menotti, *The Saint of Bleecker Street*
1956 Ernest Toch, *Symphony No. 3*
1957 Norman Dello Joio, *Meditations on Ecclesiastes*
1958 Samuel Barber, *Vanessa*
1959 John La Montaine, *Concerto for Piano and Orchestra*
1960 Elliott Carter, *Second String Quartet*
1961 Walter Piston, *Symphony No. 7*
1962 Robert Ward, *The Crucible*
1963 Samuel Barber, *Piano Concerto No. 1*
1966 Leslie Bassett, *Variations for Orchestra*
1967 Leon Kirchner, *Quartet No. 3*
1968 George Crumb, *Echoes of Time and the River*
1969 Karel Husa, *String Quartet No. 3*
1970 Charles W. Wuorinen, *Time's Encomium*
1971 Mario Davidovsky, *Synchronisms No. 6*
1972 Jacob Druckman, *Windows*
1973 Elliott Carter, *String Quartet No. 3*
1974 Donald Martino, *Notturno*
1975 Dominick Argento, *From the Diary of Virginia Woolf*
1976 Ned Rorem, *Air Music*
1977 Richard Wernick, *Visions of Terror and Wonder*
1978 Michael Colgrass, *Deja Vu for Percussion and Orchestra*
1979 Joseph Schwantner, *Aftertones of Infinity*
1980 David Del Tredici, *In Memory of a Summer Day*
1982 Roger Sessions, *Concerto for Orchestra*
1983 Ellen T. Zwilich, *Three Movements for Orchestra*
1984 Bernard Rands, *Canti del Sole*
1985 Stephen Albert, *Symphony, RiverRun*
1986 George Perle, *Wind Quintet IV*
1987 John Harbison, *The Flight Into Egypt*
1988 William Bolcom, *12 New Etudes for Piano*
1989 Roger Reynolds, *Whispers Out of Time*
1990 Mel Powell, *Duplicates: A Concerto for Two Pianos and Orchestra*
1991 Shulamit Ran, *Symphony*
1992 Wayne Peterson, *The Face of the Night, The Heart of the Dark*
1993 Christopher Rouse, *Trombone Concerto*
1994 Gunther Schuller, *Of Reminiscences and Reflections*
1995 Morton Gould, *Stringmusic*
1996 George Walker, *Lilacs*
1997 Wynton Marsalis, *Blood on the Fields*
1998 Aaron Jay Kernis, *String Quartet No. 2*
1999 Melinda Wagner, *Concerto for Flute, Strings and Percussion*
2000 Lewis Spratlan, *Life is a Dream, Opera in Three Acts: Act II, Concert Version*
2001 John Corigliano, *Symphony No. 2 for String Orchestra*
2002 Henry Brant, *Ice Field*
2003 John Adams, *On the Transmigration of Souls*
2004 Paul Moravec, *Tempest Fantasy*
2005 Steven Stucky, *Second Concerto for Orchestra*
2006 Yehudi Wyner, *Piano Concerto: 'Chiavi in Mano'*
2007 Ornette Coleman, *Sound Grammar*
2008 David Lang, *The Little Match Girl Passion*
2009 Steve Reich, *Double Sextet*
2010 Jennifer Higdon, *Violin Concerto*

Special Citation in Music

1974 Roger Sessions
1976 Scott Joplin
1982 Milton Babbitt
1985 William Schuman
1998 George Gershwin
1999 Edward Kennedy "Duke" Ellington
2006 Thelonious Monk
2007 John Coltrane
2008 Bob Dylan
2010 Hank Williams

Man Booker Prize for Fiction, 1969-2009

The Booker Prize for fiction, established in 1968, is awarded annually in October for what is judged the best full-length novel written in English by a citizen of the UK, the Commonwealth, or the Irish Republic. In 2002 sponsorship of the award was taken over by Man Group PLC, the name was changed to the Man Booker Prize, and the amount was increased from £20,000 to £50,000.

Year	Author, book
1969	P. H. Newby, *Something to Answer For*
1970	Bernice Rubens, *The Elected Member*
1971	V. S. Naipaul, *In a Free State*
1972	John Berger, *G*
1973	J. G. Farrell, *The Siege of Krishnapur*
1974	Nadine Gordimer, *The Conservationist*; Stanley Middleton, *Holiday*
1975	Ruth Prawer Jhabvala, *Heat and Dust*
1976	David Storey, *Saville*
1977	Paul Scott, *Staying On*
1978	Iris Murdoch, *The Sea,The Sea*
1979	Penelope Fitzgerald, *Offshore*
1980	William Golding, *Rites of Passage*
1981	Salman Rushdie, *Midnight's Children*[1]
1982	Thomas Keneally, *Schindler's Ark*
1983	J. M. Coetzee, *Life and Times of Michael K*
1984	Anita Brookner, *Hotel du Lac*
1985	Keri Hulme, *The Bone People*
1986	Kingsley Amis, *The Old Devils*
1987	Penelope Lively, *Moon Tiger*
1988	Peter Carey, *Oscar and Lucinda*
1989	Kazuo Ishiguro, *The Remains of the Day*
1990	A. S. Byatt, *Possession*
1991	Ben Okri, *The Famished Road*
1992	Michael Ondaatje, *The English Patient*; Barry Unsworth, *Sacred Hunger*
1993	Roddy Doyle, *Paddy Clarke Ha Ha Ha*
1994	James Kelman, *How Late It Was, How Late*
1995	Pat Barker, *The Ghost Road*
1996	Graham Swift, *Last Orders*
1997	Arundhati Roy, *The God of Small Things*
1998	Ian McEwan, *Amsterdam*
1999	J. M. Coetzee, *Disgrace*
2000	Margaret Atwood, *The Blind Assassin*
2001	Peter Carey, *True History of the Kelly Gang*
2002	Yann Martel, *Life of Pi*
2003	DBC Pierre, *Vernon God Little*
2004	Alan Hollinghurst, *The Line of Beauty*
2005	John Banville, *The Sea*
2006	Kiran Desai, *The Inheritance of Loss*
2007	Anne Enright, *The Gathering*
2008	Aravind Adiga, *The White Tiger*
2009	Hilary Mantel, *Wolf Hall*
2010	Howard Jacobson, *The Finkler Question*

(1) Salman Rushdie's *Midnight's Children* also won the "Booker of Booker" prize in 1993 and the "Best of the Booker" prize in 2008.

Newbery Medal, 1922-2010

The Newbery Medal was awarded annually in the years shown, by the Association for Library Service to Children, a division of the American Library Association, to the author of the most distinguished contribution to American literature for children.

Year	Book, author
1922	*The Story of Mankind*, Hendrik Willem van Loon
1923	*The Voyages of Dr. Dolittle*, Hugh Lofting
1924	*The Dark Frigate*, Charles Boardman Hawes
1925	*Tales From Silver Lands*, Charles Joseph Finger
1926	*Shen of the Sea*, Arthur Bowie Chrisman
1927	*Smoky, the Cowhorse*, Will James
1928	*Gay-Neck*, Dhan Gopal Mukerji
1929	*The Trumpeter of Krakow*, Eric P. Kelly
1930	*Hitty, Her First Hundred Years*, Rachel Field
1931	*The Cat Who Went to Heaven*, Elizabeth Coatsworth
1932	*Waterless Mountain*, Laura Adams Armer
1933	*Young Fu of the Upper Yangtze*, Elizabeth Foreman Lewis
1934	*Invincible Louisa*, Cornelia Lynde Meigs
1935	*Dobry*, Monica Shannon
1936	*Caddie Woodlawn*, Carol Ryrie Brink
1937	*Roller Skates*, Ruth Sawyer
1938	*The White Stag*, Kate Seredy
1939	*Thimble Summer*, Elizabeth Enright
1940	*Daniel Boone*, James Daugherty
1941	*Call It Courage*, Armstrong Sperry
1942	*The Matchlock Gun*, Walter D. Edmonds
1943	*Adam of the Road*, Elizabeth Janet Gray
1944	*Johnny Tremain*, Esther Forbes
1945	*Rabbit Hill*, Robert Lawson
1946	*Strawberry Girl*, Lois Lenski
1947	*Miss Hickory*, Carolyn S. Bailey
1948	*Twenty-One Balloons*, William Pène Du Bois
1949	*King of the Wind*, Marguerite Henry
1950	*The Door in the Wall*, Marguerite de Angeli
1951	*Amos Fortune, Free Man*, Elizabeth Yates
1952	*Ginger Pye*, Eleanor Estes
1953	*Secret of the Andes*, Ann Nolan Clark
1954	*. . . And Now Miguel*, Joseph Krumgold
1955	*The Wheel on the School*, Meindert DeJong
1956	*Carry On, Mr. Bowditch*, Jean Lee Latham
1957	*Miracles on Maple Hill*, Virginia Sorensen
1958	*Rifles for Watie*, Harold Keith
1959	*The Witch of Blackbird Pond*, Elizabeth George Speare
1960	*Onion John*, Joseph Krumgold
1961	*Island of the Blue Dolphins*, Scott O'Dell
1962	*The Bronze Bow*, Elizabeth George Speare
1963	*A Wrinkle in Time*, Madeleine L'Engle
1964	*It's Like This, Cat*, Emily Cheney Neville
1965	*Shadow of a Bull*, Maja Wojciechowska
1966	*I, Juan de Pareja*, Elizabeth Borton de Trevino
1967	*Up a Road Slowly*, Irene Hunt
1968	*From the Mixed-Up Files of Mrs. Basil E. Frankweiler*, E. L. Konigsburg
1969	*The High King*, Lloyd Alexander
1970	*Sounder*, William H. Armstrong
1971	*The Summer of the Swans*, Betsy Byars
1972	*Mrs. Frisby and the Rats of NIMH*, Robert C. O'Brien
1973	*Julie of the Wolves*, Jean George
1974	*The Slave Dancer*, Paula Fox
1975	*M. C. Higgins the Great*, Virginia Hamilton
1976	*Grey King*, Susan Cooper
1977	*Roll of Thunder, Hear My Cry*, Mildred D. Taylor
1978	*Bridge to Terabithia*, Katherine Paterson
1979	*The Westing Game*, Ellen Raskin
1980	*A Gathering of Days*, Joan Blos
1981	*Jacob Have I Loved*, Katherine Paterson
1982	*A Visit to William Blake's Inn: Poems for Innocent and Experienced Travelers*, Nancy Willard
1983	*Dicey's Song*, Cynthia Voigt
1984	*Dear Mr. Henshaw*, Beverly Cleary
1985	*The Hero and the Crown*, Robin McKinley
1986	*Sarah, Plain and Tall*, Patricia MacLachlan
1987	*The Whipping Boy*, Sid Fleischman
1988	*Lincoln: A Photobiography*, Russell Freedman
1989	*Joyful Noise: Poems for Two Voices*, Paul Fleischman
1990	*Number the Stars*, Lois Lowry
1991	*Maniac Magee*, Jerry Spinelli
1992	*Shiloh*, Phyllis Reynolds Naylor
1993	*Missing May*, Cynthia Rylant
1994	*The Giver*, Lois Lowry
1995	*Walk Two Moons*, Sharon Creech
1996	*The Midwife's Apprentice*, Karen Cushman
1997	*The View From Saturday*, E. L. Konigsburg
1998	*Out of the Dust*, Karen Hesse
1999	*Holes*, Louis Sachar
2000	*Bud, Not Buddy*, Christopher Paul Curtis
2001	*A Year Down Yonder*, Richard Peck
2002	*A Single Shard*, Linda Sue Park
2003	*Crispin: The Cross of Lead*, Avi
2004	*The Tale of Despereaux*, Kate DiCamillo
2005	*Kira-Kira*, Cynthia Kadohata
2006	*Criss Cross*, Lynne Rae Perkins
2007	*The Higher Power of Lucky*, Susan Patron
2008	*Good Masters! Sweet Ladies! Voices From a Medieval Village*, Laura Amy Schlitz
2009	*The Graveyard Book*, Neil Gaiman
2010	*When You Reach Me*, Rebecca Stead

Caldecott Medal, 1938-2010

The Caldecott Medal was awarded annually in the years shown, by the Association for Library Service to Children, a division of the American Library Association, to the illustrator of the most distinguished American picture book for children.

Year	Book, illustrator
1938	*Animals of the Bible*, Dorothy P. Lathrop
1939	*Mei Li*, Thomas Handforth
1940	*Abraham Lincoln*, Ingri and Edgar Parin d'Aulaire
1941	*They Were Strong and Good*, Robert Lawson
1942	*Make Way for Ducklings*, Robert McCloskey
1943	*The Little House*, Virginia Lee Burton
1944	*Many Moons*, Louis Slobodkin
1945	*Prayer for a Child*, Elizabeth Orton Jones
1946	*The Rooster Crows*, Maude and Miska Petersham
1947	*The Little Island*, Leonard Weisgard
1948	*White Snow, Bright Snow*, Roger Duvoisin
1949	*The Big Snow*, Berta and Elmer Hader
1950	*Song of the Swallows*, Leo Politi
1951	*The Egg Tree*, Karherine Milhous
1952	*Finders Keepers*, Nicolas, pseud. (Nicholas Mordvinoff)
1953	*The Biggest Bear*, Lynd Ward
1954	*Madeline's Rescue*, Ludwig Bemelmans
1955	*Cinderella, or the Little Glass Slipper*, Marcia Brown
1956	*Frog Went A-Courtin'*, Feodor Rojankovsky
1957	*A Tree Is Nice*, Marc Simont
1958	*Time of Wonder*, Robert McCloskey
1959	*Chanticleer and the Fox*, Barbara Cooney
1960	*Nine Days to Christmas*, Marie Hall Ets
1961	*Baboushka and the Three Kings*, Nicolas Sidjakov
1962	*Once a Mouse*, Marcia Brown
1963	*The Snowy Day*, Ezra Jack Keats
1964	*Where the Wild Things Are*, Maurice Sendak
1965	*May I Bring a Friend?*, Beni Montressor
1966	*Always Room for One More*, Nonny Hogrogian
1967	*Sam, Bang, and Moonshine*, Evaline Ness
1968	*Drummer Hoff*, Ed Emberley
1969	*The Fool of the World and the Flying Ship*, Uri Shulevitz
1970	*Sylvester and the Magic Pebble*, William Steig
1971	*A Story A Story*, Gail E. Haley
1972	*One Fine Day*, Nonny Hogrogian
1973	*The Funny Little Woman*, Blair Lent
1974	*Duffy and the Devil*, Margot Zemach
1975	*Arrow to the Sun*, Gerald McDermott
1976	*Why Mosquitoes Buzz in People's Ears*, Leo & Diane Dillon
1977	*Ashanti to Zulu: African Traditions*, Leo & Diane Dillon
1978	*Noah's Ark*, Peter Spier
1979	*The Girl Who Loved Wild Horses*, Paul Goble
1980	*Ox-Cart Man*, Barbara Cooney
1981	*Fables*, Arnold Lobel
1982	*Jumanji*, Chris Van Allsburg
1983	*Shadow*, Marcia Brown
1984	*The Glorious Flight: Across the Channel with Louis Bleriot*, Alice and Martin Provensen
1985	*Saint George and the Dragon*, Trina Schart Hyman
1986	*The Polar Express*, Chris Van Allsburg
1987	*Hey, Al*, Richard Egielski
1988	*Owl Moon*, John Schoenherr
1989	*Song and Dance Man*, Stephen Grammell
1990	*Lon Po Po: A Red-Riding Hood Story From China*, Ed Young
1991	*Black and White*, David Macaulay
1992	*Tuesday*, David Wiesner
1993	*Mirette on the High Wire*, Emily Arnold McCully
1994	*Grandfather's Journey*, Allen Say
1995	*Smoky Night*, David Diaz
1996	*Officer Buckle and Gloria*, Peggy Rathmann
1997	*Golem*, David Wisniewski
1998	*Rapunzel*, Paul O. Zelinsky
1999	*Snowflake Bentley*, Mary Azarian
2000	*Joseph Had a Little Overcoat*, Simms Taback
2001	*So You Want to be President?*, David Small
2002	*The Three Pigs*, David Wiesner
2003	*My Friend Rabbit*, Eric Rohmann
2004	*The Man Who Walked Between the Towers*, Mordicai Gerstein
2005	*Kitten's First Full Moon*, Kevin Henkes
2006	*The Hello, Goodbye Window*, Chris Raschka
2007	*Flotsam*, David Wiesner
2008	*The Invention of Hugo Cabret*, Brian Selznick
2009	*The House in the Night*, Beth Krommes
2010	*The Lion & the Mouse*, Jerry Pinkney

National Book Awards, 1950-2009

The National Book Awards (known as American Book Awards 1980-86) are administered by the National Book Foundation and have been given annually in the years shown, since 1950. The prizes, each valued at $10,000, are awarded to U.S. citizens for works published in the U.S. In some years, multiple awards were given for nonfiction in various categories; in such cases, the history and biography (if any) or biography winner is listed. Selected additional awards in nonfiction are listed in footnotes.

Other National Book Awards, 2009: Poetry: Keith Waldrop, *Transcendental Studies: A Trilogy*. Young People's Literature: Phillip Hoose, *Claudette Colvin: Twice Toward Justice*. Distinguished Contribution to American Letters: Gore Vidal. Literarian Award for Outstanding Service to the American Literary Community: Dave Eggers.

Fiction

Year	Author, book
1950	Nelson Algren, *The Man With the Golden Arm*
1951	William Faulkner, *The Collected Stories*
1952	James Jones, *From Here to Eternity*
1953	Ralph Ellison, *Invisible Man*
1954	Saul Bellow, *The Adventures of Augie March*
1955	William Faulkner, *A Fable*
1956	John O'Hara, *Ten North Frederick*
1957	Wright Morris, *The Field of Vision*
1958	John Cheever, *The Wapshot Chronicle*
1959	Bernard Malamud, *The Magic Barrel*
1960	Philip Roth, *Goodbye, Columbus*
1961	Conrad Richter, *The Waters of Kronos*
1962	Walker Percy, *The Moviegoer*
1963	J. F. Powers, *Morte d'Urban*
1964	John Updike, *The Centaur*
1965	Saul Bellow, *Herzog*
1966	Katherine Anne Porter, *The Collected Stories*
1967	Bernard Malamud, *The Fixer*
1968	Thornton Wilder, *The Eighth Day*
1969	Jerzy Kosinski, *Steps*
1970	Joyce Carol Oates, *Them*
1971	Saul Bellow, *Mr. Sammler's Planet*
1972	Flannery O'Connor, *The Complete Stories*
1973	John Barth, *Chimera*
1974	Thomas Pynchon, *Gravity's Rainbow*
1974	Isaac Bashevis Singer, *A Crown of Feathers*
1975	Robert Stone, *Dog Soldiers*
1976	William Gaddis, *JR*
1977	Wallace Stegner, *The Spectator Bird*
1978	Mary Lee Settle, *Blood Ties*
1979	Tim O'Brien, *Going After Cacciato*
1980	William Styron, *Sophie's Choice*
1981	Wright Morris, *Plains Song*
1982	John Updike, *Rabbit Is Rich*
1983	Alice Walker, *The Color Purple*
1984	Ellen Gilchrist, *Victory Over Japan*
1985	Don DeLillo, *White Noise*
1986	E. L. Doctorow, *World's Fair*
1987	Larry Heinemann, *Paco's Story*
1988	Pete Dexter, *Paris Trout*
1989	John Casey, *Spartina*
1990	Charles Johnson, *Middle Passage*
1991	Norman Rush, *Mating*
1992	Cormac McCarthy, *All the Pretty Horses*
1993	E. Annie Proulx, *The Shipping News*
1994	William Gaddis, *A Frolic of His Own*
1995	Philip Roth, *Sabbath's Theater*
1996	Andrea Barrett, *Ship Fever and Other Stories*
1997	Charles Frazier, *Cold Mounatin*
1998	Alice McDermott, *Charming Billy*
1999	Ha Jin, *Waiting*
2000	Susan Sontag, *In America*
2001	Jonathan Franzen, *The Corrections*
2002	Julia Glass, *Three Junes*
2003	Shirley Hazzard, *The Great Fire*
2004	Lily Tuck, *The News from Paraguay*
2005	William T. Vollmann, *Europe Central*
2006	Richard Powers, *The Echo Maker*
2007	Denis Johnson, *Tree of Smoke*
2008	Peter Matthiessen, *Shadow Country*
2009	Colum McCann, *Let the Great World Spin*

Nonfiction

Year	Author, title
1950	Ralph L. Rusk, *Ralph Waldo Emerson*
1951	Newton Arvin, *Herman Melville*
1952	Rachel Carson, *The Sea Around Us*
1953	Bernard A. De Voto, *The Course of an Empire*
1954	Bruce Catton, *A Stillness at Appomattox*
1955	Joseph Wood Krutch, *The Measure of Man*
1956	Herbert Kubly, *An American in Italy*
1957	George F. Kennan, *Russia Leaves the War*
1958	Catherine Drinker Bowen, *The Lion and the Throne*
1959	J. Christopher Herold, *Mistress to an Age: A Life of Madame De Stael*
1960	Richard Ellman, *James Joyce*
1961	William L. Shirer, *The Rise and Fall of the Third Reich*
1962	Lewis Mumford, *The City in History: Its Origins, Its Transformations, and Its Prospects*
1963	Leon Edel, *Henry James: Vol. II: The Conquest of London; Vol. III: The Middle Years*
1964	WIlliam H. McNeill, *The Rise of the West: A History of the Human Community*
1965	Louis Fisher, *The Life of Lenin*
1966	Arthur M. Schlesinger Jr., *A Thousand Days: John F. Kennedy in the White House*
1967	Peter Gay, *The Enlightenment, An Interpretation, Vol I: The Rise of Modern Paganism*
1968	George F. Kennan, *Memoirs: 1925-1950*[1]
1969	Winthrop D. Jordan, *White Over Black: American Attitudes Toward the Negro, 1550-1812*[2]
1970	T. Harry Williams, *Huey Long*[3]
1971	James MacGregor Burns, *Roosevelt: The Soldier of Freedom*
1972	Joseph P. Lash, *Eleanor and Franklin: The Story of Their Relationship, Based on Eleanor Roosevelt's Private Papers*
1973	James Thomas Flexner, *George Washington, Vol. IV: Anguish and Farewell, 1793-1799*[4]
1974	John Clive, *Macaulay, The Shaping of the Historian*; Douglas Day, *Malcolm Lowry: A Biography*[5]
1975	Richard B. Sewall, *The Life of Emily Dickinson*[6]
1976	David Brion Davis, *The Problem of Slavery in the Age of Revolution, 1770-1823*
1977	W. A. Swanberg, *Norman Thomas: The Last Idealist*[7]
1978	W. Jackson Bate, *Samuel Johnson*
1979	Arthur M. Schlesinger Jr., *Robert Kennedy and His Times*
1980	Tom Wolfe, *The Right Stuff*
1981	Maxine Hong Kingston, *China Men*
1982	Tracy Kidder, *The Soul of a New Machine*
1983	Fox Butterfield, *China: Alive in the Bitter Sea*
1984	Robert V. Remini, *Andrew Jackson and the Course of American Democracy, 1833-1845*
1985	J. Anthony Lukas, C*ommon Ground: A Turbulent Decade in the Lives of Three American Families*
1986	Barry Lopez, *Arctic Dreams*
1987	Richard Rhodes, *The Making of the Atom Bomb*
1988	Neil Sheehan, *A Bright Shining Lie: John Paul Vann and America in Vietnam*
1989	Thomas L. Friedman, *From Beirut to Jerusalem*
1990	Ron Chernow, *The House of Morgan: An American Banking Dynasty and the Rise of Modern Finance*
1991	Orlando Patterson, *Freedom*
1992	Paul Monette, *Becoming a Man: Half a Life Story*
1993	Gore Vidal, *United States: Essays 1952-1992*
1994	Sherwin B. Nuland, *How We Die: Reflections on Life's Final Chapter*
1995	Tina Rosenberg, *The Haunted Land: Facing Europe's Ghosts After Communism*
1996	James Carroll, *An American Requiem: God, My Father, and the War That Came Between Us*
1997	Joseph J. Ellis, *American Sphinx: The Character of Thomas Jefferson*
1998	Edward Ball, *Slaves in the Family*
1999	John W. Dower, *Embracing Defeat: Japan in the Wake of World War II*
2000	Nathaniel Philbrick, *In the Heart of the Sea: The Tragedy of the Whaleship Essex*
2001	Andrew Solomon, *The Noonday Demon: An Atlas of Depression*
2002	Robert A. Caro, *Master of the Senate: The Years of Lyndon Johnson*
2003	Carlos Eire, *Waiting for Snow in Havana: Confessions of a Cuban Boy*
2004	Kevin Boyle, *Arc of Justice: A Saga of Race, Civil Rights, and Murder in the Jazz Age*
2005	Joan Didion, *The Year of Magical Thinking*
2006	Timothy Egan, *The Worst Hard Time: The Untold Story of Those Who Survived the Great American Dust Bowl*
2007	Tim Weiner, *Legacy of Ashes: The History of the CIA*
2008	Annette Gordon-Reed, *The Hemingses of Monticello: An American Family*
2009	T. J. Stiles, *The First Tycoon: The Epic Life of Cornelius Vanderbilt*

(1) Science, Philosophy, & Religion: Jonathan Kozol, *Death at an Early Age*. (2) Arts & Letters: Norman Mailer, *The Armies of the Night: History as a Novel, The Novel as History*. (3) Arts & Letters: Lillian Hellman, *An Unfinished Woman: A Memoir*. (4) Contemp. Affairs: Frances FitzGerald, *Fire in the Lake: The Vietnamese and the Americans in Vietnam*. (5) Arts & Letters: Pauline Kael, *Deeper Into the Movies*. (6) Arts & Letters: Roger Shattuck, *Marcel Proust*; Lewis Thomas, *The Lives of a Cell: Notes of a Biology Watcher*. (7) Contemp. Thought: Bruno Bettelheim, *The Uses of Enchantment: The Meaning and Importance of Fairy Tales*.

Journalism Awards, 2010

National Journalism Awards, by Scripps Howard Foundation. Investigative Reporting: Barbara Laker & Wendy Ruderman, *Philadelphia Daily News.* Breaking News: Associated Press. Public Service Reporting: Meg Kissinger & Susanne Rust, *Milwaukee Journal Sentinel*. Editorial Writing: Robert Greene, *LA Times*. Commentary: Nicholas D. Kristof, *NY Times*. Human Interest Writing: Steve Esack, *Morning Call* (Allentown, PA). Environmental Reporting: Charles Duhigg, *NY Times*. Washington Reporting: Thomas Frank, *USA Today*. Editorial Cartooning: Alex Hunter, *Washington Times*. Photojournalism: Rodrigo Abd, Associated Press. Business/Economics Reporting: Michael Braga, Chris Davis, & Matthew Doig, *Sarasota Herald-Tribune* (FL). Community Journalism: Daniel Gilbert, *Bristol Herald Courier* (VA). Radio In-Depth Reporting: Alix Spiegel, National Public Radio. TV/Cable In-Depth Reporting: WFAA-TV, Dallas. College Cartoonist: Christopher Sharron, *Daily Kent Stater*, Kent State Univ. (OH). Journalism Teacher of the Year: Chris Roush, Univ. of North Carolina–Chapel Hill. Journalism Administrator of the Year: Christopher Callahan, Arizona State Univ.

National Magazine Awards, by American Society of Magazine Editors and Columbia Univ. Graduate School of Journalism. Magazine of the Year: *Glamour*. General Excellence, circ. over 2 mil: *National Geographic*; 1 mil-2 mil: *Men's Health*; 500,000 to 1 mil: *GQ*; 250,000-500,000: *New York*; 100,000-250,000: *Mother Jones*; under 100,000: *San Francisco*. Single-Topic Issue: *Wired*. Magazine Section: *New York*. Reporting: *NY Times Magazine*. Public Interest: *New Yorker*. Feature Writing: *Texas Monthly*. Profile Writing: *Esquire*. Essays: *National Geographic*. Columns and Commentary: *Newsweek*. Reviews and Criticism: *The New Yorker*. Fiction: *McSweeney's Quarterly*. Personal Service: *New York*. Leisure Interests: *New York*. Design: *Wired*. Photography: *Vanity Fair*. Photojournalism: *National Geographic*. Photo Portfolio: *The New Yorker*. General Excellence, Digital Media: *New York*/NYmag.com. Mobile Media: *Epicurious*. Blogging: *Foreign Policy*.

George Foster Peabody Awards, by Univ. of Georgia. *Modern Family*, ABC. *The Late Late Show with Craig Ferguson: An Evening with Archbishop Desmond Tutu*, CBS. *Noodle Road: Connecting Asia's Kitchens*, KBS1 TV. *A Hidden America: Children of the Mountains*, ABC. SesameStreet.org, Sesame Workshop. *BBC World News America*, BBC America. "The Cost of Dying," *60 Minutes*, CBS. *Independent Lens: Between the Folds*, PBS. *Glee*, FOX. *The OxyContin Express*, Current TV. npr.org, National Public Radio. Diane Rehm. *The Day that Lehman Died*, BBC World Service. *In Treatment*, HBO. *Inventing LA: The Chandlers and Their Times*, PBS. *No. 1 Ladies' Detective Agency*, HBO. "Sabotaging the System," *60 Minutes*, CBS. *Brick City*, Sundance Channel. *Thrilla in Manila*, HBO. *FRONTLINE: The Madoff Affair*, PBS. *I-Witness: Ambulansiyang de Paa*, GMA Network. *Independent Lens: The Order of Myths*, PBS. *Hard Times*, OPB Radio. *Iran & the West*, Brook Lapping Productions. *Soraya Sarhaddi Nelson: Covering Afghanistan*, NPR. *The Great Textbook War*, West Virginia Public Broadcasting. *Mind the Gap: Why Good Schools Are Failing Black Students*, Nancy Solomon. *Endgame,* PBS. *Sichuan Earthquake: One Year On*, Now-Broadband. *BART Shooting*, KTVU-TV, Oakland, CA. *American Masters: Jerome Robbins–Something to Dance About*, PBS. *Chronicle: Paul's Gift*, WYFF-TV, Greenville, SC. *Under Fire: Discrimination and Corruption in the Texas National Guard*, KHOU-TV, Houston. *Derrion Albert Beating*, WFLD-TV, Chicago. *Where Giving Life Is a Death Sentence*, BBC America. *Up in Smoke*, KCET-TV, Los Angeles.

Reuben Award, by National Cartoonists Society. Outstanding Cartoonist of the Year: Dan Piraro.

Miscellaneous Book Awards, 2010

(Awarded in 2010 unless otherwise noted.)

Academy of American Poets Awards. Wallace Stevens Award, for poetry mastery, $100,000 (2009): Jean Valentine. Academy Fellowship, $25,000 (2009): Brigit Harryette Mullen. Lenore Marshall Poetry Prize, $25,000 (2009): Linda Gregg, *All of It Singing: New and Selected Poems*. James Laughlin Award, $5,000 (2009): Jennifer K. Sweeney, *How to Live on Bread and Music*. Walt Whitman Award, $5,000: Carl Adamshick, *Curses and Wishes*. Harold Morton Landon Translation Award, $1,000: Stephen Kessler, *Desolation of the Chimera* by Luis Cernuda. Raiziss/de Palchi Translation Prize, $5,000 (2008): Paul Vangelisti, *The Position of Things: Collected Poems, 1961-1992* by Adriano Spatola.

American Academy of Arts and Letters. Gold Medal for Drama: Romulus Linney. Award of Merit Medal for Poetry, $10,000: Gerald Stern. Academy Awards in Literature, $7,500 each: Blake Bailey, Peter Cole, Steve Erickson, Peter Everwine, Young Jean Lee, Bruce Smith, Natasha Wimmer. Benjamin H. Danks Award, $20,000: Jenny Schwartz. E. M. Forster Award, $20,000: Dan Rhodes. Harold D. Vursell Memorial Award, $10,000: Peter Schjeldahl. Katherine Anne Porter Award, $20,000: Tim O'Brien. Rome Fellowships in Literature: Jay Hopler, Heather McGowan. Rosenthal Family Foundation Award, $5,000: Daniyal Mueenuddin, *In Other Rooms, Other Wonders*. Sue Kaufman Prize for First Fiction, $5,000: Josh Weil, *The New Valley*. William Dean Howells Medal: Peter Matthiessen, *Shadow Country*.

Bollingen Prize in Poetry, $100,000, biennially, by the Yale Univ. Library (2009): Allen Grossman.

Coretta Scott King Awards, by American Library Assn., for African American authors and illustrators of outstanding books for children and young adults. Author: Vaunda Micheaux Nelson, *Bad News for Outlaws: The Remarkable Life of Bass Reeves, Deputy U.S. Marshal*. Illustrator: Charles R. Smith Jr., *My People*. New Talent: Kekla Magoon, *The Rock and the River*. Lifetime Achievement: Walter Dean Myers.

Costa Book of the Year (formerly Whitbread Award), £35,000 (2009): Christopher Reid, *A Scattering*.

Edgar Awards, by the Mystery Writers of America. Best Novel: *The Last Child*, John Hart. Best First Novel by an American Author: *In the Shadow of Gotham*, Stefanie Pintoff. Best Paperback Original: *Body Blows*, Marc Strange. Best Fact Crime: *Columbine*, Dave Cullen. Best Critical/Biographical: *The Lineup: The World's Greatest Crime Writers Tell the Inside Story of Their Greatest Detectives*, ed. Otto Penzler. Best Short Story: "Amapola," Luis Alberto Urrea. Best Juvenile: *Closed for the Season*, Mary Downing Hahn. Best Young Adult: *Reality Check*, Peter Abrahams. Best Teleplay: "Place of Execution," Patrick Harbinson (PBS/WGBH Boston). Grandmaster: Dorothy Gilman.

Golden Kite Awards, $2,500, by Society of Children's Book Writers and Illustrators. Fiction: *Sea of the Dead*, Julia Durango. Nonfiction: *Ashley Bryan: Words to My Life's Song*, Ashley Bryan. Picture Book Text: *The Longest Night*, Marion Dane Bauer. Picture Book Illustration: *Gracias Thanks*, John Parra.

Hugo Awards, by the World Science Fiction Society (WSFS). Novel (tie): *The City & The City*, China Miéville; *The Windup Girl*, Paolo Bacigalupi. Novella: "Palimpsest," Charles Stross. Novelette: "The Island," Peter Watts. Short story: "Bridesicle," Will McIntosh. Related Book: *This is Me, Jack Vance! (Or, More Properly, This is "I")*, Jack Vance. Graphic Story: *Girl Genius, Vol. 9: Agatha Heterodyne and the Heirs of the Storm*, Kaja and Phil Foglio. Dramatic, long form: *Moon*, dir. Duncan Jones. Dramatic, short form: "The Waters of Mars," *Doctor Who*, dir. Graeme Harper. Best New Writer (not a Hugo but admin. by WSFS): Seanan McGuire.

Lincoln Prize, by Lincoln and Soldiers Institute at Gettysburg College, for contribution to Civil War studies ($50,000 and a bust of Lincoln): Michael Burlinggame, *Abraham Lincoln: A Life*.

National Book Critics Circle Awards. Fiction: Hilary Mantel, *Wolf Hall*. General Nonfiction: Richard Holmes, *The Age of Wonder: How the Romantic Generation Discovered the Beauty and Terror of Science*. Biography: Blake Bailey, *Cheever: A Life*. Autobiography: Diana Athill, *Somewhere Towards the End*. Criticism: *Eula Biss, Notes from No Man's Land: American Essays*. Poetry: Rae Armantrout, *Versed*. Ivan Sandrof Lifetime Achievement Award: Joyce Carol Oates. Nona Balakian Citation for Excellence in Reviewing: Joan Acocella, *New Yorker*.

Nebula Awards, by the Science Fiction and Fantasy Writers of America. Novel: *The Windup Girl*, Paolo Bacigalupi. Novella: *The Women of Nell Gwynne's*, Kage Baker. Novelette: "Sinner, Baker, Fabulist, Priest; Red Mask, Black Mask, Gentleman, Beast," Eugie Foster. Short Story: "Spar," Kij Johnson. Ray Bradbury Award (dramatic production): *District 9*, Neill Blomkamp and Terri Tatchell. Andre Norton Award: *The Girl Who Circumnavigated Fairyland in a Ship of Her Own Making*, Catherynne M. Valente.

PEN/Faulkner Award, for fiction, $15,000: Sherman Alexie, *War Dances*.

Prix Goncourt, by Académie Goncourt (2009): Marie NDiaye, *Trois femmes puissantes* [*Three Powerful Women*].

Spingarn Medal, 1915-2010

The Spingarn Medal has been awarded annually since 1915 (except in 1938) by the National Assoc. for the Advancement of Colored People for outstanding achievement by an African American.

1915 Ernest E. Just
1916 Charles Young
1917 Harry T. Burleigh
1918 William S. Braithwaite
1919 Archibald H. Grimké
1920 W. E. B. Du Bois
1921 Charles S. Gilpin
1922 Mary B. Talbert
1923 George W.Carver
1924 Roland Hayes
1925 James W. Johnson
1926 Carter G. Woodson
1927 Anthony Overton
1928 Charles W. Chesnutt
1929 Mordecai W. Johnson
1930 Henry A. Hunt
1931 Richard B. Harrison
1932 Robert R. Moton
1933 Max Yergan
1934 William T. B. Williams
1935 Mary McLeod Bethune
1936 John Hope
1937 Walter White
1939 Marian Anderson
1940 Louis T. Wright
1941 Richard Wright
1942 A. Philip Randolph
1943 William H. Hastie
1944 Charles Drew
1945 Paul Robeson
1946 Thurgood Marshall
1947 Dr. Percy L. Julian
1948 Channing H. Tobias
1949 Ralph J. Bunche
1950 Charles H. Houston
1951 Mabel K. Staupers
1952 Harry T. Moore
1953 Paul R. Williams
1954 Theodore K. Lawless
1955 Carl Murphy
1956 Jack R. Robinson
1957 Martin Luther King Jr.
1958 Daisy Bates and the Little Rock Nine
1959 Duke Ellington
1960 Langston Hughes
1961 Kenneth B. Clark
1962 Robert C. Weaver
1963 Medgar W. Evers
1964 Roy Wilkins
1965 Leontyne Price
1966 John H. Johnson
1967 Edward W. Brooke
1968 Sammy Davis Jr.
1969 Clarence M. Mitchell Jr.
1970 Jacob Lawrence
1971 Leon H. Sullivan
1972 Gordon Parks
1973 Wilson C. Riles
1974 Damon Keith
1975 Henry (Hank) Aaron
1976 Alvin Ailey
1977 Alex Haley
1978 Andrew Young
1979 Rosa L. Parks
1980 Dr. Rayford W. Logan
1981 Coleman Young
1982 Dr. Benjamin E. Mays
1983 Lena Horne
1984 Thomas Bradley
1985 Bill Cosby
1986 Dr. Benjamin L. Hooks
1987 Percy E. Sutton
1988 Frederick D. Patterson
1989 Jesse Jackson
1990 L. Douglas Wilder
1991 Gen. Colin L. Powell
1992 Barbara Jordan
1993 Dorothy I. Height
1994 Maya Angelou
1995 John Hope Franklin
1996 A. Leon Higginbotham
1997 Carl T. Rowan
1998 Myrlie Evers-Williams
1999 Earl G. Graves Sr.
2000 Oprah Winfrey
2001 Vernon E. Jordan Jr.
2002 John Lewis
2003 Constance Baker Motley
2004 Robert L. Carter
2005 Oliver W. Hill
2006 Dr. Benjamin S. Carson
2007 John Conyers Jr.
2008 Ruby Dee
2009 Julian Bond
2010 Cicely Tyson

Miscellaneous Awards, 2010

(Awarded in 2010, unless otherwise noted.)

American Academy of Arts and Letters Architecture Awards. Arthur W. Brunner Memorial Prize, $5,000: Michael Van Valkenburgh. Academy Awards, $7,500 each: Stephen Cassell & Adam Yarinsky; Michael Meredith & Hilary Sample; Michael Sorkin.

American Academy of Arts and Letters Art Awards. Academy Awards, $7,500 each: Gabrielle Bakker, Lothar Osterburg, Julianne Swartz, Tom Uttech, Stanley Whitney. Jimmy Ernst Award, $5,000: William Christenberry. John Koch Award, $10,000: Elisa Jensen. Rosenthal Family Foundation Award In Painting, $10,000: Aaron Gilbert. Willard L. Metcalf Award, $10,000: John Grade.

American Academy of Arts and Letters Music Awards. Academy Awards, $7,500 each: Daniel Asia, David Felder, Pierre Jalbert, James Primosch. Goddard Lieberson Fellowships, $15,000 each: Philippe Bodin, Aaron J. Travers. Walter Hinrichsen Award: Paula Matthusen. Charles Ives Fellowships, $15,000 each: Anna Clyne, Michael Djupstrom. Charles Ives Scholarships, $7,500 each: Shawn Brogan Allison, Jesse Benjamin Jones, Eric Nathan, Clint Needham, Jude Vaclavik, and Roger Zare. Richard Rodgers Awards for Musical Theater: *Buddy's Tavern* by Raymond De Felitta, Alison Louise Hubbard, and Kim Oler; *Rocket Science* by Patricia Cotter, Jason Rhyne, and Stephen Weiner. Wladimir and Rhoda Lakond Award, $5,000: James Lee III.

Congressional Gold Medal, by Congress: Women Airforce Service Pilots of WWII (awarded July 1, 2009); Neil A. Armstrong, Edwin E. "Buzz" Aldrin Jr., Michael Collins, and John Herschel Glenn Jr. (Aug. 7, 2009); Arnold Palmer (Sept. 30, 2009).

Intel Science Talent Search (formerly by Westinghouse). First place, $100,000 scholarship: Erika DeBenedictis, Albuquerque, NM; second place, $75,000 scholarship: David Liu, Saratoga, CA; third place, $50,000 scholarship: Akhil Mathew, Madison, NJ.

John F. Kennedy Center Honors (2009): Mel Brooks, Dave Brubeck, Grace Bumbry, Robert De Niro, Bruce Springsteen.

John W. Kluge Prize, by Library of Congress, $500,000 each (2008): Peter Robert Lamont Brown, Romila Thapar.

Library of the Year Award, by Gale and Library Journal, $10,000: Columbus Metropolitan Library, Columbus, OH.

National Humanities Medal, by National Endowment for the Humanities, $5,000 each (2009): Robert A. Caro, Annette Gordon-Reed, David Levering Lewis, William H. McNeill, Phillippe de Montebello, Albert H. Small, Theodore C. Sorensen, Elie Wiesel.

National Medal of the Arts, by the National Endowment for the Arts and the White House: Bob Dylan, Clint Eastwood, Milton Glaser, Maya Lin, Rita Moreno, Jessye Norman, Oberlin Conservatory of Music, Joseph P. Riley Jr., School of American Ballet, Frank Stella, Michael Tilson Thomas, John Williams.

Presidential Medal of Freedom, by the White House. By Pres. Obama, Aug. 12, 2009: Nancy Goodman Brinker, Pedro José Greer Jr., Stephen Hawking, Jack Kemp (posthumous), Sen. Edward Kennedy, Billie Jean King, Rev. Joseph Lowery, Joe Medicine Crow, Harvey Milk (posthumous), Sandra Day O'Connor, Sidney Poitier, Chita Rivera, Mary Robinson, Janet Davison Rowley, Desmond Tutu, Muhammad Yunus.

Pritzker Architecture Prize, by the Hyatt Foundation, $100,000: Kazuyo Sejima and Ryue Nishizawa, Japan.

Teacher of the Year, by Council of Chief State School Officers and ING: Sarah Brown Wessling, English, Johnston High School, Johnston, IA.

Templeton Prize for Progress Toward Research or Discoveries about Spiritual Realities, by Templeton Foundation, £1 mil (about $1.6 mil): Francisco J. Ayala.

Miss America Winners, 1921-2010

1921	Margaret Gorman, Washington, DC
1922-23	Mary Campbell, Columbus, Ohio
1924	Ruth Malcolmson, Philadelphia, Pennsylvania
1925	Fay Lamphier, Oakland, California
1926	Norma Smallwood, Tulsa, Oklahoma
1927	Lois Delander, Joliet, Illinois
1933	Marion Bergeron, West Haven, Connecticut
1935	Henrietta Leaver, Pittsburgh, Pennsylvania
1936	Rose Coyle, Philadelphia, Pennsylvania
1937	Bette Cooper, Bertrand Island, New Jersey
1938	Marilyn Meseke, Marion, Ohio
1939	Patricia Donnelly, Detroit, Michigan
1940	Frances Marie Burke, Philadelphia, Pennsylvania
1941	Rosemary LaPlanche, Los Angeles, California
1942	Jo-Caroll Dennison, Tyler, Texas
1943	Jean Bartel, Los Angeles, California
1944	Venus Ramey, Washington, DC
1945	Bess Myerson, New York City, New York
1946	Marilyn Buferd, Los Angeles, California
1947	Barbara Walker, Memphis, Tennessee
1948	BeBe Shopp, Hopkins, Minnesota
1949	Jacque Mercer, Litchfield, Arizona
1951	Yolande Betbeze, Mobile, Alabama
1952	Coleen Kay Hutchins, Salt Lake City, Utah
1953	Neva Jane Langley, Macon, Georgia
1954	Evelyn Margaret Ay, Ephrata, Pennsylvania
1955	Lee Meriwether, San Francisco, California
1956	Sharon Ritchie, Denver, Colorado
1957	Marian McKnight, Manning, South Carolina
1958	Marilyn Van Derbur, Denver, Colorado
1959	Mary Ann Mobley, Brandon, Mississippi
1960	Lynda Lee Mead, Natchez, Mississippi
1961	Nancy Fleming, Montague, Michigan
1962	Maria Fletcher, Asheville, North Carolina
1963	Jacquelyn Mayer, Sandusky, Ohio
1964	Donna Axum, El Dorado, Arkansas
1965	Vonda Kay Van Dyke, Phoenix, Arizona
1966	Deborah Irene Bryant, Overland Park, Kansas
1967	Jane Anne Jayroe, Laverne, Oklahoma
1968	Debra Dene Barnes, Moran, Kansas
1969	Judith Anne Ford, Belvidere, Illinois
1970	Pamela Anne Eldred, Birmingham, Michigan
1971	Phyllis Ann George, Denton, Texas
1972	Laurie Lea Schaefer, Columbus, Ohio
1973	Terry Anne Meeuwsen, DePere, Wisconsin
1974	Rebecca Ann King, Denver, Colorado
1975	Shirley Cothran, Fort Worth, Texas
1976	Tawney Elaine Godin, Yonkers, New York
1977	Dorothy Kathleen Benham, Edina, Minnesota
1978	Susan Perkins, Columbus, Ohio
1979	Kylene Barker, Galax, Virginia
1980	Cheryl Prewitt, Ackerman, Mississippi
1981	Susan Powell, Elk City, Oklahoma
1982	Elizabeth Ward, Russellville, Arkansas
1983	Debra Maffett, Anaheim, California
1984[1]	Suzette Charles, Mays Landing, New Jersey
1985	Sharlene Wells, Salt Lake City, Utah
1986	Susan Akin, Meridian, Mississippi
1987	Kellye Cash, Memphis, Tennessee
1988	Kaye Lani Rae Rafko, Monroe, Michigan
1989	Gretchen Carlson, Anoka, Minnesota
1990	Debbye Turner, Columbia, Missouri
1991	Marjorie Vincent, Oak Park, Illinois
1992	Carolyn Suzanne Sapp, Honolulu, Hawaii
1993	Leanza Cornett, Jacksonville, Florida
1994	Kimberly Aiken, Columbia, South Carolina
1995	Heather Whitestone, Birmingham, Alabama
1996	Shawntel Smith, Muldrow, Oklahoma
1997	Tara Dawn Holland, Overland Park, Kansas
1998	Kate Shindle, Evanston, Illinois
1999	Nicole Johnson, Roanoke, Virginia
2000	Heather Renee French, Maysville, Kentucky
2001	Angela Perez Baraquio, Honolulu, Hawaii
2002	Katie Harman, Gresham, Oregon
2003	Erika Harold, Urbana, Illinois
2004	Ericka Dunlap, Orlando, Florida
2005[2]	Deidre Downs, Birmingham, Alabama
2006	Jennifer Berry, Tulsa, Oklahoma
2007	Lauren Nelson, Lawton, Oklahoma
2008	Kirsten Haglund, Farmington Hills, Michigan
2009	Katie Stam, Seymour, Indiana
2010	Caressa Cameron, Fredricksburg, Virginia

(1) Miss New York, Vanessa Williams, resigned July 23, 1984. (2) The Sept. 2005 Miss America Pageant and award were postponed until Jan. 2006, when the pageant was broadcast from Las Vegas, NV, by Country Music Television (CMT).

Entertainment Awards

Tony (Antoinette Perry) Awards, 2010

Play: *Red*, John Logan
Musical: *Memphis*
Book of a musical: Joe DiPietro, *Memphis*
Original score: Joe DiPietro & David Bryan, *Memphis*
Play revival: *Fences*
Musical revival: *La Cage aux Folles*
Actor, play: Denzel Washington, *Fences*
Actress, play: Viola Davis, *Fences*
Actor, musical: Douglas Hodge, *La Cage aux Folles*
Actress, musical: Catherine Zeta-Jones, *A Little Night Music*
Featured actor, play: Eddie Redmayne, *Red*
Featured actress, play: Scarlett Johansson, *A View From the Bridge*
Featured actor, musical: Levi Kreis, *Million Dollar Quartet*
Featured actress, musical: Katie Finneran, *Promises, Promises*
Director, play: Michael Grandage, *Red*
Director, musical: Terry Johnson, *La Cage aux Folles*
Choreography: Bill T. Jones, *Fela!*
Orchestrations: Daryl Waters & David Bryan, *Memphis*
Scenic design, play: Christopher Oram, *Red*
Scenic design, musical: Christine Jones, *American Idiot*
Costume design, play: Catherine Zuber, *The Royal Family*
Costume design, musical: Marina Draghici, *Fela!*
Regional theater: Eugene O'Neill Theater Center, Waterford, CT
Special Tony Award, lifetime achievement: Alan Ayckbourn, Marian Seldes
Isabelle Stevenson Award: David Hyde Pierce
Tony Honors for excellence in the theatre: Alliance of Resident Theatres/New York; B.H. Barry; Midtown North & South NYPD Precincts; Tom Viola

Tony Awards, 1948-2010

Year	Play	Musical
1948	*Mister Roberts*	No Award
1949	*Death of a Salesman*	*Kiss Me Kate*
1950	*The Cocktail Party*	*South Pacific*
1951	*The Rose Tattoo*	*Guys and Dolls*
1952	*The Fourposter*	*The King and I*
1953	*The Crucible*	*Wonderful Town*
1954	*The Teahouse of the August Moon*	*Kismet*
1955	*The Desperate Hours*	*The Pajama Game*
1956	*The Diary of Anne Frank*	*Damn Yankees*
1957	*Long Day's Journey Into Night*	*My Fair Lady*
1958	*Sunrise at Campobello*	*The Music Man*
1959	*J.B.*	*Redhead*
1960	*The Miracle Worker*	(tie) *Fiorello!*, *The Sound of Music*
1961	*Becket*	*Bye, Bye Birdie*
1962	*A Man for All Seasons*	*How to Succeed in Business Without Really Trying*
1963	*Who's Afraid of Virginia Woolf?*	*A Funny Thing Happened on the Way to the Forum*
1964	*Luther*	*Hello, Dolly!*
1965	*The Subject Was Roses*	*Fiddler on the Roof*
1966	*Marat/Sade*	*Man of La Mancha*
1967	*The Homecoming*	*Cabaret*
1968	*Rosencrantz and Guildenstern Are Dead*	*Hallelujah, Baby!*
1969	*The Great White Hope*	*1776*
1970	*Borstal Boy*	*Applause*
1971	*Sleuth*	*Company*
1972	*Sticks and Bones*	*Two Gentleman of Verona*
1973	*That Championship Season*	*A Little Night Music*
1974	*The River Niger*	*Raisin*
1975	*Equus*	*The Wiz*
1976	*Travesties*	*A Chorus Line*
1977	*The Shadow Box*	*Annie*
1978	*Da*	*Ain't Misbehavin'*
1979	*The Elephant Man*	*Sweeney Todd*
1980	*Children of a Lesser God*	*Evita*
1981	*Amadeus*	*42nd Street*
1982	*The Life and Adventures of Nicholas Nickelby*	*Nine*
1983	*Torch Song Trilogy*	*Cats*
1984	*The Real Thing*	*La Cage aux Folles*
1985	*Biloxi Blues*	*Big River*
1986	*I'm Not Rappaport*	*The Mystery of Edwin Drood*
1987	*Fences*	*Les Miserables*
1988	*M. Butterfly*	*Phantom of the Opera*
1989	*The Heidi Chronicles*	*Jerome Robbins' Broadway*
1990	*The Grapes of Wrath*	*City of Angels*
1991	*Lost in Yonkers*	*The Will Rogers Follies*
1992	*Dancing at Lughnasa*	*Crazy for You*
1993	*Angels in America: Millennium Approaches*	*Kiss of the Spider Woman*
1994	*Angels in America: Perestroika*	*Passion*
1995	*Love! Valour! Compassion!*	*Sunset Boulevard*
1996	*Master Class*	*Rent*
1997	*The Last Night of Ballyhoo*	*Titanic*
1998	*Art*	*The Lion King*
1999	*Side Man*	*Fosse*
2000	*Copenhagen*	*Contact*
2001	*Proof*	*The Producers*
2002	*Edward Albee's The Goat or Who Is Sylvia?*	*Thoroughly Modern Millie*
2003	*Take Me Out*	*Hairspray*
2004	*I Am My Own Wife*	*Avenue Q*
2005	*Doubt*	*Monty Python's Spamalot*
2006	*The History Boys*	*Jersey Boys*
2007	*The Coast of Utopia*	*Spring Awakening*
2008	*August: Osage County*	*In the Heights*
2009	*God of Carnage*	*Billy Elliot,The Musical*
2010	*Red*	*Memphis*

Selected Daytime Emmy Awards, 2010

Drama series: *The Bold and the Beautiful*, CBS
Game show: *Cash Cab*, Discovery Channel
Talk show, entertainment: *The Ellen DeGeneres Show*, synd.
Talk show, informative: *The Doctors*, synd.
Actress: Maura West, *As the World Turns*, CBS
Actor: Michael Park, *As the World Turns*, CBS
Sup. actress: Julie Pinson, *As the World Turns*, CBS
Sup. actor: Billy Miller, *The Young and the Restless*, CBS
Younger actress: Julie Berman, *General Hospital*, ABC
Younger actor: Drew Tyler Bell, *The Bold and the Beautiful*, CBS
Game show host: Ben Bailey, *Cash Cab*, Discovery Channel
Talk show host: Dr. Mehmet Oz, *The Dr. Oz Show*, synd.
Drama series directing team: *General Hospital*, ABC
Drama series writing team: *The Bold and the Beautiful*, CBS
Animated children's show: *Curious George*, PBS
Children's show: *The Electric Company*, PBS
Culinary show: *Giada at Home*, Food Network
Legal/courtroom show: *Cristina's Court*, FOX
Lifestyle show: *The Martha Stewart Show*, synd.
Morning show: *Today Show*, NBC

Selected Prime-Time Emmy Awards, 2010

Drama series: *Mad Men*, AMC
Comedy series: *Modern Family*, ABC
Miniseries: *The Pacific*, HBO
Variety, music, or comedy series: *The Daily Show with Jon Stewart*, Comedy Central
Made-for-television movie: *Temple Grandin*, HBO
Lead actor, drama: Bryan Cranston, *Breaking Bad*, AMC
Lead actress, drama: Kyra Sedgwick, *The Closer*, TNT
Lead actor, comedy: Jim Parsons, *The Big Bang Theory*, CBS
Lead actress, comedy: Edie Falco, *Nurse Jackie*, Showtime
Lead actor, miniseries/movie: Al Pacino, *You Don't Know* Jack, HBO
Lead actress, miniseries/movie: Claire Danes, *Temple Grandin*, HBO
Sup. actor, drama: Aaron Paul, *Breaking Bad*, AMC
Sup. actress, drama: Archie Panjabi, *The Good Wife*, CBS
Sup. actor, comedy: Eric Stonestreet, *Modern Family*, ABC
Sup. actress, comedy: Jane Lynch, *Glee*, FOX
Sup. actor, miniseries/movie: David Strathairn, *Temple Grandin*, HBO
Sup. actress, miniseries/movie: Julia Ormond, *Temple Grandin*, HBO
Host, reality/reality-competition program: Jeff Probst, *Survivor*, CBS
Reality program: *Jamie Oliver's Food Revolution*, ABC
Reality-competition program: *Top Chef*, Bravo
Director, drama: Steve Shill, *Dexter*, Showtime
Director, comedy: Ryan Murphy, *Glee*, FOX
Writing, drama: Erin Levy, Matthew Weiner, *Mad Men*, AMC
Writing, comedy: Steven Levitan, Christopher Lloyd, *Modern Family*, ABC
Writing, variety, music, or comedy: *The Colbert Report*, Comedy Central

Prime-Time Emmy Awards, 1952-2010

The Academy of Television Arts and Sciences presented the first Emmy Awards in 1949. Through the years, award categories have changed, but since 1952, the Academy has given out an outstanding comedy and drama award each year.

Year	Comedy	Drama
1952	*Red Skelton Show*, NBC	*Studio One*, CBS
1953	*I Love Lucy*, CBS	*Robert Montgomery Presents*, NBC
1954	*I Love Lucy*, CBS	*The U.S. Steel Hour*, ABC
1955	*Make Room for Daddy*, ABC	*The U.S. Steel Hour*, ABC
1956	*Phil Silvers Show*, CBS	*Producer's Showcase*, NBC
1957	*Phil Silvers Show*, CBS	*Requiem for a Heavyweight*, CBS[1]
1958	*Phil Silvers Show*, CBS	*Gunsmoke*, CBS
1959[2]	*Jack Benny Show*, CBS	*
1960	*Art Carney Special*, NBC	*Playhouse 90*, CBS
1961	*Jack Benny Show*, CBS	*Hallmark Hall of Fame*: *Macbeth*, NBC
1962	*Bob Newhart Show*, CBS	*The Defenders*, CBS
1963	*Dick Van Dyke Show*, CBS	*The Defenders*, CBS
1964	*Dick Van Dyke Show*, CBS	*The Defenders*, CBS
1965	*Dick Van Dyke Show*, CBS	*Hallmark Hall of Fame*: *The Magnificent Yankee*, NBC
1966	*Dick Van Dyke Show*, CBS	*The Fugitive*, ABC
1967	*The Monkees*, NBC	*Mission: Impossible*, CBS
1968	*Get Smart*, NBC	*Mission: Impossible*, CBS
1969	*Get Smart*, NBC	*NET Playhouse*, NET
1970	*My World and Welcome to It*, NBC	*Marcus Welby, M.D.*, ABC
1971	*All in the Family*, CBS	*The Bold Ones:"The Senator,"* NBC
1972	*All in the Family*, CBS	*Masterpiece Theatre: Elizabeth R*, PBS
1973	*All in the Family*, CBS	*The Waltons*, CBS
1974	*M*A*S*H*, CBS	*Masterpiece Theatre: Upstairs, Downstairs*; PBS
1975	*Mary Tyler Moore Show*, CBS	*Masterpiece Theatre: Upstairs, Downstairs*; PBS
1976	*Mary Tyler Moore Show*, CBS	*Police Story*, NBC
1977	*Mary Tyler Moore Show*, CBS	*Masterpiece Theatre: Upstairs, Downstairs*; PBS
1978	*All in the Family*, CBS	*The Rockford Files*, NBC
1979	*Taxi*, ABC	*Lou Grant*, CBS
1980	*Taxi*, ABC	*Lou Grant*, CBS
1981	*Taxi*, ABC	*Hill Street Blues*, NBC
1982	*Barney Miller*, ABC	*Hill Street Blues*, NBC
1983	*Cheers*, NBC	*Hill Street Blues*, NBC
1984	*Cheers*, NBC	*Hill Street Blues*, NBC
1985	*The Cosby Show*, NBC	*Cagney & Lacey*, CBS
1986	*Golden Girls*, NBC	*Cagney & Lacey*, CBS
1987	*Golden Girls*, NBC	*L.A. Law*, NBC
1988	*The Wonder Years*, ABC	*thirtysomething*, ABC
1989	*Cheers*, NBC	*L.A. Law*, NBC
1990	*Murphy Brown*, CBS	*L.A. Law*, NBC
1991	*Cheers*, NBC	*L.A. Law*, NBC
1992	*Murphy Brown*, CBS	*Northern Exposure*, CBS
1993	*Seinfeld*, NBC	*Picket Fences*, CBS
1994	*Frasier*, NBC	*Picket Fences*, CBS
1995	*Frasier*, NBC	*NYPD Blue*, ABC
1996	*Frasier*, NBC	*ER*, NBC
1997	*Frasier*, NBC	*Law & Order*, NBC
1998	*Frasier*, NBC	*The Practice*, ABC
1999	*Ally McBeal*, Fox	*The Practice*, ABC
2000	*Will & Grace*, NBC	*The West Wing*, NBC
2001	*Sex and the City*, HBO	*The West Wing*, NBC
2002	*Friends*, NBC	*The West Wing*, NBC
2003	*Everybody Loves Raymond*, CBS	*The West Wing*, NBC
2004	*Arrested Development*, Fox	*The Sopranos*, HBO
2005	*Everybody Loves Raymond*, CBS	*Lost*, ABC
2006	*The Office*, NBC	*24*, Fox
2007	*30 Rock*, NBC	*The Sopranos*, HBO
2008	*30 Rock*, NBC	*Mad Men*, AMC
2009	*30 Rock*, NBC	*Mad Men*, AMC
2010	*Modern Family*, ABC	*Mad Men*, AMC

(1) "Best Single Program of the Year," shown on *Playhouse 90*, which was named "Best New Series." (2) Beginning in 1959, Emmys awarded for work in the season encompassing the previous and current year. (*) *Playhouse 90* (CBS) was best drama of 1 hour or longer; *Alcoa-Goodyear Theatre* (NBC) was best drama of less than 1 hour.

Golden Globe Awards, 2010

The Hollywood Foreign Press Association (then the Hollywood Foreign Correspondents Association) presented its first awards for achievement in film in 1944; television was considered for the first time in 1955.

Film

Drama: *Avatar*
Comedy/musical: *The Hangover*
Actress, drama: Sandra Bullock, *The Blind Side*
Actor, drama: Jeff Bridges, *Crazy Heart*
Actress, comedy/musical: Meryl Streep, *Julie & Julia*
Actor, comedy/musical: Robert Downey Jr., *Sherlock Holmes*
Sup. actress: Mo'Nique, *Precious*
Sup. actor: Christoph Waltz, *Inglourious Basterds*
Director: James Cameron, *Avatar*
Screenplay: Jason Reitman & Sheldon Turner, *Up in the Air*
Animated film: *Up*
Foreign-language film: *The White Ribbon* [*Das Weisse Band*]
Original score: Michael Giacchino, *Up*
Original song: "The Weary Kind" (Theme from *Crazy Heart*), w/m by Ryan Bingham & T Bone Burnett
Cecil B. DeMille Award: Martin Scorsese

Television

Series, drama: *Mad Men*, AMC
Series, comedy/musical: *Glee*, FOX
Actress, drama: Julianna Margulies, *The Good Wife*, CBS
Actor, drama: Michael C. Hall, *Dexter*, Showtime
Actress, comedy/musical: Toni Collette, *United States of Tara*, Showtime
Actor, comedy/musical: Alec Baldwin, *30 Rock*, NBC
Miniseries or made-for-TV movie: *Grey Gardens*, HBO
Actress, miniseries/movie: Drew Barrymore, *Grey Gardens*, HBO
Actor, miniseries/movie: Kevin Bacon, *Taking Chance*, HBO
Sup. actress: Chloë Sevigny, *Big Love*, HBO
Sup. actor: John Lithgow, *Dexter*, Showtime

People's Choice Awards, 2010

The first People's Choice Awards were presented in 1975. Sponsored by Procter & Gamble, the nominees and awards were initially selected by a Gallup Poll. Since 2005, winners have been selected by Internet voting.

Film

Movie: *Twilight*
Comedy movie: *The Proposal*
Family movie: *Up*
Independent movie: *Inglourious Basterds*
Movie actor, actress: Johnny Depp, Sandra Bullock
Breakout movie actor, actress: Taylor Lautner, Miley Cyrus
Action movie star: Hugh Jackman
Comedic movie star: Jim Carrey
On-screen team: *The Twilight Saga*

Music

Artists: Keith Urban, Taylor Swift
Band: Paramore
Breakout music artist: Lady Gaga
Country artist: Carrie Underwood
Hip-hop artist: Eminem
Pop artist: Lady Gaga
R&B artist: Mariah Carey
Collaboration: "Run This Town," Jay-Z feat. Rihanna & Kanye West

Television

Drama: *House*
Comedy: *The Big Bang Theory*
Drama actor, actress: Hugh Laurie, Katherine Heigl
Comedy actor, actress: Steve Carell, Alyson Hannigan
Animal show: *Dog Whisperer*
Competition show: *American Idol*
Sci-Fi or fantasy show: *Supernatural*
Talk show: *The Ellen DeGeneres Show*
TV obsession: *True Blood*
New drama: *The Vampire Diaries*
New comedy: *Glee*

Academy Awards (Oscars), 1927-2009

Year	Picture	Actor	Actress	Sup. Actor[1]	Sup. Actress[1]	Director
1927 -28	*Wings*	Emil Jannings *The Way of All Flesh*	Janet Gaynor *Seventh Heaven*			Frank Borzage *Seventh Heaven*; Lewis Milestone *Two Arabian Knights*
1928 -29	*Broadway Melody*	Warner Baxter *In Old Arizona*	Mary Pickford *Coquette*			Frank Lloyd *The Divine Lady*
1929 -30	*All Quiet on the Western Front*	George Arliss *Disraeli*	Norma Shearer *The Divorcee*			Lewis Milestone *All Quiet on the Western Front*
1930 -31	*Cimarron*	Lionel Barrymore *Free Soul*	Marie Dressler *Min and Bill*			Norman Taurog *Skippy*
1931 -32	*Grand Hotel*	Fredric March *Dr. Jekyll and Mr. Hyde*; Wallace Beery *The Champ*	Helen Hayes *The Sin of Madelon Claudet*			Frank Borzage *Bad Girl*
1932 -33	*Cavalcade*	Charles Laughton *The Private Life of Henry VIII*	Katharine Hepburn *Morning Glory*			Frank Lloyd *Cavalcade*
1934	*It Happened One Night*	Clark Gable *It Happened One Night*	Claudette Colbert *It Happened One Night*			Frank Capra *It Happened One Night*
1935	*Mutiny on the Bounty*	Victor McLaglen *The Informer*	Bette Davis *Dangerous*			John Ford *The Informer*
1936	*The Great Ziegfeld*	Paul Muni *Story of Louis Pasteur*	Luise Rainer *The Great Ziegfeld*	Walter Brennan *Come and Get It*	Gale Sondergaard *Anthony Adverse*	Frank Capra *Mr. Deeds Goes to Town*
1937	*Life of Emile Zola*	Spencer Tracy *Captains Courageous*	Luise Rainer *The Good Earth*	Joseph Schildkraut *Life of Emile Zola*	Alice Brady *In Old Chicago*	Leo McCarey *The Awful Truth*
1938	*You Can't Take It With You*	Spencer Tracy *Boys Town*	Bette Davis *Jezebel*	Walter Brennan *Kentucky*	Fay Bainter *Jezebel*	Frank Capra *You Can't Take It With You*
1939	*Gone With the Wind*	Robert Donat *Goodbye Mr. Chips*	Vivien Leigh *Gone With the Wind*	Thomas Mitchell *Stage Coach*	Hattie McDaniel *Gone With the Wind*	Victor Fleming *Gone With the Wind*
1940	*Rebecca*	James Stewart *The Philadelphia Story*	Ginger Rogers *Kitty Foyle*	Walter Brennan *The Westerner*	Jane Darwell *The Grapes of Wrath*	John Ford *The Grapes of Wrath*
1941	*How Green Was My Valley*	Gary Cooper *Sergeant York*	Joan Fontaine *Suspicion*	Donald Crisp *How Green Was My Valley*	Mary Astor *The Great Lie*	John Ford *How Green Was My Valley*
1942	*Mrs. Miniver*	James Cagney *Yankee Doodle Dandy*	Greer Garson *Mrs. Miniver*	Van Heflin *Johnny Eager*	Teresa Wright *Mrs. Miniver*	William Wyler *Mrs. Miniver*
1943	*Casablanca*	Paul Lukas *Watch on the Rhine*	Jennifer Jones *The Song of Bernadette*	Charles Coburn *The More the Merrier*	Katina Paxinou *For Whom the Bell Tolls*	Michael Curtiz *Casablanca*
1944	*Going My Way*	Bing Crosby *Going My Way*	Ingrid Bergman *Gaslight*	Barry Fitzgerald *Going My Way*	Ethel Barrymore *None But the Lonely Heart*	Leo McCarey *Going My Way*
1945	*The Lost Weekend*	Ray Milland *The Lost Weekend*	Joan Crawford *Mildred Pierce*	James Dunn *A Tree Grows in Brooklyn*	Anne Revere *National Velvet*	Billy Wilder *The Lost Weekend*
1946	*The Best Years of Our Lives*	Fredric March *The Best Years of Our Lives*	Olivia de Havilland *To Each His Own*	Harold Russell *The Best Years of Our Lives*	Anne Baxter *The Razor's Edge*	William Wyler *The Best Years of Our Lives*
1947	*Gentleman's Agreement*	Ronald Colman *A Double Life*	Loretta Young *The Farmer's Daughter*	Edmund Gwenn *Miracle on 34th Street*	Celeste Holm *Gentleman's Agreement*	Elia Kazan *Gentleman's Agreement*
1948	*Hamlet*	Laurence Olivier *Hamlet*	Jane Wyman *Johnny Belinda*	Walter Huston *Treasure of Sierra Madre*	Claire Trevor *Key Largo*	John Huston *Treasure of Sierra Madre*
1949	*All the King's Men*	Broderick Crawford *All the King's Men*	Olivia de Havilland *The Heiress*	Dean Jagger *Twelve O'Clock High*	Mercedes McCambridge *All the King's Men*	Joseph L. Mankiewicz *Letter to Three Wives*
1950	*All About Eve*	Jose Ferrer *Cyrano de Bergerac*	Judy Holliday *Born Yesterday*	George Sanders *All About Eve*	Josephine Hull *Harvey*	Joseph L. Mankiewicz *All About Eve*
1951	*An American in Paris*	Humphrey Bogart *The African Queen*	Vivien Leigh *A Streetcar Named Desire*	Karl Malden *A Streetcar Named Desire*	Kim Hunter *A Streetcar Named Desire*	George Stevens *A Place in the Sun*
1952	*The Greatest Show on Earth*	Gary Cooper *High Noon*	Shirley Booth *Come Back Little Sheba*	Anthony Quinn *Viva Zapata!*	Gloria Grahame *The Bad and the Beautiful*	John Ford *The Quiet Man*
1953	*From Here to Eternity*	William Holden *Stalag 17*	Audrey Hepburn *Roman Holiday*	Frank Sinatra *From Here to Eternity*	Donna Reed *From Here to Eternity*	Fred Zinnemann *From Here to Eternity*

Year	Picture	Actor	Actress	Sup. Actor[1]	Sup. Actress[1]	Director
1954	*On the Waterfront*	Marlon Brando *On the Waterfront*	Grace Kelly *The Country Girl*	Edmond O'Brien *The Barefoot Contessa*	Eva Marie Saint *On the Waterfront*	Elia Kazan *On the Waterfront*
1955	*Marty*	Ernest Borgnine *Marty*	Anna Magnani *The Rose Tattoo*	Jack Lemmon *Mister Roberts*	Jo Van Fleet *East of Eden*	Delbert Mann *Marty*
1956	*Around the World in 80 Days*	Yul Brynner *The King and I*	Ingrid Bergman *Anastasia*	Anthony Quinn *Lust for Life*	Dorothy Malone *Written on the Wind*	George Stevens *Giant*
1957	*The Bridge on the River Kwai*	Alec Guinness *The Bridge on the River Kwai*	Joanne Woodward *The Three Faces of Eve*	Red Buttons *Sayonara*	Miyoshi Umeki *Sayonara*	David Lean *The Bridge on the River Kwai*
1958	*Gigi*	David Niven *Separate Tables*	Susan Hayward *I Want to Live*	Burl Ives *The Big Country*	Wendy Hiller *Separate Tables*	Vincente Minnelli *Gigi*
1959	*Ben-Hur*	Charlton Heston *Ben-Hur*	Simone Signoret *Room at the Top*	Hugh Griffith *Ben-Hur*	Shelley Winters *Diary of Anne Frank*	William Wyler *Ben-Hur*
1960	*The Apartment*	Burt Lancaster *Elmer Gantry*	Elizabeth Taylor *Butterfield 8*	Peter Ustinov *Spartacus*	Shirley Jones *Elmer Gantry*	Billy Wilder *The Apartment*
1961	*West Side Story*	Maximilian Schell *Judgment at Nuremberg*	Sophia Loren *Two Women*	George Chakiris *West Side Story*	Rita Moreno *West Side Story*	Jerome Robbins, Robert Wise *West Side Story*
1962	*Lawrence of Arabia*	Gregory Peck *To Kill a Mockingbird*	Anne Bancroft *The Miracle Worker*	Ed Begley *Sweet Bird of Youth*	Patty Duke *The Miracle Worker*	David Lean *Lawrence of Arabia*
1963	*Tom Jones*	Sidney Poitier *Lilies of the Field*	Patricia Neal *Hud*	Melvyn Douglas *Hud*	Margaret Rutherford *The V.I.P.s*	Tony Richardson *Tom Jones*
1964	*My Fair Lady*	Rex Harrison *My Fair Lady*	Julie Andrews *Mary Poppins*	Peter Ustinov *Topkapi*	Lila Kedrova *Zorba the Greek*	George Cukor *My Fair Lady*
1965	*The Sound of Music*	Lee Marvin *Cat Ballou*	Julie Christie *Darling*	Martin Balsam *A Thousand Clowns*	Shelley Winters *A Patch of Blue*	Robert Wise *The Sound of Music*
1966	*A Man for All Seasons*	Paul Scofield *A Man for All Seasons*	Elizabeth Taylor *Who's Afraid of Virginia Woolf?*	Walter Matthau *The Fortune Cookie*	Sandy Dennis *Who's Afraid of Virginia Woolf?*	Fred Zinnemann *A Man for All Seasons*
1967	*In the Heat of the Night*	Rod Steiger *In the Heat of the Night*	Katharine Hepburn *Guess Who's Coming to Dinner*	George Kennedy *Cool Hand Luke*	Estelle Parsons *Bonnie and Clyde*	Mike Nichols *The Graduate*
1968	*Oliver!*	Cliff Robertson *Charly*	Katharine Hepburn *The Lion in Winter*; Barbra Streisand *Funny Girl*	Jack Albertson *The Subject Was Roses*	Ruth Gordon *Rosemary's Baby*	Sir Carol Reed *Oliver!*
1969	*Midnight Cowboy*	John Wayne *True Grit*	Maggie Smith *The Prime of Miss Jean Brodie*	Gig Young *They Shoot Horses Don't They?*	Goldie Hawn *Cactus Flower*	John Schlesinger *Midnight Cowboy*
1970	*Patton*	George C. Scott *Patton* (refused)	Glenda Jackson *Women in Love*	John Mills *Ryan's Daughter*	Helen Hayes *Airport*	Franklin Schaffner *Patton*
1971	*The French Connection*	Gene Hackman *The French Connection*	Jane Fonda *Klute*	Ben Johnson *The Last Picture Show*	Cloris Leachman *The Last Picture Show*	William Friedkin *The French Connection*
1972	*The Godfather*	Marlon Brando *The Godfather* (refused)	Liza Minnelli *Cabaret*	Joel Grey *Cabaret*	Eileen Heckart *Butterflies Are Free*	Bob Fosse *Cabaret*
1973	*The Sting*	Jack Lemmon *Save the Tiger*	Glenda Jackson *A Touch of Class*	John Houseman *The Paper Chase*	Tatum O'Neal *Paper Moon*	George Roy Hill *The Sting*
1974	*The Godfather Part II*	Art Carney *Harry and Tonto*	Ellen Burstyn *Alice Doesn't Live Here Anymore*	Robert DeNiro *The Godfather Part II*	Ingrid Bergman *Murder on the Orient Express*	Francis Ford Coppola *The Godfather Part II*
1975	*One Flew Over the Cuckoo's Nest*	Jack Nicholson *One Flew Over the Cuckoo's Nest*	Louise Fletcher *One Flew Over the Cuckoo's Nest*	George Burns *The Sunshine Boys*	Lee Grant *Shampoo*	Milos Forman *One Flew Over the Cuckoo's Nest*
1976	*Rocky*	Peter Finch *Network*	Faye Dunaway *Network*	Jason Robards *All the President's Men*	Beatrice Straight *Network*	John G. Avildsen *Rocky*
1977	*Annie Hall*	Richard Dreyfuss *The Goodbye Girl*	Diane Keaton *Annie Hall*	Jason Robards *Julia*	Vanessa Redgrave *Julia*	Woody Allen *Annie Hall*
1978	*The Deer Hunter*	Jon Voight *Coming Home*	Jane Fonda *Coming Home*	Christopher Walken *The Deer Hunter*	Maggie Smith *California Suite*	Michael Cimino *The Deer Hunter*
1979	*Kramer vs. Kramer*	Dustin Hoffman *Kramer vs. Kramer*	Sally Field *Norma Rae*	Melvyn Douglas *Being There*	Meryl Streep *Kramer vs. Kramer*	Robert Benton *Kramer vs. Kramer*
1980	*Ordinary People*	Robert DeNiro *Raging Bull*	Sissy Spacek *Coal Miner's Daughter*	Timothy Hutton *Ordinary People*	Mary Steenburgen *Melvin and Howard*	Robert Redford *Ordinary People*
1981	*Chariots of Fire*	Henry Fonda *On Golden Pond*	Katharine Hepburn *On Golden Pond*	John Gielgud *Arthur*	Maureen Stapleton *Reds*	Warren Beatty *Reds*
1982	*Gandhi*	Ben Kingsley *Gandhi*	Meryl Streep *Sophie's Choice*	Louis Gossett Jr. *An Officer and a Gentleman*	Jessica Lange *Tootsie*	Richard Attenborough *Gandhi*
1983	*Terms of Endearment*	Robert Duvall *Tender Mercies*	Shirley MacLaine *Terms of Endearment*	Jack Nicholson *Terms of Endearment*	Linda Hunt *The Year of Living Dangerously*	James L. Brooks *Terms of Endearment*

Year	Picture	Actor	Actress	Sup. Actor[1]	Sup. Actress[1]	Director
1984	*Amadeus*	F. Murray Abraham *Amadeus*	Sally Field *Places in the Heart*	Haing S. Ngor *The Killing Fields*	Peggy Ashcroft *A Passage to India*	Milos Forman *Amadeus*
1985	*Out of Africa*	William Hurt *Kiss of the Spider Woman*	Geraldine Page *The Trip to Bountiful*	Don Ameche *Cocoon*	Anjelica Huston *Prizzi's Honor*	Sydney Pollack *Out of Africa*
1986	*Platoon*	Paul Newman *The Color of Money*	Marlee Matlin *Children of a Lesser God*	Michael Caine *Hannah and Her Sisters*	Dianne Wiest *Hannah and Her Sisters*	Oliver Stone *Platoon*
1987	*The Last Emperor*	Michael Douglas *Wall Street*	Cher *Moonstruck*	Sean Connery *The Untouchables*	Olympia Dukakis *Moonstruck*	Bernardo Bertolucci *The Last Emperor*
1988	*Rain Man*	Dustin Hoffman *Rain Man*	Jodie Foster *The Accused*	Kevin Kline *A Fish Called Wanda*	Geena Davis *The Accidental Tourist*	Barry Levinson *Rain Man*
1989	*Driving Miss Daisy*	Daniel Day-Lewis *My Left Foot*	Jessica Tandy *Driving Miss Daisy*	Denzel Washington *Glory*	Brenda Fricker *My Left Foot*	Oliver Stone *Born on the Fourth of July*
1990	*Dances With Wolves*	Jeremy Irons *Reversal of Fortune*	Kathy Bates *Misery*	Joe Pesci *Goodfellas*	Whoopi Goldberg *Ghost*	Kevin Costner *Dances With Wolves*
1991	*The Silence of the Lambs*	Anthony Hopkins *The Silence of the Lambs*	Jodie Foster *The Silence of the Lambs*	Jack Palance *City Slickers*	Mercedes Ruehl *The Fisher King*	Jonathan Demme *The Silence of the Lambs*
1992	*Unforgiven*	Al Pacino *Scent of a Woman*	Emma Thompson *Howards End*	Gene Hackman *Unforgiven*	Marisa Tomei *My Cousin Vinny*	Clint Eastwood *Unforgiven*
1993	*Schindler's List*	Tom Hanks *Philadelphia*	Holly Hunter *The Piano*	Tommy Lee Jones *The Fugitive*	Anna Paquin *The Piano*	Steven Spielberg *Schindler's List*
1994	*Forrest Gump*	Tom Hanks *Forrest Gump*	Jessica Lange *Blue Sky*	Martin Landau *Ed Wood*	Dianne Wiest *Bullets Over Broadway*	Robert Zemeckis *Forrest Gump*
1995	*Braveheart*	Nicolas Cage *Leaving Las Vegas*	Susan Sarandon *Dead Man Walking*	Kevin Spacey *The Usual Suspects*	Mira Sorvino *Mighty Aphrodite*	Mel Gibson *Braveheart*
1996	*The English Patient*	Geoffrey Rush *Shine*	Frances McDormand *Fargo*	Cuba Gooding Jr. *Jerry Maguire*	Juliette Binoche *The English Patient*	Anthony Minghella *The English Patient*
1997	*Titanic*	Jack Nicholson *As Good As It Gets*	Helen Hunt *As Good As It Gets*	Robin Williams *Good Will Hunting*	Kim Basinger *L.A. Confidential*	James Cameron *Titanic*
1998	*Shakespeare in Love*	Roberto Benigni *Life Is Beautiful*	Gwyneth Paltrow *Shakespeare in Love*	James Coburn *Affliction*	Judi Dench *Shakespeare in Love*	Steven Spielberg *Saving Private Ryan*
1999	*American Beauty*	Kevin Spacey *American Beauty*	Hilary Swank *Boys Don't Cry*	Michael Caine *The Cider House Rules*	Angelina Jolie *Girl Interrupted*	Sam Mendes *American Beauty*
2000	*Gladiator*	Russell Crowe *Gladiator*	Julia Roberts *Erin Brockovich*	Benicio Del Toro *Traffic*	Marcia Gay Harden *Pollock*	Steven Soderbergh *Traffic*
2001	*A Beautiful Mind*	Denzel Washington *Training Day*	Halle Berry *Monster's Ball*	Jim Broadbent *Iris*	Jennifer Connelly *A Beautiful Mind*	Ron Howard *A Beautiful Mind*
2002	*Chicago*	Adrien Brody *The Pianist*	Nicole Kidman *The Hours*	Chris Cooper *Adaptation*	Catherine Zeta-Jones, *Chicago*	Roman Polanski *The Pianist*
2003	*The Lord of the Rings: The Return of the King*	Sean Penn *Mystic River*	Charlize Theron *Monster*	Tim Robbins *Mystic River*	Renée Zellweger *Cold Mountain*	Peter Jackson *The Lord of the Rings: The Return of the King*
2004	*Million Dollar Baby*	Jamie Foxx *Ray*	Hilary Swank *Million Dollar Baby*	Morgan Freeman *Million Dollar Baby*	Cate Blanchett *The Aviator*	Clint Eastwood *Million Dollar Baby*
2005	*Crash*	Philip Seymour Hoffman *Capote*	Reese Witherspoon *Walk the Line*	George Clooney *Syriana*	Rachel Weisz *The Constant Gardener*	Ang Lee *Brokeback Mountain*
2006	*The Departed*	Forest Whitaker *The Last King of Scotland*	Helen Mirren *The Queen*	Alan Arkin *Little Miss Sunshine*	Jennifer Hudson *Dreamgirls*	Martin Scorsese *The Departed*
2007	*No Country for Old Men*	Daniel Day-Lewis *There Will Be Blood*	Marion Cotillard *La Vie en Rose*	Javier Bardem *No Country for Old Men*	Tilda Swinton *Michael Clayton*	Joel Coen and Ethan Coen, *No Country for Old Men*
2008	*Slumdog Millionaire*	Sean Penn *Milk*	Kate Winslet *The Reader*	Heath Ledger *The Dark Knight*	Penelope Cruz, *Vicky Cristina Barcelona*	Danny Boyle *Slumdog Millionaire*
2009	*The Hurt Locker*	Jeff Bridges *Crazy Heart*	Sandra Bullock *The Blind Side*	Christoph Waltz *Inglourious Basterds*	Mo'Nique *Precious*	Kathryn Bigelow *The Hurt Locker*

(1) These awards not given until 1936.

Other Oscar Winners, 2009

Animated film: *Up*
Screenplay, adapted: *Precious: Based on the Novel 'Push' by Sapphire*, Geoffrey Fletcher
Screenplay, original: Mark Boal, *The Hurt Locker*
Art direction: *Avatar*
Cinematography: *Avatar*
Costume design: *The Young Victoria*
Documentary: *The Cove*
Film editing: *The Hurt Locker*
Foreign language film: *El Secreto de Sus Ojos*, [*The Secret in Their Eyes*], Argentina
Makeup: *Star Trek*
Original score: *Up*, Michael Giacchino
Original song: "The Weary Kind (Theme from Crazy Heart)," Ryan Bingham and T Bone Burnett
Short films: *Logorama* (animated), *Music by Prudence* (documentary), *The New Tenants* (live-action)
Sound editing: *The Hurt Locker*
Sound mixing: *The Hurt Locker*
Visual effects: *Avatar*

Other Film Awards, 2010

(Awarded in 2010, unless otherwise noted.)

Berlin International Film Festival

Best film (Golden Bear): *Bal* [*Honey*], Semih Kaplanoglu, Turkey/Germany
Jury grand prix (Silver Bear): *Eu cand vreau sa fluier, fluier* [*If I Want to Whistle, I Whistle*], Florin Serban, Romania/Sweden
Director: Roman Polanski, *The Ghost Writer*, France/Germany/UK
Actress: Shinobu Terajima, *Caterpillar*, Japan
Actor: Grigori Dobrygin & Sergei Puskepalis, *Kak ya provel etim letom* [*How I Ended This Summer*], Russia
Artistic achievement (camera): Pavel Kostomarov, *Kak ya provel etim letom* [*How I Ended This Summer*], Russia
Script: Wang Quan'an & Na Jin, *Tuan Yuan* [*Apart Together*], China
Alfred Bauer Prize: *Eu cand vreau sa fluier, fluier* [*If I Want to Whistle, I Whistle*], Florin Serban, Romania/Sweden

British Academy of Film and Television Awards (BAFTAs, 2009)

Best film: *The Hurt Locker*
British film: *Fish Tank*
Director: Kathryn Bigelow, *The Hurt Locker*
Original screenplay: Mark Boal, *The Hurt Locker*
Adapted screenplay: Jason Reitman & Sheldon Turner, *Up in the Air*
Foreign language film: *Un prophète* [*A Prophet*], France
Animated film: *Up*
Actor: Colin Firth, *A Single Man*
Actress: Carey Mulligan, *An Education*
Supporting actor: Christoph Waltz, *Inglourious Basterds*
Supporting actress: Mo'Nique, *Precious*

Cannes International Film Festival Awards

Cannes: Feature Films

Palme d'Or: *Lung Boonmee Raluek Chat* [*Uncle Boonmee Who Can Recall His Past Lives*], Apichatpong Weerasethakul, UK/Thai./Fr./Ger./Sp.
Grand prix: *Des hommes et des dieux* [*Of Gods and Men*], Xavier Beauvois, France
Director: Mathieu Amalric, *Tournée* [*On Tour*], France
Screenplay: Lee Chang-dong, *Poetry*, South Korea
Actor: Javier Bardem, *Biutiful*, Mexico/Spain; Elio Germano, *La nostra vita* [*Our Life*], Italy/France
Actress: Juliette Binoche, *Copie conforme* [*Certified Copy*], France/Italy
Jury prize: *Un homme qui crie* [*A Screaming Man*], Mahamat-Saleh Haroun, Fr./Belg./Chad

Cannes: Short Films

Palme d'Or: *Chienne d'histoire* [*Barking Island*], Serge Avédikian, France
Jury prize: *Micky Bader* [*Bathing Micky*], Frida Kempff, Sweden/Denmark

Director's Guild of America Awards

Feature film: Kathryn Bigelow, *The Hurt Locker*
Documentary: Louis Psihoyos, *The Cove*

Genie Awards (Canada)

Motion picture: *Polytechnique*
Actor: Joshua Jackson, *One Week*
Actress: Karine Vanasse, *Polytechnique*
Supporting actor: Maxim Gaudette, *Polytechnique*
Supporting actress: Martha Burns, *Love & Savagery*
Documentary: *A Hard Name*
Director: Denis Villeneuve, *Polytechnique*

Sundance Film Festival Awards

Grand jury prize: *Winter's Bone*, Debra Granik (drama); *Restrepo*, Sebastien Junger & Tim Hetherington (doc.)
World cinema grand jury prize: *Animal Kingdom*, David Michôd, Australia (drama); *Det røde kapel* [*The Red Chapel*], Mads Brügger, Denmark (doc.)
Audience award: *happythankyoumoreplease*, Josh Radnor (drama); *Waiting for Superman*, Davis Guggenheim (doc.)
World cinema audience award: *Contracorriente*, Javier Fuentes-León, Peru/Colombia/Fr./Ger. (drama); *Waste Land*, Lucy Walker, Brazil/UK (doc.)
Directing: Eric Mendelsohn, *3 Backyards*; Leon Gast, *Smash His Camera* (doc.)
World cinema directing award: Juan Carlos Valdivia, *Zona sur* [*Southern District*], Bolivia (drama); Christian Frei, *Space Tourists*, Switzerland (doc.)
Waldo Salt screenwriting award: Debra Granik & Anne Rosellini, *Winter's Bone*
World Cinema screenwriting award: Juan Carlos Valdivia, *Zona sur* [*Southern District*]
Documentary editing: Penelope Falk, *Joan Rivers: A Piece of Work*
World cinema doc. editing: Joëlle Alexis, *A Film Unfinished*, Germany/Israel
Cinematography: Zak Mulligan, *Obselidia* (drama); Kirsten Johnson, Laura Poitras, *The Oath* (doc.)
World cinema cinematography: Mariano Cohn & Gastón Duprat, *El hombre de al lado* [*The Man Next Door*], Argentina (drama); Kate McCullough & Michael Lavelle, *His & Hers*, Ireland (doc.)
Special jury prize: Mark Ruffalo, *Sympathy for Delicious (drama)*; Josh Fox, *Gasland* (doc.)
World cinema special jury prize: Tatiana Maslany, *Grown Up Movie Star*, Canada (breakout performance); Rob Lemkin & Thet Sambath, *Enemies of the People*, UK/Cambodia
Alfred P. Sloan feature film prize: Diane Bell, *Obselidia*
Short filmmaking jury prize: *Drunk History*
International short filmmaking jury prize: *The Six Dollar Fifty Man*, New Zealand

Toronto International Film Festival

Prize of the international critics (FIPRESCI Prize) for discovery: *Beautiful Boy*, Shawn Ku
FIPRESCI prize for special presentations: *L'Amour Fou*, Pierre Thoretton
Cadillac people's choice award: *The King's Speech*, Tom Hooper
Cadillac people's choice award (documentary): *Force of Nature: The David Suzuki Movie*, Sturla Gunnarsson
Cadillac people's choice award (midnight madness): *Stake Land*, Jim Mickle
Best Canadian short film: *Les Fleurs de l'âge*, Vincent Biron
Best Canadian first feature film: *The High Cost of Living*, Deborah Chow

MTV Video Music Awards, 2010

Video of the year: "Bad Romance," Lady Gaga
New artist: "Baby," Justin Bieber feat. Ludacris
Female video: "Bad Romance," Lady Gaga
Male video: "Not Afraid," Eminem
Breakthrough video: "Tighten Up," The Black Keys
Collaboration: "Telephone," Lady Gaga feat. Beyoncé
Dance video: "Bad Romance," Lady Gaga
Hip-Hop video: "Not Afraid," Eminem
Rock video: "Kings and Queens," 30 Seconds to Mars
Pop video: "Bad Romance," Lady Gaga
Art direction: "Dog Days Are Over," Florence + the Machine
Choreography: "Bad Romance," Lady Gaga
Cinematography: "Empire State of Mind," Jay-Z & Alicia Keys
Direction: "Bad Romance," Lady Gaga
Editing: "Bad Romance," Lady Gaga
Special effects: "Uprising," Muse

Academy of Country Music Awards, 2010

Entertainer of the year: Carrie Underwood
Album of the year: *Revolution*, Miranda Lambert
Record of the year (single): "Need You Now," Lady Antebellum
Song of the year: "Need You Now," Lady Antebellum
Vocal event of the year: "Hillbilly Bone," Blake Shelton feat. Trace Adkins
Female vocalist: Miranda Lambert
Male vocalist: Brad Paisley
Vocal duo: Brooks & Dunn
Vocal group: Lady Antebellum
New artist: Luke Bryan
New solo vocalist: Luke Bryan
New vocal duo: Joey + Rory
New duo/group: Gloriana
Video of the year: "White Liar," Miranda Lambert
Triple crown award: Carrie Underwood
Crystal milestone award: Taylor Swift, Jennifer Nettles
Humanitarian award: Montgomery Gentry

Grammy Awards

Source: National Academy of Recording Arts & Sciences
2009 Grammy Awards are for albums released Oct. 1, 2008-Sept. 30, 2009, and were presented in Feb. 2010.

Selected Grammy Awards for 2009

Record of the year (single): "Use Somebody," Kings Of Leon
Album of the year: *Fearless*, Taylor Swift
Song of the year: "Single Ladies (Put A Ring On It)," Beyoncé
New artist: Zac Brown Band
Pop vocal perf., female: "Halo," Beyoncé
Pop vocal perf., male: "Make It Mine," Jason Mraz
Pop vocal perf., duo/group: "I Gotta Feeling," The Black Eyed Peas
Pop vocal perf., collaboration: "Lucky," Jason Mraz & Colbie Caillat
Pop vocal album: *The E.N.D.*, The Black Eyed Peas
Dance recording: "Poker Face," Lady Gaga
Dance/electronic album: *The Fame*, Lady Gaga
Rock vocal perf., solo: "Working On A Dream," Bruce Springsteen
Rock vocal perf., duo/group: "Use Somebody," Kings Of Leon
Hard rock perf.: "War Machine," AC/DC
Rock song: "Use Somebody," Kings Of Leon
Rock album: *21st Century Breakdown*, Green Day
Alternative album: *Wolfgang Amadeus Phoenix*, Phoenix
R&B vocal perf., female: "Single Ladies (Put A Ring On It)," Beyoncé
R&B vocal perf., male: "Pretty Wings," Maxwell
R&B vocal perf., duo/group: "Blame It," Jamie Foxx & T-Pain
R&B song: "Single Ladies (Put A Ring On It)," Beyoncé (w/m by Harrell, Knowles, Nash, Stewart)
R&B album: *Blacksummers' Night*, Maxwell
R&B album, contemporary: *I Am... Sasha Fierce*, Beyoncé
Rap perf., solo: "D.O.A. (Death Of Auto-Tune)," Jay-Z
Rap perf., duo/group: "Crack A Bottle," Eminem, Dr. Dre, & 50 Cent
Rap song: "Run This Town," Jay-Z, Rihanna, & Kanye West
Rap album: *Relapse*, Eminem
Country vocal perf., female: "White Horse," Taylor Swift
Country vocal perf., male: "Sweet Thing," Keith Urban
Country vocal perf., duo/group: "I Run To You," Lady Antebellum
Country song: "White Horse," Taylor Swift
Country album: *Fearless*, Taylor Swift
Comedy album: *A Colbert Christmas: The Greatest Gift Of All!*, Stephen Colbert
Soundtrack album, compilation: *Slumdog Millionaire*, various artists
Soundtrack album, score: *Up*, Michael Giacchino
Song, motion picture/TV: "Jai Ho," w/m by Gulzar, A.R. Rahman, & Tanvi Shah, *Slumdog Millionaire*
Music video, short form: "Boom Boom Pow," The Black Eyed Peas
Music video, long form: *The Beatles Love—All Together Now*, various artists

Grammy Awards for 1958-2009

Record of the Year (single)	Year	Album of the Year
Domenico Modugno, "Nel Blu Dipinto Di Blu (Volare)"	**1958**	Henry Mancini, *The Music From Peter Gunn*
Bobby Darin, "Mack the Knife"	**1959**	Frank Sinatra, *Come Dance With Me*
Percy Faith, "Theme From a Summer Place"	**1960**	Bob Newhart, *Button Down Mind*
Henry Mancini, "Moon River"	**1961**	Judy Garland, *Judy at Carnegie Hall*
Tony Bennett, "I Left My Heart in San Francisco"	**1962**	Vaughn Meader, *The First Family*
Henry Mancini, "The Days of Wine and Roses"	**1963**	Barbra Streisand, *The Barbra Streisand Album*
Stan Getz, Astrud Gilberto, "The Girl From Ipanema"	**1964**	Stan Getz, João Gilberto, *Getz/Gilberto*
Herb Alpert, "A Taste of Honey"	**1965**	Frank Sinatra, *September of My Years*
Frank Sinatra, "Strangers in the Night"	**1966**	Frank Sinatra, *A Man and His Music*
5th Dimension, "Up, Up and Away"	**1967**	The Beatles, *Sgt. Pepper's Lonely Hearts Club Band*
Simon and Garfunkel, "Mrs. Robinson"	**1968**	Glen Campbell, *By the Time I Get to Phoenix*
5th Dimension, "Aquarius/Let the Sunshine In"	**1969**	Blood, Sweat & Tears, *Blood, Sweat & Tears*
Simon and Garfunkel, "Bridge Over Troubled Water"	**1970**	Simon and Garfunkel, *Bridge Over Troubled Water*
Carole King, "It's Too Late"	**1971**	Carole King, *Tapestry*
Roberta Flack, "The First Time Ever I Saw Your Face"	**1972**	George Harrison and friends, *The Concert for Bangla Desh*
Roberta Flack, "Killing Me Softly With His Song"	**1973**	Stevie Wonder, *Innervisions*
Olivia Newton-John, "I Honestly Love You"	**1974**	Stevie Wonder, *Fulfillingness' First Finale*
Captain & Tennille, "Love Will Keep Us Together"	**1975**	Paul Simon, *Still Crazy After All These Years*
George Benson, "This Masquerade"	**1976**	Stevie Wonder, *Songs in the Key of Life*
Eagles, "Hotel California"	**1977**	Fleetwood Mac, *Rumours*
Billy Joel, "Just the Way You Are"	**1978**	Bee Gees, *Saturday Night Fever*
The Doobie Brothers, "What a Fool Believes"	**1979**	Billy Joel, *52nd Street*
Christopher Cross, "Sailing"	**1980**	Christopher Cross, *Christopher Cross*
Kim Carnes, "Bette Davis Eyes"	**1981**	John Lennon, Yoko Ono, *Double Fantasy*
Toto, "Rosanna"	**1982**	Toto, *Toto IV*
Michael Jackson, "Beat It"	**1983**	Michael Jackson, *Thriller*
Tina Turner, "What's Love Got to Do With It"	**1984**	Lionel Richie, *Can't Slow Down*
USA for Africa, "We Are the World"	**1985**	Phil Collins, *No Jacket Required*
Steve Winwood, "Higher Love"	**1986**	Paul Simon, *Graceland*
Paul Simon, "Graceland"	**1987**	U2, *The Joshua Tree*
Bobby McFerrin, "Don't Worry, Be Happy"	**1988**	George Michael, *Faith*
Bette Midler, "Wind Beneath My Wings"	**1989**	Bonnie Raitt, *Nick of Time*
Phil Collins, "Another Day in Paradise"	**1990**	Quincy Jones, *Back on the Block*
Natalie Cole, with Nat "King" Cole, "Unforgettable"	**1991**	Natalie Cole, with Nat "King" Cole, *Unforgettable*
Eric Clapton, "Tears in Heaven"	**1992**	Eric Clapton, *Unplugged*
Whitney Houston, "I Will Always Love You"	**1993**	Whitney Houston, *The Bodyguard*
Sheryl Crow, "All I Wanna Do"	**1994**	Tony Bennett, *MTV Unplugged*
Seal, "Kiss From a Rose"	**1995**	Alanis Morissette, *Jagged Little Pill*
Eric Clapton, "Change the World"	**1996**	Celine Dion, *Falling Into You*
Shawn Colvin, "Sunny Came Home"	**1997**	Bob Dylan, *Time Out of Mind*
Celine Dion, "My Heart Will Go On"	**1998**	Lauryn Hill, *The Miseducation of Lauryn Hill*
Santana featuring Rob Thomas, "Smooth"	**1999**	Santana, *Supernatural*
U2, "Beautiful Day"	**2000**	Steely Dan, *Two Against Nature*
U2, "Walk On"	**2001**	Various Artists, *O Brother, Where Art Thou?*
Norah Jones, "Don't Know Why"	**2002**	Norah Jones, *Come Away With Me*
Coldplay, "Clocks"	**2003**	OutKast, *Speakerboxxx/The Love Below*
Ray Charles & Norah Jones, "Here We Go Again"	**2004**	Ray Charles & Various Artists, *Genius Loves Company*
Green Day, "Boulevard of Broken Dreams"	**2005**	U2, *How to Dismantle an Atomic Bomb*
Dixie Chicks, "Not Ready to Make Nice"	**2006**	Dixie Chicks, *Taking the Long Way*
Amy Winehouse, "Rehab"	**2007**	Herbie Hancock, *River: The Joni Letters*
Robert Plant & Alison Krauss, "Please Read the Letter"	**2008**	Robert Plant & Alison Krauss, *Raising Sand*
Kings Of Leon, "Use Somebody"	**2009**	Taylor Swift, *Fearless*

SCIENCE AND TECHNOLOGY

Science and Technology News 2010

The following were some of the more newsworthy developments in science and technology in the past year. (See also Astronomy, Computers and Telecommunications, and the Chronology of the Year's Events.)

A New Member of the Human Family

The skeleton of an early human-like primate is leading scientists to revise conventional wisdom about human evolution. A study published in *Science* on Oct. 2, 2009, investigated the skeleton of Ardi, an *Ardipithecus ramidus* who lived 4.4 million years ago (MYA) in what were then verdant African forests. She is the earliest skeleton yet studied in detail on the human branch of the primate tree, which split off from other apes about 6 MYA.

Before discovering Ardi, scientists had conjectured that our early ancestors looked and acted a bit like modern chimpanzees. But Ardi's skeleton suggests that, in many ways, she was close to humans. She could probably walk upright on four human-like little toes and a chimp-like thumb toe. And with her free hands, she could catch prey, root out food, and even use tools. But, like chimps, Ardi had long, flexible fingers designed for climbing trees—even though once she got into them, she would have moved around on the palms of her hands. This was a surprise to evolutionary biologists, for a common theory prior to her discovery was that humans evolved to walk upright upon leaving the forests for open savannas. Yet Ardi's skeleton would indicate that humans' ancestors began to walk even while still spending time in trees.

Dr. Frankenstein, I Presume?

Scientists have created a DNA strand that is able to govern the life and reproduction of a single-celled organism, according to an article published in the May 21, 2010, issue of *Science*—an achievement being billed as the first example of synthetic life. A cell's genome—the arrangement of its DNA—governs many of its life processes. For this project, J. Craig Venter's team used a computer to create a genome based on that of *Mycoplasm mycoides*, a single-celled bacteria. To *Mycoplasm*'s genome, they added their own watermark by weaving in names, e-mail addresses, and even a literary quotation. Researchers used a machine that constructs DNA strands to make this computer-generated genome physical, and they injected it into the cell body of a different kind of bacterium. True to the teams' predictions, this new bacterial cell acted and replicated like *Mycoplasm mycoides*, marking the first time that scientists had built a working DNA sequence.

Besides showcasing the powers of cutting-edge biotechnology, this project may have practical implications for health and environmental technology, researchers say. In the future, it may be possible to design and build genomes that grow vaccines more economically or create new fuel sources.

Meet the Parents

Somewhere in a cave in the Middle East, between 80 and 45 thousand years ago (KYA), a human and a Neanderthal got together and had a baby. At least, that's what a comparison of Neanderthal and human genomes suggests.

Neanderthals and humans split from a common ancestor about 400 KYA. Neanderthals evolved outside of Africa, while humans remained in Africa, leaving later and eventually supplanting Neanderthals. Researchers have long debated whether they interbred, and even if they could interbreed. A new study, published in the May 7, 2010, issue of *Science*, offers genetic evidence that they did. Researchers led by Svante Pääbo compared areas of human and Neanderthal genomes that have changed relatively recently. In particular, they investigated whether any of the genetic mutations that exist in non-African humans but not in Africans might also be found in Neanderthals—if they were, it would indicate that the two hominids swapped genes after humans left Africa. And indeed, results showed they had. Researchers identified 12 parts of the genome that differed between non-Africans and Africans; Neanderthal and human genomes matched in 10 of these 12 regions.

A Marginalized Organ Gets Its Day

You've probably learned that the appendix is a vestigial organ, one that served a purpose in our evolutionary past but is now useless—and given that around 250,000 Americans get their appendix taken out every year without any obvious consequences, this would seem right.

But over the years, researchers have found indications that the appendix does *something*. It contains lymphatic tissue, suggesting a relation to the immune system, and it contains bacteria that aid digestion. Now, in a study published in the Oct. 2009 *Journal of Evolutionary Biology*, evolutionary biologists report learning that the appendix evolved at least twice in mammals—a good sign that it's there for a reason. Many mammals have appendices, the researchers learned, including lemurs, rabbits, and possums. The organ probably first emerged about 90 million years ago in ancestors of primates and rodents, and then evolved a second time in the ancestors of marsupials. The researchers also found that bullfrogs, although they don't have an appendix, have a place in the intestine that stores bacteria as well.

Why would it be useful for the digestive system to store bacteria? Diarrhea can be common in unclean environments (such as most of nature), and it leads the body to expunge all the intestine's bacteria, good and bad. The appendix may offer a reservoir of bacteria to replenish the intestine. Ironically, our own hypersanitized society may undercut the appendix's function—the bacteria stored there, having no place to go, can turn infectious and result in higher rates of appendicitis.

Dinosaurs of a Feather, in Living Color

What did dinosaurs look like? Two papers released in 2010 offer color portraits of a few feathered dinosaurs. In the popular imagination, dinosaurs don't have feathers. But looked at evolutionarily, it isn't so surprising that some did—paleontologists and evolutionary biologists theorize that birds evolved from dinosaurs. The first clue that feathers may have appeared somewhere on the evolutionary path from dinosaur to bird came in the 1990s, when scientists discovered fossils of primitive birds and birdlike dinosaurs that had impressions of feathers and bristles that were possibly proto-feathers. In 2008, Jakob Vinther and colleagues realized that microscopic particles in the feather impressions were residues of pigments that gave feathers color, offering a technique for learning the color of dinosaurs. Two teams, one led by Vinther and the other by Mike Benton, took advantage of this. Benton's team, publishing in *Nature* on Jan. 27, 2010, offered portraits of two animals. *Sinosauropteryx*, a small dinosaur, had alternating white and reddish-brown rings of proto-feathers along its tail and a crest of reddish-brown proto-feathers on its head. An early bird, *Confuciusornis*, showed off white, black, and reddish-brown feathers. Benton's team, for its part, focused on one animal, the *Anchiornis*, a chicken-sized dinosaur. *Anchiornis* wasn't able to fly, suggesting that it used its plumage either in mating rituals or to scare off predators, but it was covered in gray feathers, with limbs of black-and-white feathers and a reddish-brown plume—a bit like a modern woodpecker.

What's in the Moon

There may be more water on the lunar surface than we had realized, according to data from two unmanned missions to the moon, one by a probe sent by India's space agency and the other by NASA. Both analyzed data using spectrometry—a technique that identifies the molecular composition of matter by analyzing the spectrum of light reflected—and published the results in papers in the Sept. 24, 2009, issue of *Science*. The Indian mission's analysis of the spectrum of reflected light produced startling results: contrary to previous analyses, water is present across the moon, although how much water there is and what form it takes is unclear. NASA's mission focused not on the surface but on deep, cold craters in the moon. In one of these they found quite a bit of water—100 kg (around 220 pounds). NASA scientists gained this information in dramatic fashion, by crashing a used-up rocket into a crater and analyzing the composition of the resulting plume of debris. The presence of lunar water, scientists hope, will allow them to better understand the moon's geologic history and, someday, may make it easier to establish a station on the moon.

Science Glossary

This glossary covers some concepts that come up frequently in the news, in biology, chemistry, geology, and physics. See also Astronomy, Computers and Telecommunications, Environment, Health, Meteorology, Weights and Measures.

Biology

Note: For classification terms such as *kingdom*, *phylum*, etc., see p. 298.

Amino acid: one of about 20 similar small molecules that are the building blocks of proteins.

Antibiotic: a substance produced by or derived from a bacterium, fungus, or other organism that battles bacterial infections and diseases, by killing bacteria or halting their growth.

Autoimmunity: a condition in which an individual's immune system reacts against his or her own tissues; leads to diseases such as lupus, diabetes, inflammatory bowel disease, and rheumatoid arthritis.

Bacteriophage or phage: a virus that infects, or lyses, bacteria.

Bacterium (plural, bacteria): one of a large, varied class of microscopic and simple, single-celled organisms; bacteria live almost everywhere—some forms cause disease, while others are useful in digestion and other natural processes.

Biodiversity: richness of variety of life-forms—both plant and animal—in a given environment.

Cell: the smallest unit of life capable of living independently, or with other cells; usually bounded by a membrane. May include a nucleus and other specialized parts.

Cholesterol: a fatty substance in animal tissues. It is produced by the liver in humans; is found in foods such as butter, eggs, and meat; and is an essential body constituent.

Chromosome: one of the rod-like structures in cell nuclei that carry genetic material (DNA).

Cloning: the process of copying a particular piece of DNA to allow it to be sequenced, studied, or used in some other way; can also refer to producing a genetic copy of an organism.

DNA (deoxyribonucleic acid): the chemical substance that carries genetic information, which determines the form and functioning of all living things.

Ecosystem: an interdependent community of living organisms and their climatic and geographical habitat.

Enzyme: a protein that promotes a particular chemical reaction in the body.

Estrogen: one of a group of hormones that promote development of female secondary sex characteristics and the growth and health of the female reproductive system; males also produce small amounts of estrogen.

Eukaryote: single- or multi-celled organisms whose cells have distinct nuclei.

Evolution: the process of gradual change that may occur as a species adapts to its environment; natural selection is the process by which evolution occurs.

Gene: a portion of a DNA molecule that provides the blueprint for the assembly of a protein.

Gene pool: the collection and total diversity of genes in an interbreeding population.

Gene therapy: a treatment in which scientists try to implant functioning genes into a person's cells so the genes can produce proteins that the person lacks or that help the person fight disease.

Genetic sequencing: the process of determining the order of subunits within a gene or the order of all an organism's genes.

Genome: the complete set of an organism's genetic material.

Hormone: a substance secreted in one part of an organism that regulates the functioning of other tissues or organs.

Meiosis: the process of cell division that results in gametes (sperm or egg cells), all of which contain half the number of chromosomes as their precursor.

Metabolism: the sum total of the body's chemical processes providing energy for vital functions and enabling new material to be synthesized.

Mitosis: the process by which a cell divides its nucleus and other cell materials into two duplicate daughter cells with the same DNA.

Neuron: a nerve cell, of the type found in the brain or spinal cord, that sends electrical and chemical messages to other cells.

Nucleus (plural, nuclei): the center of an atom; or the portion of a cell that contains genetic material and regulates growth and metabolism.

Organism: a living entity, capable of growth, metabolism, and usually reproduction.

Phenotype: the observable properties and characteristics of an organism arising at least in part from its genetic makeup.

Pheromone: a chemical secreted by an animal to influence the behavior of other members of its species.

Placebo effect: a phenomenon in which patients show improvements even though they have taken a medically inactive substance, called a placebo.

Prokaryote: a single-celled organism that does not have a distinct nucleus, such as bacteria and blue-green algae.

Protein: a complex molecule made up of one or more chains of amino acids; essential to the structure and function of all cells.

RNA (ribonucleic acid): a complex molecule similar to the genetic material DNA but usually single-stranded; several forms of RNA translate the genetic code of DNA and use that code to assemble proteins for structural and biological functions in the body.

Species: a population of organisms that breed with each other in nature and produce fertile offspring; other definitions of species exist to accommodate the diversity of life on Earth.

Stem cell: a cell that can give rise to other types of cells; for instance, bone marrow stem cells divide and produce different types of blood cells.

Steroid: type of hormone that freely enters cells (other hormones bind to cell surfaces). Different varieties can suppress immune response or influence stress reaction, blood pressure, or sexual development; includes testosterone- and estrogen-related compounds.

Testosterone: a hormone that stimulates the development and maintenance of male sexual characteristics and the production of sperm; women also produce small amounts of testosterone.

Virus: a microscopic, often disease-causing, organism made of genetic material surrounded by a protein shell; can only reproduce inside a living cell.

Chemistry

Acid: a class of compound that contrasts with bases. Acids taste sour, turn litmus red/pink, and often produce hydrogen gas in contact with some metals. Acids donate protons (hydrogen atoms minus the electron) in chemical reactions.

Base: a substance that yields hydroxyl ions (OH-) when dissolved in water; any of a class of compounds whose aqueous solutions taste bitter, feel slippery, turn litmus blue, and react with acids to form salts; also known as **alkaline**.

Carbon fiber: an extremely strong, thin fiber made by pyrolyzing (decomposing by heat) synthetic fibers, such as rayon, until charred; used to make high-strength composites.

Chlorofluorocarbon (CFC): one of a group of industrial chemicals that contain chlorine, fluorine, and carbon and have been found to damage Earth's ozone layer.

Element: a substance that cannot be chemically decomposed into simpler substances; the atoms of an element all have the same number of protons and electrons.

Isotope: an atom of a chemical element with the same number of protons in its nucleus as other atoms of that element, but with a different number of neutrons.

Molecule: the basic unit of a chemical compound, composed of two or more atoms bound together.

Noble gases or inert gases: a group of gases including helium, neon, argon, krypton, xenon, and radon that are not reactive except in rare and limited instances.

Osmosis: the transfer of a fluid across a semipermeable membrane, usually from an area of higher concentration to one of lower concentration.

Phase: any of the possible states of matter—solid, liquid, gas, or plasma—that change according to temperature and pressure.

Polymer: a huge molecule containing hundreds or thousands of smaller molecules arranged in repeating units.

Salt: a neutral compound produced by the reaction of an acid and a base.

Geology

Fault, tectonic: a crack or break in Earth's crust, often due to the slippage of tectonic plates past or over one another; usually geologically unstable.

Igneous: a type of rock formed by solidification from a molten state, especially from molten magma.

Magma: hot liquid rock material under Earth's crust, from which igneous rock is formed by cooling.

Metamorphic: in geology, the name given to sedimentary rocks or minerals that have recrystallized under the influence of heat and pressure since their original deposition.

Pangaea: a single supercontinent that scientists believe broke apart about 170 mil years ago to form the current continents.

Plate tectonics: theory that Earth's crust is made up of many separate rigid plates of rock that float on top of hot semi-liquid rock.

Sedimentary: a type of rock formed by the buildup of material at the bottoms of bodies of water.

Physics

Absolute zero: the theoretical temperature at which all motion within a molecule stops, corresponding to –273.15° C (–459.67° F).

Antimatter: matter that consists of antiparticles, such as antiprotons, that have an opposite charge from normal particles; when matter meets antimatter, both are destroyed, and their combined mass is converted to energy. Antimatter is created in certain radioactive decay processes but appears to be present in only small amounts in the universe.

Atom: the basic unit of a chemical element.

Atomic mass: the total mass of an atom of a given element; atoms of the same element with different atomic masses (different numbers of neutrons, not protons) are called **isotopes**.

Atomic number: the number of protons in an atom of a given element of the periodic table; the characteristic that sets atoms of different elements apart.

Axion: a hypothetical subatomic particle with low mass and energy that is thought to exist because of the properties of the strong nuclear force.

Bose-Einstein condensate (BEC): a "super-atom" comprising thousands of atoms super-cooled to within a few hundred millionths of a degree of absolute zero and thus condensed into the lowest energy state; atoms bound in the BEC behave synchronously, giving the BEC wavelike properties.

Boson: force-carrying particles including photons, gluons, and the W and Z particles; one of the two primary categories of particles in the Standard Model, the other being fermions.

Dark energy: a mysterious, undefined energy leading to a repulsive force pervading all of space-time; proposed by cosmologists as counteracting gravity and accelerating the expansion of the universe; predicted to make up 65% of the universe's composition.

Dark matter: hypothetical, invisible matter that some scientists believe makes up 90% of the matter in the universe; its existence was proposed to account for otherwise inexplicable gravitational forces observed in space.

Doppler effect: a change in the frequency of sound, light, or radio waves caused by the motion of the source emitting the waves or the motion of the person or instrument perceiving the waves.

Electron: negatively charged particle that is the least massive electrically charged fundamental particle; the most common charged lepton in the Standard Model.

Energy: capacity to perform work. Energy can take various forms, such as potential energy, kinetic energy, and chemical energy.

Entropy: a measure of disorder in a system.

Fermion: any one of a number of matter particles including electrons, protons, neutrons, and quarks; one of the two primary categories of particles in the Standard Model, the other being bosons.

Field: the effects of forces (gravitational, electric, etc.) are visualized and described mathematically by physicists in terms of fields, which show the strength and direction of a force at a given position.

Fission: a nuclear reaction that occurs when the nuclei of large, unstable atoms break apart, releasing large amounts of energy.

Fluorescence: luminescence that is caused by the absorption of radiation at one wavelength followed by an immediate re-radiation, usually at a different wavelength, that stops almost immediately when the radiation stops.

Force: In classical physics, a force is something that causes acceleration in a body and can be thought of as a push or pull.

Fusion: a nuclear reaction occurring when atomic nuclei collide at high temperatures and combine to form one heavier atomic nucleus, releasing enormous energy in the process.

Gravity: an attractive force between any 2 objects or particles, proportional to the mass (or energy) of the objects; strength of the force decreases with greater distance; the only fundamental force still unaccounted for by the Standard Model.

Half-life: the time it takes for half of a given amount of a radioactive element to decay.

Hertz (Hz): a measure of frequency, or how many times a given event occurs per second; applied to sound waves, electrical current, microchip clock speeds.

Laser: light consisting of a cascade of photons all having the same wavelength; stands for Light Amplification by Stimulated Emission of Radiation.

Light-emitting diode (LED): a semiconductor that emits light when an electrical current is passed through it. The color of the light depends on the material used in making the diode.

Neutrino: a tiny fundamental particle with no electrical charge and very small mass that moves very quickly through the universe; comes in three varieties, or flavors, called electron, muon, and tau.

Neutron: a neutral particle found in the nuclei of atoms.

Particle accelerator: a large machine with a long tunnel in which atoms smash into each other at high speeds; physicists use these machines to study subatomic particles.

Phosphorescence: luminescence that is caused by the absorption of radiation at one wavelength followed by a delayed re-radiation, usually at a different wavelength, that continues for at least a hundredth of a second after the radiation stops.

Photon: the elementary unit, or quantum, of light or electromagnetic radiation having no mass or electrical charge; one of the fundamental force-carrying particles, or bosons, described by the Standard Model.

Plasma: a high-energy state of matter different from solid, liquid, or gas in which atomic nuclei and the electrons orbiting them separate from each other.

Proton: a positively charged subatomic particle found in the nuclei of atoms.

Quantum: a natural unit of some physically measurable property, such as energy or electrical charge.

Quark: a fermion and a fundamental matter particle that makes up neutrons and protons, forming atomic nuclei; there are 6 different "flavors" of quarks grouped in pairs; up and down, charm and strange, top and bottom.

Radiation: energy emitted as rays or particles; radiation includes heat, light, ultraviolet rays, gamma rays, X-rays, cosmic rays, alpha particles, beta particles, and the protons, neutrons, and electrons of radioactive atoms.

Relativity, general theory of: a theory of space-time proposed by Albert Einstein in 1915; gravitational and other forces are transmitted through the effects of the curvature of space-time.

Relativity, special theory of: Einstein's theory of space and time: all laws of physics are valid in all uniformly moving frames of reference, and the speed of light in a vacuum is always the same, so long as the source and the observer are moving uniformly (not accelerating).

Standard Model: prevailing theory of the interaction of subatomic particles; matter particles are fermions: either leptons or quarks; force-carrying particles are bosons: either gluons, W or Z bosons, or photons; successfully explains three of the four elementary forces acting on particles (strong, weak, electromagnetic) but thus far has not incorporated gravity.

String theory: a theory that seeks to unify quantum mechanics and general relativity, positing that the basic constituents of matter can best be understood not as point objects but as tiny closed loops, or "strings."

Subatomic particle: one of the small particles, such as electrons, neutrons, and protons, which make up an atom.

Superconductivity: the property of certain materials, usually metals and chemically complex ceramics, to conduct electricity without resistance, generally at very cold temperatures.

Thermodynamics: the branch of physics that describes how energy, heat, and temperature flow in physical systems.

Ultraviolet radiation: a form of light, invisible to the human eye, that has a shorter wavelength and greater energy than visible light but a longer wavelength and less energy than X-rays.

Virtual particle: subatomic particles that rapidly pop into and out of existence and can exert real forces; usually occur in particle-antiparticle pairs and are rapidly annihilated.

Mohs Scale of Hardness

Hardness is the ability of a solid substance to resist abrasion or deformation on the surface. Soft minerals scratch easier than hard ones. For example, a diamond will scratch graphite because the graphite is softer. In 1812, German mineralogist Frederich Mohs (1773-1839) created the arbitrary scale shown below to measure relative hardness using ten minerals that were readily available at that time. The numbers in the Mohs scale are arranged in order of increasing hardness. A mineral's hardness is obtained by determining which mineral in the Mohs scale will scratch the specimen.

Mohs Scale

1. Talc
2. Gypsum
3. Calcite
4. Fluorite
5. Apatite
6. Orthoclase feldspar
7. Quartz
8. Topaz
9. Corundum
10. Diamond

Selected items and their relative hardness

2.5	Fingernails	5.5	Knife blade
2.5-3	Gold, silver	6-7	Glass
3	Copper penny	6.5	Iron pyrite
4-4.5	Platinum	7+	Hardened steel file
4-5	Iron		

Chemical Elements, Atomic Numbers, Year Discovered

See Periodic Table of the Elements on page 290 for atomic weights.

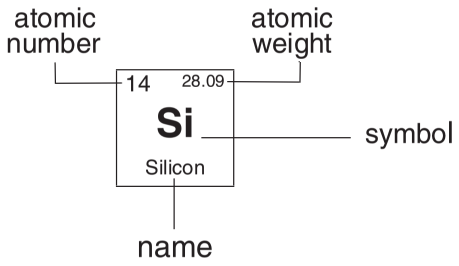
Element	Symbol	Atomic number	Year discov.
Actinium	Ac	89	1899
Aluminum	Al	13	1825
Americium	Am	95	1944
Antimony	Sb	51	1450
Argon	Ar	18	1894
Arsenic	As	33	13th cent.
Astatine	At	85	1940
Barium	Ba	56	1808
Berkelium	Bk	97	1949
Beryllium	Be	4	1798
Bismuth	Bi	83	15th cent.
Bohrium	Bh	107	1981
Boron	B	5	1808
Bromine	Br	35	1826
Cadmium	Cd	48	1817
Calcium	Ca	20	1808
Californium	Cf	98	1950
Carbon	C	6	BCE
Cerium	Ce	58	1803
Cesium	Cs	55	1860
Chlorine	Cl	17	1774
Chromium	Cr	24	1797
Cobalt	Co	27	1735
Copernicium	Cn	112	1996
Copper	Cu	29	BCE
Curium	Cm	96	1944
Darmstadtium	Ds	110	1995
Dubnium (Hahnium)[1]	Db (Ha)	105	1970
Dysprosium	Dy	66	1886
Einsteinium	Es	99	1952
Erbium	Er	68	1843
Europium	Eu	63	1901
Fermium	Fm	100	1953
Fluorine	F	9	1771
Francium	Fr	87	1939
Gadolinium	Gd	64	1886
Gallium	Ga	31	1875
Germanium	Ge	32	1886
Gold	Au	79	BCE
Hafnium	Hf	72	1923
Hassium	Hs	108	1984
Helium	He	2	1868
Holmium	Ho	67	1878
Hydrogen	H	1	1766
Indium	In	49	1863
Iodine	I	53	1811
Iridium	Ir	77	1804
Iron	Fe	26	BCE
Krypton	Kr	36	1898
Lanthanum	La	57	1839
Lawrencium	Lr	103	1961
Lead	Pb	82	BCE
Lithium	Li	3	1817
Lutetium	Lu	71	1907
Magnesium	Mg	12	1829
Manganese	Mn	25	1774
Meitnerium	Mt	109	1982
Mendelevium	Md	101	1955
Mercury	Hg	80	BCE
Molybdenum	Mo	42	1782
Neodymium	Nd	60	1885
Neon	Ne	10	1898
Neptunium	Np	93	1940
Nickel	Ni	28	1751
Niobium[2]	Nb	41	1801
Nitrogen	N	7	1772
Nobelium	No	102	1958
Osmium	Os	76	1804
Oxygen	O	8	1774
Palladium	Pd	46	1803
Phosphorus	P	15	1669
Platinum	Pt	78	1735
Plutonium	Pu	94	1941
Polonium	Po	84	1898
Potassium	K	19	1807
Praseodymium	Pr	59	1885
Promethium	Pm	61	1945
Protactinium	Pa	91	1917
Radium	Ra	88	1898
Radon	Rn	86	1900
Rhenium	Re	75	1925
Rhodium	Rh	45	1803
Roentgenium	Rg	111	1995
Rubidium	Rb	37	1861
Ruthenium	Ru	44	1845
Rutherfordium	Rf	104	1969
Samarium	Sm	62	1879
Scandium	Sc	21	1879
Seaborgium	Sg	106	1974
Selenium	Se	34	1817
Silicon	Si	14	1823
Silver	Ag	47	BCE
Sodium	Na	11	1807
Strontium	Sr	38	1790
Sulfur	S	16	BCE
Tantalum	Ta	73	1802
Technetium	Tc	43	1937
Tellurium	Te	52	1782
Terbium	Tb	65	1843
Thallium	Tl	81	1861
Thorium	Th	90	1828
Thulium	Tm	69	1879
Tin	Sn	50	BCE
Titanium	Ti	22	1791
Tungsten (Wolfram)	W	74	1783
*Ununhexium	Uuh	116	2000
*Ununoctium	Uuo	118	2006
*Ununpentium	Uup	115	2004
*Ununquadium	Uuq	114	1999
*Ununseptium	Uus	117	2010
*Ununtrium	Uut	113	2004
Uranium	U	92	1789
Vanadium	V	23	1830
Xenon	Xe	54	1898
Ytterbium	Yb	70	1878
Yttrium	Y	39	1794
Zinc	Zn	30	BCE
Zirconium	Zr	40	1789

Note: 118 elements are listed here; only 112 have been independently confirmed. The most recent of these, element 112 (with a mass number of 270), was reported by S. Hoffman et al. in 1996 and was approved by the International Union of Pure and Applied Chemistry (IUPAC) in June 2009. The discoverers proposed the name Copernicium with a symbol of Cn, in honor of the astronomer Nicolaus Copernicus; the name was made official on Feb. 19, 2010, the 537th anniversary of Copernicus's birth. (*) Indicates element whose existence has been reported or hypothesized, but not yet confirmed. Between 1999 and 2006, observation of many isotopes of elements 113-118 have been reported in refereed journals. These reports all await confirmation and are shown in italics in the periodic table. (1) The name Dubnium (Db) has been approved by IUPAC for element 105, but the name Hahnium (Ha) is used in most of the scientific literature before 1998 and is still sometimes used in the U.S. (2) Formerly Columbium.

Periodic Table of the Elements

Source: Lawrence Berkeley National Laboratory; International Union of Pure and Applied Chemistry (IUPAC)

Parentheses indicate undiscovered elements.



alkali metals	alkaline earth metals													nonmetals					noble gases
1 1.01 **H** Hydrogen																			2 4.003 **He** Helium
3 6.94 **Li** Lithium	4 9.01 **Be** Beryllium													5 10.81 **B** Boron	6 12.01 **C** Carbon	7 14.01 **N** Nitrogen	8 15.999 **O** Oxygen	9 18.998 **F** Fluorine	10 20.18 **Ne** Neon
11 22.99 **Na** Sodium	12 24.31 **Mg** Magnesium	transitional metals												13 26.98 **Al** Aluminum	14 28.09 **Si** Silicon	15 30.97 **P** Phosphorus	16 32.07 **S** Sulfur	17 35.45 **Cl** Chlorine	18 39.95 **Ar** Argon
19 39.10 **K** Potassium	20 40.08 **Ca** Calcium	21 44.96 **Sc** Scandium	22 47.90 **Ti** Titanium	23 50.94 **V** Vanadium	24 51.996 **Cr** Chromium	25 54.94 **Mn** Manganese	26 55.85 **Fe** Iron	27 58.93 **Co** Cobalt	28 58.70 **Ni** Nickel	29 63.55 **Cu** Copper	30 65.38 **Zn** Zinc	31 69.72 **Ga** Gallium	32 72.64 **Ge** Germanium	33 74.92 **As** Arsenic	34 78.96 **Se** Selenium	35 79.90 **Br** Bromine	36 83.80 **Kr** Krypton
37 85.47 **Rb** Rubidium	38 87.62 **Sr** Strontium	39 88.91 **Y** Yttrium	40 91.22 **Zr** Zirconium	41 92.91 **Nb** Niobium	42 95.96 **Mo** Molybdenum	43 [98]* **Tc** Technetium	44 101.07 **Ru** Ruthenium	45 102.91 **Rh** Rhodium	46 106.42 **Pd** Palladium	47 107.87 **Ag** Silver	48 112.41 **Cd** Cadmium	49 114.82 **In** Indium	50 118.71 **Sn** Tin	51 121.76 **Sb** Antimony	52 127.60 **Te** Tellurium	53 126.90 **I** Iodine	54 131.30 **Xe** Xenon
55 132.91 **Cs** Cesium	56 137.33 **Ba** Barium	57 138.91 **La** Lanthanum	72 178.49 **Hf** Hafnium	73 180.95 **Ta** Tantalum	74 183.84 **W** Tungsten	75 186.21 **Re** Rhenium	76 190.23 **Os** Osmium	77 192.22 **Ir** Iridium	78 195.08 **Pt** Platinum	79 196.97 **Au** Gold	80 200.59 **Hg** Mercury	81 204.38 **Tl** Thallium	82 207.2 **Pb** Lead	83 208.98 **Bi** Bismuth	84 [209]* **Po** Polonium	85 [210]* **At** Astatine	86 [222]* **Rn** Radon
87 223 **Fr** Francium	88 [226]* **Ra** Radium	89 [227]* **Ac** Actinium	104 [265]* **Rf** Rutherfordium	105 [268]* **Db** Dubnium	106 [271]* **Sg** Seaborgium	107 [272]* **Bh** Bohrium	108 [270]* **Hs** Hassium	109 [276]* **Mt** Meitnerium	110 [281]* **Ds** Darmstadtium	111 [280]* **Rg** Roentgenium	112 [285]* **Cn** Copernicium	[284]* ***113***	[289]* ***114***	[288]* ***115***	[293]* ***116***	(117)	[294]* ***118***

other metals

Lanthanide series	58 140.12 **Ce** Cerium	59 140.91 **Pr** Praseodymium	60 144.24 **Nd** Neodymium	61 [145]* **Pm** Promethium	62 150.36 **Sm** Samarium	63 151.96 **Eu** Europium	64 157.25 **Gd** Gadolinium	65 158.93 **Tb** Terbium	66 162.50 **Dy** Dysprosium	67 164.93 **Ho** Holmium	68 167.26 **Er** Erbium	69 168.93 **Tm** Thulium	70 173.05 **Yb** Ytterbium	71 174.97 **Lu** Lutetium
Actinide series	90 232.04 **Th** Thorium	91 231.04 **Pa** Protactinium	92 238.03 **U** Uranium	93 [237]* **Np** Neptunium	94 [244]* **Pu** Plutonium	95 [243]* **Am** Americium	96 [247]* **Cm** Curium	97 [247]* **Bk** Berkelium	98 [251]* **Cf** Californium	99 [252]* **Es** Einsteinium	100 [257]* **Fm** Fermium	101 [258]* **Md** Mendelevium	102 [259]* **No** Nobelium	103 [262]* **Lr** Lawrencium

*Element has no stable nuclides. The value enclosed in brackets, e.g. [209], indicates the mass number of the longest-lived isotope of the element. However three such elements (Th, Pa, and U) do have a characteristic terrestrial isotopic composition, and for these an atomic weight is tabulated.

Basic Laws of Physics

Isaac Newton's Laws of Motion

1. An object in motion moves at a constant velocity in a straight line unless acted upon by a force. Likewise, an object at rest will stay at rest—a property known as inertia.

2. The acceleration of an object is proportional to the force acting on it and inversely proportional to the mass of an object.

Force (F) equals mass (m) times acceleration (a):

$$F = ma$$

3. For every action, there is an equal and opposite reaction. For example, a force of 1 ton pushing down on an object requires an equal force pushing upward on the object in order for it to stay in place.

Law of Gravity

In common usage, gravity refers to the gravitational force between planets and objects on or near them. But in scientific parlance, gravitation represents one of four basic forces controlling the interactions of matter. The others are strong and weak nuclear forces and electromagnetic force. The gravitational force (F) between objects is proportional to the product of their masses (m_1 and m_2) and inversely proportional to the square of the distance (d) between them. G represents the gravitational constant in Newton's law of gravity, a fixed ratio of approximately 6.67390×10^{-11} newton m^2/kg^2.

The basic law of gravity is:

$$F = G\frac{m_1\ m_2}{d_2}$$

Earth's gravitational force is considered to pull objects toward it at a constant acceleration of $g = 9.8$ m/s^2.This allows calculation of the velocity (v) of an object with an initial velocity of v_0 in free fall at a given point in time (t), and calculation of the distance (d) of an object from Earth at any given time, with any given initial velocity (v_0) and any known initial height (a) via the following equations:

$$v = v_0 - gt$$

$$d = -{}^1\!/_2 g(t^2) + v_0 t + a$$

Assuming that height is measured in feet and speeds in feet per second, the maximum height (H) reached by an object with a positive v_0 is expressed as:

$$H = a + \frac{v_0{}^2}{64}$$

Several physical aspects of the Earth slightly distort its gravitational force. Gravity is lessened by the centrifugal force of the Earth's rotation. At the poles, where centrifugal force is absent, acceleration due to gravity is greater.

Also, the further an object is from Earth's center, the smaller the gravitational force. Gravity is weaker on a mountaintop than at sea level.

Conservation Laws

In physics, laws of conservation state that in a closed system, where neither mass nor energy is added or subtracted, certain measurable quantities remain constant.

Conservation of Mass: Mass is neither created nor destroyed within a closed system except when converted to energy.

Conservation of Momentum: All moving objects have momentum, and in a closed system, total momentum is always conserved. Linear momentum is the product of the mass of an object and its velocity. In the following equation, M and V represent the initial total mass and velocity of objects within a closed system. After a collision between those objects, the mass and velocity of individual objects may change (for example, one object could break into smaller pieces, each traveling at a different velocity) but the product of the total mass and velocity in the system after the collision (mv) will remain the same.

$$MV = mv$$

Any object moving in a circle has another kind of momentum—angular momentum. This is because circular motion requires acceleration toward the center of the circle. The amount of acceleration depends on the speed of the object and the square of the radius of the circle. (Angular momentum is the product of this speed, the mass of the object and the square of the radius.)

Conservation of Energy: The total amount of energy in a closed system will not change except when converted to mass.

Conservation of Mass-Energy: Einstein's special theory of relativity states that mass and energy are related. Because they can be converted into one another, mass and energy alone cannot be conserved. But the total amount of mass and energy together must be conserved. This is reflected in the following equation where m is mass, E is energy, and c is the speed of light in a vacuum (which is constant):

$$E = mc^2$$

Relativistic mass can describe how mass increases with velocity. The following equation—where m is the mass of a moving object, m_0 is the object's mass when not moving, v is its velocity in relation to a stationary observer, and c is the speed of light—shows the relationship:

$$m = \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}}$$

The theory that no object can travel faster than the speed of light is based in this equation. As an object approaches c, so much energy is converted to mass that it no longer accelerates.

Laws of Thermodynamics

1. Heat is a form of energy. Within a closed system energy must be conserved except in nuclear reactions or other extreme conditions. It is neither created nor destroyed.

2. Within a self-sustaining system, heat can never go from an area of low temperature to an area of high temperature, for this would require added energy. Without added energy, disorder, or entropy, can only increase.

3. Absolute zero cannot be attained by any procedure in a finite number of steps. Although it can be approached asymptotically, it can never be reached.

Laws of Current Electricity

Electric current generally represents the flow of electrons through a conductor. The rate at which electrons flow can be measured in amperes, defined as the number of electrons (measured in a unit called the coulomb, equal to about 6.24 quintillion or 6.24×10^{18} electrons) moving past a particular point every second. One ampere is equal to 1 coulomb of charge passing each second. Like water, electrons tend to move from areas of high pressure to low pressure. The difference between these two "pressures" is known as potential difference and is measured in volts.

Certain substances, such as copper and carbon, allow electric currents to pass more readily than others—that is, they have greater conductivity. Resistance to conductivity is measured in ohms.

Ohm's Law: Electric current is directly proportional to the potential difference and inversely proportional to the total resistance of the circuit. I is electric current (measured in amperes), V is the potential difference (measured in volts), and R is resistance (measured in ohms):

$$I = \frac{V}{R}$$

Law of Electric Power: Electric power (P), measured in watts, represents the rate at which electricity is converted into some other form of energy (such as light, in the case of a light bulb). P is the product of current and potential difference:

$$P = IV$$

Two Basic Laws of Quantum Physics

1. Heisenberg's uncertainty principle: Certain pairs of observable quantities like energy and time or position and momentum cannot be measured with complete accuracy simultaneously. Also known as the indeterminacy principle.

2. Pauli's exclusion principle: Two electrons in an atom cannot simultaneously occupy the same quantum or energy state. This has since been shown to be true for many subatomic particles.

Breaking the Sound Barrier; Speed of Sound

The prefix **Mach** is used to describe supersonic speed. It was named for Ernst Mach (1838-1916), a Czech-born Austrian physicist. Mach may be defined as the ratio of the velocity of an object to the velocity of sound in a particular medium. A plane moving at the speed of sound moves at Mach 1. At twice the speed of sound, it moves at Mach 2.

When a plane passes the sound barrier—flying faster than sound travels—listeners in the area hear thunderclaps, although the pilot of the plane does not.

Sound is produced by vibrations of an object and is transmitted by the alternating increase and decrease in pressure radiating outward through a material medium of molecules, like waves spreading out on a pond after a rock has been tossed in.

The **frequency of sound** is determined by the number of times the vibrating waves undulate per second and is measured in cycles per second. The slower the cycle of waves, the lower the frequency. As the frequency increases, the sound becomes higher in pitch. The human ear is sensitive to frequencies between 20 and 20,000 vibrations per second, although this range varies among individuals.

Intensity, or loudness, is the strength of the pressure of these radiating waves and is measured in decibels. (See Weights and Measures.)

The **speed of sound** is generally defined as 1,088 feet per second at sea level at 32° F. It varies in other temperatures and media. Sound travels faster in water than in air and even faster in iron and steel.

Light; Colors of the Spectrum

Light, a form of electromagnetic radiation similar to radiant heat, radio waves, and X-rays, is emitted from a source in straight lines and spreads out over larger areas as it travels; light per unit area diminishes in proportion to the square of the distance.

The English mathematician and physicist Sir Isaac Newton (1642-1727) described light as an **emission of particles**; the Dutch astronomer, mathematician, and physicist Christiaan Huygens (1629-95) developed the theory that light travels in a **wave motion**. It is now believed that these 2 theories are essentially complementary, and the development of quantum theory has led to results where light acts like a series of particles in some experiments and like a wave in others.

The **speed of light** was first measured in a laboratory experiment by the French physicist Armand Hippolyte Louis Fizeau (1819-96). Today the speed of light is known very precisely as 299,792.458 km per sec (or 186,282.396 mi per sec) in a vacuum; in water the speed of light is about 25% less, and in glass, 33% less.

Color sensations are produced through the excitation of the retina of the eye by light vibrating at different frequencies. The different colors of the spectrum may be produced by viewing a light beam that is refracted by passage through a prism, which breaks the light into its wavelengths.

Customarily, the **primary colors** are taken to be the 6 monochromatic colors that occupy relatively large areas of the spectrum: red, orange, yellow, green, blue, and violet. However, scientists disagree about how many and what primary colors to recognize. The color sensation of **black** is due to complete lack of stimulation of the retina, that of **white** to complete stimulation.

Infrared and **ultraviolet rays**, below the red (long) end of the spectrum and above the violet (short) end of the spectrum, respectively, are invisible to the naked eye. Heat is the principal effect of infrared rays, and chemical action that of ultraviolet rays.

Discoveries and Innovations: Chemistry, Physics, Biology, Medicine

Discovery	Date	Discoverer(s)	Nationality
Acetylene gas	1862	Berthelot	French
ACTH	1927	Evans, Long	U.S.
Adrenaline	1901	Takamine	Japan
Aluminum, electrolytic process	1886	Hall	U.S.
Aluminum, isolated	1825	Oersted	Danish
Anesthesia, ether	1842	Long	U.S.
Anesthesia, local	1885	Koller	Austrian
Anesthesia, spinal	1898	Bier	German
Aniline dye	1856	Perkin	English
Anti-rabies	1885	Pasteur	French
Antiseptic surgery	1867	Lister	English
Antitoxin, diphtheria	1891	Von Behring	German
Argyrol	1897	Bayer	German
Arsphenamine	1910	Ehrlich	German
Aspirin	1853	Gerhardt	French
Atabrine	1932	Mietzsch, et al.	German
Atomic numbers	1913	Moseley	English
Atomic theory	1803	Dalton	English
Atomic time clock	1948	Lyons	U.S.
Atomic time clock, cesium beam	1948	Essen	English
Atom-smashing theory	1919	Rutherford	English
Bacitracin	1943	Johnson, Meleneyl	U.S.
Bacteria, description	1676	Leeuwenhoek	Dutch
Bleaching powder	1798	Tennant	English
Blood, circulation	1628	Harvey	English
Blood plasma storage (blood banks)	1940	Drew	U.S.
Bordeaux mixture	1885	Millardet	French
Bromine from the sea	1826	Balard	French
Calcium carbide	1888	Wilson	U.S.
Calculus	1670	Newton	English
Camphor synthetic	1896	Haller	French
Canning (food)	1804	Appert	French
Carbon oxides	1925	Fisher	German
Chemotherapy	1909	Ehrlich	German
Chloamphenicol	1947	Burkholder	U.S.
Chlorine	1774	Scheele	Swedish
Chloroform	1831	Guthrie, S.	U.S.
Chlortetracycline	1948	Duggen	U.S.
Classification of plants and animals	1735	Linnaeus	Swedish
Cloning, DNA	1973	Boyer, Cohen	U.S.
Cloning, mammal	1996	Wilmut, et al.	Scottish
Cocaine	1860	Niermann	German
Combustion explained	1777	Lavoisier	French
Conditioned reflex	1914	Pavlov	Russian
Cortisone	1936	Kendall	U.S.
Cortisone, synthesis	1946	Sarett	U.S.
Cosmic rays	1910	Gockel	Swiss
Cyanamide	1905	Frank, Caro	German
Cyclotron	1930	Lawrence	U.S.
DDT (not applied as insecticide until 1939)	1874	Zeidler	German
Deuterium	1932	Urey, Brickwedde, Murphy	U.S.
DNA (structure)	1953	Crick	English
		Watson	U.S.
		Wilkins	English
Electric resistance, law of	1827	Ohm	German
Electric waves	1888	Hertz	German
Electrolysis	1852	Faraday	English
Electromagnetism	1819	Oersted	Danish
Electron	1897	Thomson, J.	English
Electron diffraction	1936	Thomson	English
		Davisson, G.	U.S.
Electroshock treatment	1938	Cerletti, Bini	Italian
Erythromycin	1952	McGuire	U.S.
Evolution, natural selection	1858	Darwin	English
Falling bodies, law of	1590	Galileo	Italian
Gases, law of combining volumes	1808	Gay-Lussac	French
Geometry, analytic	1619	Descartes	French
Gold, cyanide process for extraction	1887	MacArthur, Forest	British
Gravitation, law	1687	Newton	English
HIV (human immuno-deficiency virus)	1984	Montagnier	French
		Gallo	U.S.
Holograph	1948	Gabor	British
Human heart transplant	1967	Barnard	S. African
Indigo, synthesis of	1880	Baeyer	German
Induction, electric	1830	Henry	U.S.
Insulin	1922	Banting, Best	Canadian
		Macleod	Scottish
Intelligence testing	1905	Binet, Simon	French

Discovery	Date	Discoverer(s)	Nationality
In vitro fertilization	1978	Steptoe, Edwards	English
Isotopes, theory	1912	Soddy	English
Laser	1957	Gould	U.S.
Light, velocity	1675	Roemer	Danish
Light, wave theory	1690	Huygens	Dutch
Lithography	1796	Senefelder	Bohemian
Logarithms	1614	Napier	Scottish
LSD-25	1943	Hoffman	Swiss
Mendelian laws	1866	Mendel	Austrian
Mercator projection (map)	1568	Mercator (Kremer)	Flemish
Methanol	1661	Boyle	Irish
Milk condensation	1853	Borden	U.S.
Molecular hypothesis	1811	Avogadro	Italian
Motion, laws of	1687	Newton	English
Neomycin	1949	Waksman, Lechevalier	U.S.
Neutrino	1956	Reines, Cowan	U.S.
Neutron	1932	Chadwick	English
Nitric acid	1648	Glauber	German
Nitric oxide	1772	Priestley	English
Nitroglycerin	1846	Sobrero	Italian
Oil cracking process	1891	Dewar	U.S.
Oxygen	1774	Priestley	English
Oxytetracycline	1950	Finlay, et al.	U.S.
Ozone	1840	Schonbein	German
Paper, sulfite process	1867	Tilghman	U.S.
Paper, wood pulp, sulfate process	1884	Dahl	German
Penicillin	1928	Fleming	Scottish
Practical use	1941	Florey, Chain	English
Periodic law and table of elements	1869	Mendeleyev	Russian
Physostigmine synthesis	1935	Julian	U.S.
Pill, birth-control	1954	Pincus, Rock	U.S.
Planetary motion, laws	1609	Kepler	German
Plutonium fission	1940	Kennedy, Wahl, Seaborg, Segre	U.S.
Polymyxin	1947	Ainsworth	English
Positron	1932	Anderson	U.S.
Proton	1919	Rutherford	N. Zealand
Psychoanalysis	1900	Freud	Austrian
Pulsars	1967	Bell	English
Quantum theory	1900	Planck	German
Quasars	1963	Matthews, Sandage	U.S.
Quinine synthetic	1946	Woodward, Doering	U.S.
Radioactivity	1896	Becquerel	French
Radiocarbon dating	1947	Libby	U.S.
Radium	1898	Curie, Pierre	French
		Curie, Marie	Pol.-Fr.
Relativity theory	1905	Einstein	German
Reserpine	1949	Jal Vaikl	Indian
Schick test	1913	Schick	U.S.
Silicon	1823	Berzelius	Swedish
Smallpox eradication	1979	World Health Org.	UN
Streptomycin	1944	Waksman, et al.	U.S.
Sulfanilamide	1935	Bovet, Trefouel	French
Sulfanilamide theory	1908	Gelmo	German
Sulfapyridine	1938	Ewins, Phelps	English
Sulfathiazole	1939	Fosbinder, Walter	U.S.
Sulfuric acid	1831	Phillips	English
Sulfuric acid, lead	1746	Roebuck	English
Superconductivity	1911	Onnes	Dutch
Superconductivity theory	1957	Bardeen, Cooper, Schreiffer	U.S.
Superconductors, high-temp.	1986	Bednorz, Muller	Ger., Swiss
Syphilis test	1906	Wassermann	German
Transplant, heart	1967	Barnard	S. Africa
Tuberculin	1890	Koch	German
Uranium fission, atomic reactor	1942	Fermi, Szilard	U.S.
Uranium fission theory	1939	Hahn, Meitner, Strassmann	German
		Bohr	Danish
		Fermi	Italian
		Einstein, Pegram, Wheeler	U.S.
Vaccine, measles	1963	Enders	U.S.
Vaccine, measles-mumps-rubella	1971	Hilleman	U.S.
Vaccine, meningitis (first conjugate)	1987	Gordon, et al., Connaught Lab.	U.S.
Vaccine, polio	1954	Salk	U.S.
Vaccine, polio, oral	1960	Sabin	U.S.
Vaccine, rabies	1885	Pasteur	French
Vaccine, smallpox	1796	Jenner	English
Vaccine, typhus	1909	Nicolle	French
Vaccine, varicella	1974	Takahashi	Japanese
Van Allen belts, radiation	1958	Van Allen	U.S.
Vitamin A	1913	McCollum, Davis	U.S.
Vitamin B	1916	McCollum	U.S.
Vitamin C	1928	Szent-Gyorgyi	Hungarian
		King	U.S.
Vitamin D	1922	McCollum	U.S.
Vitamin K	1935	Dam, Doisy	U.S.
Xerography	1938	Carlson	U.S.
X-ray	1895	Roentgen	German

Inventions

Invention	Date	Inventor(s)	Nationality
Adding machine	1642	Pascal	French
Adding machine	1885	Burroughs	U.S.
Aerosol spray	1926	Rotheim	Norwegian
Airbag	1952	Hetrick	U.S.
Air brake	1868	Westinghouse	U.S.
Air conditioning	1902	Carrier	U.S.
Air pump	1654	Guericke	German
Airplane, automatic pilot	1912	Sperry	U.S.
Airplane, experimental	1896	Langley	U.S.
Airplane, hydro	1911	Curtiss	U.S.
Airplane jet engine	1939	Ohain	German
Airplane with motor	1903	Wright Bros.	U.S.
Airship	1852	Giffard	French
Arc welder	1919	Thomson	U.S.
Aspartame	1965	Schlatter	U.S.
Autogyro	1920	de la Cierva	Spanish
Automobile, differential gear	1885	Benz	German
Automobile, electric	1892	Morrison	U.S.
Automobile, exp'mtl	1864	Marcus	Austrian
Automobile, gasoline	1889	Daimler	German
Automobile, gasoline	1892	Duryea	U.S.
Automobile magneto	1897	Bosch	German
Automobile muffler	1904	Pope.	U.S.
Automobile self-starter	1911	Kettering	U.S.
Bakelite	1907	Baekeland	Belg., U.S.
Balloon	1783	Montgolfier	French
Barometer	1643	Torricelli	Italian
Bicycle, modern	1885	Starley	English
Bifocal lens	1780	Franklin	U.S.
Bottle machine	1895	Owens	U.S.
Braille printing	1829	Braille	French
Bubble gum	1928	Diemer	U.S.
Burner, gas	1855	Bunsen	German
Calculating machine	1833	Babbage	English
Calculator, electronic pocket	1972	Merryman, Van Tassel	U.S.
Camera, digital	1977	Lloyd, Sasson	U.S.
Camera, Kodak	1888	Eastman, Walker	U.S.
Camera, Polaroid Land	1948	Land	U.S.
Car coupler	1873	Janney	U.S.
Carburetor, gasoline	1893	Maybach	German
Carding machine	1797	Whittemore	U.S.
Carpet sweeper	1876	Bissell	U.S.
Cash register	1879	Ritty	U.S.
Cassette, audio	1963	Philips Co.	Dutch
Cassette, videotape	1969	Sony	Japanese
Cathode-ray tube	1897	Braun	German
CAT, or CT, scan	1973	Hounsfield	English
Cellophane	1908	Brandenberger	Swiss
Celluloid	1870	Hyatt	U.S.
Cement, Portland	1824	Aspdin	English
Chronometer	1735	Harrison	English
Circuit breaker	1925	Hilliard	U.S.
Circuit, integrated	1959	Kilby, Noyce, Texas Instr.	U.S.
Clock, pendulum	1657	Huygens	Dutch
Coaxial cable system	1929	Affel, Espensched	U.S.
Coffeemaker, automatic drip	1963	Bunn Corp.	U.S.
Compressed air rock drill	1871	Ingersoll	U.S.
Comptometer	1887	Felt	U.S.
Computer, automatic sequence	1944	Aiken, et al.	U.S.
Computer, electronic	1942	Atanasoff, Berry	U.S.
Computer, laptop	1987	Sinclair	English
Computer, mini	1960	Digital Corp.	U.S.
Condenser microphone (telephone)	1916	Wente	U.S.
Contact lens, corneal	1948	Tuohy	U.S.
Contraceptive, oral	1954	Pincus, Rock	U.S.
Corn, hybrid	1917	Jones	U.S.
Cotton gin	1793	Whitney	U.S.
Cream separator	1878	DeLaval	Swedish
Cultivator, disc	1878	Mallon	U.S.
Cystoscope	1878	Nitze	German
Diapers, disposable	1950	Donovan	U.S.
Diesel engine	1895	Diesel	German

Invention	Date	Inventor(s)	Nationality
Disc, compact	**1972**	RCA	U.S.
Disc player, compact	**1979**	Sony, Philips Co.	Japanese, Dutch
Dishwasher	**1893**	Cochrane	U.S.
Disk, floppy	**1970**	IBM	U.S.
Disk, video	**1972**	Philips Co.	Dutch
Dynamite	**1866**	Nobel	Swedish
Dynamo, contin. current	**1871**	Gramme	Belgian
Electronic paper (e-ink)	**1974**	Sheridon	U.S.
Electric battery	**1800**	Volta	Italian
Electric fan	**1882**	Wheeler	U.S.
Electrocardiograph	**1903**	Einthoven	Dutch
Electroencephalograph	**1929**	Berger	German
Electromagnet	**1824**	Sturgeon	English
Electron microscope	**1931**	Ruska, Knoll	German
Electron spectrometer	**1944**	Deutsch, Elliott, Evans	U.S.
Electron tube multigrid	**1913**	Langmuir	U.S.
Electroplating	**1805**	Brugnatelli	Italian
Electrostatic generator	**1929**	Van de Graaff	U.S.
Elevator brake	**1852**	Otis	U.S.
Elevator, push button	**1922**	Larson	U.S.
Engine, automatic transmission	**1910**	Fottinger	German
Engine, coal-gas 4-cycle	**1876**	Otto	German
Engine, compression ignition	**1883**	Daimler	German
Engine, electric ignition	**1883**	Benz	German
Engine, gas, compound	**1926**	Eickemeyer	U.S.
Engine, gasoline	**1872**	Brayton, Geo.	U.S.
Engine, gasoline	**1889**	Daimler	German
Engine, jet	**1930**	Whittle	English
Engine, steam, piston	**1705**	Newcomen	English
Engine, steam, piston	**1769**	Watt	Scottish
Engraving, half-tone	**1852**	Talbot	U.S.
Fiberglass	**1938**	Owens-Corning	U.S.
Fiber optics	**1955**	Kapany	English
Fiber optic wire	**1970**	Keck, Maurer Schulz	U.S.
Filament, tungsten	**1913**	Coolidge	U.S.
Flanged rail	**1831**	Stevens	U.S.
Flatiron, electric	**1882**	Seely	U.S.
Food, frozen	**1923**	Birdseye	U.S.
Freon	**1930**	Midgley, et al.	U.S.
Furnace (for steel)	**1858**	Siemens	German
Galvanometer	**1820**	Sweigger	German
Garbage bag, polyethylene	**1950**	Wasylyk	Canadian
Gas discharge tube	**1922**	Hull	U.S.
Gas lighting	**1792**	Murdoch	Scottish
Gas mantle	**1885**	Welsbach	Austrian
Gasoline (lead ethyl)	**1922**	Midgley	U.S.
Gasoline, cracked	**1913**	Burton	U.S.
Gasoline, high octane	**1930**	Ipatieff	Russian
Geiger counter	**1913**	Geiger	German
Glass, laminated safety	**1909**	Benedictus	French
Glider	**1853**	Cayley	English
Google search software	**1996**	Brin, Page	U.S.
Gun, breechloader	**1811**	Thornton	U.S.
Gun, Browning	**1897**	Browning	U.S.
Gun, magazine	**1875**	Hotchkiss	U.S.
Gun, silencer	**1908**	Maxim, H. P.	U.S.
Guncotton	**1847**	Schoenbein	German
Gyrocompass	**1911**	Sperry	U.S.
Gyroscope	**1852**	Foucault	French
Harvester-thresher	**1818**	Lane	U.S.
Heart, artificial	**1982**	Jarvik	U.S.
Helicopter	**1939**	Sikorsky	U.S.
Hydrometer	**1768**	Baume	French
Iron lung	**1928**	Drinker, Slaw	U.S.
Kaleidoscope	**1817**	Brewster	Scottish
Kevlar	**1965**	Kwolek, Blades	U.S.
Kinetoscope	**1889**	Edison	U.S.
Lamp, arc	**1847**	Staite	English
Lamp, fluorescent	**1938**	General Electric, Westinghouse	U.S.
Lamp, incandescent	**1879**	Edison	U.S.
Lamp, incand., gas	**1913**	Langmuir	U.S.
Lamp, klieg	**1911**	Kliegl, A. & J.	U.S.
Lamp, mercury vapor	**1912**	Hewitt	U.S.
Lamp, miner's safety	**1816**	Davy	English
Lamp, neon	**1909**	Claude	French
Lathe, turret	**1845**	Fitch	U.S.
Launderette	**1934**	Cantrell	U.S.
Lens, achromatic	**1758**	Dollond	English
Lens, fused bifocal	**1908**	Borsch	U.S.
Leyden jar (condenser)	**1745**	von Kleist	German
Lightning rod	**1752**	Franklin	U.S.

Invention	Date	Inventor(s)	Nationality
Linoleum	**1860**	Walton	English
Linotype	**1884**	Mergenthaler	U.S.
Liquid Paper	**c.1951**	Graham	U.S.
Lock, cylinder	**1851**	Yale	U.S.
Locomotive, electric	**1851**	Vail	U.S.
Locomotive, exp'mtl	**1802**	Trevithick	English
Locomotive, exp'mtl	**1812**	Fenton, et al.	English
Locomotive, exp'mtl	**1814**	Stephenson	English
Locomotive, practical	**1829**	Stephenson	English
Locomotive, 1st U.S.	**1830**	Cooper, P.	U.S.
Loom, power	**1785**	Cartwright	English
Loudspeaker, dynamic	**1924**	Rice, Kellogg	U.S.
Machine gun	**1862**	Gatling	U.S.
Machine gun, improved	**1872**	Hotchkiss	U.S.
Machine gun (Maxim)	**1883**	Maxim, H. S.	U.S.-Eng.
Magnet, electro	**1828**	Henry	U.S.
Magnetic Resonance Imaging (MRI)	**1971**	Damadian	U.S.
Mason jar	**1858**	Mason, J.	U.S.
Match, friction	**1827**	Walker, J.	English
Mercerized textiles	**1843**	Mercer, J.	English
Meter, induction	**1888**	Shallenberger	U.S.
Metronome	**1816**	Malezel	German
Microcomputer	**1973**	Truong, et al.	French
Micrometer	**1636**	Gascoigne	English
Microphone	**1877**	Berliner	U.S.
Microprocessor	**1971**	Intel Corp.	U.S.
Microscope, compound	**1590**	Janssen	Dutch
Microscope, electronic	**1931**	Knoll, Ruska	German
Microscope, field ion	**1951**	Mueller	German
Microwave oven	**1947**	Spencer	U.S.
Monitor, warship	**1861**	Ericsson	U.S.
Monotype	**1887**	Lanston	U.S.
Motor, AC	**1892**	Tesla	U.S.
Motor, DC.	**1837**	Davenport	U.S.
Motor, induction	**1887**	Tesla	U.S.
Motorcycle	**1885**	Daimler	German
Movie machine	**1894**	Jenkins	U.S.
Movie, panoramic	**1952**	Waller	U.S.
Movie, talking	**1927**	Warner Bros.	U.S.
Mower, lawn	**1831**	Budding, Ferrabee	English
Mowing machine	**1822**	Bailey	U.S.
Neoprene	**1930**	Carothers	U.S.
Nylon	**1937**	DuPont lab	U.S.
Oil cracking furnace	**1891**	Gavrilov	Russian
Oil filled power cable	**1921**	Emanueli	Italian
Oleomargarine	**1869**	Mege-Mouries	French
Ophthalmoscope	**1851**	Helmholtz	German
Pacemaker	**1952**	Zoll	U.S.
Paper	**105**	Ts'ai	Chinese
Paper clip	**1900**	Waaler	Norwegian
Paper machine	**1809**	Dickinson	U.S.
Parachute	**1785**	Blanchard	French
Pen, ballpoint	**1888**	Loud	U.S.
Pen, fountain	**1884**	Waterman	U.S.
Pen, steel	**1780**	Harrison	English
Pendulum	**1583**	Galileo	Italian
Percussion cap	**1807**	Forsythe	Scottish
Phonograph	**1877**	Edison	U.S.
Photo, color	**1892**	Ives	U.S.
Photo film, celluloid	**1893**	Reichenbach	U.S.
Photo film, transparent	**1884**	Eastman, Goodwin	U.S.
Photoelectric cell	**1895**	Elster	German
Photocopier	**1938**	Carlson	U.S.
Photographic paper	**1835**	Talbot	English
Photography	**1816**	Niepce	French
Photography	**1835**	Talbot	English
Photography	**1835**	Daguerre	French
Photophone	**1880**	Bell	U.S.-Scot.
Phototelegraphy	**1925**	Bell Labs	U.S.
Piano	**1709**	Cristofori	Italian
Piano, player	**1863**	Fourneaux	French
Pin, safety	**1849**	Hunt	U.S.
Pistol (revolver)	**1836**	Colt	U.S.
Plow, cast iron	**1785**	Ransome	English
Plow, disc	**1896**	Hardy	U.S.
Pneumatic hammer	**1890**	King	U.S.
Post-it note	**1980**	Fry, Silver	U.S.
Powder, smokeless	**1884**	Vieille	French
Printing press, rotary	**1845**	Hoe	U.S.
Printing press, web	**1865**	Bullock	U.S.
Propeller, screw	**1804**	Stevens	U.S.
Propeller, screw	**1837**	Ericsson	Swedish
Punch card accounting	**1889**	Hollerith	U.S.
Radar	**1940**	Watson-Watt	Scottish

Invention	Date	Inventor(s)	Nationality
Radio, magnetic detector	1902	Marconi	Italian
Radio, signals	1895	Marconi	Italian
Radio amplifier	1906	De Forest	U.S.
Radio beacon	1928	Donovan	U.S.
Radio crystal oscillator	1918	Nicolson	U.S.
Radio receiver, cascade tuning	1913	Alexanderson	U.S.
Radio receiver, heterodyne	1913	Fessenden	Canadian
Radio transmitter triode modulation	1914	Alexanderson	U.S.
Radio tube diode	1904	Fleming	English
Radio tube oscillator	1915	De Forest	U.S.
Radio tube triode	1906	De Forest	U.S.
Radio FM, 2-path	1933	Armstrong	U.S.
Rayon (acetate)	1895	Cross	English
Rayon (cuprammonium)	1890	Despeissis	French
Rayon (nitrocellulose)	1884	Chardonnet	French
Razor, electric	1917	Schick	U.S.
Razor, safety	1895	Gillette	U.S.
Reaper	1834	McCormick	U.S.
Record, cylinder	1887	Bell, Tainter	U.S.
Record, disc	1887	Berliner	U.S.
Record, long playing	1947	Goldmark	U.S.
Record, wax cylinder	1888	Edison	U.S.
Refrigerator car	1868	David	U.S.
Remote control	1898	Tesla	U.S.
Resin, synthetic	1931	Hill	English
Richter scale	1935	Richter	U.S.
Rifle, repeating	1860	Henry	U.S.
Rocket, liquid fuel	1926	Goddard	U.S.
Rollerblades	1980	Olson	U.S.
Rubber, vulcanized	1839	Goodyear	U.S.
Saccharin	1879	Remsen, Fahlberg	U.S.
Saw, circular	1777	Miller	English
Scotch tape	1930	Drew	U.S.
Seat belt	1959	Volvo	Swedish
Sewing machine	1846	Howe	U.S.
Shoe-lasting machine	1883	Matzeliger	U.S.
Shoe-sewing machine	1860	McKay	U.S.
Shrapnel shell	1784	Shrapnel	English
Shuttle, flying	1733	Kay	English
Sleeping-car	1865	Pullman	U.S.
Slide rule	1620	Oughtred	English
Smoke detector	1969	Smith, House	U.S.
Soap, hardwater	1928	Bertsch	German
Spectroscope	1859	Kirchoff, Bunsen	German
Spectroscope (mass)	1918	Dempster	U.S.
Spinning jenny	c.1764	Hargreaves	English
Spinning mule	1779	Crompton	English
Steamboat, exp'mtl	1778	Jouffroy	French
Steamboat, exp'mtl	1785	Fitch	U.S.
Steamboat, exp'mtl	1787	Rumsey	U.S.
Steamboat, exp'mtl	1803	Fulton	U.S.
Steamboat, exp'mtl	1804	Stevens	U.S.
Steamboat, practical	1802	Symington	Scottish
Steamboat, practical	1807	Fulton	U.S.
Steam car	1770	Cugnot	French
Steam turbine	1884	Parsons	English
Steel (converter)	1856	Bessemer	English
Steel alloy	1891	Harvey	U.S.
Steel alloy, high-speed	1901	Taylor, White	U.S.
Steel, manganese	1884	Hadfield	English
Steel, stainless	1916	Brearley	English
Stereoscope	1838	Wheatstone	English
Stethoscope	1819	Laennec	French
Stethoscope, binaural	1840	Cammann	U.S.
Stock ticker	1870	Edison	U.S.
Storage battery, rechargeable	1859	Plante	French
Stove, electric	1896	Hadaway	U.S.
Submarine	1891	Holland	U.S.
Submarine, even keel	1894	Lake	U.S.
Submarine, torpedo	1776	Bushnell	U.S.
Synthesizer	1964	Moog	U.S.
Tank, military	1914	Swinton	English
Tape recorder, magnetic	1899	Poulsen	Danish
Teflon	1938	Du Pont	U.S.
Telegraph, magnetic	1837	Morse	U.S.
Telegraph, quadruplex	1864	Edison	U.S.
Telegraph, railroad	1887	Woods	U.S.
Telegraph, wireless high frequency	1895	Marconi	Italian
Telephone[1]	1871	Meucci	U.S.-Italian
Telephone[1]	1876	Bell	U.S.-Scot.
Telephone amplifier	1912	De Forest	U.S.
Telephone answering machine (1st practical)	1954	Hashimoto	Japanese
Telephone, automatic	1891	Strowger	U.S.
Telephone, cellular	1947	Bell Labs	U.S.
Telephone, cordless[2]	1950	Gross	U.S.
Telephone, radio	1900	Poulsen Fessenden	Danish Canadian
Telephone, radio	1906	De Forest	U.S.
Telephone, radio, long dist.	1915	AT&T	U.S.
Telephone, recording	1898	Poulsen	Danish
Telescope	1608	Lippershey	Neth.
Telescope	1609	Galileo	Italian
Telescope, astronomical	1611	Kepler	German
Teletype	1928	Morkrum, Kleinschmidt	U.S.
Television, color	1928	Baird	Scottish
Television, electronic	1927	Farnsworth	U.S.
Television, iconoscope	1923	Zworykin	U.S.
Television, mech. scanner	1923	Baird	Scottish
Tesla Coil	1891	Tesla	U.S.
Thermometer	1593	Galileo	Italian
Thermometer	1730	Reaumur	French
Thermometer, mercury	1714	Fahrenheit	German
Time recorder	1890	Bundy	U.S.
Tire, double-tube	1845	Thomson	Scottish
Tire, pneumatic	1888	Dunlop	Scottish
Toaster, automatic	1918	Strite	U.S.
Toilet, flush	1589	Harington	English
Tool, pneumatic	1865	Law	English
Torpedo, marine	1804	Fulton	U.S.
Tractor, crawler	1904	Holt	U.S.
Transformer, AC	1885	Stanley	U.S.
Transistor	1947	Shockley, Brattain, Bardeen	U.S.
Trolley car, electric	1884-87	Van DePoele, Sprague	U.S.
Tungsten, ductile	1912	Coolidge	U.S.
Tupperware®	1945	Tupper	U.S.
Turbine, gas	1849	Bourdin	French
Turbine, hydraulic	1849	Francis	U.S.
Turbine, steam	1884	Parsons	English
Type, movable	1447	Gutenberg	German
Typewriter	1867	Sholes, Soule, Glidden	U.S.
Universal Serial Bus (USB)	1994	Bhatt et al.	U.S.
Vacuum cleaner, electric	1907	Spangler	U.S.
Vacuum evaporating pan	1846	Rillieux	U.S.
Velcro	1948	de Mestral	Swiss
Video game ("Pong")	1972	Bushnell	U.S.
Video home system (VHS)	1975	Matsushita, JVC	Japanese
Washer, electric	1901	Fisher	U.S.
Welding, atomic hydrogen	1924	Langmuir, Palmer	U.S.
Welding, electric	1877	Thomson	U.S.
Wiki software	1995	Cunningham	U.S.
Windshield wiper	1903	Anderson	U.S.
Wind tunnel	1912	Eiffel	French
Wire, barbed	1874	Glidden	U.S.
Wrench, double-acting	1913	Owen	U.S.
X-ray tube	1913	Coolidge	U.S.
Zeppelin	1900	Zeppelin	German
Zipper, early model	1893	Judson	U.S.
Zipper, improved	1913	Sundback	Canadian

(1) While Alexander Graham Bell has traditionally been credited with invention of the telephone, which he patented, Antonio Meucci developed a working model before Bell. (2) Al Gross held a number of important early patents in the field of wireless communication; other people were also involved in the development of practical cordless telephones.

Top 20 Corporations Receiving U.S. Patents in 2009

Source: U.S. Patent and Trademark Office, U.S. Department of Commerce

Rank	Company	No. of patents
1.	International Business Machines Corporation	4,887
2.	Samsung Electronics Co., Ltd.	3,592
3.	Microsoft Corporation	2,901
4.	Canon Kabushiki Kaisha	2,200
5.	Panasonic Corporation	1,759
6.	Toshiba Corporation	1,669
7.	Sony Corporation	1,656
8.	Intel Corporation	1,534
9.	Seiko Epson Corporation	1,328
10.	Hewlett-Packard Development Company, L.P.	1,269
11.	Fujitsu, Ltd.	1,188
12.	LG Electronics, Inc.	1,064
13.	Hitachi, Ltd.	1,051
14.	Ricoh Company, Ltd.	985
15.	General Electric Co.	976
16.	Micron Technology, Inc.	966
17.	Cisco Technology, Inc.	913
18.	Fujifilm Corporation.	873
19.	Honda Giken Kogyo Kabushiki Kaisha (Honda Motor Co., Ltd.)	725
20.	Broadcom Corporation	714

Note: Reflects patent ownership at time of patent grant. Changes may occur after patent grant. Where more than one assignee exists, patents are attributed to first-named assignee.

Foreign Countries Receiving Most U.S. Patents, 2009

Source: U.S. Patent and Trademark Office, U.S. Dept. of Commerce

2009 rank	Country (2008 rank)	2009 patents	% change 2008-09	Share of total issued
1.	Japan (1)	35,501	5.4%	21.2%
2.	Germany (2)	9,000	1.0	5.4
3.	South Korea (3)	8,762	16.1	5.2
4.	Taiwan (4)	6,642	4.8	4.0
5.	Canada (5)	3,655	7.7	2.2
6.	United Kingdom (7)	3,175	2.6	1.9
7.	France (6)	3,140	–0.7%	1.9%
8.	China (11)	1,655	35.1	1.0
9.	Israel (12)	1,404	20.4	0.8
10.	Italy (8)	1,346	20.4	0.8
United States		**82,382**	**6.3**	**49.2**
All countries		**167,349**	**6.1**	**100.0**

Note: Country of origin is determined by residence of first-named inventor.

Top 20 U.S. Patent Categories, 1989-2009

Source: U.S. Patent and Trademark Office, U.S. Dept. of Commerce

(ranked by number of patents issued in 2009)

Rank	Category	Pre-1989	1989	1999	2009	Change, 1989-2009
1.	Multiplex Communications	2,549	402	1,514	5,304	1,219.4%
2.	Semiconductor Device Manufacturing: Process	4,244	618	3,413	4,908	694.2
3.	Active Solid-State Devices (e.g., Transistors, Solid-State Diodes)	3,861	753	2,621	4,674	520.7
4.	Drug, Bio-Affecting and Body Treating Compositions	19,017	2,537	4,068	3,488	37.5
5.	Telecommunications	2,303	233	1,542	3,372	1,347.2
6.	Electrical Computers and Digital Processing Systems: Multicomputer Data Transferring	206	38	1,004	3,291	8,560.5
7.	Data Processing: Database and File Management or Data Structures	185	57	1,041	2,876	4,945.6
8.	Chemistry: Molecular Biology and Microbiology	5,464	926	3,984	2,710	192.7
9.	Image Analysis	1,359	290	1,353	2,625	805.2
10.	Computer Graphics Processing and Selective Visual Display Systems	2,251	438	1,569	2,597	492.9
11.	Static Information Storage and Retrieval	3,022	517	1,760	2,384	361.1
12.	Pulse or Digital Communications	2,169	438	1,245	2,280	420.5
13.	Radiant Energy	7,627	1,282	1,026	2,184	70.4
14.	Electricity: Electrical Systems and Devices	5,322	769	1,291	2,122	175.9
15.	Error Detection/Correction and Fault Detection/Recovery	2,050	355	1,041	2,095	490.1
16.	Electrical Connectors	5,993	913	1,665	2,071	126.8
17.	Optical: Systems and Elements	5,559	796	1,563	2,025	154.4
18.	Data Processing: Financial, Business Practice, Management, or Cost/Price Determination	497	128	718	1,960	1,431.3
19.	Television	5,666	765	1,097	1,946	154.4
20.	Communications: Electrical	5,669	873	1,395	1,872	114.4

Bottom 20 U.S. Patent Categories, 1989-2009

Source: U.S. Patent and Trademark Office, U.S. Dept. of Commerce

(ranked by number of patents issued in 2009)

Rank	Category	Pre-1989	1989	1999	2009	Change, 1989-2009
1.	Motors: Spring, Weight, or Animal Powered	56	4	5	2	–50.0%
2.	Electric Lamp and Discharge Devices: Consumable Electrodes	5	0	0	2	NA
3.	Synthetic Resins or Natural Rubbers	107	12	7	2	–83.3
4.	Button Making	2	0	1	1	NA
5.	Wood Turning	28	1	5	1	0.0
6.	Telegraphy	409	48	32	1	–97.9
7.	Whips and Whip Apparatus	9	1	0	1	0.0
8.	Railway Wheels and Axles	34	1	9	1	0.0
9.	Recorders	806	70	22	1	–98.6
10.	Sheet Metal Container Making	147	14	16	1	–92.9
11.	Coopering	2	1	0	0	–100.0
12.	Needle and Pin Making	11	1	0	0	–100.0
13.	Type Casting	0	0	0	0	NA
14.	Wooden Receptacles	43	4	5	0	–100.0
15.	Selective Cutting (e.g., Punching)	26	0	0	0	NA
16.	Wire Fabrics and Structure	15	0	0	0	NA
17.	Railway Mail Delivery	2	0	0	0	NA
18.	Typesetting	0	0	0	0	NA
19.	Land Vehicles: Animal Draft Appliances	1	0	0	0	NA
20.	Books, Strips, and Leaves for Manifolding	97	10	3	0	–100.0

NA = Not applicable. **Note:** Excludes patents for which design classification could not be determined.

Geologic Time Scale

Our understanding of Earth's ancient history is largely a result of geoscientists' study of climate, rock strata, ice samples, mineral deposits, and fossils from around the world; clues to the planet's origin have also been found through the study of extraterrestrial bodies. Geologists divide Earth's history into the following units (MYA = million years ago):

PRECAMBRIAN TIME (4,600-542 MYA)

HADEAN EON (4,600-3,800 MYA) Earth has no continents, oceans, or life; surface conditions are defined by intense volcanic activity and widespread meteorite impact. Oldest known minerals and rocks, many of meteoric origin, date to this era.

ARCHEAN EON (3,800-2,500 MYA) Earth's surface cools and water vapor in atmosphere condenses to form early oceans, which define small protocontinents; the first single-celled organisms, primarily bacteria, appear in these oceans.

PROTEROZOIC EON (2,500-542 MYA) Protocontinents merge into larger landmasses as Earth's crust continues to shift. Atmospheric oxygen levels increase, and first known multicellular life (a form of algae) appears. Later, soft-bodied marine animals emerge.

PHANEROZOIC EON

Paleozoic Era (542-251 MYA)

Cambrian Period (542-488 MYA) Collisions between Earth's plates create a supercontinent of the southern hemisphere known as Gondwanaland. Seas experience an explosion of invertebrate animal life, including thousands of species of trilobites; there is no life on land.

Ordovician Period (488-443 MYA) Gondwanaland extends from South Pole to tropic regions; northern hemisphere is mostly open ocean. Average global temperatures are warmer than present era. First primitive land plants, early ancestors of starfish and mollusks, and first known vertebrates (armored, jawless fishes) appear. The period ends in extinction of a majority of species, possibly a result of a global drop in sea level due to glaciation.

Silurian Period (443-416 MYA) South Pole remains covered by supercontinent, but precursors of present-day N America, Europe, and Asia coalesce around the equator and middle latitudes. Appearance of first known vascular land plants, first freshwater fish, first jawed fish, first coral reefs, and first air-breathing animals (*eurypterids*, a scorpion-like creature).

Devonian Period (416-359 MYA) Collisions between Gondwanaland and ancestral landmasses of N America and Eurasia produce mountains visible today as northern Appalachians. Newly-formed ozone layer offers protection from sun's rays, allowing first air-breathing spiders and mites to appear on dry land; emergence of first jawed fish, fish with fins and scales, and first amphibians.

Carboniferous Period (359-299 MYA) Precursors of modern N America and Northern Europe lie in tropical latitudes north of the Equator; warm and humid conditions there facilitate spread of lush forests and peat swamps that later form most of the world's coal and limestone. Later period sees emergence of first true conifers, *lepidodendrales* ("scale trees") as tall as 100 ft, and first true reptiles.

Permian Period (299-251 MYA) All major landmasses collide to form the supercontinent Pangaea, surrounded by the world ocean Panthalassa. Gradual warming throughout the Permian allows for initial flourishing of species—including dinosaur precursors (up to 10 ft in length) and marine species in shallow inland seas—but later precipitates mass extinction of as much as 95% of all species.

Mesozoic Era (251-65.5 MYA)

Triassic Period (251-199 MYA) Pangea separates into supercontinents of Laurasia and Gondwana; subtropical conditions extend as far north as present-day Wyoming and New England. Emergence of *icthyosaurs* and *plesiosaurs* (large marine reptiles), several species of dinosaurs (up to 15 ft long), first true mammals, and first insects to undergo metamorphosis from larva to pupa to adult.

Jurassic Period (199-145 MYA) North American continent drifts westward, opening Gulf of Mexico; rift forms between South America and Africa. Warm, moist climate contributes to flourishing of coral reefs and temperate and subtropical forests. Appearance of first angiosperms (flowering plants), *pterosaurs* (winged reptiles), earliest known bird (*Archaeopteryx*), and huge dinosaurs such as the carnivorous *Allosaurus* and herbivorous *Apatosaurus*.

Cretaceous Period (145-65.5 MYA) African continental plate drifts north, creating roots of European Alps; gap between S America and Africa broadens; western movement of N America drives formation of Sierra Nevada and Rocky Mountains, turning the western interior of continent into a vast swamp. Later, sea levels rise and cover about one-third of Earth's present land area; global climate is warm and mild. The period ends in a mass extinction of plant and animal species (including dinosaurs), possibly caused by volcanic activity or impact of one or more asteroids or comet fragments.

Cenozoic Era (65.5 MYA-present)

Paleogene Period (65.5-23 MYA)

- Paleocene Epoch (65.5-55.8 MYA) Australia separates from Antarctica; N America and Greenland spread apart. Mammalian life predominates, including early marsupials, insectivores, creodonts (carnivorous ancestors to both cats and dogs), and primitive hoofed mammals.
- Eocene Epoch (55.8-33.9 MYA) Australia drifts farther from Antarctica; the Indian subcontinent becomes welded to Asia,and tectonic forces drive the upheaval of the Alpine-Himalayan system. Climate in N America and Europe is subtropical and moist, with temperate forests as far north as Greenland and Siberia. Ancestors of modern horses, rhinoceroses, camels, bats, primates, and squirrel-like rodents emerge; earliest known marine mammals appear in later Eocene.
- Oligocene Epoch (33.9-23 MYA) San Andreas fault develops between N American and Pacific plates. Mammalian species continue to diversify, producing the first elephants, modern horses, and multiple rodent, camel, and rhinoceros-like species, as well as first known species of great ape. Long-term cooling trend begins that would later cause Pleistocene ice ages.

Neogene Period (23 MYA-present)

- Miocene Epoch (23-5.3 MYA) Crustal plate collisions continue to drive uplift of Alps, Himalayas, and Cordilleran Ranges in Americas; eroded sediment is deposited in shallow marine basins, forming reservoirs for oil fields of California, Romania, and Caspian Sea. Ocean currents prevent Antarctica from receiving warmer waters, fostering growth of Antarctic ice sheet; northern forests become grassy prairies. Elephants give rise to first mastodons, and large apes related to the orangutan live in Asia and southern Europe; oldest hominid fossils from Africa date to this epoch.
- Pliocene Epoch (5.3-1.8 MYA) Alps continue to rise in Europe, and subduction of the Pacific tectonic plate elevates the Sierra Nevada and volcanic Cascade Range. Climate becomes cooler and drier, driving formation of permanent Arctic ice cap. Rapid primate evolution produces *Australopithecus*, earliest direct ancestor of *Homo sapiens*.
- Pleistocene Epoch (1.8 MYA-11,800 years ago) Glacier ice covers as much as 25% or more of Earth's land surface, carving numerous present-day features including the Great Lakes; increased rainfall in lower latitudes allows plant and animal life to flourish in northern and eastern Africa. Late Pleistocene brings worldwide extinction of many large mammals, including the mastodon, saber-toothed tiger, and ground sloth.
- Holocene Epoch (11,800 years ago to the present) Melting ice caused sea levels to rise 100 ft or more in early Holocene, covering large areas of land and extending continental shelf of North America. Humans proliferate, and civilization begins.

Classification

Source: *Funk & Wagnalls New Encyclopedia*

In biology, classification is the identification, naming, and grouping of organisms into a formal system. The 2 fields that are most directly concerned with classification are taxonomy and systematics. Although the 2 disciplines overlap considerably, taxonomy is more concerned with nomenclature (naming) and with constructing hierarchical systems, and systematics with uncovering evolutionary relationships. Two kingdoms of living forms, Plantae and Animalia, have been recognized since Aristotle established the first taxonomy in the 4th century BCE. In addition, there are the following 3 kingdoms: Protista (one-celled organisms), Monera (bacteria and blue-green algae; also known as kingdom Procaryotae), and Fungi. The 7 basic categories of classification (from most general to most specific) are kingdom, phylum (or division), class, order, family, genus, and species. Below are 2 examples:

ZOOLOGICAL HIERARCHY

Kingdom	Phylum	Class	Order	Family	Genus	Species name	Common name
Animalia	Chordata	Mammalia	Primates	Hominidae	Homo	Homo sapiens	Human

BOTANICAL HIERARCHY

Kingdom	Division*	Class	Order	Family	Genus	Species name	Common name
Plantae	Magnoliophyta	Magnoliopsida	Magnoliales	Magnoliaceae	Magnolia	M. virginiana	Sweet Bay

*In botany, the division is generally used in place of the phylum.

Gestation, Longevity, and Incubation of Selected Animals

Information reviewed by Ronald M. Nowak, author of *Walker's Mammals of the World* (6th ed., Johns Hopkins University Press, 1999). Average longevity figures supplied by Ronald T. Reuther. These apply to animals in captivity; the potential life span of animals is rarely attained in nature. Figures on gestation and incubation are averages based on estimates.

Animal	Gestation (days)	Average longevity (yrs.)	Maximum longevity (yrs.-mos.)
Ass	365	12	47
Baboon	187	20	45
Bear (black)	219	18	36-10
Bear (grizzly)	225	25	50
Bear (polar)	240	20	45
Beaver	105	5	50
Bison	285	15	40
Camel	406	12	50
Cat (domestic)	63	12	38
Chimpanzee	230	20	60
Chipmunk	31	6	10
Cow	284	15	30
Deer (white-tailed)	201	8	20
Dog (domestic)	61	12	21
Elephant (African)	660	35	70
Elephant (Asian)	645	40	77
Elk	250	15	26-8
Fox (red)	52	7	14
Giraffe	457	10	36-2
Goat (domestic)	151	8	18
Gorilla	258	20	54
Guinea pig	68	4	8
Hippopotamus	238	41	61
Horse	330	20	50
Kangaroo (gray)	36	7	24
Leopard	98	12	23
Lion	100	15	30
Monkey (rhesus)	166	15	37
Moose	240	12	27
Mouse (meadow)	21	3	4
Mouse (domestic white)	19	3	6
Opossum (American)	13	1	5
Pig (domestic)	112	10	27
Puma	90	12	20
Rabbit (domestic)	31	5	18-10
Rhinoceros (black)	450	15	45-10
Rhinoceros (white)	480	20	50
Sea lion (California)	350	12	34
Sheep (domestic)	154	12	23
Squirrel (gray)	44	10	23-6
Tiger	105	16	26-3
Wolf (maned)	63	5	15-8
Zebra (Grant's)	365	15	50

Animal	Incubation time (days)
Chicken	21
Duck	30
Goose	30
Pigeon	18
Turkey	26

Major Venomous Animals

Snakes

Asian pit viper—2 ft to 5 ft long; throughout Asia; reactions and mortality vary, but most bites cause tissue damage, and mortality is generally low.

Australian brown snake—4 ft to 7 ft long; very slow onset of cardiac or respiratory distress; moderate mortality, but because death can be sudden and unexpected, it is the most dangerous of the Australian snakes; antivenom.

Barba Amarilla or fer-de-lance—up to 7 ft long; from tropical Mexico to Brazil; severe tissue damage common; moderate mortality; antivenom.

Black mamba—up to 14 ft long, fast-moving; S and central Africa; rapid onset of dizziness, difficulty breathing, erratic heart-beat; mortality high, nears 100% without antivenom.

Boomslang—less than 6 ft long; African savannahs; rapid onset of nausea and dizziness, often followed by slight recovery and then sudden death from internal hemorrhaging; bites rare, mortality high; antivenom.

Bushmaster—up to 12 ft long; wet tropical forests of Central and S America; few bites occur, but mortality rate is high.

Common, or Asian, cobra—4 ft to 8 ft long; throughout southern Asia; considerable tissue damage, sometimes paralysis; mortality probably not more than 10%; antivenom.

Copperhead—less than 4 ft long; from New England to Texas; pain and swelling; very seldom fatal; antivenom seldom needed.

Coral snake—2 ft to 5 ft long; in Americas south of Canada; bite may be painless; slow onset of paralysis, impaired breathing; mortalities rare, but high without antivenom and mechanical respiration.

Cottonmouth water moccasin—up to 5 ft long; wetlands of southern U.S. from Virginia to Texas; rapid onset of severe pain, swelling; mortality low, but tissue destruction can be extensive; antivenom.

Death adder—less than 3 ft long; Australia; rapid onset of faintness, cardiac and respiratory distress; at least 50% mortality without antivenom.

Desert horned viper—up to 2 ft long; dry areas of Africa and western Asia; swelling and tissue damage; low mortality; antivenom.

European viper—1 ft to 3 ft long; throughout Europe; bleeding and tissue damage; mortality low; antivenom.

Gaboon viper—more than 6 ft long, fat, 2-in. fangs; south of the Sahara; massive tissue damage, internal bleeding; few recorded bites.

King cobra—up to 16 ft long; throughout southern Asia; rapid swelling, dizziness, loss of consciousness, difficulty breathing, erratic heartbeat; mortality varies sharply with amount of venom involved, but most bites involve nonfatal amounts; antivenom.

Krait—up to 5 ft long; SE Asia; rapid onset of sleepiness, numbness; up to 50% mortality even with use of antivenom.

Puff adder—up to 5 ft long, fat; south of the Sahara, throughout the Middle East; rapid large swelling, great pain, dizziness; moderate mortality, often from internal bleeding; antivenom.

Rattlesnake—2 ft to 6 ft long; throughout W Hemisphere; rapid onset of severe pain, swelling; mortality low, but amputation of affected digits is sometimes necessary; antivenom. Mojave rattler may produce temporary paralysis.

Ringhals, or spitting, cobra—5 ft to 7 ft long; southern Africa; squirts venom through holes in front of fangs as a defense; venom is severely irritating, can cause blindness.

Russell's viper or tic-polonga—more than 5 ft long; throughout Asia; internal bleeding; bite reports common; moderate mortality rate; antivenom.

Saw-scaled, or carpet, viper—up to 2 ft long; dry areas from India to Africa; severe bleeding, fever; high mortality, causes more human fatalities than any other snake; antivenom.

Sea snakes—3 ft to 10 ft long; throughout Pacific, Indian oceans except NE Pacific; almost painless bite; variety of muscle pain, paralysis; mortality rate low, many bites not envenomed; some antivenoms.

Sharp-nosed pit viper or one hundred pace snake—up to 5 ft long; S Vietnam, Taiwan, and China; the most toxic of Asian pit vipers; very rapid onset of swelling and tissue damage, internal bleeding; moderate mortality; antivenom.

Taipan—up to 11 ft long; Australia and New Guinea; rapid paralysis with severe breathing difficulty; mortality nears 100% without antivenom.

Tiger snake—2 ft to 6 ft long; S Australia; pain, numbness, mental disturbances with rapid paralysis; may be deadliest of all land snakes, but antivenom is quite effective.

Yellow, or cape, cobra—7 ft long; southern Africa; most toxic venom of any cobra; rapid onset of swelling, breathing and cardiac difficulties; mortality is high without treatment; antivenom.

Note: Not all bites by venomous snakes are actually envenomed. Any animal bite, however, carries the danger of tetanus, and anyone suffering a venomous snake bite should seek medical attention. Antivenoms do not cure; they are only an aid in the treatment of bites. Mortality rates above are for envenomed bites; low mortality, c. 2% or less; moderate, 2-5%; high, 5-15%.

Lizards

Gila monster—up to 24 in. long, with heavy body and tail; in high desert in SW U.S. and N Mexico; immediate severe pain and transient low blood pressure; no recent mortality.

Mexican beaded lizard—similar to Gila monster; Mexican west coast; reaction and mortality rate similar to Gila monster.

Insects

Ants, bees, wasps, hornets, etc—global distribution; usual reaction is piercing pain in area of sting; not directly fatal, except in cases of massive multiple stings, though many people suffer allergic reactions—swelling and rashes—and a few may die within minutes from severe sensitivity to the venom (anaphylactic shock).

Spiders, scorpions

Atrax or funnel web, spider—several varieties, often large; Australia; slow onset of breathing, circulation difficulties; low mortality; antivenom.

Black widow—small, round-bodied with red hourglass marking; the widow and its relatives are found in tropical and temperate zones; severe musculoskeletal pain, weakness, breathing difficulty, convulsions; may be more serious in small children; low mortality; antivenom. The **redback** spider of Australia has the hourglass marking on its back, rather than on its front, but is otherwise identical to the black widow.

Brown recluse, or fiddleback, spider—small, oblong body; throughout U.S.; pain with later ulceration, which may last months, at place of bite; in severe cases fever, nausea, and stomach cramps; very low mortality.

Scorpion—crablike body with stinger in tail, various sizes; many varieties throughout tropical and subtropical areas; symptoms may include severe pain spreading from the wound, numbness, severe agitation, cramps; severe reaction may include respiratory failure; low mortality, usually in children; antivenoms.

Tarantula—large, hairy spider found around the world; the American tarantula, and probably all other tarantulas, are harmless to humans, though their bite may cause some pain and swelling.

Sea life

Cone-shell—mollusk in small, beautiful shell; S Pacific and Indian oceans; shoots barbs into victims; paralysis; low mortality.

Octopus—global distribution, usually in warm waters; rapid onset of paralysis with breathing difficulty; all varieties produce venom, but only a few can cause death.

Portuguese man-of-war—jellyfish-like, with tentacles up to 100 ft long; in most warm water areas; immediate severe pain; not directly fatal, though shock may cause death in rare cases.

Sea wasp—jellyfish, with tentacles up to 30 ft long; S Pacific; very rapid onset of circulatory problems; high mortality because of speed of toxic reaction; antivenom.

Stingray—several varieties of differing sizes; tropical and temperate seas and some fresh water; severe pain, rapid onset of nausea, vomiting, breathing difficulties; wound area may ulcerate, gangrene may appear; seldom fatal.

Stonefish—brownish fish that lies motionless on bottom of shallow waters; throughout S Pacific and Indian oceans; extraordinary pain, rapid paralysis; low mortality; antivenom available, amount determined by number of puncture wounds; warm water relieves pain.

Speeds of Selected Animals

Source: Natural History magazine. © American Museum of Natural History

Animal	mph	Animal	mph	Animal	mph
Cheetah	70	Mongolian wild ass	40	Human	27.89
Pronghorn antelope	61	Greyhound	39.35	Elephant	25
Wildebeest	50	Whippet	35.50	Black mamba snake	20
Lion	50	Rabbit (domestic)	35	Six-lined race runner (lizard)	18
Thomson's gazelle	50	Mule deer	35	Wild turkey	15
Quarterhorse	47.5	Jackal	35	Squirrel	12
Elk	45	Reindeer	32	Pig (domestic)	11
Cape hunting dog	45	Giraffe	32	Chicken	9
Coyote	43	White-tailed deer	30	Spider (Tegenaria atrica)	1.17
Gray fox	42	Wart hog	30	Giant tortoise	0.17
Hyena	40	Grizzly bear	30	Three-toed sloth	0.15
Zebra	40	Cat (domestic)	30	Garden snail	0.03

Note: Most of these measurements are for maximum speeds over approximate quarter-mile distances. Exceptions are the lion and elephant, whose speeds were clocked in the act of charging; the whippet, which was timed over a 200-yd course; the cheetah, timed over a 100-yd distance; humans, timed over a 15-yd segment of a 100-yd run; and the black mamba, six-lined race runner, spider, giant tortoise, three-toed sloth, and garden snail, which were measured over various small distances.

Top 50 American Kennel Club Registrations, 1999-2009

Source: American Kennel Club, New York, NY

Breed	Rank 2009	2008	2004	1999	Breed	Rank 2009	2008	2004	1999
Labrador Retriever	1	1	1	1	Pembroke Welsh Corgi	26	24	23	30
German Shepherd	2	3	3	3	Mastiff	27	28	33	39
Yorkshire Terrier	3	2	5	9	Australian Shepherd	28	29	34	38
Golden Retriever	4	4	2	2	English Springer Spaniel	29	27	28	26
Beagle	5	5	4	5	Brittany	30	30	30	31
Boxer	6	6	7	10	Weimaraner	31	31	29	34
Bulldog	7	8	14	21	Havanese	32	36	52	92
Dachshund	8	7	6	4	Miniature Pinscher	33	32	21	17
Poodle	9	9	8	6	Basset Hound	34	33	25	22
Shih Tzu	10	10	9	11	Bichon Frise	35	35	26	25
Miniature Schnauzer	11	11	11	14	West Highland White Terrier	36	34	31	29
Chihuahua	12	12	10	7	Papillon	37	37	35	46
Rottweiler	13	14	16	8	Collie	38	38	36	32
Pomeranian	14	13	13	12	Bernese Mountain Dog	39	40	48	59
Doberman Pinscher	15	18	22	23	Bullmastiff	40	39	47	50
German Shorthaired Pointer	16	16	20	24	Redbone Coonhound[1]	41	NA	NA	NA
Pug	17	15	12	16	Vizsla	42	44	44	48
Shetland Sheepdog	18	19	18	15	Bloodhound	43	43	50	51
Boston Terrier	19	17	17	19	Bluetick Coonhound[1]	44	NA	NA	NA
Maltese	20	20	19	20	St. Bernard	45	45	37	37
Great Dane	21	22	27	28	Newfoundland	46	46	45	53
Siberian Husky	22	23	24	18	Chinese Shar-Pei	47	47	41	35
Cocker Spaniel	23	21	15	13	Rhodesian Ridgeback	48	50	55	56
French Bulldog	24	26	49	73	Chesapeake Bay Retriever	49	48	46	41
Cavalier King Charles Spaniel	25	25	32	58	Akita	50	52	51	36

NA = Breed not recognized by AKC in year indicated. (1) Breed entered in AKC registry in 2009.

Top 10 Breed Registrations for Pedigreed Cats, 1979-2005

Source: The Cat Fanciers' Association, Manasquan, NJ; ranked by new registrations, 2005

Breed	2005[1]	2004	2000	1995	1990	1979	Breed	2005[1]	2004	2000	1995	1990	1979
Persian	16,657	18,176	25,524	44,735	60,661	25,819	Birman	991	945	998	990	969	258
Maine Coon	3,932	4,162	4,539	4,332	2,727	401	American Shorthair	802	846	885	1,050	1,176	738
Exotic	3,006	2,838	2,094	1,610	1,311	289	Oriental	764	854	1,085	1,237	1,288	260
Siamese	1,445	1,621	2,131	3,025	3,860	3,607	Tonkinese	704	717	803	780	618	—
Abyssinian	1,344	1,462	1,683	2,469	2,702	1,524	**Total**	**NA**	**41,606**	**49,551**	**70,288**	**84,729**	**37,630**
Ragdoll	1,215	981	—	—	—	—							

(1) Latest figures available. 2006 rankings were identical to 2005, except the 10th most popular breed was the Sphynx.

Trees of the U.S.

Source: American Forests, Washington, DC

Approximately 826 native and naturalized species of trees are grown in the U.S. The oldest living tree in the U.S. is believed to be a bristlecone pine tree in California named Methuselah, estimated to be 4,700 years old. The world's largest known living tree, the General Sherman giant sequoia in California, weighs more than 6,167 tons—as much as 41 blue whales or 740 elephants. Listed here are the 10 largest National Champion trees according to American Forests, as of June 9, 2010.

10 Largest National Champion Trees

Tree type	Girth at 4.5 ft (in.)	Height (ft)	Crown spread (ft)	Total points	Location
Giant sequoia (Gen. Sherman tree)	1,020	274	107	1,321	Sequoia National Park, CA
Coast redwood	950	321	75	1,290	Jedediah Smith Redwoods State Park, CA
Coast redwood	895	307	83	1,223	Jedediah Smith Redwoods State Park, CA
Coast redwood	867	311	101	1,203	Prairie Creek Redwoods State Park, CA
Western red cedar	761	159	45	931	Olympic National Park, WA
Sitka spruce	668	191	96	883	Olympic National Park, WA
Coast Douglas-fir	505	281	71	804	Olympic National Forest, WA
Port-Orford-cedar	522	242	35	773	Siskiyou National Forest, OR
Common baldcypress	647	96	74	762	Cat Island, LA
Blue gum eucalyptus	586	141	126	759	Petrolia, CA

Note: American Forests uses a point system to determine the largest trees. The following calculation is used to determine a tree's total points: trunk circumference (in inches) + height (in feet) + ¼ average crown spread (in feet) = total points.

ENVIRONMENT

U.S. Greenhouse Gas Emissions from Human Activities, 1990-2008

Source: U.S. Environmental Protection Agency

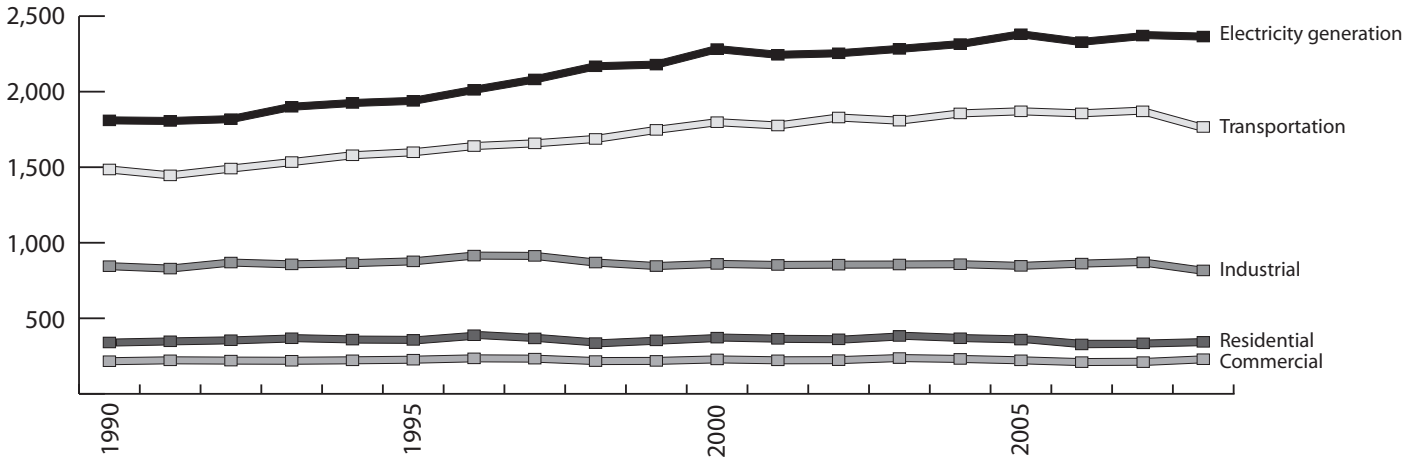
Gas and major source(s)	1990	1995	2000	2005	2006	2007	2008	% change, 2000-08
Carbon dioxide (CO_2)	5,100.8	5,427.3	5,977.2	6,108.4	6,017.2	6,120.2	5,921.2	–0.9%
Fossil fuel combustion	4,735.7	5,029.5	5,593.4	5,753.3	5,652.8	5,757.0	5,572.8	–0.4
Methane (CH_4)	613.4	613.2	586.0	553.2	568.2	569.2	567.6	–3.1
Landfills	149.3	144.1	120.7	125.6	127.1	126.5	126.3	4.6
Enteric fermentation[1]	132.4	143.7	136.8	136.7	139.0	141.2	140.8	2.9
Natural gas systems	129.5	132.6	130.7	103.6	103.1	99.5	96.4	–26.2
Coal mining	84.1	67.1	60.4	56.9	58.3	58.1	67.6	11.9
Nitrous oxide (N_2O)	322.3	342.5	345.5	328.3	329.5	327.7	318.2	–7.9
Agricultural soil management	203.5	205.9	210.1	215.8	211.2	211.0	215.9	2.8
Hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)	90.3	105.7	135.8	143.3	144.8	151.0	149.7	10.3
Total U.S. emissions	**6,126.8**	**6,488.8**	**7,044.5**	**7,133.2**	**7,059.9**	**7,168.1**	**6,956.8**	**–1.2**
Net U.S. emissions[2]	**5,217.3**	**5,646.0**	**6,380.2**	**6,182.8**	**6,100.7**	**6,212.7**	**6,016.4**	**–5.7**

Note: Emissions given in terms of equivalent emissions of carbon dioxide (CO_2), using units of teragrams of carbon dioxide equivalents (Tg CO_2 Eq.). (1) Digestive process of ruminant animals, such as cattle and sheep, producing methane as a by-product. (2) Total emissions minus carbon dioxide absorbed by forests or other means.

U.S. Carbon Dioxide Emissions from Fossil Fuel Combustion, 1990-2008

Source: U.S. Environmental Protection Agency; in teragrams of carbon dioxide equivalents (Tg CO_2 Eq.)

The concept of Global Warming Potential (GWP) was developed by the Intergovernmental Panel on Climate Change (IPCC) to compare the ability of each greenhouse gas to trap heat in the atmosphere relative to another gas. Carbon dioxide (CO_2) from fossil fuel combustion is the largest source of U.S. greenhouse gas emissions, accounting for approximately 79% of GWP weighted emissions since 1990.



Top 15 Nations Producing Carbon Dioxide Emissions, 1980-2008

Source: U.S. Department of Energy

(in million metric tons of carbon dioxide emitted from the consumption of energy; ranked by 2008 totals)

Country	1980	1985	1990	1995	2000	2008	% change, 1980-2008	% change, 1990-2008
China	1,460.20	1,873.52	2,288.95	2,885.42	2,871.53	6,533.55	347%	185%
United States	4,780.83	4,610.67	5,037.07	5,325.90	5,863.81	5,832.82	22	16
Russia[1]	3,092.69	3,547.09	3,833.32	1,607.08	1,560.42	1,729.38	NA	NA
India	293.17	450.47	582.50	876.39	1,009.76	1,494.88	410	157
Japan	948.93	928.55	1,049.49	1,118.96	1,205.07	1,214.19	28	16
Germany[2]	762.03	690.84	700.81	894.27	857.97	828.76	NA	NA
Canada	458.35	444.80	471.72	509.94	574.78	573.50	25	22
United Kingdom	616.34	591.73	604.36	561.79	561.66	571.80	–7	–5
Korea, South	132.27	173.24	243.06	382.48	440.29	542.09	310	123
Iran	116.85	159.97	202.14	262.24	320.67	511.12	337	153
Saudi Arabia	176.92	179.22	208.02	235.29	290.54	466.05	163	124
Italy	372.20	366.32	415.96	431.89	448.21	454.85	22	9
South Africa	236.95	304.60	300.44	350.32	390.16	451.12	90	50
Mexico	240.43	280.83	302.31	321.57	383.33	444.56	85	47
Australia	199.82	238.96	268.95	290.49	358.26	437.44	119	63
World total[3]	**18,488.25**	**19,607.56**	**21,677.33**	**22,218.53**	**23,876.59**	**30,377.31**	**64**	**40**

NA = Not applicable. (1) Numbers for 1980-90 are for the former Soviet Union. (2) Numbers for 1980-90 are for former West Germany. (3) Includes nations not listed.

Air Pollution in Selected World Cities

Source: *World Development Indicators 2010*, The World Bank

Particulate matter in the following table refers to smoke, soot, dust, and liquid droplets from combustion that are in the air—specifically, to particulates less than 10 microns in diameter capable of reaching deep into the respiratory tract. The level of particulates, an important indicator of air quality, is significantly affected by the state of technology and pollution controls. Particulate pollution causes an estimated 500,000 premature deaths each year. **Sulfur dioxide** is a pollutant formed when fossil fuels containing sulfur are burned. **Nitrogen dioxide** is a poisonous, pungent gas formed when nitric oxide combines with hydrocarbons and sunlight, producing a photochemical reaction. Nitrogen oxides are emitted by bacteria, nitrogenous fertilizers, aerobic decomposition of organic matter, biomass combustion, and, especially, burning fuel for vehicles and industrial activities. Emissions of sulfur dioxide and nitrogen oxides lead to **acid rain**.

Data in the following table are average concentrations based on reports from urban monitoring sites, measured in micrograms per cubic meter (mpcm); the figures give a general indication of air quality, but results should be interpreted with caution. World Health Organization standards for acceptable air quality are annual mean concentrations of 20 mpcm for particulate matter less than 10 microns in diameter and 40 mpcm for nitrogen dioxide and daily mean concentrations of 20 mpcm for sulfur dioxide.

City, country	Particulate matter[1]	Sulfur dioxide[2]	Nitrogen dioxide[2]	City, country	Particulate matter[1]	Sulfur dioxide[2]	Nitrogen dioxide[2]
Accra, Ghana	33	NA	NA	Montréal, Canada	17	10	42
Amsterdam, Netherlands	34	10	58	Moscow, Russia	19	109	NA
Athens, Greece	38	34	64	Mumbai, India	57	33	39
Bangkok, Thailand	76	11	23	Nairobi, Kenya	40	NA	NA
Barcelona, Spain	33	11	43	New York, NY-Newark, NJ, U.S.	20	26	79
Beijing, China	90	90	122	Oslo, Norway	18	8	43
Berlin, Germany	21	18	26	Paris, France	11	14	57
Cairo, Egypt	149	69	NA	Prague, Czech Republic	21	14	33
Calcutta, India	116	49	34	Quito, Ecuador	30	22	NA
Capetown, South Africa	13	21	72	Rio de Janeiro, Brazil	35	129	NA
Caracas, Venezuela	16	33	57	Rome, Italy	29	NA	NA
Chicago, IL, U.S.	23	14	57	São Paulo, Brazil	34	43	83
Delhi, India	136	24	41	Seoul, South Korea	37	44	60
Jakarta, Indonesia	84	NA	NA	Shanghai, China	74	53	73
London, United Kingdom	19	25	77	Sofia, Bulgaria	63	39	122
Los Angeles, CA, U.S.	32	9	74	Tokyo, Japan	38	18	68
Manila, Philippines	28	33	NA	Toronto, Canada	20	17	43
Mexico City, Mexico	48	74	130	Warsaw, Poland	42	16	32
Milan, Italy	30	31	248				

NA = Not available. (1) Data collected in 2006. (2) 2001.

Air Quality of Selected U.S. Metropolitan Areas, 2000-09

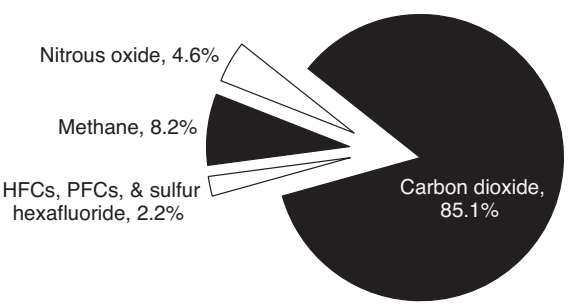
Source: Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency

Data indicate the number of days metropolitan statistical areas failed to meet acceptable air-quality standards.

Metropolitan Statistical Area	2000	2005	2006	2007	2008	2009
Atlanta-Sandy Springs-Marietta, GA	26	5	14	15	4	0
Bakersfield, CA	62	33	41	29	40	23
Baltimore-Towson, MD	7	6	4	5	4	1
Baton Rouge, LA	19	9	5	5	0	0
Boston-Cambridge-Quincy, MA-NH	1	3	0	2	0	0
Chicago-Naperville-Joliet, IL-IN-WI	1	6	0	2	0	1
Cincinnati-Middletown, OH-KY-IN	3	5	1	4	0	0
Cleveland-Elyria-Mentor, OH	2	6	1	2	0	0
Dallas-Fort Worth-Arlington, TX	17	16	13	3	1	3
Denver-Aurora, CO	0	0	2	2	0	0
Detroit-Warren-Livonia, MI	1	7	1	4	1	0
Fresno, CA	69	19	16	19	17	10
Houston-Sugar Land-Baytown, TX	30	19	16	5	3	6
Indianapolis-Carmel, IN	6	1	0	0	0	0
Kansas City, MO-KS	6	4	2	2	0	0
Las Vegas-Paradise, NV	1	3	1	2	0	0
Los Angeles-Long Beach-Santa Ana, CA	36	29	26	18	31	18
Memphis, TN-MS-AR	6	4	4	2	1	0
Miami-Fort Lauderdale-Pompano Beach, FL	0	1	1	0	0	0
Minneapolis-St. Paul-Bloomington, MN-WI	1	2	0	0	0	0
Nashville-Davidson-Murfreesboro-Franklin, TN	5	1	2	2	0	0
New Orleans-Metairie-Kenner, LA	5	0	0	1	0	0
New York-Northern New Jersey-Long Island, NY-NJ-PA	7	12	11	7	2	0
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	9	9	8	7	4	0
Phoenix-Mesa-Scottsdale, AZ	2	1	150	92	84	17
Pittsburgh, PA	7	13	5	8	2	3
Riverside-San Bernardino-Ontario, CA	65	50	46	52	57	47
Sacramento–Arden-Arcade–Roseville, CA	22	22	22	4	19	8
Salt Lake City, UT	9	2	0	9	1	4
San Francisco-Oakland-Fremont, CA	1	0	3	0	1	0
Seattle-Tacoma-Bellevue, WA	1	0	6	2	0	1
Tucson, AZ	0	0	0	0	0	1
Washington-Arlington-Alexandria, DC-VA-MD-WV	5	4	8	3	3	0
Winston-Salem, NC	4	0	0	2	0	1

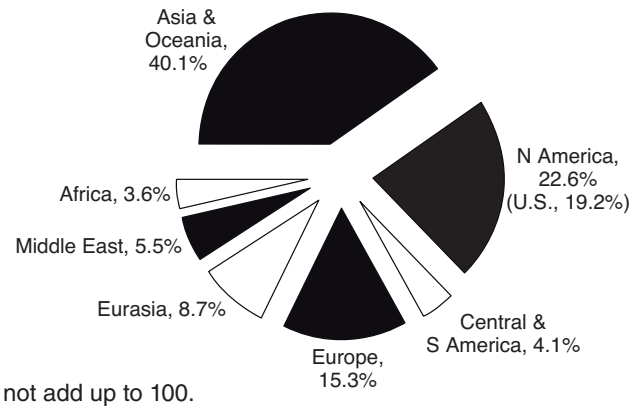
U.S. Greenhouse Gas Emissions, 2008

Source: U.S. Environmental Protection Agency



World Carbon Dioxide Emissions from the Use of Fossil Fuels, 2008

Source: U.S. Energy Information Administration



Note: Emissions sources are independently rounded; percentages may not add up to 100.

Atmospheric Concentration of Carbon Dioxide, 1744-2009

Sources: Carbon Dioxide Information Analysis Center, U.S. Dept. of Energy

Year[1]	CO_2 in ppm[2]	Year[1]	CO_2 in ppm[2]	Year[1]	CO_2 in ppm[2]	Year[1]	CO_2 in ppm[2]	Year[1]	CO_2 in ppm[2]
1744	277	1878	290	1943	308	1990	354	2006	379
1791	280	1903	295	1960	317	2000	367	2007	381
1816	284	1915	301	1970	326	2004	375	2008	383
1843	287	1927	306	1980	339	2005	377	2009	385
1869	289								

(1) Measurements for the years 1744-1943 were derived from a 200-m ice core sample drilled near Siple Station in Antarctica between 1983-84. Measurements from 1960-2004 were taken directly from the atmosphere at Mauna Loa Observatory in Hawaii. Measurements for 2005-09 were taken directly from the atmosphere at Jubany Station, Antarctica. (2) Parts per million.

Emissions of Principal Air Pollutants in the U.S., 1970-2008

Source: Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency; in est. million tons

Pollutant	1970	1975	1980	1985	1990	1995	2000	2005	2008
Carbon monoxide	204.0	188.4	185.4	176.8	154.2	126.8	114.5	93.0	77.7
Nitrogen oxides[1]	26.9	26.4	27.1	25.8	25.5	25.0	22.6	19.1	16.3
Particulate matter[2]									
PM_{10}	13.0	7.6	7.0	41.3	27.8	25.8	23.0	18.3	11.9
$PM_{2.5}$	NA	NA	NA	NA	7.6	6.9	6.5	3.0	2.4
Sulfur dioxide	31.2	28.0	25.9	23.3	23.1	18.6	16.3	14.8	11.4
Volatile org. compounds[1]	3.5	30.8	31.1	27.4	24.1	22.06	17.5	18.4	15.9
Lead	0.221	0.160	0.074	0.022	0.005	0.004	0.003	0.001	0.001
Total[3]	**278.8**	**281.4**	**276.5**	**294.6**	**254.7**	**91.5**	**193.9**	**163.6**	**133.2**

NA = Not available. (1) Ozone, a major air pollutant and the primary constituent of smog, is not emitted directly to the air but is formed by sunlight acting on emissions of nitrogen oxides and volatile organic compounds. (2) PM_{10}, particulates 10 microns or smaller diameter. $PM_{2.5}$, particulates 2.5 microns or smaller diameter. (3) Totals are rounded, as are components of totals.

Carbon Monoxide Emission Estimates, 1970-2008

(in thousand tons)

Source	1970	1975	1980	1985	1990	1995	2000	2006	2007	2008
Fuel combustion, elec. util.	237	276	322	291	363	372	484	661	680	699
Industrial processes[1]	10,610	8,304	7,700	5,894	5,572	5,631	3,628	3,143	3,213	3,283
Transportation[2]	174,602	167,884	160,512	153,216	131,702	107,755	92,239	65,111	61,007	56,902
Total[3]	**204,042**	**188,398**	**185,408**	**176,845**	**154,188**	**126,778**	**114,465**	**87,915**	**82,801**	**77,685**

(1) Industrial fuel combustion, chemical and allied manufacturing, metals processing, and petroleum and other industrial sectors. (2) Highway and off-highway vehicles. (3) Numbers may not add up to totals because not all categories are listed.

Nitrogen Oxides Emission Estimates, 1970-2008

(in thousand tons)

Source	1970	1975	1980	1985	1990	1995	2000	2006	2007	2008
Fuel combustion, elec. util.	4,900	5,694	7,024	6,127	6,663	6,384	5,330	3,446	3,320	3,006
Industrial processes[1]	5,100	4,546	4,110	4,009	3,831	3,909	3,518	2,769	2,755	2,741
Transportation[2]	15,276	15,029	14,846	14,508	13,373	12,989	12,561	10,740	10,101	9,461
Total[3]	**26,882**	**26,378**	**27,080**	**25,757**	**25,527**	**24,955**	**22,599**	**18,110**	**17,321**	**16,339**

(1) Industrial fuel combustion, chemical and allied manufacturing, metals processing, and petroleum and other industrial sectors. (2) Highway and off-highway vehicles. (3) Numbers may not add up to totals because not all categories are listed.

Sulfur Dioxide Emissions Estimates, 1970-2008

(in thousand tons)

Source	1970	1975	1980	1985	1990	1995	2000	2006	2007	2008
Fuel combustion, elec. util.	17,398	18,268	17,469	16,272	15,909	12,080	11,396	9,404	8,941	7,552
Industrial processes[1]	11,661	7,993	6,725	5,597	5,402	4,945	3,516	2,701	2,683	2,663
Transportation[2]	551	635	717	809	874	741	697	827	673	520
Total[3]	**31,218**	**28,044**	**25,926**	**23,307**	**23,077**	**18,619**	**16,348**	**13,655**	**13,006**	**11,429**

(1) Industrial fuel combustion, chemical and allied manufacturing, metals processing, and petroleum and other industrial sectors. (2) Highway and off-highway vehicles. (3) Numbers may not add up to totals because not all categories are listed.

Average Global Temperatures, 1900-2009

Source: National Oceanic and Atmospheric Administration; in degrees Fahrenheit

Period	Avg. °F	Period	Avg. °F	Period	Avg. °F	Period	Avg. °F	Period	Avg. °F
1900-09	56.58	1940-49	57.13	1980-89	57.35	2002	58.02	2006	57.99
1910-19	56.56	1950-59	56.98	1990-99	57.64	2003	58.02	2007	58.01
1920-29	56.76	1960-69	57.04	2000	57.67	2004	57.98	2008	57.88
1930-39	57.01	1970-79	57.06	2001	57.90	2005	58.11	2009	57.99

Note: The warmest year on record was 2005, when the average global temperature reached 58.11°F. The second warmest year on record was 1998.

Toxics Release Inventory, U.S., 2007-08

Source: U.S. Environmental Protection Agency

Releases of toxic chemicals into the environment, by manner of release and industry sector; pollutant transfers by destination of transfer. Numbers may not add up to totals because of rounding.

Pollutant releases	2007 mil lbs	2008 mil lbs
Air releases	1,320	1,141
Surface water discharges	239	247
Underground injection	206	187
On-site land releases	1,796	1,798
Off-site releases	559	489
Total on- and off-site releases	**4,119**	**3,861**
Pollutant transfers	**mil lbs**	**mil lbs**
To recycling	2,113	1,949
To energy recovery	525	448
To treatment	287	257
To publicly owned treatment works	255	255
Other transfers	<1	<1
Off-site to disposal	670	570
Total	**3,850**	**3,480**

Top industries, total releases	2007 %	2008 %
Metal mining	28%	30%
Electric utilities	25	23
Chemicals	12	12
Primary metals	12	11
Paper	5	5
All others	19	18
Top carcinogens, air/water/land releases	**mil lbs**	**mil lbs**
Lead compounds	477	470
Arsenic compounds	94	71
Chromium compounds	49	45
Styrene	43	33
Nickel compounds	30	27
Formaldehyde	21	19

Note: This information does not indicate whether (or to what degree) the public has been exposed to toxic chemicals.

Top 10 States, Total Toxics Releases, 2008

Source: U.S. Environmental Protection Agency

State	Total lbs	State	Total lbs	State	Total lbs	State	Total lbs
Alaska	567,786,837	Indiana	209,293,782	Pennsylvania	150,733,212	Alabama	113,347,399
Ohio	224,021,614	Texas	207,107,666	Louisiana	139,269,950		
Utah	214,966,213	Nevada	202,281,770	Illinois	115,105,875	**U.S. total***	**3,861,339,680**

*Includes District of Columbia, Puerto Rico, American Samoa, Guam, Northern Marianas, and the Virgin Islands.

Hazardous Waste Sites in the U.S., 2009

Source: *National Priorities List*, U.S. Environmental Protection Agency, June 2009

State/territory	Proposed Gen.	Proposed Fed.	Final Gen.	Final Fed.	Total
Alabama	2	0	10	3	15
Alaska	0	0	1	5	6
Arizona	0	0	7	2	9
Arkansas	0	0	9	0	9
California	2	0	70	24	96
Colorado	2	0	15	3	20
Connecticut	1	0	13	1	15
Delaware	1	0	13	1	15
District of Columbia	0	0	0	1	1
Florida	3	0	46	6	55
Georgia	1	0	13	2	16
Hawaii	0	0	1	2	3
Idaho	3	0	4	2	9
Illinois	4	1	40	4	48
Indiana	0	0	32	0	32
Iowa	1	0	10	1	12
Kansas	1	0	10	1	12
Kentucky	0	0	13	1	14
Louisiana	3	0	8	1	12
Maine	0	0	9	3	12
Maryland	1	0	8	10	19
Massachusetts	1	0	25	6	32
Michigan	2	1	66	0	69
Minnesota	0	0	23	2	25
Mississippi	2	0	4	0	6
Missouri	1	0	27	3	31
Montana	2	0	15	0	17
Nebraska	0	0	12	1	13
Nevada	0	0	1	0	1
New Hampshire	1	0	19	1	21
New Jersey	2	0	104	8	114
New Mexico	1	0	12	1	14
New York	4	0	82	4	90
North Carolina	1	0	33	2	36
North Dakota	0	0	0	0	0
Ohio	5	2	31	3	41
Oklahoma	1	0	7	1	9
Oregon	0	0	11	2	13
Pennsylvania	2	0	89	6	97
Rhode Island	0	0	10	2	12
South Carolina	0	0	24	2	26
South Dakota	0	0	1	1	2
Tennessee	1	1	10	3	15
Texas	2	0	44	4	50
Utah	3	0	12	4	19
Vermont	0	0	11	0	11
Virginia	0	0	20	11	31
Washington	0	0	35	13	48
West Virginia	0	0	7	2	9
Wisconsin	1	0	38	0	39
Wyoming	0	0	1	1	2
Guam	0	0	1	1	2
Puerto Rico	0	0	13	1	14
Virgin Islands	0	0	1	0	1
Total	**56**	**5**	**1,121**	**158**	**1,340**

Note: Fed. = Hazardous waste produced by federal agency; Gen. = Non-Fed. sites. Sites that have been proposed for federal Superfund financing are listed under Proposed; sites that have qualified for Superfund financing are under Final.

Renewable Water Resources, 2008

Source: Food and Agriculture Organization, United Nations

Globally, water supplies are abundant, but they are unevenly distributed among and within countries. In some areas, water withdrawals are so high, relative to supply, that surface water supplies are shrinking, and groundwater reserves are being de-pleted faster than they can be replenished by precipitation. The U.S. (including Alaska and Hawaii) has a total of 2,818 cubic kilometers (cubic km) of internal renewable water resources, an actual total (which takes into account incoming water flow from outside the country) of 3,069 cubic km, and 9,847 cubic meters (cubic m) per capita. Totals for all countries are 43,002 cubic km of internal resources, 54,337 cubic km of actual resources, and 6,380 cubic m per capita.

These numbers, and those in the tables below, were published by the Food and Agriculture Organization in 2008; the tables draw upon studies done over a number of years and use 2007 population data. Numbers represent each given country's internal resources.

Countries With Greatest Water Resources, 2008

Country	Cubic meters per capita	Total cubic km
French Guiana	609,091	134.0
Iceland	539,683	170.0
Guyana	315,858	241.0
Suriname	236,893	88.0
Congo, Republic of	230,152	222.0
Papua New Guinea	121,788	801.0
Bhutan	113,537	78.0
Gabon	113,260	164.0
Solomon Islands	87,476	44.7
Canada	87,255	2,850.0

Countries With Lowest Water Resources, 2008

Country	Cubic meters per capita	Total cubic km
Kuwait	6.9	0.0
United Arab Emirates	33.4	0.2
Qatar	45.3	0.1
Bahamas	59.2	0.0
Yemen	91.6	2.1
Saudi Arabia	95.2	2.4
Libya	95.3	0.6
Maldives	98.4	0.0
Malta	124.1	0.1
Singapore	130.0	0.6

Top 50 Countries by Forest Area, 1990-2007

Source: World Resources Institute; United Nations

(in square kilometers; ranked by 2007 area)

Country	Forest area in 2007	Forest area in 1990	% change in forest area 1990-2007	% of land area covered by forest in 2007
Russia	8,085,986	8,089,500	0.0%	49.4%
Brazil	4,714,920	5,200,270	–9.3	55.7
Canada	3,101,340	3,101,340	0.0	34.1
United States	3,034,070	2,986,480	1.6	33.1
China	2,054,056	1,571,410	30.7	22.0
Australia	1,632,912	1,679,040	–2.7	21.3
Congo, Dem. Rep.	1,329,707	1,405,305	–5.4	58.7
Indonesia	847,522	1,165,670	–27.3	46.8
Peru	685,536	701,560	–2.3	53.6
India	677,598	639,390	6.0	22.8
Sudan	663,677	763,814	–13.1	27.9
Mexico	637,172	690,160	–7.7	32.8
Colombia	606,340	614,390	–1.3	54.6
Angola	588,544	609,760	–3.5	47.2
Bolivia	581,996	627,950	–7.3	53.7
Venezuela	471,378	520,260	–9.4	53.4
Zambia	415,624	491,240	–15.4	55.9
Tanzania	344,326	414,410	–16.9	38.9
Argentina	327,214	352,620	–7.2	12.0
Myanmar	312,892	392,190	–20.2	47.9
Papua New Guinea	291,588	315,230	–7.5	64.4
Sweden	275,496	273,670	0.7	67.1
Japan	248,648	249,500	–0.3	68.2
Central African Rep.	226,958	232,030	–2.2	36.4
Finland	225,100	221,940	1.4	74.0
Congo	224,373	227,263	–1.3%	65.7%
Gabon	217,546	219,270	–0.8	84.4
Cameroon	208,050	245,450	–15.2	44.0
Malaysia	206,096	223,760	–7.9	62.7
Mozambique	191,620	200,120	–4.2	24.4
Spain	185,066	134,790	37.3	37.1
Paraguay	181,178	211,570	–14.4	45.6
Zimbabwe	169,140	222,340	–23.9	43.7
Chile	162,358	152,630	6.4	21.8
Laos	159,860	173,140	–7.7	69.3
France	156,352	145,380	7.5	28.5
Guyana	151,035	151,040	0.0	76.7
Suriname	147,760	147,760	0.0	94.7
Thailand	144,024	159,650	–9.8	28.2
Vietnam	134,134	93,630	43.3	43.3
Madagascar	127,637	136,919	–6.8	21.9
Ethiopia	127,180	151,140	–15.9	12.7
Mali	123,715	140,715	–12.1	10.1
Chad	117,626	131,097	–10.3	9.3
Botswana	117,062	137,180	–14.7	20.7
Germany	110,760	107,410	3.1	31.8
Iran	110,750	110,750	0.0	6.8
Ecuador	104,582	138,170	–24.3	37.8
Cote d'Ivoire	104,358	102,220	2.1	32.8
Nigeria	102,698	172,340	–40.4	11.3
World	**39,373,237**	**40,747,288**	**–3.4**	**NA**

NA = Not available.

Selected Endangered Animal Species

Source: Fish and Wildlife Service, U.S. Dept. of the Interior

Common name	Scientific name	Range
Albatross, Amsterdam	Diomedia amsterdamensis	Amsterdam Island, Indian Ocean
Antelope, giant sable	Hippotragus niger variani	Angola
Armadillo, giant	Pridontes maximus	Venezuela, Guyana to Argentina
Babirusa	Babyrousa babyrussa	Indonesia
Bandicoot, desert	Perameles eremiana	Australia
Bat, gray	Myotis grisescens	Central, southeastern U.S.
Bear, Mexican grizzly	Ursus arctos	Mexico
Bison, wood	Bison bison athabascae	Canada, northwestern U.S.
Bobcat, Mexican	Lynx rufus escuinapae	Central Mexico
Caiman, black	Melanosuchus niger	Amazon basin
Camel, Bactrian	Camelus bactrianus	Mongolia, China
Caribou, woodland	Rangifer tarandus caribou	Canada, northwestern U.S.

Common name	Scientific name	Range
Cheetah	Acinonyx jubatus	Africa to India
Chimpanzee, pygmy	Pan paniscus	Dem. Rep. of the Congo
Condor, California	Gymnogyps californianus	U.S. (AZ, CA, OR), Mexico (Baja California)
Crane, whooping	Grus americana	Canada, Mexico, U.S. (Rocky Mts. to Carolinas)
Crocodile, American	Crocodylus acutus	Mexico, Caribbean Sea, Central and S America
Deer, Columbian white-tailed	Odocoileus virginianus leucurus	U.S. (OR, WA)
Dolphin, Chinese river	Lipotes vexillifer	China
Dugong	Dugong dugon	East Africa to southern Japan
Elephant, Asian	Elephas maximus	South central and southeastern Asia
Fox, northern swift	Vulpes velox hebes	U.S. (northern plains), Canada
Frog, mountain yellow-legged	Rana muscosa	Western U.S. (CA, NV)
Gorilla	Gorilla gorilla	Central and W Africa
Hartebeest, Tora	Alcelaphus buselaphus tora	Egypt, Ethiopia, Sudan
Hawk, Hawaiian	Buteo solitarius	U.S. (HI)
Hyena, brown	Parahyaena brunnea	Southern Africa
Impala, black-faced	Aepyceros melampus petersi	Angola, Namibia
Kangaroo, Tasmanian forester	Macropus giganteus tasmaniensis	Australia (Tasmania)
Leopard	Panthera pardus	Africa and Asia
Lion, Asiatic	Panthera leo persica	Turkey to India
Manatee, West Indian	Trichechus manatus	Southeastern U.S., Caribbean Sea, Mexico
Monkey, spider	Ateles geoffroyi frontatus	Costa Rica, Nicaragua
Ocelot	Leopardus pardalis	U.S. (AZ, TX) to Central and S America
Orangutan	Pongo pygmaeus	Borneo, Sumatra
Ostrich, West African	Struthio camelus spatzi	W Sahara
Otter, marine	Lontra felina	Peru south to Straits of Magellan
Panda, giant	Ailuropoda melanoleuca	China
Panther, Florida	Puma concolor coryi	U.S. (LA and AR to SC and FL)
Parakeet, golden	Aratinga guarouba	Brazil
Parrot, imperial	Amazona imperialis	West Indies (Dominica)
Penguin, Galapagos	Spheniscus mendiculus	Ecuador (Galapagos Islands)
Puma, eastern	Puma concolor couguar	Eastern N America (presumed extinct in wild)
Python, Indian	Python molurus molurus	Sri Lanka, India
Rat-kangaroo, brush-tailed	Bettongia penicillata	Australia
Rhinoceros, black	Diceros bicornis	Sub-Saharan Africa
Rhinoceros, northern white	Ceratotherium simum cottoni	Dem. Rep. of the Congo, Sudan, Uganda, Central African Rep.
Salamander, Chinese giant	Andrias davidianus	Western China
Sea-lion, Steller	Eumetopias jubatus	Alaska, Russia
Squirrel, Carolina northern flying	Glaucomys sabrinus coloratus	U.S. (NC, TN)
Tiger	Panthera tigris	Asia
Tortoise, Galapagos	Geochelone nigra	Ecuador (Galapagos Islands)
Whale, gray	Eschrichtius robustus	N Pacific Ocean
Whale, humpback	Megaptera novaeangliae	All major oceans
Wolf, red	Canis rufus	U.S. (FL, NC, SC)
Woodpecker, ivory-billed	Campephilus principalis	South central and southeastern U.S., Cuba
Yak, wild	Bos mutus	China (Tibet), India
Zebra, mountain	Equus zebra zebra	South Africa

List of Endangered and Threatened Species, 2010

Source: Fish and Wildlife Service, U.S. Dept. of the Interior; as of Aug. 2010

	Endangered		Threatened			
Group	**U.S.**	**Foreign**	**U.S.**	**Foreign**	**Total species[1]**	**U.S. species with recovery plans**
Mammals	71	255	15	20	361	60
Birds	76	184	16	7	283	85
Reptiles	13	66	24	16	119	38
Amphibians	14	8	11	1	34	17
Fishes	74	11	66	1	152	102
Clams	62	2	8	0	72	70
Snails	24	1	11	0	36	30
Insects	50	4	10	0	64	40
Arachnids	12	0	0	0	12	12
Crustaceans	19	0	3	0	22	18
Corals	0	0	2	0	2	0
Animal subtotal	**415**	**531**	**166**	**45**	**1,157**	**472**
Flowering plants	615	1	146	0	762	638
Conifers and cycads	2	0	1	2	5	3
Ferns and allies	27	0	2	0	29	26
Lichens	2	0	0	0	2	2
Plant subtotal	**646**	**1**	**149**	**2**	**798**	**669**
Grand total	**1,061**	**532**	**315**	**47**	**1,955**	**1,141**

(1) Some species are classified as both endangered and threatened. The table tallies these dual status species only once, as endangered. The dual status species, all tallied as endangered, are (U.S.) California tiger salamander, chinook salmon, chum salmon, coho salmon, gray wolf, green sea turtle, grizzly bear, piping plover, roseate tern, sockeye salmon, steelhead, Steller sea-lion; (non-U.S.) argali, chimpanzee, dugong, leopard, saltwater crocodile.

METEOROLOGY

National Weather Service Watches and Warnings

Source: National Weather Service, National Oceanic and Atmospheric Admin. (NOAA), U.S. Dept. of Commerce; *Glossary of Meteorology*, American Meteorological Society

The **National Weather Service** issues watches, warnings, and advisories for specific geographic areas to alert people to the possibility or imminent arrival of severe weather. A severe thunderstorm or tornado watch is issued when a severe convective storm, covering a relatively small geographic area or moving in a narrow path, is sufficiently intense to threaten life and property. Excessive localized convective rains are not classified as severe storms but are often the product of severe local storms. Such rainfall may result in phenomena, such as flash floods, that threaten life and property. Lightning occurs with all thunderstorms and, along with flash floods, is a leading cause of storm deaths and injuries.

Cyclone: atmospheric circulation of winds rotating counterclockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere. Tornadoes, hurricanes, and the lows shown on weather maps are all examples of cyclones. Cyclones are usually accompanied by precipitation or stormy weather.

Severe thunderstorm: thunderstorm (any local atmospheric disturbance) that produces a tornado, winds more than 50 knots (58 mph), and/or hail at least ¾ inch in diameter. A **severe thunderstorm watch** indicates a severe thunderstorm is likely to develop within a 4- to 8-hr period. A **severe thunderstorm warning** indicates a severe thunderstorm has been sighted by radar or reported by a spotter.

Tornado: violent rotating column of air that extends from the base of a thunderstorm to the ground. On a local scale, it is the most destructive of all atmospheric phenomena. Tornado paths range from a few feet to more than 100 mi long (avg. 5 mi) and from a few feet to more than 1 mi in diameter (avg. 220 yds). The average forward speed is 30 mph, and wind speeds can reach to more than 200 mph.

Subtropical storm: cyclone that develops over subtropical waters (20-40° lat.) with 1-min. sustained surface winds of 34 knots (39 mph) or more. It may form over warm or cold water and can develop into a tropical storm or hurricane.

Tropical storm: cyclone that develops over tropical waters (23.5° N-23.5° S lat.) with 1-min. sustained surface winds between 34 and 63 knots (39-73 mph). A **tropical storm watch** is issued when tropical storm conditions pose a threat to specified coastal areas within 36 hours. A **tropical storm warning** is issued when such conditions are expected in a specified coastal area within 24 hours.

Hurricane: tropical cyclone having 1-min. sustained surface winds of 64 knots (74 mph) or more. (West of the international date line, north of the equator, such storms are known as **typhoons**.) The hurricane-force winds form a circle or oval, sometimes as wide as 300 mi in diameter. In the lower latitudes, hurricanes usually move W or NW at 10-15 mph. When the center approaches 25° to 30° N lat., the direction of motion often changes to the NE, with increased forward speed. In the Atlantic, hurricane season is June 1-Nov. 30. Hurricane season is May 15-Nov. 30 in the eastern Pacific. A **hurricane warning** is issued when a hurricane is forecast for an area within 24 hours.

Winter storm and **blizzard:** A **winter storm watch** is issued when there is a potential for heavy snow or significant ice accumulations, usually at least 24-36 hours in advance. A **winter storm warning** is issued when a winter storm is producing or is forecast to produce heavy snow or significant ice accumulations. A **blizzard warning** is issued for winter storm conditions where winds are 35 mph or more and there is sufficient falling and/or blowing snow to frequently reduce visibility to less than ¼ mi for at least 3 hours.

Floods take many forms. **River flooding:** occurs when rains, sometimes coupled with melting snow, quickly fill river basins with an excess of water. Torrential rains from decaying hurricanes or tropical systems are also a major cause. **Coastal flooding:** tropical storm and hurricane winds or intense offshore low pressure systems can drive ocean water inland. Coastal floods can also be produced by sea waves called **tsunamis**, sometimes referred to as tidal waves, produced by earthquakes or volcanic activity. **Flash flooding:** usually due to copious amounts of rain falling in a short time, flash flooding typically occurs within 6 hours of a rain event. Ice can also cause flash flooding. When ice accumulates at natural or artificial obstructions, it can stop the flow of water. The resulting buildup of water can lead to flooding upstream. If the jam suddenly gives way, a flash flood can occur downstream.

Flash floods account for the majority of flood deaths in the U.S. and are the leading cause of deaths associated with thunderstorms. Urbanization significantly increases runoff because less rain is absorbed by the terrain, making flash flooding in urban areas extremely dangerous. Streets can become swift-moving rivers, and basements can fill with water.

A **(flash) flood watch** indicates flooding or flash flooding is possible within a designated area. A **(flash) flood warning** indicates flooding is in progress, imminent, or highly likely.

National Weather Service Marine Warnings and Advisories

Primary sources of dissemination are commercial radio, TV, U.S. Coast Guard radio stations, and NOAA VHF-FM broadcasts. NOAA broadcasts on a group of frequencies, the most common being 162.40 to 162.55 MHz. These broadcasts can usually be received within 25 nautical mi of the transmission site.

Small craft advisory: alerts mariners to sustained weather and/or sea conditions, present or forecast, potentially hazardous to small boats, including winds 20-33 knots (23-38 mph) and/or dangerous wave conditions. The advisory is also issued when sea or lake ice exists that could be hazardous to small boats. Criteria vary depending on region and type of marine environment.

Special marine warning: indicates potentially hazardous weather conditions, usually of short duration (2 hours or less) and producing wind speeds of 34 knots (39 mph) or more, not adequately covered by existing marine warnings.

Gale warning: indicates winds of 34-47 knots (39-54 mph) not directly associated with a tropical storm are forecast for the area.

Tropical storm warning: indicates that winds 34-63 knots (39-73 mph) associated with a tropical storm are forecast to occur within 24 hours.

Storm warning: indicates winds 48-63 knots (55-73 mph) not directly associated with a tropical storm are forecast for the area.

Hurricane warning: indicates that winds 64 knots (74 mph) or greater associated with a hurricane are forecast for the area within 24 hours.

Monthly Normal Mean Temperatures, Normal Precipitation, U.S. Cities

Source: National Climatic Data Center, NESDIS, NOAA, U.S. Dept. of Commerce

Normals are averages covering a 30-year period. The temperature and precipitation normals given here are based on records for 1971-2000. Temperatures listed below represent means of the normal daily maximum and normal daily minimum temperatures for each month. For stations that did not have continuous records from the same site for the entire 30 years, the means have been adjusted to the record at the present site. (*) = city station. Other figures are for airport stations. T = Temperature in Fahrenheit; P = Precipitation in inches.

	Jan.		Feb.		Mar.		Apr.		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
Station	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**
Albany, NY	22	2.7	25	2.3	35	3.2	47	3.3	58	3.7	66	3.7	71	3.5	69	3.7	61	3.3	49	3.2	39	3.3	28	2.8
Albuquerque, NM	36	0.5	41	0.4	48	0.6	56	0.5	65	0.6	75	0.7	79	1.3	76	1.7	69	1.1	57	1.0	44	0.6	36	0.5
Anchorage, AK	16	0.7	19	0.7	26	0.7	36	0.5	47	0.7	55	1.1	58	1.7	56	2.9	48	2.9	34	2.1	22	1.1	18	1.1
Asheville, NC	36	3.1	39	3.2	46	3.9	54	3.2	62	3.5	69	3.2	73	3.0	72	3.3	66	3.0	55	2.4	46	2.9	39	2.6
Atlanta, GA	43	5.0	47	4.7	54	5.4	62	3.6	70	4.0	77	3.6	80	5.1	79	3.7	73	4.1	63	3.1	53	4.1	45	3.8
Atlantic City, NJ	32	3.6	34	2.9	42	4.1	51	3.5	61	3.4	70	2.7	75	3.9	74	4.3	66	3.1	55	2.9	46	3.3	37	3.2
Baltimore, MD	32	3.5	36	3.0	44	3.9	53	3.0	63	3.9	72	3.4	77	3.9	75	3.7	67	4.0	55	3.2	46	3.1	37	3.4
Barrow, AK	–14	0.1	–16	0.1	–14	0.1	–1	0.1	20	0.1	35	0.3	40	0.9	39	1.0	31	0.7	15	0.4	–1	0.2	–11	0.1
Birmingham, AL	43	5.5	47	4.2	55	6.1	61	4.7	69	4.8	76	3.8	80	5.1	80	3.5	74	4.1	63	3.2	53	4.6	46	4.5
Bismarck, ND	10	0.5	18	0.5	30	0.9	43	1.5	56	2.2	65	2.6	70	2.6	69	2.2	58	1.6	45	1.3	28	0.7	15	0.4
Boise, ID	30	1.4	37	1.1	44	1.4	51	1.3	59	1.3	67	0.7	75	0.4	74	0.3	64	0.8	53	0.8	40	1.4	31	1.4
Boston, MA	29	3.9	32	3.3	39	3.9	48	3.6	59	3.2	68	3.2	74	3.1	72	3.4	65	3.5	54	3.8	45	4.0	35	3.7
Buffalo, NY	25	3.2	26	2.4	34	3.0	45	3.0	57	3.4	66	3.8	71	3.1	69	3.9	62	3.8	51	3.2	40	3.9	30	3.8
Burlington, VT	18	2.2	20	1.7	31	2.3	44	2.9	57	3.3	66	3.4	71	4.0	68	4.0	59	3.8	48	3.1	37	3.1	25	2.2
Caribou, ME	10	3.0	13	2.1	25	2.6	38	2.6	52	3.3	61	3.3	66	3.9	63	4.2	54	3.3	43	3.0	31	3.1	16	3.2
Charleston, SC	48	4.1	51	3.1	58	4.0	64	2.8	72	3.7	78	5.9	82	6.1	81	6.9	76	6.0	66	3.1	58	2.7	51	3.2
Charleston, WV	33	3.3	37	3.2	45	3.9	54	3.3	62	4.3	70	4.1	74	4.9	73	4.1	66	3.5	55	2.7	46	3.7	38	3.3
Chicago, IL	22	1.8	27	1.6	37	2.7	48	3.7	59	3.4	68	3.6	73	3.5	72	4.6	64	3.3	52	2.7	39	3.0	27	2.4
Cleveland, OH	26	2.5	28	2.3	38	2.9	48	3.4	59	3.5	68	3.9	72	3.5	70	3.7	63	3.8	52	2.7	42	3.4	31	3.1
Columbus, OH	28	2.5	32	2.2	42	2.9	52	3.3	63	3.9	71	4.1	75	4.6	74	3.7	67	2.9	55	2.3	44	3.2	34	2.9
Dallas-Ft. Worth, TX	44	1.9	49	2.4	57	3.1	65	3.2	73	5.2	81	3.2	85	2.1	84	2.0	78	2.4	67	4.1	55	2.6	47	2.6
Denver, CO	29	0.5	33	0.5	40	1.3	48	1.9	57	2.3	68	1.6	73	2.2	72	1.8	62	1.1	51	1.0	38	1.0	30	0.6
Des Moines, IA	20	1.0	27	1.2	38	2.2	51	3.6	62	4.3	71	4.6	76	4.2	74	4.5	65	3.2	53	2.6	38	2.1	25	1.3
Detroit, MI	25	1.9	27	1.9	37	2.5	48	3.1	60	3.1	69	3.6	74	3.2	72	3.1	64	3.3	52	2.2	41	2.7	30	2.5
Dodge City, KS	30	0.6	36	0.7	44	1.8	54	2.3	64	3.0	74	3.2	80	3.2	78	2.7	69	1.7	57	1.5	42	1.0	33	0.8
Duluth, MN	8	1.1	15	0.8	25	1.7	39	2.1	52	3.0	60	4.3	66	4.2	64	4.2	55	4.1	44	2.5	28	2.1	14	0.9
Fairbanks, AK	–10	0.6	–4	0.4	11	0.3	32	0.2	49	0.6	60	1.4	62	1.7	56	1.7	45	1.1	24	1.0	2	0.7	–6	0.7
Fresno, CA	46	2.2	51	2.1	56	2.2	61	0.8	69	0.4	76	0.2	81	0.0	80	0.0	75	0.3	65	0.7	53	1.1	45	1.3
Galveston, TX*	56	4.1	58	2.6	64	2.8	70	2.6	77	3.7	82	4.0	84	3.5	84	4.2	81	5.8	74	3.5	65	3.6	58	3.5
Grand Rapids, MI	22	2.0	25	1.5	35	2.6	46	3.5	58	3.4	67	3.7	71	3.6	69	3.8	61	4.3	50	2.8	38	3.4	28	2.7
Hartford, CT	26	3.8	29	3.0	38	3.9	49	3.9	60	4.4	69	3.9	74	3.7	72	4.0	63	4.1	52	3.9	42	4.1	31	3.6
Helena, MT	20	0.5	26	0.4	35	0.6	44	0.9	53	1.8	61	1.8	68	1.3	67	1.3	56	1.1	45	0.7	31	0.5	21	0.5
Honolulu, HI	73	2.7	73	2.4	74	1.9	76	1.1	77	0.8	80	0.4	81	0.5	82	0.5	82	0.7	80	2.2	78	2.3	75	2.9
Houston, TX	52	3.7	55	3.0	62	3.4	69	3.6	76	5.2	81	5.4	84	3.2	83	3.8	79	4.3	70	4.5	61	4.2	54	3.7
Huron, SD	14	0.5	21	0.6	33	1.7	46	2.3	58	3.0	68	3.3	73	2.9	72	2.1	61	1.8	48	1.6	31	0.9	19	0.4
Indianapolis, IN	27	2.5	31	2.4	42	3.4	52	3.6	63	4.4	72	4.1	75	4.4	74	3.8	66	2.9	55	2.8	43	3.6	32	3.0
Jackson, MS	45	5.7	49	4.5	57	5.7	63	6.0	72	4.9	79	3.8	81	4.7	81	3.7	76	3.2	64	3.4	55	5.0	48	5.3
Jacksonville, FL	53	3.7	56	3.2	62	3.9	67	3.1	73	3.5	79	5.4	82	6.0	81	6.9	78	7.9	69	3.9	62	2.3	55	2.6
Juneau, AK	26	4.8	29	4.0	34	3.5	41	3.0	48	3.5	54	3.4	57	4.1	56	5.4	50	7.6	42	8.3	33	5.4	29	5.4
Kansas City, MO	27	1.2	33	1.3	44	2.4	54	3.4	64	5.4	74	4.4	79	4.4	77	3.5	68	4.6	57	3.3	43	2.3	31	1.6
Knoxville, TN	38	4.6	42	4.0	50	5.2	58	4.0	66	4.7	74	4.0	78	4.7	77	2.9	71	3.0	59	2.7	49	4.0	41	4.5
Lander, WY	20	0.5	26	0.5	36	1.2	44	2.1	53	2.4	64	1.2	71	0.8	69	0.6	59	1.1	46	1.4	30	1.0	21	0.6
Lexington, KY	32	3.3	36	3.3	46	4.4	55	3.7	64	4.8	72	4.6	76	4.8	75	3.8	68	3.1	57	2.7	46	3.4	36	4.0
Little Rock, AR	40	3.6	45	3.3	53	4.9	61	5.5	70	5.1	78	4.0	82	3.3	81	2.9	74	3.7	63	4.3	52	5.7	43	4.7
Los Angeles, CA*	57	3.0	58	3.1	58	2.4	61	0.6	63	0.2	66	0.1	69	0.0	71	0.1	70	0.3	67	0.4	62	1.1	58	1.8
Louisville, KY	33	3.3	38	3.3	47	4.4	56	3.9	66	4.9	74	3.8	78	4.3	77	3.4	70	3.1	59	2.8	48	3.8	38	3.7
Marquette, MI*	12	2.6	15	1.9	24	3.1	36	2.8	50	3.1	59	3.2	64	3.0	62	3.6	54	3.7	43	3.7	29	3.3	17	2.4
Memphis, TN	40	4.2	45	4.3	54	5.6	62	5.8	71	5.2	79	4.3	83	4.2	81	3.0	75	3.3	64	3.3	52	5.8	43	5.7
Miami, FL	68	1.9	69	2.1	72	2.6	76	3.4	80	5.5	82	8.5	84	5.8	84	8.6	82	8.4	79	6.2	74	3.4	70	2.2
Milwaukee, WI	21	1.9	25	1.7	35	2.6	45	3.8	56	3.1	66	3.6	72	3.6	71	4.0	63	3.3	51	2.5	38	2.7	26	2.2
Minneapolis, MN	13	1.0	20	0.8	32	1.9	47	2.3	59	3.2	68	4.3	73	4.0	71	4.1	61	2.7	49	2.1	33	1.9	19	1.0
Mobile, AL	61	5.8	65	5.1	71	7.2	77	5.1	84	6.1	89	5.0	91	6.5	91	6.2	87	6.0	79	3.3	70	5.4	63	4.7
Moline, IL	21	1.6	27	1.5	39	2.9	51	3.8	62	4.3	71	4.6	75	4.0	73	4.4	65	3.2	53	2.8	39	2.7	26	2.2
Nashua, NH	23	3.9	26	3.1	35	4.1	46	3.9	57	3.7	66	3.9	71	3.7	69	3.8	61	3.6	49	3.9	39	4.2	28	3.7
Nashville, TN	37	4.0	41	3.7	50	4.9	59	3.9	67	5.1	75	4.1	79	3.8	78	3.3	71	3.6	60	2.9	49	4.5	41	4.5
Newark, NJ	31	4.0	34	3.0	42	4.2	52	3.9	63	4.5	72	3.4	77	4.7	76	4.0	68	4.0	56	3.2	46	3.9	36	3.6
New Orleans, LA	53	5.9	56	5.5	62	5.2	68	5.0	76	4.6	81	6.8	83	6.2	83	6.2	79	5.6	70	3.1	61	5.1	55	5.1
New York, NY*	33	3.6	35	2.8	42	3.9	52	3.7	62	4.2	72	3.6	77	4.4	76	4.1	69	3.8	58	3.3	48	3.7	38	3.5
Norfolk, VA	40	3.9	42	3.3	49	4.1	57	3.4	66	3.7	75	3.8	79	5.2	77	4.8	72	4.1	61	3.5	52	3.0	44	3.0
Oklahoma City, OK	37	1.3	42	1.6	51	2.9	60	3.0	68	5.4	77	4.6	82	2.9	81	2.5	73	4.0	62	3.6	49	2.1	40	1.9
Omaha, NE	22	0.8	28	0.8	39	2.1	51	2.9	62	4.4	72	4.0	77	3.9	75	3.2	65	3.2	53	2.2	38	1.8	26	0.9
Philadelphia, PA	32	3.5	35	2.7	43	3.8	53	3.5	64	3.9	72	3.3	78	4.4	76	3.8	69	3.9	57	2.8	47	3.2	37	3.3
Phoenix, AZ	54	0.8	58	0.8	63	1.1	70	0.3	79	0.2	89	0.1	93	1.0	91	0.9	86	0.8	75	0.8	62	0.7	54	0.9
Pittsburgh, PA	28	2.7	31	2.4	40	3.2	50	3.0	60	3.8	68	4.1	73	4.0	71	3.4	64	3.2	53	2.3	42	3.0	33	2.9
Portland, ME	22	4.1	25	3.1	34	4.1	44	4.3	54	3.8	63	3.3	69	3.3	67	3.1	59	3.4	48	4.4	38	4.7	28	4.2
Portland, OR	40	5.1	43	4.2	47	3.7	51	2.6	57	2.4	63	1.6	68	0.7	69	0.9	64	1.7	54	2.9	46	5.6	40	5.7
Providence, RI	29	4.4	31	3.5	39	4.4	49	4.2	59	3.7	68	3.4	73	3.2	72	3.9	64	3.7	53	3.7	44	4.4	34	4.1
Raleigh, NC	40	4.0	43	3.5	51	4.0	59	2.8	67	3.8	75	3.4	79	4.3	77	3.8	71	4.3	60	3.2	51	3.0	43	3.0
Rapid City, SD	22	0.4	27	0.5	35	1.0	45	1.9	55	3.0	65	2.8	72	2.0	71	1.6	61	1.1	48	1.4	33	0.6	25	0.4
Reno, NV	34	1.1	39	1.1	43	0.9	49	0.4	56	0.6	65	0.5	71	0.2	70	0.3	62	0.5	52	0.4	41	0.8	34	0.9
Richmond, VA	36	3.6	40	3.0	48	4.1	57	3.2	65	4.0	74	3.5	78	4.7	76	4.2	70	4.0	58	3.6	49	3.1	40	3.1
St. Louis, MO	30	2.1	35	2.3	46	3.6	57	3.7	67	4.1	77	3.8	80	3.9	78	3.0	70	3.0	58	2.8	45	3.7	34	2.9
Salt Lake City, UT	29	1.4	35	1.3	43	1.9	50	2.0	59	2.1	69	0.8	77	0.7	76	0.8	65	1.3	53	1.6	40	1.4	30	1.2
San Antonio, TX	51	1.7	55	1.8	63	1.9	69	2.6	76	4.7	81	4.3	84	2.0	84	2.6	79	3.0	71	3.9	60	2.6	53	2.0
San Diego, CA	58	2.3	59	2.0	60	2.3	63	0.8	65	0.2	67	0.1	71	0.0	73	0.1	72	0.2	68	0.4	62	1.1	58	1.3
San Francisco, CA	49	4.5	52	4.0	54	3.3	56	1.2	59	0.4	61	0.1	63	0.0	64	0.1	64	0.2	61	1.0	55	2.5	50	2.9
San Juan, PR	77	3.0	77	2.3	78	2.1	79	3.7	81	5.3	82	3.5	82	4.2	82	5.2	82	5.6	82	5.1	80	6.2	78	4.6
Santa Fe, NM	29	0.6	35	0.5	41	0.8	48	0.7	57	1.3	66	1.2	70	2.3	68	2.1	62	1.7	51	1.3	38	1.1	30	0.7
Savannah, GA	49	4.0	53	2.9	59	3.6	65	3.3	73	3.6	79	5.5	82	6.0	81	7.2	77	5.1	67	3.1	59	2.4	51	2.8
Seattle, WA	41	5.1	43	4.2	46	3.8	50	2.6	56	1.8	61	1.5	65	0.8	66	1.0	61	1.6	53	3.2	45	5.9	41	5.6
Spokane, WA	27	1.8	33	1.5	40	1.5	47	1.3	54	1.6	62	1.2	69	0.8	69	0.7	59	0.8	47	1.1	35	2.2	27	2.3
Springfield, MO	32	2.1	37	2.3	46	3.8	56	4.3	65	4.6	73	5.0	79	3.6	78	3.4	69	4.8	58	3.5	46	4.5	36	3.2
Tampa, FL	61	2.3	63	2.7	67	2.9	72	1.8	78	2.9	82	5.5	83	6.5	83	7.6	82	6.5	76	2.3	69	1.6	63	2.3
Washington, DC	34	3.6	36	2.8	44	3.9	54	3.3	64	4.3	73	3.6	78	4.2	76	3.9	69	4.1	57	3.4	47	3.3	38	3.2
Wilmington, DE	32	3.4	34	2.8	43	4.0	52	3.4	63	4.1	72	4.0	77	4.3	75	3.5	68	4.0	56	3.0	46	3.2	36	3.4

Normal High and Low Temperatures, Precipitation, U.S. Cities

Source: National Climatic Data Center, NESDIS, NOAA, U.S. Dept. of Commerce

The normal temperatures and precipitation data given here are based on records for the period 1971-2000. The extreme temperatures are based on records from the time of each station's installation. (*) = city station. Other figures are for airport stations.

State	Station	NORMAL TEMPERATURE (°F) January Max.	January Min.	July Max.	July Min.	EXTREME TEMPERATURE (°F) Highest	Lowest	AVG. ANNUAL PRECIPITATION (in.)
Alabama	Mobile	61	40	91	72	105	3	66.29
Alaska	Anchorage	22	9	65	52	85	–34	16.08
Alaska	Barrow	–8	–20	47	34	79	–56	4.16
Alaska	Juneau	31	21	64	49	90	–22	58.33
Arizona	Phoenix	65	43	104	81	122	17	8.29
Arkansas	North Little Rock	49	31	94	73	111	–6	49.19
California	Los Angeles*	66	49	75	63	110	23	13.15
California	San Francisco	56	43	71	55	106	20	20.11
Colorado	Denver	43	15	88	59	101	–19	15.81
Connecticut	Hartford	34	17	85	62	102	–26	46.16
Delaware	Wilmington	39	24	86	67	102	–14	42.81
District of Columbia	Washington–National	43	27	89	67	105	–5	39.35
Florida	Jacksonville	64	42	91	72	105	7	52.34
Florida	Miami	77	60	91	77	98	30	58.53
Georgia	Atlanta	52	34	89	71	105	–8	50.20
Georgia	Savannah	60	38	92	72	105	3	49.58
Hawaii	Honolulu	80	66	88	74	95	53	18.29
Idaho	Boise	37	24	89	60	111	–25	12.19
Illinois	Chicago	30	14	84	63	104	–27	36.27
Indiana	Indianapolis	35	19	86	65	104	–27	40.95
Iowa	Des Moines	29	12	86	66	108	–26	34.72
Kansas	Dodge City	41	19	93	67	110	–21	22.35
Kentucky	Lexington	40	24	86	66	103	–21	45.91
Kentucky	Louisville	41	25	87	70	106	–22	44.54
Louisiana	New Orleans	62	43	91	74	102	11	64.16
Maine	Caribou	19	0	76	55	96	–41	37.44
Maine	Portland	31	13	79	59	103	–39	45.83
Maryland	Baltimore	41	24	87	66	105	–7	41.94
Massachusetts	Boston	37	22	82	66	102	–12	42.53
Michigan	Detroit	31	18	83	64	104	–21	32.89
Michigan	Grand Rapids	29	16	82	61	100	–22	37.13
Michigan	Sault Ste. Marie*	22	5	76	52	98	–36	34.67
Minnesota	Duluth	18	–1	76	55	97	–39	31.00
Minnesota	Minneapolis-St. Paul	22	4	83	63	105	–34	29.41
Mississippi	Jackson	55	35	91	71	107	2	55.95
Missouri	Kansas City	36	18	89	68	109	–23	37.98
Missouri	St. Louis	38	21	90	71	107	–18	38.75
Montana	Helena	31	10	83	52	105	–42	11.32
Nebraska	Omaha	32	12	87	66	114	–23	30.22
Nevada	Reno	46	22	91	51	108	–16	7.48
New Hampshire	Concord	31	10	83	57	102	–37	37.60
New Jersey	Atlantic City	41	23	85	65	106	–11	40.59
New Mexico	Albuquerque	48	24	92	65	107	–17	9.47
New York	Albany	31	13	82	60	100	–28	38.60
New York	Buffalo	31	18	80	62	99	–20	40.54
New York	New York–Central Park*	38	26	84	69	106	–15	49.69
North Carolina	Raleigh	50	30	89	69	105	–9	43.05
North Dakota	Bismarck	21	–1	85	56	111	–44	16.84
Ohio	Cleveland	33	19	81	62	104	–20	38.71
Ohio	Columbus	36	20	85	65	102	–22	38.52
Oklahoma	Oklahoma City	47	26	93	71	110	–8	35.85
Oregon	Portland	46	34	79	57	107	–3	37.07
Pennsylvania	Philadelphia	39	26	86	70	104	–7	42.05
Pennsylvania	Pittsburgh	35	20	83	62	103	–22	37.85
Puerto Rico	San Juan	82	71	87	77	98	46	50.76
Rhode Island	Providence	37	20	83	64	104	–13	46.45
South Carolina	Charleston	59	37	91	73	105	6	51.53
South Dakota	Huron	25	4	86	61	112	–41	20.90
South Dakota	Rapid City	34	11	86	58	110	–31	16.64
Tennessee	Memphis	49	31	92	73	108	–13	54.65
Tennessee	Nashville	46	28	89	70	107	–17	48.11
Texas	Dallas-Fort Worth	54	34	95	75	109	17	34.73
Texas	Houston	62	41	94	74	109	17	47.84
Utah	Salt Lake City	37	21	91	63	107	–30	16.50
Vermont	Burlington	27	9	81	60	101	–30	36.05
Virginia	Norfolk	48	32	87	71	104	–3	45.74
Virginia	Richmond	45	28	88	68	105	–12	43.91
Washington	Seattle-Tacoma	46	36	75	55	100	0	37.07
Washington	Spokane	33	22	83	55	108	–25	16.67
West Virginia	Charleston	43	24	85	63	104	–16	44.05
Wisconsin	Milwaukee	28	13	81	63	103	–26	34.81
Wyoming	Lander	32	9	86	55	101	–37	13.42

Mean annual snowfall (in.): Based on climate normals 1971-2000: Boston, MA, 41.8; Sault Ste. Marie, MI, 132.6; Albany, NY, 62.7; Burlington, VT, 83.1; Lander, WY, 102.9; Anchorage, AK, 69.5.

Wettest spot: Mount Waialeale, HI, on the island of Kauai, is the rainiest place in the world. It has an average annual rainfall of 460 in.

Temperature extremes: A temperature of 136°F observed at El Azizia (Al Aziziyah), near Tripoli, Libya, on Sept. 13, 1922, is generally accepted as the world's highest temperature recorded under standard conditions. The record high in the U.S. was 134°F in Death Valley, CA, July 10, 1913. The world record low of –129°F was recorded at the Soviet station of Vostok in Antarctica on July 21, 1983. The record low in the U.S. was –80°F at Prospect Creek, AK, Jan. 23, 1971.

Annual Climatological Data for U.S. Cities, 2009

Source: National Climatic Data Center, NESDIS, NOAA, U.S. Dept. of Commerce

Station	Elev. (ft)	TEMPERATURE (°F) Highest	Date	Lowest	Date	PRECIPITATION[1] Total (in.)	Greatest in 24 hrs. (in.)	Date	Snowfall[2] Total snowfall (in.)	Greatest in 24 hrs (in.)	Date	FASTEST[3] WIND MPH	Date	NO. OF DAYS Prec. 0.01 in. or more	Snow, sleet 1 in. or more
Albany, NY	281	91	8/17	–8	1/16	41.22	3.12	7/1-2	37.9	7.3	12/9	38	10/7	132	10
Albuquerque, NM	5,308	100	7/19	12	12/4	6.67	1.20	9/16-17	1.5	0.8	10/29	51	4/4	52	0
Anchorage, AK	222	79	7/7	–24	1/7	13.64	0.62	8/14	66.1	7.6	2/28	35	1/16	108	22
Asheville, NC	2,174	89	6/20	4	1/17	62.13	3.54	11/10-11	16.5	10.1	12/18	38	3/1	151	3
Atlanta, GA	974	96	6/27	12	1/16	69.43	4.46	11/10-11	4.2	4.2	3/1	41	4/13	122	1
Atlantic City, NJ	117	94	8/10	3	3/4	61.55	4.17	9/10-11	26.6	11.4	12/19	41	2/12	136	5
Baltimore, MD	196	94	8/10	2	1/17	55.57	2.60	5/25-26	28.6	17.0	12/19	43	4/3	132	7
Barrow, AK	38	74	7/14	–47	2/12	6.17	0.54	8/24	59.9	3.6	5/30	43	3/9	107	20
Birmingham, AL	630	96	6/28+	12	1/16	71.66	4.28	11/9-10	2.0	1.0	3/1	39	12/8	147	1
Bismarck, ND	1,654	98	8/12	–44	1/15	23.12	5.77	6/15-16	74.3	11.8	3/30	41	6/26	95	17
Boise, ID	2,861	106	7/18	–6	12/8	11.26	1.10	8/6-7	23.9	3.2	12/30	45	3/29	90	9
Boston, MA	180	95	8/18	6	1/16+	43.49	2.36	7/23-24	55.9	10.0	12/20	39	12/9	131	6
Buffalo, NY	717	88	8/17	–6	2/5	44.31	3.76	9/28-29	69.8	7.1	1/28	43	12/10	155	18
Burlington, VT	348	90	8/18+	–21	1/16	37.42	2.13	5/9-10	65.0	9.1	1/28	38	10/31	157	18
Caribou, ME	626	89	5/21	–37	1/16	38.93	1.48	11/14-15	104.5	10.0	2/23	38	2/14	152	25
Charleston, SC	48	98	6/27	19	2/5	55.97	4.15	7/8	T	T	1/20	38	6/16	115	0
Chicago, IL	658	94	6/25+	–18	1/16	42.57	3.97	7/19	51.0	8.4	1/10	38	7/27	138	16
Cleveland, OH	805	93	8/9	–13	1/16	35.76	1.55	8/28-29	69.3	10.9	2/4	52	6/25	154	18
Columbus, OH	812	93	6/25	–11	1/17	35.48	2.46	8/28-29	29.2	5.6	1/14	49	2/11	131	7
Dallas-Ft. Worth, TX	562	104	7/13	20	1/28	40.89	3.66	3/11-12	3.4	3.0	12/24	45	6/10	86	1
Denver, CO	5,382	98	8/23	–17	12/9	18.12	1.64	6/23	63.7	7.8	3/26	53	6/26	94	19
Des Moines, IA	971	97	6/23	–19	1/16	38.80	2.81	4/26-27	54.9	10.6	12/8	41	12/9	127	16
Detroit, MI	631	94	8/9	–15	1/16	34.11	3.11	6/19-20	49.9	6.4	1/10	44	12/9	124	16
Duluth, MN	1,429	88	5/20	–24	1/15+	29.10	2.91	8/19-20	71.3	12.4	12/25	38	12/25	126	18
Fairbanks, AK	464	91	7/8	–47	1/8+	8.37	0.74	3/4-5	58.5	9.0	3/5	29	3/6	90	19
Fresno, CA	375	112	7/19	28	12/9	9.08	1.39	10/13-14	0.0	0.0	—	33	10/27	42	0
Grand Rapids, MI	788	96	6/24	–8	1/17+	42.85	3.15	7/19	76.4	7.2	12/10	43	3/10	147	23
Hartford, CT	165	94	8/17	–3	1/17+	48.29	2.36	7/31	37.6	7.9	3/2	37	12/29	135	10
Helena, MT	3,867	99	7/23	–23	12/18	10.25	1.12	7/27	39.9	4.0	2/26	43	7/12	90	17
Honolulu, HI	18	92	9/10	58	1/18	11.55	2.63	1/10-11	—	—	—	35	11/17	74	—
Houston, TX	107	104	6/26+	26	12/5	47.01	4.67	4/17-18	1.0	1.0	12/4	48	8/12	98	1
Huron, SD	1,284	98	5/19	–30	1/15	23.20	1.35	10/5-6	58.9	9.5	12/25	44	1/12	106	17
Indianapolis, IN	797	93	6/24	–12	1/16	48.66	3.81	8/4	29.4	8.0	1/28	60	5/13	132	9
Jackson, MS	296	101	6/28	19	1/21	56.79	3.13	3/13-14	—	—	—	37	6/28	125	—
Jacksonville, FL	34	98	6/22	20	2/5	59.20	6.98	5/20-21	—	—	—	44	5/14	108	—
Kansas City, MO	1,008	97	8/8	–6	1/15	44.95	3.38	8/16-17	23.8	5.2	2/28	40	3/23	112	9
Knoxville, TN	982	92	6/27+	5	1/16	60.66	3.25	1/6-7	8.0	3.0	2/2	46	2/11	142	4
Lander, WY	5,560	96	8/22	–24	12/9	16.20	1.57	10/4-5	117.9	16.7	3/26	49	1/2	87	22
Lexington, KY	984	92	6/25	–3	1/16	54.01	2.78	7/30-31	12.3	3.6	2/3	41	2/11	150	3
Los Angeles, CA	326	95	4/20	39	12/8	7.48	1.25	10/13-14	—	—	—	43	3/22	23	—
Louisville, KY	484	92	6/26+	–1	1/16	53.93	4.53	8/4	11.1	4.1	1/27	45	2/11	128	3
Marquette, MI	1,415	89	5/20	–20	12/27	31.71	1.64	8/29	181.0	10.6	4/20	—	—	163	48
Memphis, TN	286	100	6/23	12	1/16	61.26	2.25	9/17-18	4.1	3.0	2/28	40	6/12	118	1
Miami, FL	29	98	6/22	38	2/5	52.09	2.37	11/25	—	—	—	37	7/20	133	—
Milwaukee, WI	680	94	6/24	–12	1/16	35.81	3.73	6/18-19	49.8	14.2	3/2	36	12/25	124	15
Minn.-St. Paul, MN	874	97	5/19	–22	1/16	24.80	3.05	8/7-8	47.0	6.0	2/26	41	9/27	106	14
Mobile, AL	212	101	7/2	20	1/21	76.47	5.34	12/12-13	T	T	3/28	39	7/14	126	0
Moline, IL	607	95	6/23	–27	1/16	51.25	2.48	7/10-11	40.1	5.1	12/8	47	6/19	119	15
Nashville, TN	574	95	6/27+	5	1/16	57.87	3.38	9/16-17	0.7	0.3	3/1	38	12/24	130	0
Newark, NJ	28	95	8/17+	5	1/17	47.93	2.97	7/29	32.1	6.9	12/19	49	2/12	122	11
New Orleans, LA	7	101	6/24	29	1/21	79.31	8.76	12/14-15	—	—	—	41	7/6	123	—
New York, NY	161	92	8/17	6	1/17	53.62	2.30	6/18	34.0	9.1	12/19	30	2/12	129	11
Norfolk, VA	69	95	7/26	15	2/6	64.66	5.13	9/7-8	0.7	0.5	3/2	58	11/12	133	0
North Little Rock, AR	565	98	6/27+	13	1/16	79.61	7.42	12/23-24	0.4	0.4	2/28	—	—	118	0
Oklahoma City, OK	1,284	105	7/13+	6	1/28	35.69	2.45	10/8-9	17.9	13.5	12/24	49	12/24	91	3
Philadelphia, PA	62	95	8/21+	6	1/17	52.50	3.18	8/21-22	45.6	22.5	12/19	46	2/12	131	5
Phoenix, AZ	1,106	115	7/28+	35	12/26	3.26	0.73	2/7-8	—	—	—	43	12/7	22	—
Pittsburgh, PA	1,175	90	8/17+	–10	1/17	32.84	2.93	6/16-17	40.2	4.7	12/19	41	2/12	151	14
Portland, ME	72	92	4/28	–16	1/16	58.61	5.25	11/14-15	67.7	11.5	1/18	36	10/7	136	16
Portland, OR	223	106	7/29+	12	12/9	30.50	3.13	1/1-2	—	—	—	39	6/4	154	—
Providence, RI	53	94	8/18	1	1/25	54.85	2.92	7/1-2	52.1	14.3	12/20	44	12/3	143	13
Raleigh, NC	430	99	8/11+	11	1/17	40.43	3.40	11/10-11	6.8	3.5	1/20	43	1/7	128	2
Rapid City, SD	3,153	97	8/13	–15	1/27	18.64	1.55	3/23-24	82.7	12.4	4/4	64	3/23	112	22
Reno, NV	4,407	102	7/18	–6	12/9	8.25	1.45	10/13	22.5	7.0	12/7	55	11/20	58	6
Richmond, VA	167	98	8/10	4	1/17	48.32	3.54	11/12-13	14.0	6.0	12/18	43	5/9	125	4
St. Louis, MO	710	98	8/9	0	1/16+	50.92	3.06	6/15-16	12.3	3.5	1/27	49	6/2	122	6
Salt Lake City, UT	4,224	102	7/23+	0	12/10	15.85	0.94	4/14-15	44.4	5.4	12/30	43	8/6	105	17
San Antonio, TX	821	104	8/23	23	12/5	30.69	6.03	12/3-4	T	T	12/29	43	4/30	77	0
San Diego, CA	81	98	4/20	42	12/25	5.50	1.56	12/7	—	—	—	32	2/9	24	—
San Francisco, CA	89	95	8/28	33	12/8	16.61	2.64	10/13	—	—	—	49	4/14	59	—
San Juan, PR	10	95	8/26	69	2/17	64.86	3.85	9/13	0.0	0.0	—	33	7/19	208	0
Sault Ste. Marie, MI	727	88	6/24	–18	1/16	28.47	1.14	5/27-28	101.0	8.8	12/10	37	10/30	166	33
Savannah, GA	143	97	6/28	21	2/6	61.11	4.07	4/1-2	0.0	0.0	—	38	8/5	110	0
Scottsbluff, NE	3,949	99	7/24	–22	1/27+	20.05	1.76	6/10-11	85.5	13.8	10/29	47	5/12	106	25
Seattle, WA	434	103	7/29	16	12/10	38.44	2.35	1/6-7	9.4	3.5	1/4	33	11/16	146	3
Spokane, WA	2,384	101	8/1	–8	1/3	15.45	0.74	10/25-26	46.1	7.5	1/5	53	3/15	107	13
Springfield, MO	1,280	96	6/23	4	1/15	51.86	5.67	10/8-9	8.5	3.9	1/27	48	5/8	123	1
Tampa, FL	40	97	6/23	32	2/5	45.87	5.22	7/1-2	0.0	0.0	—	33	1/19	102	0
Washington, DC	3	97	8/10	8	1/17	46.80	1.73	10/27-28	24.1	15.0	12/19	39	3/2	130	5
Wilmington, DE	77	93	8/10	5	1/17	52.06	2.60	8/21-22	34.6	17.0	12/19	52	6/2	132	7

(+): Indicates value for extreme also occurred on an earlier date(s). (T): Trace amount. (—): Data not available or unreported. (1) Where one date is shown, it is the starting date of the storm. (2) Comprises all forms of frozen precipitation, including hail and sleet. (3) Sustained for at least 2 mins., not peak gust.

Record Temperatures by State

Source: National Climatic Data Center, NESDIS, NOAA, U.S. Dept. of Commerce
(through June 2010)

	LOWEST TEMPERATURE				HIGHEST TEMPERATURE			
State	°F	Latest date	Station	Approx. elevation (ft)	°F	Latest date	Station	Approx. elevation (ft)
Alabama	–27	Jan. 30, 1966	New Market	732	112	Sept. 6, 1925	Centerville	220
Alaska	–80	Jan. 23, 1971	Prospect Creek Camp	955	100	June 27, 1915	Fort Yukon	445
Arizona	–40	Jan. 7, 1971	Hawley Lake	8,180	128	June 29, 1994	Lake Havasu City	468
Arkansas	–29	Feb. 13, 1905	Brook Farm Pond	1,260	120	Aug. 10, 1936	Ozark	390
California	–45	Jan. 20, 1937	Boca	5,575	134	July 10, 1913	Greenland Ranch	–194
Colorado	–61	Feb. 1, 1985	Maybell	5,944	114	July 11, 1954[1]	Sedgwick	3,584
Connecticut	–32	Jan. 22, 1961[1]	Coventry	480	106	July 15, 1995[1]	Danbury	405
Delaware	–17	Jan. 17, 1893	Millsboro	20	110	July 21, 1930	Millsboro	20
Florida	–2	Feb. 13, 1899	Tallahassee	192	109	June 29, 1931	Monticello	98
Georgia	–17	Jan. 27, 1940	CCC Camp F-16	1,000	112	Aug. 20, 1983[1]	Greenville	960
Hawaii	12	May 17, 1979	Mauna Kea Obs.	13,773	100	Apr. 27, 1931	Pahala	840
Idaho	–60	Jan. 18, 1943	Island Park Dam	6,290	118	July 28, 1934	Orofino	1,320
Illinois	–36	Jan. 5, 1999	Congerville	635	117	July 14, 1954[1]	East St. Louis	410
Indiana	–36	Jan. 19, 1994	New Whiteland	785	116	July 14, 1936[1]	Collegeville	650
Iowa	–47	Feb. 3, 1996[1]	Elkader	788	118	July 20, 1934	Keokuk	651
Kansas	–40	Feb. 13, 1905	Lebanon	1,874	121	July 24, 1936[1]	Alton (near)	1,591
Kentucky	–37	Jan. 19, 1994	Shelbyville	730	114	July 28, 1930	Greensburg	590
Louisiana	–16	Feb. 13, 1899	Minden	200	114	Aug. 10, 1936	Plain Dealing	290
Maine	–50	Jan. 16, 2009	Big Black River	885	105	July 10, 1911[1]	North Bridgton	449
Maryland	–40	Jan. 13, 1912	Oakland	2,420	109	July 10, 1936[1]	Cumberland Frederick	899 380
Massachusetts	–35	Jan. 12, 1981[1]	Chester	640	107	Aug. 2, 1975	Chester New Bedford	640 70
Michigan	–51	Feb. 9, 1934	Vanderbilt	905	112	July 13, 1936	Mio Stanwood	960 830
Minnesota	–60	Feb. 2, 1996	Tower	1,485	115	July 29, 1917	Beardsley	1,089
Mississippi	–19	Jan. 30, 1966	Corinth	420	115	July 29, 1930	Holly Springs	502
Missouri	–40	Feb. 13, 1905	Warsaw	705	118	July 14, 1954	Warsaw Union	705 540
Montana	–70	Jan. 20, 1954	Rogers Pass	5,545	117	July 5, 1937[1]	Medicine Lake	1,942
Nebraska	–47	Dec. 22, 1989[1]	Oshkosh	3,390	118	July 24, 1936[1]	Minden	2,160
Nevada	–50	Jan. 8, 1937	San Jacinto	5,203	125	June 29, 1994	Laughlin	605
New Hampshire	–46	Jan. 8, 1968	Mt. Washington	6,267	106	July 4, 1911	Nashua	140
New Jersey	–34	Jan. 5, 1904	River Vale	70	110	July 10, 1936	Runyon	20
New Mexico	–50	Feb. 1, 1951	Gavilan	7,425	122	June 27, 1994	Waste Isolat. Pilot Plt.	3,411
New York	–52	Feb. 18, 1979	Old Forge	1,748	108	July 22, 1926	Troy	35
North Carolina	–34	Jan. 21, 1985	Mt. Mitchell	6,240	110	Aug. 21, 1983	Fayetteville	186
North Dakota	–60	Feb. 15, 1936	Parshall	1,952	121	July 6, 1936	Steele	1,885
Ohio	–39	Feb. 10, 1899	Milligan	875	113	July 21, 1934	Gallipolis (near)	669
Oklahoma	–27	Jan. 4, 1947[1]	Guthrie	1,110	120	June 27, 1994[1]	Tipton	1,269
Oregon	–54	Feb. 10, 1933[1]	Seneca	4,660	119	Aug. 10, 1898[1]	Pendleton	1,040
Pennsylvania	–42	Jan. 5, 1904	Smethport	1,469	111	July 10, 1936[1]	Phoenixville	105
Rhode Island	–28	Jan. 11, 1942	Wood River Junction	49	104	Aug. 2, 1975	Providence	60
South Carolina	–19	Jan. 21, 1985	Caesars Head	3,200	111	June 28, 1954[1]	Camden	140
South Dakota	–58	Feb. 17, 1936	McIntosh	2,175	120	July 15, 2006[1]	Fort Pierre	1,590
Tennessee	–32	Dec. 30, 1917	Mountain City	2,503	113	Aug. 9, 1930[1]	Perryville	371
Texas	–23	Feb. 8, 1933	Seminole	3,336	120	June 28, 1994[1]	Monahans	2,547
Utah	–50	Jan. 5, 1913	Strawberry Tunnel E.	7,615	117	July 5, 1985	Saint George	2,770
Vermont	–50	Dec. 30, 1933	Bloomfield	1,040	107	July 7, 1912	Vernon	226
Virginia	–30	Jan. 21, 1985	Mountain Lake Bio. Station	3,870	110	July 15, 1954[1]	Balcony Falls	732
Washington	–48	Dec. 30, 1968	Mazama Winthrop	2,140 1,755	118	Aug. 5, 1961[1]	Ice Harbor Dam	368
West Virginia	–37	Dec. 30, 1917	Lewisburg	2,251	112	July 10, 1936[1]	Martinsburg	534
Wisconsin	–55	Feb. 4, 1996[1]	Couderay	1,300	114	July 13, 1936	Wisconsin Dells	835
Wyoming	–66	Feb. 9, 1933	Riverside R.S.	6,500	115	July 15, 1988[1]	Diversion Dam	5,575

(1) Also on earlier dates at the same or other places.

Hurricane and Tornado Classifications

Source: National Weather Service, NOAA, U.S. Dept. of Commerce

The Saffir-Simpson Hurricane Wind Scale rates a hurricane's intensity from 1 to 5. The scale, updated in early 2010, provides examples of the type of damage and impacts associated with winds of the indicated intensity. The Fujita (or F) Scale was created by T. Theodore Fujita in 1971, to classify tornadoes. The Enhanced Fujita Scale, an update to the original, was implemented in the U.S. in Feb. 2007. It uses 3-second gusts estimated at the point of damage based on a judgment of 8 levels of damage to 28 indicators.

Saffir-Simpson Wind Scale (Hurricanes)

Category	Winds[1]	Summary of damage
1	74-95 mph	Very dangerous winds will produce some damage.
2	96-110 mph	Extremely dangerous winds will cause extensive damage.
3	111-130 mph	Devastating damage will occur.
4	131-155 mph	Catastrophic damage will occur.
5	Over 155 mph	Catastrophic damage will occur.

(1) 1-minute sustained winds.

Enhanced Fujita Scale (Tornadoes)

Rank	3-sec. gust
EF-0	65-85 mph
EF-1	86-110 mph
EF-2	111-135 mph
EF-3	136-165 mph
EF-4	166-200 mph
EF-5	Over 200 mph

Tropical Cyclone Names in 2011

Source: National Weather Service, NOAA, U.S. Dept. of Commerce

Atlantic: Arlene, Bret, Cindy, Don, Emily, Franklin, Gert, Harvey, Irene, Jose, Katia, Lee, Maria, Nate, Ophelia, Philippe, Rina, Sean, Tammy, Vince, and Whitney. If there are more than 21 named Atlantic storms in one season, remaining storms take names from the Greek alphabet, starting with Alpha.

Eastern North Pacific: Adrian, Beatriz, Calvin, Dora, Eugene, Fernanda, Greg, Hilary, Irwin, Jova, Kenneth, Lidia, Max, Norma, Otis, Pilar, Ramon, Selma, Todd, Veronica, Wiley, Xina, York, Zelda.

World Temperature and Precipitation

Source: World Meteorological Organization

Average daily maximum and minimum temperatures and annual precipitation based on records for the period 1961-90. Records of extreme temperatures include all available years of data for a given location and are usually for a longer period. Surface elevations are supplied by the WMO and may differ from figures in other sections of *The World Almanac*. NA = Not available.

Station	Surface elevation (ft)	Temperature (°F)						Avg. annual precipitation (in.)
		AVERAGE DAILY				EXTREME		
		January		July				
		Max.	Min.	Max.	Min.	Max.	Min.	
Algiers, Algeria	82	61.7	42.6	87.1	65.3	NA	NA	27.0
Athens, Greece	49	56.1	44.6	88.9	73.0	NA	NA	14.6
Auckland, New Zealand	20	74.8	61.2	58.5	46.4	NA	NA	49.4
Bangkok, Thailand	66	89.6	69.8	90.9	77.0	104	51	59.0
Berlin, Germany	190	35.2	26.8	73.6	55.2	107	–4	23.3
Bogotá, Colombia	8,357	67.3	41.7	64.6	45.5	75	21	32.4
Bombay (Mumbai), India	36	85.3	66.7	86.2	77.5	110	46	85.4
Bucharest, Romania	298	34.7	22.1	83.8	60.1	105	–18	23.4
Budapest, Hungary	456	34.2	24.8	79.7	59.7	103	–10	20.3
Buenos Aires, Argentina	82	85.8	67.3	59.7	45.7	104	22	45.2
Cairo, Egypt	243	65.8	48.2	93.9	71.1	118	34	1.0
Cape Town, South Africa	138	79.0	60.3	63.3	44.6	105	28	20.5
Caracas, Venezuela	2,739	79.9	60.8	81.3	66.0	96	45	36.1
Casablanca, Morocco	203	62.8	47.1	77.7	66.7	NA	NA	16.8
Copenhagen, Denmark	16	35.6	28.4	68.9	55.0	NA	NA	NA
Damascus, Syria	2,004	54.3	32.9	97.2	61.9	NA	NA	5.6
Dublin, Ireland	279	45.7	36.5	66.0	52.5	86	8	28.8
Geneva, Switzerland	1,364	38.3	27.9	76.3	53.2	101	–3	35.6
Havana, Cuba	164	78.4	65.5	88.3	74.8	NA	NA	46.9
Hong Kong, China	203	65.5	56.5	88.7	79.9	97	32	87.2
Istanbul, Turkey	108	47.8	37.2	82.8	65.3	105	7	27.4
Jerusalem, Israel	2,483	53.4	39.4	83.8	63.0	107	26	23.2
Lagos, Nigeria	125	90.0	72.3	82.8	72.1	NA	NA	59.3
Lima, Peru	43	79.0	66.9	66.4	59.4	NA	NA	0.2
London, England	203	44.1	32.7	71.1	52.3	99	2	29.7
Manila, Philippines	79	85.8	74.8	89.1	76.8	NA	NA	49.6
Mexico City, Mexico	7,570	70.3	43.7	73.8	53.2	NA	NA	33.4
Montreal, Canada	118	21.6	5.2	79.2	59.7	100	–36	37.0
Nairobi, Kenya	5,897	77.9	50.9	71.6	48.6	NA	NA	41.9
Paris, France	213	42.8	33.6	75.2	55.2	105	–1	25.6
Prague, Czech Republic	1,197	32.7	22.5	73.9	53.2	98	–16	20.7
Reykjavik, Iceland	200	35.4	26.6	55.9	46.9	76	–3	31.5
Rome, Italy	79	53.8	35.4	88.2	62.1	NA	NA	33.0
San Salvador, El Salvador	2,037	86.5	61.3	86.2	66.4	105	45	68.3
São Paulo, Brazil	2,598	81.1	65.7	71.2	53.1	NA	NA	57.4
Shanghai, China	23	45.9	32.9	88.9	76.6	104	10	43.8
Singapore	52	85.8	73.6	87.4	75.6	NA	NA	84.6
Stockholm, Sweden	171	30.7	23.0	71.4	56.1	97	–26	21.2
Sydney, Australia	10	79.5	65.5	62.4	43.9	114	32	46.4
Tehran, Iran	3,906	45.0	30.0	98.2	75.2	109	–5	9.1
Tokyo, Japan	118	49.1	34.2	83.8	72.1	NA	NA	55.4
Toronto, Canada	567	27.5	12.0	80.2	57.6	105	–26	30.8

Speed of Winds in the U.S.

Source: National Climatic Data Center, NESDIS, NOAA, U.S. Dept. of Commerce

In miles per hour. Based on available records through 2009. Average and maximum speeds are annual. Max. speeds are highest 2-min. average.

Station	Avg.	Max.	Station	Avg.	Max.	Station	Avg.	Max.
Albuquerque, NM	8.9	53	Helena, MT[2]	7.7	73	Oklahoma City, OK	12.2	74
Anchorage, AK[1,2]	7.1	75	Honolulu, HI	11.2	46	Omaha, NE	10.5	58
Atlanta, GA	9.1	60	Houston, TX	7.6	52	Philadelphia, PA[2]	9.5	73
Baltimore, MD[2]	8.7	80	Indianapolis, IN	9.6	60	Phoenix, AZ	6.2	54
Birmingham, AL	7.1	65	Jackson, MS	6.9	55	Pittsburgh, PA	9.0	58
Bismarck, ND	10.2	64	Jacksonville, FL	7.8	57	Portland, ME	8.7	57
Boise, ID[2]	8.7	61	Little Rock, AR[2]	7.7	65	Portland, OR[2]	7.9	88
Boston, MA	12.3	54	Los Angeles, CA[2]	5.1	49	Providence, RI	10.4	90
Buffalo, NY[2]	11.8	91	Louisville, KY	8.3	56	Richmond, VA	7.7	43
Burlington, VT	9.0	39	Miami, FL	9.2	86	St. Louis, MO	9.6	53
Charleston, SC	8.6	52	Milwaukee, WI	11.5	54	Salt Lake City, UT[2]	8.8	71
Chicago, IL	10.3	58	Minn.-St. Paul, MN	10.5	51	San Francisco, CA[2]	8.7	47
Cleveland, OH	10.5	53	Mobile, AL	8.8	66	San Juan, PR	7.8	79
Dallas-Ft. Worth, TX	10.7	73	Mount Washington, NH[1,2]	35.1	231	Seattle, WA[2]	8.8	66
Denver, CO	8.7	54	Nashville, TN	8.0	58	Sioux Falls, SD	11.0	70
Des Moines, IA[2]	10.7	76	Newark, NJ	10.2	82	Washington, DC	9.4	49
Detroit, MI	10.2	61	New Orleans, LA	8.2	69	Wichita, KS	12.2	70
Hartford, CT	8.4	46	New York, NY	9.1	40	Wilmington, DE	9.0	58

(1) Max. speed based on short gusts. (2) Max. speed calculated from minimum time during which one mile of wind passed the station.

Tides and Their Causes

Source: National Ocean Service, NOAA, U.S. Dept. of Commerce

The tides are natural phenomena involving the movement of waves in the Earth's large fluid bodies as a result of the gravitational attraction of the sun and moon. These two variable influences combined produce the complex recurrent cycle of the tides. Tides may occur in both oceans and seas; to a limited extent in large lakes and in the atmosphere; and, to a very minute degree, in the Earth itself. The length of time between succeeding tides can vary.

The tide-generating force represents the difference between (1) the centrifugal force produced by Earth's revolution around the common center-of-gravity of the Earth-moon system and (2) the gravitational attraction of the moon acting upon the Earth's overlying waters. The moon is about 390 times closer to Earth than is the sun. So despite its smaller mass, the moon's tide-raising force is two times greater.

The tide-generating forces of the moon and sun acting tangentially to the Earth's surface tend to cause a maximum accumulation of waters at two diametrically opposite points on the Earth's surface and to withdraw compensating amounts of water from all points 90° removed from these tidal bulges. As the Earth rotates beneath the maxima and minima of these tide-generating forces, a sequence of two high tides, separated by two low tides, is produced each lunar day (the time it takes for a specific site on the Earth to rotate from an exact point under the moon to the same point under the moon, 24 hours and 50 minutes) in what is called a **semidiurnal tide**. Each ocean basin reacts differently to tidal forces.

Twice each month, when the sun, moon, and Earth are directly aligned—the moon between the Earth and sun (at new moon) or on the opposite side of Earth from the sun (at full moon)—the sun and moon exert gravitational forces in a mutual or additive fashion. The highest high tides and lowest low tides, called **spring tides**, are produced at these times. At two positions 90° in between, the moon and sun's gravitational forces—imposed at right angles—counteract each other to the greatest extent, and the range between high and low tides is reduced, resulting in **neap tides**.

The inclination of the moon's monthly orbit and of the sun to the equator during Earth's yearly rotation through its orbit produce a difference in the height of succeeding high and low tides, known as the diurnal inequality. In most cases, this produces a so-called **mixed tide**. In extreme cases, these phenomena may result in a **diurnal tide**, with only one high tide and one low tide each day. There are other monthly and yearly variations in the tides because of the elliptical shape of the orbits.

U.S. convention distinguishes between mean higher high water (MHHW), mean high water (MHW), mean tide level (MTL), mean sea level (MSL), mean low water (MLW), and mean lower low water (MLLW). Great diurnal range of tide is the difference in height between MHHW and MLLW. Mean range of tide is the difference between MHW and MLW.

The range of tides in the open ocean is generally less than in the coastal regions, where the incoming tide can be augmented by the continental shelves, as well as by bays and estuaries. The largest tidal ranges in the world occur in the Bay of Fundy and in Ungava Bay, Canada, where the range of tide reaches 53 ft. In New Orleans, the periodic rise and fall of the diurnal tide is affected by the seasonal stages of the Mississippi River, being about 10 in. at low stage and 0 at high.

In every case, actual high or low tide can vary considerably from the average, as a result of weather conditions such as strong winds, abrupt barometric pressure changes, or prolonged periods of extreme high or low pressure.

Average Rise and Fall of Tides

(mean ranges, based on 2010 predictions)

Place	Ft	In.	Place	Ft	In.	Place	Ft	In.
Baltimore, MD	1	2	Honolulu, HI	1	3	Portland, ME	9	1
Boston, MA	9	6	Key West, FL	1	3	St. Petersburg, FL	1	7
Charleston, SC	5	3	Los Angeles, CA	3	10	San Diego, CA	4	1
Cristobal, Panama	0	8	Miami, FL	2	4	Sandy Hook, NJ	4	8
Eastport, ME	18	4	New London, CT	2	7	San Francisco, CA	4	1
Ft. Pulaski, GA	6	11	Newport, RI	3	6	San Juan, PR	1	1
Galveston, TX	1	0	New York, NY	4	6	Seattle, WA	7	8
Hampton Roads, VA	2	5	Philadelphia, PA	6	0	Washington, DC	2	9

El Niño and La Niña

Source: National Weather Service, NOAA, U.S. Dept. of Commerce

El Niño is a climatically significant disruption of the ocean-atmosphere system characterized by large-scale weakening of trade winds and warming of the surface layers in the central and eastern equatorial Pacific. The term *El Niño*, Spanish for "the little boy" or "The Christ Child," was originally used by fishermen to refer to a warm ocean current that appeared around Christmas off the west coasts of Ecuador and Peru that lasted several months. The term has come to be reserved for exceptionally strong, warm currents that bring heavy rains.

El Niño events generally occur at irregular intervals of 2 to 7 years, at an average of once every 3 to 4 years. They typically last 12 to 18 months. The intensity of El Niño events varies depending on the area encompassed by the abnormally warm ocean temperatures. Some are strong, such as in 1982-83 and 1997-98. Others are considerably weaker, such as the 2009-10 event. The eastward extent of warmer than normal water varies from episode to episode.

El Niño influences weather around the globe, and its impacts are most clearly seen in the winter. During El Niño years, winter temperatures in the continental U.S. tend to be warmer than normal in the North and West Coast states and cooler than normal in the Southeast. Conditions tend to be wetter than normal over central and southern California, the Southwest states and across much of the South, and drier than normal over the northern portions of the Rocky Mountains and in the Ohio valley. Globally, El Niño brings wetter than normal conditions to Peru and Chile and dry conditions to Australia and Indonesia. It should be noted that El Niño is only one of a number of factors influencing seasonal variations of climate.

La Niña ("the little girl") is characterized by colder than normal sea surface temperatures in the equatorial Pacific. La Niña typically brings wetter, cooler conditions to the Pacific North-west and drier, warmer conditions to much of the southern U.S. El Niño and La Niña are opposite phases of the El Niño-Southern Oscillation (ENSO) cycle, a shift in tropical sea-level pressure between the Eastern and Western hemispheres.

The National Weather Service's Climate Prediction Center, using satellites and buoys in the Pacific Ocean, monitors these events. Highly sophisticated numerical computer models of the ocean and atmosphere use these data to predict the onset and evolution of El Niño and La Niña.

Wind Chill Table

Source: National Weather Service, NOAA, U.S. Dept. of Commerce

Temperature and wind combine to cause heat loss from body surfaces. For example, a temperature of 5°F, plus a 10-mph wind, causes body heat loss equal to that which would occur in –10°F with no wind. In other words, a 10-mph wind makes 5°F feel like –10°F. Wind speeds greater than 45 mph have little additional chilling effect. Direct sunlight can increase the wind chill temperature 10° to 15°F. When the wind chill temperature falls within the shaded area, frostbite can occur in 30 mins. or less.

Wind speed (mph)	Air temperature (°F)																	
	Calm	40	35	30	25	20	15	10	5	0	–5	–10	–15	–20	–25	–30	–35	–40	–45
		Wind chill temperature (°F)																	
	5	36	31	25	19	13	7	1	–5	–11	–16	–22	–28	–34	–40	–46	–52	–57	–63
	10	34	27	21	15	9	3	–4	–10	–16	–22	–28	–35	–41	–47	–53	–59	–66	–72
	15	32	25	19	13	6	0	–7	–13	–19	–26	–32	–39	–45	–51	–58	–64	–71	–77
	20	30	24	17	11	4	–2	–9	–15	–22	–29	–35	–42	–48	–55	–61	–68	–74	–81
	25	29	23	16	9	3	–4	–11	–17	–24	–31	–37	–44	–51	–58	–64	–71	–78	–84
	30	28	22	15	8	1	–5	–12	–19	–26	–33	–39	–46	–53	–60	–67	–73	–80	–87
	35	28	21	14	7	0	–7	–14	–21	–27	–34	–41	–48	–55	–62	–69	–76	–82	–89
	40	27	20	13	6	–1	–8	–15	–22	–29	–36	–43	–50	–57	–64	–71	–78	–84	–91
	45	26	19	12	5	–2	–9	–16	–23	–30	–37	–44	–51	–58	–65	–72	–79	–86	–93

Heat Index

Source: National Weather Service, NOAA, U.S. Dept. of Commerce

The heat index, or the "apparent temperature," is an accurate measure of how hot it really feels when the relative humidity is added to the actual air temperature. For example, when the air temperature is 100°F, and the relative humidity is 50%, it will feel as if it's 118°F (with no humidity). Full sunlight can make one feel even hotter. On the chart, the shaded area above 105° corresponds to a level that may cause increasingly severe heat disorders with continued exposure and/or physical activity.

Relative humidity %	Temperature (°F)															
	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
	Apparent temperature (°F)															
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	126	130					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Caution | Extreme caution | Danger | Extreme danger

Ultraviolet (UV) Index Forecast

Source: National Weather Service, NOAA, U.S. Dept. of Commerce; U.S. Environmental Protection Agency

The National Weather Service (NWS) and the Environmental Protection Agency (EPA) developed and began offering a UV index in 1994, in response to increasing incidences of skin cancer, cataracts, and other effects from exposure to the sun's harmful rays. In 2004, the Global Solar UV Index was released by the World Health Organization. The UV index is now a regular element of NWS atmospheric forecasts.

The UV index, ranging from 0 to 11+, is an indication of the expected intensity of UV radiation reaching the Earth's surface during the solar noon hour (the time of day when the sun appears to have reached its highest point in the sky; it depends on location and the time of year). The lower the UV index value, the less the radiation. The UV index forecast is produced daily for 58 cities by the NWS Climate Prediction Center and uses the following scale.

UV index	Exposure	Minimum precautions
0-2	Low	Sunscreen with an SPF of at least 15
3-5	Moderate	Sunscreen, covering up
6-7	High	Sunscreen, hat, UV-blocking sunglasses, avoid sun 10 AM-4 PM
8-10	Very high	Same as above
11+	Extreme	Same as above

The index value is valid for a radius of about 30 miles around a listed city and is based on several factors:

Ozone. Ozone, a form of oxygen, the molecules of which consist of three atoms rather than two, blocks UV radiation. The more ozone, the lower the UV radiation at the surface.

Sun height. The higher the sun is in the sky, the higher the UV radiation level.

Cloudiness. UV radiation levels are highest under cloudless skies. Even with cloud cover, UV radiation levels can be high due to the scattering of UV radiation by water molecules and fine particles in the atmosphere.

Reflectivity. Reflective surfaces intensify UV exposure. Sand reflects about 15% of UV radiation reaching the surface; sea foam, 25%; snow, as much as 80%; water, up to 100% depending on reflection angle.

Elevation. At higher elevations, UV radiation travels a shorter distance to reach Earth's surface so there is less atmosphere to absorb the rays. For every 1,000 m (3,281 ft) one travels above sea level, UV levels increase by 10-12%. Snow and lack of pollutants intensify UV exposure at higher altitudes.

Latitude. The closer a location is to the equator, the higher the UV radiation level.

SPF (sun protection factor) number. The UV index is not linked in any way to the SPF number on suntan lotions and sunscreens. The Centers for Disease Control and Prevention (CDC) recommends using a sunscreen with at least SPF 15. For an explanation of the SPF factor, contact the product's manufacturer or refer to the Food and Drug Administration website www.fda.gov/ForConsumers/ConsumerUpdates

Further information. For precautions to take after learning the UV index value, call the EPA's Stratospheric Ozone Hotline (800-296-1996). For questions on scientific aspects, visit the NWS Climate Prediction Center online at www.cpc.noaa.gov.

Lightning

Source: National Weather Service, NOAA, U.S. Dept. of Commerce

Lightning occurs as a result of ice in storm clouds. As ice particles rise and sink in a cloud, collisions between them cause a separation of electrical charge. Positively charged crystals rise to the top, while negatively charged crystals drop. As the storm travels, a pool of positive charges gathers in the ground below and follows along, traveling up objects like trees, houses, and telephone poles. In a common form of lightning, the negatively charged area in a storm sends charges downward, attracted to positively charged objects. A channel develops and the electrical transfer seen is lightning. Lightning can travel miles away from the area of a storm.

The transfer of charges in lightning generates a huge amount of heat, sending the temperature in the channel to 50,000°F and causing the air within it to expand rapidly. The sound of that expansion is thunder. Sound travels more slowly than light, so lightning is usually observed before thunder is heard.

An estimated 25 mil cloud-to-ground lightning bolts happen in the U.S. each year, killing an annual average of 58 people in 1980-2009. This is a small number compared to U.S. deaths from fire (about 3,000 a year) and motor vehicle accidents (40,000-50,000), but it is still significant. In comparison, tornadoes caused an average of 57 deaths a year and hurricanes an average of 48 over the same 30-year time period. The National Weather Service reported that in 2009, 34 people were struck and killed by lightning; 201 more were injured.

Most lightning deaths and injuries occur in the summer months when people are outdoors. If outdoors, one should run to a safe building or vehicle when the first thunder is heard, lightning is seen, or dark threatening clouds are observed developing overhead. Even while indoors, one is advised to stay away from windows and avoid contact with anything conducting electricity, including corded phones, and tubs, showers, and other plumbing, and stay inside until 30 mins. after the last clap of thunder is heard.

More information about lightning can be found online at www.lightningsafety.noaa.gov.

Global Measured Extremes of Temperature and Precipitation Records

Source: World Weather/Climate Extremes Archive, World Meteorological Organization Commission for Climatology

(records in each category ranked from most to least extreme)

Highest Temperature Extremes

Continent	Highest temp. (°F)	Place	Elevation (ft)	Date
Africa	136	El Azizia, Libya	367	Sept. 13, 1922
North America	134	Death Valley, CA, U.S. (Furnace Creek Ranch)	–179	July 10, 1913
Asia	129	Tirat Tsvi, Israel	–722	June 21, 1942
Australia	123	Oodnadatta, South Australia	367	Jan. 2, 1960
South America	120	Rivadavia, Argentina	2,192	Dec. 11, 1905
Europe	118.4	Athens, Greece (and Elefsina, Greece)	774	July 10, 1977
Oceania	108	Tuguegarao, Philippines	676	Apr. 29, 1912
Antarctica	59	Vanda Station (New Zealand), Wright Valley	49	May 1, 1974

Lowest Temperature Extremes

Continent	Lowest temp. (°F)	Place	Elevation (ft)	Date
Antarctica	–129	Vostok Station (Russia)	11,220	July 21, 1983
Asia	–90	Verkhoyansk, Russia	350	Feb. 5 and 7, 1892
	–90	Oimekon, Russia	2,625	Feb. 6, 1933
North America	–81.4	Snag, Yukon Territory, Canada	2,120	Feb. 3, 1947
Europe	–72.6	Ust 'Schugor, Russia	279	Dec. 31, 1978
South America	–27	Sarmiento, Argentina	879	June 1, 1907
Africa	–11	Ifrane, Morocco	5,364	Feb. 11, 1935
Australia	–9.4	Charlotte Pass, New South Wales	5,758	June 29, 1994

Highest Measured Average Annual Precipitation Extremes

Continent	Highest avg. (in.)[1]	Place	Elevation (ft)	Years in averaging period
Asia	467.4	Mawsynram, India	4,695	38
Oceania	460	Mt. Waialeale, Kauai, HI, U.S.	5,148	30
Africa	405	Debundscha, Cameroon	30	32
South America	354	Quibdo, Colombia	230	29
Australia	316.3	Bellenden Ker, Queensland	5,102	34
North America	276	Henderson Lake, British Columbia, Canada	12	15
Europe	183	Crkvica, Bosnia-Herzegovina	4,298	22
Antarctica	31.5[2]	Along coast of E and W and over the Antarctic Peninsula		3[3]

(1) Official greatest average annual precipitation. The average annual precipitation record of 523.6 in., set in Lloro, Colombia (14 mi SE and at a higher elevation than Quibdo), is an estimated amount. (2) 460 in. water equivalent. (3) July 1996-June 1999.

Lowest Measured Average Annual Precipitation Extremes

Continent	Lowest avg. (in.)	Place	Elevation (ft)	Years in averaging period
South America	0.03	Arica, Chile	213	59
Antarctica	0.08	Amundsen-Scott South Pole Station (U.S.)	9,301	10
Africa	<0.1	Wadi Halfa, Sudan	590	39
North America	1.2	Batagues, Mexico	69	14
Asia	1.8	Aden, Yemen	63	50
Australia	4.05	Troudaninna, South Australia	46	42
Europe	6.4	Astrakhan, Russia	66	25
Oceania	7.41	Mauna Kea Observatory, HI, U.S.	13,780	11[1]

(1) 1972-1982

DISASTERS

Some Notable Aircraft Disasters Since 1937

Source: National Transportation Safety Board; World Almanac research. As of Sept. 2010.

Particularly notable disasters are in bold. Asterisk (*) indicates number of deaths includes those on ground.

Date	Aircraft	Site of accident	Deaths
1937, May 6	**German zeppelin Hindenburg**	**Burned at mooring, Lakehurst, NJ**	**36***
1944, Aug. 23	U.S. Air Force B-24 Liberator bomber	Hit school, Freckleton, England	61*
1945, July 28	U.S. Army B-25	Hit Empire State Building after getting lost in fog, New York, NY	14*
1952, Dec. 20	U.S. Air Force C-124	Crashed at Moses Lake, WA	87
1953, Mar. 3	**Canadian Pacific DH-106 Comet**	**Crashed on takeoff from Karachi, Pakistan; world's first fatal commercial passenger jet crash**	**11**
1953, June 18	U.S. Air Force C-124	Crashed, burned near Tokyo, Japan	129
1955, Oct. 6	United Airlines DC-4	Crashed in Medicine Bow Peak, WY	66
1955, Nov. 1	United Airlines DC-6	Bomb on board exploded near Longmont, CO	44[1]
1956, June 20	Venezuelan Super Constellation	Crashed into Atlantic off Asbury Park, NJ	74
1956, June 30	TWA Super Const., United DC-7	Collided over Grand Canyon, AZ	128
1960, Dec. 16	United DC-8, TWA Super Const.	Collided over New York, NY, killing all 128 on planes, 6 on ground	134*
1962, Mar. 16	Flying Tiger Super Constellation	Vanished in W Pacific en route to Philippines from Guam	107
1962, June 3	Air France Boeing 707	Crashed on takeoff from Paris, France	130
1962, June 22	Air France Boeing 707	Crashed in storm, Guadeloupe, French West Indies	113
1963, Feb. 1	Lebanese Middle East Airlines Vickers Viscount 754, Turkish Mil. Douglas C-47	Collided over Ankara, Turkey, killing all 17 on planes, 87 on ground	104*
1963, June 3	Northwest Airlines DC-7	Crashed into Pacific off British Columbia, Canada	101
1963, Nov. 29	Trans-Canada Air Lines DC-8	Crashed after takeoff from Montreal, Quebec, Canada	118
1965, May 20	Pakistani Boeing 720	Crashed at airport in Cairo, Egypt	121
1966, Jan. 24	Air India Boeing 707	Crashed on Mont Blanc, France-Italy	117
1966, Feb. 4	All-Nippon Boeing 727	Plunged into Tokyo Bay, Japan	133
1966, Mar. 5	BOAC Boeing 707	Crashed into Mt. Fuji, Japan, after encountering severe turbulence	124
1966, Dec. 24	U.S. military-chartered CL-44	Crashed into village in S Vietnam	129*
1967, Apr. 20	Globe Air Bristol Britannia	Crashed on approach to airport, Nicosia, Cyprus	126
1967, July 19	Piedmont Boeing 727, Cessna 310	Collided over Hendersonville, NC	82
1968, Apr. 20	S. African Airways Boeing 707	Crashed on takeoff from Windhoek, South-West Africa	122
1968, May 3	Braniff International Electra	Crashed in storm near Dawson, TX	85
1969, Mar. 16	Venezuelan DC-9	Crashed after takeoff from Maracaibo, Venezuela	155[2]
1969, Dec. 8	Olympic Airways DC-6B	Crashed in storm near Athens, Greece	93
1970, Feb. 15	Dominicana DC-9	Crashed into sea on takeoff from Santo Domingo, Dominican Rep.	102
1970, July 3	British-chartered DH-106 Comet	Crashed near Barcelona, Spain	112
1970, July 5	Air Canada DC-8	Crashed near Toronto International Airport, Canada	108
1970, Aug. 9	LANSA Lockheed L-188A Electra	Crashed on takeoff from Cuzco, Peru	101*
1970, Nov. 14	Southern Airways DC-9	Crashed into mountains near Huntington, WV	75[3]
1971, July 30	All-Nippon Boeing 727, Japan Air Force F-86 fighter	Collided over Morioka, Japan	162[4]
1971, Sept. 4	Alaska Airlines Boeing 727	Crashed into mountain near Juneau, AK	111
1972, Aug. 14	East German IL-62	Crashed on takeoff from East Berlin	156
1972, Oct. 13	Aeroflot IL-62	Crashed near Moscow, U.S.S.R.	176
1972, Dec. 3	Spanish-chartered Convair CV-990	Crashed on takeoff from Canary Islands, Spain	155
1972, Dec. 29	Eastern Airlines Lockheed Tristar	Crashed on approach to Miami Intl. Airport, FL	101
1973, Jan. 22	Nigerian-chartered Boeing 707	Burst into flames upon landing at Kano Airport, Nigeria	176
1973, Feb. 21	**Libyan Arab Boeing 727**	**Flew off course, shot down by Israeli fighter planes over Sinai Desert**	**108**
1973, Apr. 10	British Vickers Vanguard	Crashed during snowstorm on approach to Basel, Switzerland	104
1973, June 3	Soviet Supersonic Tu-144	Crashed near Goussainville, France	14[5]
1973, July 11	Brazilian Boeing 707	Crashed on approach to Orly Airport, Paris, France	122
1973, July 31	Delta Airlines DC-9	Crashed while attempting landing in fog, Logan Airport, Boston, MA	89
1974, Mar. 3	Turkish DC-10	Crashed in Ermenonville, near Paris, France	346
1974, Apr. 22	Pan American Boeing 707	Crashed in Bali, Indonesia	107
1974, Dec. 1	TWA Boeing 727	Crashed on approach in storm, Upperville, VA	92
1974, Dec. 4	Dutch-chartered DC-8	Crashed in storm near Colombo, Sri Lanka	191
1975, Apr. 4	Air Force Galaxy C-5A	Crashed on takeoff near Saigon, S Viet.; carried orphans	172
1975, June 24	Eastern Airlines 727	Crashed in storm, JFK Airport, New York, NY	113
1975, Aug. 3	Alia Royal Jordanian Boeing 707	Hit mountainside in heavy fog near Agadir, Morocco	188
1976, Sept. 10	Brit. Airways Trident, Yug. DC-9	Collided near Zagreb, Yugoslavia	176
1976, Sept. 19	Turkish 727	Hit mountain in S Turkey	155
1976, Oct. 13	LAB Boeing 707	Crashed after takeoff from Santa Cruz, Bolivia	100[6]
1977, Mar. 27	**KLM 747, Pan American 747**	**Collided on runway, Tenerife, Canary Islands, Spain; world's worst airline disaster**	**583**
1977, Nov. 19	TAP Portugal Boeing 727	Crashed in Madeira, Portugal	130
1977, Dec. 4	Malaysian Airlines Boeing 737	Hijacked and forced to fly to Singapore, crashed near Johor Strait	100
1977, Dec. 13	National Jet Service DC-3	Crashed after takeoff from Evansville, IN; passengers incl. Univ. of Evansville men's basketball team	29
1978, Jan. 1	Air India 747	Crashed into sea after takeoff from Bombay, India	213
1978, Sept. 25	Boeing 727, Cessna 172	Collided over San Diego, CA	150
1978, Nov. 15	Indonesian-chartered DC-8	Crashed on approach to airport, Colombo, Sri Lanka	183
1979, May 25	**American Airlines DC-10**	**Crashed after takeoff from O'Hare Airport, Chicago, IL; highest death toll in U.S. aviation history**	**275***
1979, Aug. 11	Aeroflot/Moldova Tu-134, Aeroflot Tu-134	Collided over Ukraine	178
1979, Nov. 26	Pakistani Boeing 707	Crashed near Jidda, Saudi Arabia	156
1979, Nov. 28	Air New Zealand DC-10	Crashed into mountain after takeoff from Antarctica	257
1980, Mar. 14	PLL LOT IL-62	Crashed making emergency landing, Warsaw, Poland	87[7]
1980, Aug. 19	Saudi Arabian Tristar	Burned after emergency landing in Riyadh, Saudi Arabia	301
1981, Dec. 1	Inex Adria DC-9	Crashed into mountain on island of Corsica, France	180
1982, Jan. 13	Air Florida Boeing 737	Crashed into Potomac R. after takeoff from Washington, DC	78
1982, July 9	Pan Am Boeing 727	Crashed after takeoff from Kenner, LA, near New Orleans	153*
1983, Sept. 1	**S. Korean Boeing 747**	**Shot down after violating Soviet airspace near Sakhalin; plane apparently misidentified**	**269**
1983, Nov. 27	Avianca Boeing 747	Crashed near Barajas Airport, Madrid, Spain	183

Date	Aircraft	Site of accident	Deaths
1984, Oct. 11	Aeroflot/East Siberia Tu-154	Crashed into vehicles on runway while landing in poor weather, Omsk, Russia	178*
1985, Feb. 19	Spanish Boeing 727	Crashed into Mt. Oiz, Spain	148
1985, June 23	Air India Boeing 747	Crashed into Atlantic off Ireland after bomb detonated on board	329
1985, Aug. 2	Delta Air Lines L-1011	Crashed at Dallas-Ft. Worth Airport, TX	137
1985, Aug. 12	**Japan Air Lines Boeing 747**	**Crashed into Mt. Ogura, Japan; world's worst single-plane disaster**	**520**
1985, Dec. 12	Arrow Air DC-8	Crashed after takeoff from Gander, Newfoundland, Canada	256[8]
1986, Mar. 31	Mexican Boeing 727	Crashed NW of Mexico City	166
1986, Aug. 31	Aeromexico DC-9, Piper PA-28	Collided over Cerritos, CA	82*
1987, May 9	Polish IL-62M	Crashed after takeoff from Warsaw, Poland	183
1987, Aug. 16	Northwest Airlines MD-82	Crashed after takeoff from Romulus, MI	156
1987, Nov. 28	S. African Boeing 747	Crashed into Indian Ocean near Mauritius	159
1987, Nov. 29	S. Korean Boeing 707	Bomb planted by 2 N. Korean agents exploded while plane over Thai-Burmese border	155
1988, Mar. 17	Colombian Boeing 707	Crashed into mountainside near Venezuela border	137
1988, July 3	**Iran Air Airbus A300**	**Misidentified as hostile aircraft, shot down by U.S. Navy warship *Vincennes* over Pers. Gulf**	**290**
1988, Dec. 21	**Pan Am Boeing 747**	**Libyan agent planted bomb on board; exploded over Lockerbie, Scotland**	**270[9]**
1989, Feb. 8	U.S.-chartered Boeing 707	Crashed into mountain on Azores Isls., off Portugal	144
1989, June 7	Suriname DC-8	Crashed near Paramaribo Airport, Suriname	168
1989, July 19	United Airlines DC-10	Crashed on landing in Sioux City, IA	111
1989, Sept. 19	**UTA DC-10**	**Bomb exploded on board flight from Chad to France while over desert in Niger**	**171**
1989, Nov. 27	Avianca Boeing 727	Bomb exploded on flight from Bogotá, Colombia	107
1990, Jan. 25	Avianca Air Boeing 707	Crashed on landing at JFK Airport, New York, NY	73
1990, Feb. 14	Indian Airlines Airbus 320	Crashed and burned on landing in Bangalore, India	91
1990, Oct. 2	Xiamen Airlines Boeing 737	Hijacked after takeoff from Xiamen; struck empty 707, then 757 on runway, Guangzhou, China	132
1991, May 26	Lauda-Air Boeing 767-300	Exploded over rural Thailand	223
1991, July 11	Nigerian DC-8	Crashed on landing at Jidda, Saudi Arabia	261
1991, Oct. 5	Air Force Lockheed C-130 Hercules	Crashed after takeoff from Jakarta, Indonesia	137*
1992, July 31	Thai Airbus A300-310	Crashed into mountain N of Kathmandu, Nepal	113
1992, Oct. 4	**El Al Boeing 747-200F**	**Crashed into 2 apartment bldgs., Amsterdam, Netherlands**	**120***
1993, Feb. 8	Iran Air Tu-154, Iranian Air Force jet	Collided after military jet took off from Tehran, Iran	133
1993, Mar. 5	Macedonian Pal Air Fokker 100	Crashed after takeoff in snowstorm from Skopje, Macedonia	83
1994, Jan. 3	Aeroflot Tu-154	Crashed and exploded after takeoff from Irkhutsk, Russia	125*
1994, Apr. 26	China Airlines Airbus A300	Crashed on approach to Nagoya Airport, Japan	264
1994, June 6	China Northwest Airlines Tu-154	Crashed near Xian, China	160
1994, Sept. 8	USAir Boeing 737-300	Crashed near Pittsburgh Intl. Airport, Aliquippa, PA	132
1994, Oct. 31	American Eagle ATR-72-210	Crashed in field near Roselawn, IN	68
1995, Aug. 11	Aviateca Boeing 737	Crashed into Chichontepec volcano, El Salvador	65
1995, Dec. 20	American Airlines Boeing 757	Crashed into mountain N of Cali, Colombia	160
1996, Jan. 8	Antonov-32 cargo plane	Crashed into central market in Kinshasa, Zaire	350+*
1996, Feb. 6	Turkish Boeing 757	Crashed into Atlantic off Dominican Republic	189
1996, Apr. 3	U.S. Air Force Boeing T-43A	Crashed into mountain near Dubrovnik, Croatia	35[10]
1996, May 11	ValuJet DC-9	Crashed into Florida Everglades after takeoff	110
1996, July 17	Trans World Airlines Boeing 747	Exploded and crashed into Atlantic off Long Isl., NY	230
1996, Aug. 29	Vnukovo Tu-154	Crashed into mountain on Arctic island of Spitsbergen	141
1996, Oct. 2	Aeroperu Boeing 757	Crashed into Pacific after takeoff from Lima, Peru	70
1996, Oct. 31	Brazilian TAM Fokker-100	Crashed shortly after takeoff from São Paulo, Brazil	97*
1996, Nov. 7	ADG Boeing 727	Crashed into lagoon SE of Lagos, Nigeria	143
1996, Nov. 12	**Saudi Arabian Boeing 747, Kazakh IL-76 cargo plane**	**Collided near New Delhi, India; world's worst midair collision**	**349**
1996, Nov. 23	Ethiopian Airlines Boeing 767	Hijacked, then crashed into Indian Ocean off the Comoros	127
1997, Aug. 6	Korean Air Boeing 747-300	Crashed into jungle on Guam on approach to airport	228
1997, Sept. 3	Vietnamese Airlines Tu-134	Crashed on approach to Phnom Penh airport, Cambodia	64
1997, Sept. 26	Indonesian Airbus A300	Crashed near airport, Medan, Indonesia	234
1997, Oct. 10	Austral Airlines DC-9-32	Crashed and exploded near Neuvo Berlin, Uruguay	74
1997, Dec. 6	Russian AN-124 transport cargo plane	Crashed into apartment complex near Irkutsk, Siberia	67*
1997, Dec. 15	Tajik Air Tu-154	Crashed in desert near airport, Sharja, UAE	85
1997, Dec. 17	AeroSvit Airlines Yakovlev-42	Crashed into mountains near Katerini, Greece	70
1997, Dec. 19	SilkAir Boeing 737-300	Crashed into Musi River, Sumatra, Indonesia	104
1998, Feb. 2	Cebu Pacific Air DC-9-32	Crashed into mountain near Cagayan de Oro, Philippines	104
1998, Feb. 16	China Airlines Airbus A300	Crashed on approach to airport in Taipei, Taiwan	203*
1998, Apr. 20	Air France Boeing 727-200	Crashed into mountain after takeoff from Bogotá, Colombia	53
1998, Sept. 2	Swissair MD-11	Crashed into Atlantic off Nova Scotia, Canada	229
1998, Dec. 11	Thai Airways Airbus A310	Crashed on third landing attempt at Surat Thani airport, Thailand	101
1999, Feb. 24	China Southwest Airlines Tu-154	Crashed on approach to airport in Wenzhou, China	61
1999, Sept. 1	LAPA Boeing 737-200	Crashed on takeoff from airport, Buenos Aires, Argentina	74*
1999, Oct. 31	EgyptAir Boeing 767	Crashed off Nantucket, MA; result of deliberate actions by copilot, motives unknown	217
2000, Jan. 30	Kenya Airways Airbus A310	Crashed into Atlantic after takeoff from Abidjan, Ivory Coast	169
2000, Jan. 31	Alaska Airlines MD-83	Crashed into Pacific off coast of Southern CA	88
2000, Apr. 19	Air Philippines Boeing 737-200	Crashed on approach to airport, Davao, Philippines	131
2000, July 25	**Air France Concorde**	**Crashed into hotel after takeoff from Paris; world's first Concorde crash**	**113***
2000, Aug. 23	Gulf Air Airbus A320	Crashed into Persian Gulf on approach to airport in Bahrain	143
2000, Oct. 31	Singapore Airlines Boeing 747	Crashed immediately after takeoff from Taipei, Taiwan	81
2001, Apr. 7	M-17 helicopter	Crashed into mountain S of Hanoi, Vietnam	16[11]
2001, July 3	Vladivostokavia Tu-154	Crashed on approach to airport, Irkutsk, Russia	145
2001, Sept. 11	**2 Boeing 767s, 2 Boeing 757s**	**September 11 terrorist attacks**	**265[12]**
2001, Oct. 4	Sibir Airlines Tu-154	Crashed into Black Sea, off Russia, after hit by errant Ukrainian missile	78
2001, Oct. 8	Cessna 525A Citation, Scandinavian Airlines System (SAS) MD-87	Collided in heavy fog on takeoff from Milan, Italy	118*
2001, Nov. 12	**American Airlines Airbus A300**	**Crashed after takeoff from JFK Airport, New York, NY**	**265***

Date	Aircraft	Site of accident	Deaths
2002, Jan. 28	TAME Ecuador Boeing 727	Crashed into Andes mountains, S Colombia	92
2002, Feb. 12	Iran Air Tours Tu-154	Crashed in Khorramabad, Iran	119
2002, Apr. 15	Air China Boeing 767	Crashed into mountainside in rain and fog on approach to airport, Pusan, S. Korea	129
2002, May 4	EAS Airlines BAC 1-11	Crashed shortly after takeoff from Kano, Nigeria	149
2002, May 7	China Northern Airlines MD-82	Plunged into sea, apparently after a passenger started fire in cabin, NE China	112
2002, May 25	China Airlines Boeing 747	Broke apart in midair, plunged into Taiwan Strait en route to Hong Kong airport	225
2002, July 1	Bashkirian Airlines Tu-154, DHL Boeing 757 cargo	Collided over S Germany	71
2002, July 27	**Ukraine Air Force Sukhoi Su-27**	**Crashed while performing, Lviv, Ukraine; world's worst air-show crash**	**77**[13]
2002, Aug. 19	Russian Mi-26 transport helicopter	Hit by Chechen missile near Grozny, Chechnya	127
2003, Jan. 8	Turkish Airlines British Aerospace RJ-100	Crashed on approach to airport in Diyarbakir, Turkey	75
2003, Feb. 19	Iranian Revolutionary Guard Il-76	Crashed into mountain near Kerman, Iran; passengers were Revolutionary Guard members.	275
2003, Mar. 6	Air Algérie Boeing 737-200	Crashed on takeoff from Tamanrasset, Algeria	102
2003, May 8	Congolese Air Force Il-76	On flight from Kinshasa, Dem. Rep. of Congo, cargo door opened, passengers sucked out.	7+[14]
2003, May 26	Ukrain.-Medit. Airlines Yak-42	Crashed into mountain in fog approaching Trabzon, Turkey; passengers incl. Spanish peacekeepers returning from Afghan.	75
2003, July 8	Sudan Airways Boeing 737-200	Mechanical problems reported shortly after takeoff; crashed upon return to Port Sudan Airport	115
2003, Dec. 25	Union Transp. Africains Boeing 727	Overloading caused crash on takeoff from Cotonou, Benin	138
2004, Jan. 3	Flash Airlines Boeing 737-300	Crashed into Red Sea after takeoff from Sharm el-Sheik, Egypt	148
2004, Feb. 10	Iranian Kish Airline Fokker-50	Crashed on approach to Sharjah, UAE	43
2004, Aug. 24	Volga-Aviaexpress Tu-134, Sibir Airlines Tu-154	2 planes that took off from Moscow crashed within minutes of each other; brought down by Chechen suicide bombers	90
2005, Feb. 3	Kam Air Boeing 737-200	Crashed on approach to airport in Kabul, Afghan.	104
2005, Aug. 14	Helios Airways Boeing 737-300	Crashed after air pressure failure on board, near Athens, Greece.	121
2005, Aug. 16	West Caribbean Airways MD-82	Crashed after engine failure, near Machiques, Venezuela.	160
2005, Sept. 5	Mandala Airlines Boeing 737-200	Crashed shortly after takeoff from Medan, Sumatra, Indonesia	145[15]
2005, Oct. 22	Bellview Airlines Boeing 737-200	Crashed during heavy electrical storm near Lagos, Nigeria	117
2005, Dec. 6	Islamic Rep. of Iran Air Force Lockheed C-130	Crashed into apartment building after reportedly attempting emergency landing back at airport, Tehran, Iran	116+[16]
2005, Dec. 10	Sosoliso Airlines DC-9-30	Crashed during storm on approach to Port Harcourt, Nigeria	107
2006, May 3	Armavia Airbus A320	Crashed into Black Sea on approach to airport, Sochi, Russia	113
2006, July 9	S7 Airlines Airbus A310	Skidded off runway, crashed into concrete barrier after landing, Irkutsk, Russia	125
2006, Aug. 22	Pulkovo Aviation Tu-154	Crashed after encountering storm, near Donetsk, Ukraine	170
2006, Aug. 27	Comair Bombardier CRJ-100	Crashed after takeoff from Lexington, KY	49
2006, Sept. 29	Gol Airlines Boeing 737	Crashed into Amazon jungle after midair collision with Embraer Legacy jet, Brazil	154
2006, Oct. 29	ADC Airlines Boeing 737-200	Crashed in stormy weather shortly after takeoff from Abuja, Nigeria	96
2007, Jan. 1	Adam Air Boeing 737-400	Crashed into sea off coast, Makassar, Indonesia.	102
2007, May 5	Kenya Airways Boeing 737-800	Crashed shortly after takeoff from Douala, Cameroon	114
2007, July 17	TAM Airlines Airbus 320	Crashed into cargo depot, gas station after skidding off airport runway, São Paulo, Brazil	199*
2007, Sept. 16	One-Two-Go Airlines Boeing-MD-82	Skidded off runway, caught fire after landing, Phuket, Thailand	89
2007, Nov. 30	Atlasjet MD-83	Crashed on approach to airport, Isparta, Turkey	57
2008, Aug. 20	Spanair Boeing-MD-82	Swerved off runway, caught fire on takeoff attempt, Madrid, Spain	154
2008, Aug. 24	Itek Air Boeing 737	Crashed after takeoff from Bishkek, Kyrgyzstan	65
2008, Sept. 14	Aeroflot-Nord Boeing 737-500	Crashed on approach to airport, Perm, Russia	88
2009, Feb. 12	Colgan Air Bombardier Dash 8 Q400	Crashed into house near airport, Buffalo, NY	50*
2009, May 20	Indonesian military C-130 Hercules	Crashed into houses and a rice field, Java, Indonesia	98
2009, June 1	**Air France Airbus A330**	**Plunged into Atlantic Ocean en route from Rio de Janeiro, Brazil, to Paris, France**	**228**
2009, June 29	Yemenia Airbus A310-300	Fell into Indian Ocean on approach to Moroni, Comoros	152
2009, July 15	Caspian Airlines Tupolev 154	Crashed after takeoff from Tehran, Iran	168
2010, Jan. 25	Ethiopian Airlines Boeing 737-300	Crashed into Mediterranean after takeoff from Beirut, Lebanon	90
2010, May 12	Afriqiyah Airways Airbus A330-200	Crashed short of runway in Tripoli, Libya	103
2010, May 22	Air India Express Boeing 737-300	Overran runway on landing at Mangalore, India.	158

(1) Bomb was planted by Jack G. Graham in insurance plot to kill his mother, Daisie E. King, a passenger. (2) 84 on plane, 71 on ground killed. (3) Incl. 43 Marshall Univ. (WV) football players and coaches. (4) Fighter pilot parachuted to safety. (5) First supersonic plane crash; killed 8 on ground. (6) Crew of 3, 97 on ground killed. (7) Incl. 22 members of U.S. amateur boxing team. (8) Incl. 248 members of U.S. 101st Airborne Division. (9) Incl. 11 on ground. (10) Incl. U.S. Sec. of Commerce Ron Brown. (11) Carried U.S. mil. personnel searching for MIAs from Vietnam War. (12) 4 planes were hijacked and crashed, with all on board killed (265, incl. 19 hijackers). American Airlines Flight 11, a Boeing 767-200, with 81 passengers, 11 crew, crashed into Tower 1 of World Trade Center; United Airlines Flight 175, a Boeing 767-200, with 56 passengers, 9 crew, crashed into Tower 2 of World Trade Center; American Airlines Flight 77, a Boeing 757-200, with 58 passengers, 6 crew, crashed into Pentagon outside Washington, DC; United Air Lines Flight 93, a Boeing 757-200, with 37 passengers, 7 crew, crashed near Shanksville, PA. About 125 died on ground in the Pentagon. In May 2007, for first time, medical examiner linked a death to exposure to dust from collapsed towers on Sept. 11. Additional deaths from such exposure brought number of World Trade Center victims to 2,752 as of Sept. 2009. (13) Pilots ejected to safety. All spectator deaths. (14) 7 confirmed dead. Actual number might be 60-100+. (15) Incl. 44 on ground. (16) 94 on plane plus 22+ on ground.



Disaster Averted

Date: Jan. 15, 2009. **Location:** Hudson River, NY-NJ. **Fatalities:** 0.

Chesley B. "Sully" Sullenberger III, the captain of U.S. Airways Flight 1549, made a spectacular emergency landing on the surface of a chilly Hudson River after apparent bird strikes took out both of the plane's engines shortly after takeoff from New York's LaGuardia Airport. Ferry boats and other nearby watercrafts safely evacuated the five crew members and all 150 passengers to shore soon after the emergency water landing.

Some Notable Shipwrecks Since 1854

Figures are estimated deaths. Does not include most wartime disasters.

1854, Mar. 1—City of Glasgow; Brit. steamer left Liverpool for Philadelphia, never heard from again; 480.
1854, Sept. 27—Arctic and **Vesta;** U.S. Collins Line steamer sunk in collision with French steamer nr. Cape Race, Canada; 285-351.
1856, Jan. 23—Pacific; U.S. Collins Line steamer went missing in N Atlantic; 186-286.
1858, Sept. 23—Austria; German steamer destroyed by fire in N Atlantic; 471.
1863, Apr. 27—Anglo-Saxon; Brit. steamer wrecked at Cape Race, Canada; 238.
1865, Apr. 27—Sultana; Mississippi R. steamer blew up nr. Memphis, TN; 1,450.
1869, Oct. 27—Stonewall; steamer burned, Mississippi R. below Cairo, IL; 200.
1870, Jan. 25—City of Boston; Brit. Inman Line steamer vanished between New York and Liverpool; 177.
1870, Oct. 19—Cambria; Brit. steamer off N Ireland; 196.
1872, Nov. 7—Mary Celeste; U.S. half-brig sailing from New York to Genoa, Italy, found abandoned; loss of life unknown.
1873, Jan. 22—Northfleet; Brit. steamer foundered off Dungeness, England; 300.
1873, Apr. 1—Atlantic; Brit. White Star steamer off Nova Scotia, Can.; 585.
1873, Nov. 23—Ville du Havre and **Loch Earn;** French steamer sank after collision with Brit. sailing ship; 226.
1875, May 7—Schiller; German steamer off Scilly Isles, UK; 312.
1875, Nov. 4—Pacific; U.S. steamer sank after collision off Cape Flattery, WA; 236.
1878, Sept. 3—Princess Alice; Brit. steamer sank after collision with *Bywell Castle* in Thames R.; 700.
1878, Dec. 18—Byzantin; French steamer sank after collision in Dardanelles, off Turkey; 210.
1881, May 24—Victoria; steamer capsized in Thames R., ON, Canada; 200.
1883, Jan. 19—Cimbria and **Sultan;** German steamer sank in collision with Brit. steamer in North Sea; 389.
1890, Feb. 17—Duburg; Brit. steamer wrecked, China Sea; 400.
1890, Sept. 19—Ertogrul; Turkish frigate off Japan; 540.
1891, Mar. 17—Utopia and **Anson;** Brit. steamer sank in collision with Brit. ironclad off Gibraltar; 562.
1895, Jan. 30—Elbe and **Craithie;** German steamer sank in collision with Brit. steamer in North Sea; 332.
1895, Mar. 11—Reina Regenta; Spanish cruiser foundered nr. Gibraltar; 400.
1898, Feb. 15—USS Maine; explosion caused battleship to sink in Havana Harbor, Cuba; 260.
1898, July 4—La Bourgogne and **Cromartyshire;** French steamer sank in collision with Brit. sailing ship off Nova Scotia, Can.; 549.
1898, Nov. 26—Portland; U.S. steamer, off Cape Cod, MA; 157.
1904, June 15—General Slocum; excursion steamer burned in East R., New York, NY; 1,021.
1904, June 28—Norge; Danish steamer wrecked on Rockall Isl., Scotland; 620.
1906, Aug. 4—Sirio; Italian steamer wrecked off Cape Palos, Spain; 350.
1908, Mar. 23—Mutsu Maru; Japanese steamer sank in collision with another steamer nr. Hakodate, Japan; 300.
1909, Aug. 1—Waratah; Brit. steamer vanished en route from Sydney to London; 300.
1910, Feb. 9—General Chanzy; French steamer wrecked off Minorca, Spain; 200.
1911, Sept. 25—Liberté; French battleship exploded at Toulon; 285.
1912, Mar. 5—Principe de Asturias; Spanish steamer wrecked off Spanish coast; 500.
1912, Apr. 14-15—Titanic; Brit. White Star steamer hit iceberg in N Atlantic; 1,503.
1912, Sept. 28—Kichemaru; Japanese steamer sank off Japan coast; 1,000.
1914, May 29—Empress of Ireland; Canadian Pacific steamer collided with Norwegian coal transporter *Storstad* in St. Lawrence R., Can.; 1,014.
1915, May 7—Lusitania; Brit. Cunard Line steamer torpedoed and sunk by German submarine off Ireland; 1,198.
1915, July 24—Eastland; steamer capsized, Chicago R., IL; 844.
1916, Feb. 26—Provence; French cruiser sank in Medit.; 3,100.
1916, Mar. 3—Principe de Asturias; Spanish steamer wrecked nr. Santos, Brazil; 558.
1917, Dec. 6—Mont Blanc and **Imo;** French ammunition ship and Belgian steamer collided in Halifax Harbor, Can.; 1,600.
1918, Apr. 25—Kiang-Kwan; Chinese steamer sank in collision off Hankow; 500.
1918, July 12—Kawachi; Japanese battleship blew up in Tokayama Bay; 500.
1918, Oct. 25—Princess Sophia; Canadian steamer sank off Alaskan coast; 398.
1919, Jan. 17—Chaonia; French steamer lost in Straits of Messina, Italy; 460.
1919, Sept. 9—Valbanera; Spanish steamer lost off FL coast; 500.
1921, Mar. 18—Hong Kong; steamer wrecked, S China Sea; 1,000.
1922, Aug. 26—Niitaka; Japanese cruiser sank in storm off Kamchatka, USSR; 300.
1924, June 12—USS Mississippi; explosions in battleship's gun turret, off San Pedro, CA; 48.
1927, Oct. 25—Principessa Mafalda; Italian steamer blew up, sank off Porto Seguro, Brazil; 314.
1928, Nov. 12—Vestris; Brit. steamer sank off VA coast; 113.
1934, Sept. 8—Morro Castle; U.S. steamer en route from Havana to New York, burned off Asbury Park, NJ; 134.
1939, May 23—Squalus; U.S. submarine sank off Portsmouth, NH; 26.
1939, June 1—Thetis; Brit. submarine sank, Liverpool Bay; 99.
1942, Feb. 18—USS Truxtun and **USS Pollux;** destroyer and cargo ship ran aground, sank off Newfoundland, Can.; 204.
1942, Oct. 2—Curacao and **Queen Mary;** Brit. cruiser sank after collision with liner; 338.
1944, Dec. 17-18—3 U.S. Third Fleet destroyers sank during typhoon, Philippine Sea; 790.
1945, Jan. 30—Wilhelm Gustloff; liner with German refugees, soldiers sunk by Soviet submarine in Baltic; 5,000-9,000.
1945, Apr. 16—Goya; cargo ship carrying German refugees, soldiers sunk by Soviet submarine in Baltic; 6,000-7,000.
1945, May 3—Cap Arcona and **Thielbek;** German liners carrying concentration camp inmates sunk by British warplanes in Lubeck Bay, Ger.; 7,000-8,000.
1947, Jan. 19—Himera; Greek steamer hit mine off Athens, Greece; 392.
1947, Apr. 16—Grandcamp; French freighter exploded, Texas City, TX, harbor, started fires; 576+.
1948, Dec. 3—Kiangya; Chinese refugee ship wrecked in explosion S of Shanghai; 1,100+.
1949, Sept. 17—Noronic; Canadian Great Lakes Cruiser burned in dock, Toronto, Can.; 130.
1952, Apr. 26—USS Hobson and **USS Wasp;** destroyer and aircraft carrier collided in Atlantic; 176.
1954, Sept. 26—Toya Maru; Japanese ferry sank, Tsugaru Strait, Japan; 1,172.
1956, July 26—Andrea Doria and **Stockholm;** Italian liner and Swedish liner collided off Nantucket Isl., MA; 51.
1957, July 14—Eshghabad; Soviet ship ran aground in Caspian Sea; 270.
1961, Apr. 8—Dara; Brit. liner exploded in Persian Gulf; 236.
1961, July 8—Save; Portuguese ship ran aground off Mozambique; 259.
1963, Apr. 10—Thresher; U.S. Navy atomic submarine sank in N Atlantic; 129.
1964, Feb. 10—Voyager; Australian destroyer sank after collision with aircraft carrier *Melbourne* off New South Wales; 82.
1965, Nov. 13—Yarmouth Castle; Panamanian-registered cruise ship burned, sank off Nassau, Bahamas; 89.
1968, Jan. 25—Dakar; Israeli submarine vanished in Medit.; 69.
1968, May 27—Scorpion; U.S. nuclear submarine went missing, later found to have sunk in Atlantic nr. Azores; 99.
1969, June 2—Evans and **Melbourne;** U.S. destroyer cut in half by Australian carrier, S China Sea; 74.
1970, Mar. 4—Eurydice; French submarine sank in Medit. nr. Toulon; 57.
1970, Dec. 15—Namyong-Ho; S. Korean ferry sank in Korea Strait; 308.
1974, Sept. 26—Soviet destroyer sank in Black Sea; 200+.
1975, Nov. 10—Edmund Fitzgerald; U.S. cargo ship sank during storm on Lake Superior; 29.
1976, Oct. 20—George Prince and **Frosta;** U.S. ferryboat and Norwegian tanker collided, Mississippi R., at Luling, LA; 77.
1976, Dec. 25—Patria; Egyptian liner caught fire, sank in Red Sea; 100.

Sinking of the *General Slocum*

Date: June 15, 1904. **Location:** New York, NY. **Fatalities:** 1,021.

The highest death toll of any incident in New York City prior to the Sept. 11, 2001, terrorist attacks. The *General Slocum* caught fire while on the East River. Most of its 1,300-1,500 passengers were women and children, German immigrants on a daylong church outing. Shortly after the ship launched, a fire erupted on board. The inexperienced crew didn't know how to respond, and the ship, which was in poor condition, lacked adequate safety measures. Those who didn't know how to swim died in the fire or drowned when they jumped into the water.

1979, Aug. 14—23 yachts competing in Fastnet yacht race sank or abandoned during storm in S Irish Sea; 18.
1980, Apr. 22—**Don Juan;** sank off Mindoro Isl., Philippines, after colliding with barge; 1,000+.
1981, Jan. 27—**Tamponas II;** Indonesian passenger ship caught fire and sank in Java Sea; 580.
1983, Feb. 12—**Marine Electric;** coal freighter sank during storm off Chincoteague, VA; 33.
1983, May 25—**10th of Ramadan;** Nile steamer caught fire and sank in Lake Nasser, Egypt; 357.
1986, Apr. 20—**Atlas Star;** ferry sank in storm, Dhaleswari R. nr. Dhaka, Bangladesh; 300+.
1986, May 25—**Shamia;** ferry capsized in storm, Meghna R., Bangladesh; 500+.
1986, Sept. 1—**Admiral Nakhimov** and **Pyotr Vasev;** Soviet cruise ship collided with Soviet freighter in Black Sea; 425.
1987, Mar. 6—**Herald of Free Enterprise;** Brit. ferry capsized off Zeebrugge, Belgium; 189.
1987, Dec. 20—**Doña Paz** and **Victor;** Philippine ferry and oil tanker collided in Tablas Strait; 4,341.
1988, Aug. 6—Indian ferry capsized on Ganges R.; 400+.
1989, Apr. 7—**Komsolets;** Soviet submarine sank after fire off Norwegian coast; 42.
1989, Aug. 20—**Bowbelle** and **Marchioness;** Brit. barge struck Brit. pleasure cruiser on Thames R. in central London; 56.
1991, Apr. 10—**Moby Prince** and **Agip Abruzzo;** auto ferry and oil tanker collided outside Livorno Harbor, Italy; 140.
1991, Dec. 14—**Salem Express;** ferry rammed coral reef nr. Safaga, Egypt; 462.
1993, Feb. 17—**Neptune;** ferry capsized off Port-au-Prince, Haiti; 500+.
1993, Oct. 10—**Seohae;** capsized in Yellow Sea nr. W S. Korea during storm; 285.
1994, Sept. 28—**Estonia;** ferry sank in Baltic Sea; 852.
1996, May 21—**Bukoba;** overcrowded Tanzanian ferry sank in Lake Victoria; 500+.
1997, Feb. 20—Tamil refugee boat sank off Sri Lanka; 165.
1997, Mar. 28—Albanian refugee boat sank in Adriatic after being rammed by Italian navy warship *Sibilla*; 83.
1997, Sept. 8—**Pride of la Gonâve;** Haitian ferry sank off Montrouis, Haiti; 200+.
1998, Apr. 4—Passenger boat capsized off coast nr. Ibaka beach, Nigeria; 280.
1998, Sept. 2—2 passenger boats capsized on Lake Kivu, nr. Bukavu, Congo; 200+.
1999, Feb. 6—**Harta Rimba;** cargo ship sank off Indonesia; 280+.
1999, May 1—**Miss Majestic;** "duck" boat on tour sank, Lake Hamilton, AR; 13.
1999, Nov. 24—**Dashun;** passenger ferry capsized nr. Yantai, China; 280.
2000, June 29—**Cahaya Bahari;** overloaded ferry carrying refugees from religious strife capsized in storm off Sulawesi Isl., Indonesia; 500+.
2000, Aug. 12—**Kursk;** faulty torpedo exploded on board Russian submarine, causing it to sink in Barents Sea; 118.
2000, Sept. 26—**Express Samina;** Greek ferry sank off Paros, Greece; 81+.
2001, Feb. 9—**Ehime Maru;** Japanese trawler sunk by surfacing U.S. submarine *Greeneville*, nr. Hawaii; 9.
2001, Oct. 19—Fishing boat overloaded with refugees, mainly from Middle East, sank off Indonesia; 350+.
2001, Dec. 22—Suspected N. Korean spy ship sank after exchanging fire with Japanese coast guard; 15.
2002, May 4—**Salahuddin-2;** overloaded Bangladesh ferry sank in Meghna R.; 300+.
2002, Sept. 26—**Joola;** overloaded Senegalese ferry capsized in ocean off The Gambia; 1,863.
2003, Mar. 23—**Kashowgwe;** overloaded ferry capsized in Lake Tanganyika, off Burundi; 111+.
2003, July 8—**MV-Nasrin 1;** overcrowded ferry sank nr. Chandpur in Bangladesh R.; 400.
2003, Oct. 15—**Andrew J. Barberi;** NYC ferry crashed into dock on approach to Staten Isl.; 11.
2003, Nov. 25—**Dieu Merci;** overloaded ferry sank on Lake Mayi Ndombe, Dem. Rep. of Congo; 130-200.
2004, Jan. 26—**Convoi Lengi;** ferry caught fire on Congo R., Dem. Rep. of Congo; 200.
2004, Mar 6—**Lady D;** water taxi capsized in storm, Inner Harbor, Baltimore, MD; 5.
2004, Mar. 11—**Samson;** ferry sank off Madagascar during cyclone; 113.
2005, July 7—**KMP Digul;** ferry capsized in rough waters nr. Merauke, Indonesia; 150+.
2005, Aug. 12—Fishing boat overloaded with Ecuadorans attempting to migrate to U.S. sank off Colombia; 94.
2005, Oct. 2—**Ethan Allen;** glass boat carrying senior citizens capsized on tour, Lake George, NY; 20.
2006, Feb. 3—**Al-Salam Boccaccio 98;** ferry caught fire, sank in Red Sea off Egypt; 1,000+.
2006, Dec. 30—**Senopati Nusantara;** high waves capsized ferry en route to Java, Indonesia; 400+.
2007, May 4—Boat overloaded with illegal Haitian immigrants capsized in storm nr. Turks and Caicos Isls.; 61+.
2007, Nov. 23—**Explorer;** Canadian cruise ship sank off Antarctica, first comm. passenger ship to sink in region; none.
2008, June 23—**Princess of the Stars;** Philippine ferry capsized during Typhoon *Fengshen* nr. Manila; 800.
2009, Mar. 30—Passenger boat carrying African immigrants to Italy capsized off coast of Libya; 200+.

Some Notable Railroad Disasters Since 1925

Date	Location	Deaths
1925, June 16	Hackettstown, NJ	50
1925, Oct. 27	Victoria, MS	21
1926, Sept. 5	Waco, CO	30
1937, July 16	Bhita, India	107
1938, June 19	Saugus, MT	47
1939, Aug. 12	Harney, NV	24
1939, Dec. 22	Near Magdeburg, Germany	132
1939, Dec. 22	Near Friedrichshafen, Germany	99
1940, Apr. 19	Little Falls, NY	31
1940, July 31	Cuyahoga Falls, OH	43
1943, Aug. 29	Wayland, NY	27
1943, Sept. 6	Frankford Junction, Philad., PA	79
1943, Dec. 16	Between Rennert and Buie, NC	72
1944, Jan. 16	León Province, Spain	500
1944, Mar. 2	Salerno, Italy	521
1944, July 6	High Bluff, TN	35
1944, Aug. 4	Near Stockton, GA	47
1944, Sept. 14	Dewey, IN	29
1944, Dec. 31	Bagley, UT	50
1945, Aug. 9	Michigan, ND	34
1946, Mar. 20	Aracaju, Mexico	185
1946, Apr. 25	Naperville, IL	45
1947, Feb. 18	Gallitzin, PA	24
1949, Oct. 22	Near Dwor, Poland	200+
1950, Feb. 17	Rockville Centre, NY	31
1950, Sept. 11	Coshocton, OH	33
1950, Nov. 22	Richmond Hill, NY	79
1951, Feb. 6	Woodbridge, NJ	84
1952, Mar. 4	Near Rio de Janeiro, Brazil	119
1952, July 9	Rzepin, Poland	160
1952, Oct. 8	Harrow, England	112
1953, Mar. 27	Conneaut, OH	21
1953, Dec. 24	Tangiwai, New Zealand	151
1955, Apr. 3	Guadalajara, Mexico	300
1956, Jan. 22	Los Angeles, CA	30
1957, Sept. 1	Kendal, Jamaica	178
1957, Sept. 29	Montgomery, W Pakistan	250
1957, Dec. 4	London, England	90
1958, May 8	Rio de Janeiro, Brazil	128
1958, Sept. 15	Elizabethport, NJ	48
1960, Nov. 14	Pardubice, Czechoslovakia	110
1962, Jan. 8	Woerden, Netherlands	91
1962, May 3	Tokyo, Japan	163
1963, Nov. 9	Yokohama, Japan	120+
1964, July 26	Porto, Portugal	94
1967, July 6	Madgeburg, Germany	94
1970, Feb. 1	Buenos Aires, Argentina	236
1972, June 16	Vierzy, France	107
1972, July 21	Seville, Spain	76
1972, Oct. 6	Saltillo, Mexico	208
1972, Oct. 30	Chicago, IL	45
1974, Aug. 30	Zagreb, Yugoslavia	153
1975, Feb. 28	Subway train, London, England	41
1977, Jan. 18	Granville, Australia	83
1981, June 6	Bihar, India	800+
1982, Jan. 27	El Asnam, Algeria	130
1982, July 11	Tepic, Mexico	120
1983, Feb. 19	Empalme, Mexico	100
1985, Feb. 23	Madhya Pradesh state, India	50
1987, July 2	Kasumbalesha Shaba, Zaire	125
1988, June 27	Gare de Lyon train station, Paris	57
1988, Dec. 12	London, England	35
1989, Jan. 15	Maizdi Khan, Bangladesh	110+
1989, June 9	Train collided with bus, S Russia	31
1990, Jan. 4	Sindh Province, Pakistan	210+
1993, Sept. 22	Big Bayou Conot, AL	47
1994, Mar. 8	Near Durban, South Africa	63
1994, Sept. 22	Tolunda, Angola	300
1995, Aug. 20	Firozabad, India	358
1997, Mar. 3	Punjab Province, Pakistan	125

Date	Location	Deaths
1997, Apr. 29	Rongjiawan, China	58
1997, May 4	Rwandan refugees on overcrowded trains, Kisangani, Zaire	100+
1997, Sept. 14	Madhya Pradesh state, India	77
1998, Feb. 19	Yaounde, Cameroon	100+
1998, June 3	Eschede, Germany	102
1998, Nov. 26	Khanna, India	200+
1998, Mar. 15	Bourbonnais, IL	11
1999, Mar. 24	Nairobi, Kenya	32+
1999, Aug. 2	Gauhati, India	285+
1999, Oct. 5	London, England	31
2000, Jan. 4	Rena, Norway	35
2000, Nov. 11	Kaprun, Austria	155
2001, June 22	Cochin, India	64
2002, Feb. 20	S of Cairo, Egypt	373
2002, May 25	Muamba, Mozambique	196+
2002, June 24	Igandu, Tanzania	281+
2002, Sept. 10	Bihar, India	118
2003, Feb. 1	NW Zimbabwe	46
2003, May 8	Near Lake Balaton, Hungary	33
2003, May 15	Ludhiana, India	36
2003, June 22	Rajapur, India	33
2003, July 2	Andhra Pradesh state, India	22
2004, Feb. 18	Neyshabur, NE Iran	300+
2004, Apr. 22	Ryongchon, North Korea	161
2004, July 22	Mekece, NW Turkey	36
2005, Jan. 26	Glendale, CA	11
2005, Apr. 25	Near Amagasaki, Japan	107+
2005, July 13	3 commuter trains, Ghotki, Pakistan	133
2005, Oct. 29	Near Veligonda, India	114+
2006, Jan. 23	Podgorica, Montenegro	46
2007, Aug. 2	Nr. Benaleka, Dem. Rep. of Congo	70+
2008, July 16	Near Marsa Matruh, Egypt	37+
2008, Sept. 12	Commuter train collided head-on with freight train, Los Angeles, CA	25
2009, June 22	Moving DC Metro train collided with stationary train nr. Takoma Park, MD	9
2010, Feb 15	Passenger trains collided near Brussels	18
2010, May 28	Passenger train derailed, allegedly by Maoist rebels, West Bengal, India	148

Some Notable U.S. Tornadoes Since 1925

Date	Location	Deaths
1925, Mar. 18	MO, IL, IN	689
1927, Apr. 12	Rocksprings, TX	74
1927, May 9	AR; Poplar Bluff, MO	92
1927, Sept. 29	St. Louis, MO	90
1930, May 6	Hill, Navarro, Ellis Cos., TX	41
1932, Mar. 21	Alabama	268
1936, Apr. 5-6	Tupelo, MS; Gainesville, GA	454
1938, Sept. 29	Charleston, SC	32
1942, Mar. 16	Central to NE Mississippi	75
1942, Apr. 27	Rogers and Mayes Cos., OK	52
1944, June 23	OH, PA, WV, MD	150
1945, Apr. 12	OK, AR	102
1947, Apr. 9	TX; Woodward, OK; KS	181
1948, Mar. 19	Bunker Hill and Gillespie, IL	33
1949, Jan. 3	LA, AR	58
1952, Mar. 21-22	AR, MO, TN	208
1953, May 11	Waco, TX	114
1953, June 8	Flint-Beecher, MI; OH	142
1953, June 9	Worcester and vicinity, MA	90
1953, Dec. 5	Vicksburg, MS	38
1955, May 25	Udall, KS; MO; Blackwell, OK; TX	115
1957, May 20	KS, MO	48
1958, June, 4	NW Wisconsin	30
1959, Feb. 10	St. Louis, MO	21
1960, May 5-6	Southeastern OK, AR	30
1962, Mar. 31	Milton, FL	17
1965, Apr. 11	IA, IN, IL, OH, MI, WI	271
1966, Mar. 3	Jackson, MS	57
1966, Mar. 3	MS, AL	61
1967, Apr. 21	IL, MO, IA, MI	33
1968, May 15	Midwest	71
1969, Jan. 23	Mississippi	32
1970, May 11	Lubbock, TX	23
1971, Feb. 21	Mississippi Delta: MS, LA, AR, TN	110
1973, May 26-27	South, Midwest	47
1974, Apr. 3-4	AL; GA; KY; Xenia, OH; other states	315
1977, Apr. 4	AL, MS, GA	22
1979, Apr. 10	TX, OK	60
1984, Mar. 28	NC, SC	57
1985, May 31	NY; PA; OH; Ontario, Can.	75
1987, May 22	Saragosa, TX	30
1989, Nov. 15	Huntsville, AL	18
1990, Aug. 28	Northern IL	25
1991, Apr. 26	KS, OK	23
1992, Nov. 21-23	South, Midwest	26
1994, Mar. 27-28	AL, TN, GA, NC, SC	52
1995, May 6-7	S Oklahoma, N Texas	23
1997, Mar. 1	Central AR	26
1997, May 27	Jarrell, TX	27
1998, Feb. 22-23	Central FL	42
1998, Apr. 8	AL, GA, MS	39
1999, May 3	OK, KS	54
2000, Feb. 14	SW Georgia	22+
2000, Dec. 16	Alabama	12
2001, Nov. 23-24	AL, AR, MS	13
2002, Nov. 10-11	AL, MS, TN, IN, OH, PA	36
2003, May 4-11	TN, MO, KS, IL, OK, WV, AL	48
2005, Nov. 6	KY, IN	22
2006, Apr. 7-8	Central U.S., TX to WV	12
2007, Mar. 1	AL, GA, MO, Midwest	20
2007, May 4	Greensburg, KS	11
2008, Feb. 25	"Super Tuesday" outbreak, TN, AR, KY, AL, MO	57
2008, May 10	MS, OK, GA	23
2010, Apr. 24	MS	10

Principal U.S. Mine Disasters Since 1900

Source: Bureau of Mines, U.S. Dept. of the Interior; Mine Safety and Health Admin., U.S. Dept. of Labor; World Almanac research

All are bituminous-coal mines unless otherwise noted.

Date	Location	Deaths
1900, May 1	Scofield, UT	200
1902, May 19	Coal Creek, TN	184
1902, July 10	Johnstown, PA	112
1903, June 30	Hanna, WY	169
1904, Jan. 25	Cheswick, PA	179
1905, Feb. 20	Virginia City, AL	112
1907, Jan. 29	Stuart, WV	84
1907, Dec. 6	Monongah, WV	362
1907, Dec. 19	Jacobs Creek, PA	239
1908, Nov. 28	Marianna, PA	154
1909, Nov. 13	Cherry, IL	259
1910, Jan. 31	Primero, CO	75
1910, May 5	Palos, AL	84
1910, Nov. 8	Delagua, CO	79
1911, Apr. 8	Littleton, AL	128
1911, Dec. 9	Briceville, TN	84
1912, Mar. 26	Jed, WV	83
1913, Apr. 23	Finleyville, PA	98
1913, Oct. 22	Dawson, NM	263
1914, Apr. 28	Eccles, WV	181
1915, Mar. 2	Layland, WV	115
1917, Apr. 27	Hastings, CO	121
1917, June 8	Butte, MT[1]	163
1919, June 5	Wilkes-Barre, PA[2]	92
1922, Nov. 6	Spangler, PA	77
1922, Nov. 22	Dolomite, AL	90
1923, Feb. 8	Dawson, NM	120
1923, Aug. 14	Kemmerer, WY	99
1924, Mar. 8	Castle Gate, UT	172
1924, Apr. 28	Benwood, WV	119
1926, Jan. 13	Wilburton, OK	91
1926, Nov. 3	Ishpeming, MI[1]	51
1927, Apr. 30	Everettville, WV	97
1928, May 19	Mather, PA	195
1930, Nov. 5	Millfield, OH	82
1940, Jan. 10	Bartley, WV	91
1940, Mar. 16	St. Clairesville, OH	72
1942, Mar. 26	Allentown, PA[3]	31
1943, Feb. 27	Washoe, MT	74
1947, Mar. 25	Centralia, IL	111
1951, Dec. 21	West Frankfort, IL	119
1968, Mar. 6	Belle Isle, LA[4]	21
1968, Nov. 20	Farmington, WV	78
1972, May 2	Kellogg, ID[1]	91
1976, Mar. 9	Oven Fork, KY	15
1981, Apr. 15	Redstone, CO	15
1981, Dec. 8	Whitwell, TN	13
1984, Dec. 19	Orangeville, UT	27
1989, Sept. 13	Wheatcroft, KY	10
2001, Sept. 23	Brookwood, AL	13
2006, Jan. 2	Sago, WV	12
2010, Apr. 5	Montcoal, WV	29

Note: World's worst mine disaster killed 1,549 workers in Manchuria, China, Apr. 25, 1942. (1) Metal mine. (2) Anthracite mine. (3) Limestone mine. (4) Salt mine.

Some Notable Hurricanes, Typhoons, Blizzards, Other Storms

C.—cyclone; H.—hurricane; TS.—tropical storm; T.—typhoon[1]

Date	Location	Deaths
1881, Aug. 24-29	H., GA, SC	700
1888, Mar. 11-14	Blizzard, eastern U.S.	400
1893, Aug. 15-Sept. 2	H., GA, SC	1,000+
1893, Oct. 1	H., LA	1,100+
1900, Sept. 8	H., Galveston, TX	8,000+
1906, Sept. 19-24	H., LA, MS	350
1906, Sept. 18	T., Hong Kong	10,000+
1909, Sept. 20	H., LA	350+
1915, Aug. 16	H., Galveston, TX	275
1915, Sept. 29	H., LA	275
1919, Sept. 6-14	H., Carib., Florida Keys, Gulf, TX	600+[2]
1926, Sept. 11-22	H., FL, AL, MS	370+
1926, Oct. 20	H., Cuba	600
1928, Sept. 6-20	H., southern FL	2,500+
1930, Sept. 3	H., Dominican Republic	2,000
1935, Aug. 29-Sept. 10	H., Caribbean, SE U.S.	400+
1937, Sept. 2	T., "The Great Typhoon," Hong Kong	10,000+
1938, Sept. 21	H., "Long Isl. Express," NY; New England	682
1940, Nov. 11-12	Blizzard, NE, Midwest U.S.	144
1942, Oct. 15-16	H., Bengal, India	40,000
1947, Dec. 26	Blizzard, NYC, N Atl. states	55
1952, Oct. 22	T., Philippines	440
1954, Aug. 30	H. *Carol*, northeastern U.S.	68
1954, Oct. 5-18	H. *Hazel*, E Canada, U.S., Haiti	347
1955, Aug. 7-21	H. *Diane*, eastern U.S.	400
1955, Sept. 19	H. *Hilda*, Mexico	200
1956, Feb. 1-29	Blizzard, W Europe	1,000
1957, June 25-30	H. *Audrey*, TX to AL	390
1958, Feb. 15-16	Blizzard, northeastern U.S.	171
1959, Sept. 17-19	T. *Sarah*, Japan, S. Korea	2,000
1959, Sept. 26-27	T. *Vera*, Honshu, Japan	4,466
1960, Sept. 4-12	H. *Donna*, Caribbean, E U.S.	148
1961, Oct. 31	H. *Hattie*, Brit. Honduras.	400
1962, Sept. 1	T. *Wanda*, Hong Kong	130-200
1963, May 28-29	Windstorm, Bangladesh	22,000
1963, Oct. 4-8	H. *Flora*, Caribbean	6,000
1964, June 30	T. *Winnie*, N Philippines	107
1964, Sept. 5	T. *Ruby*, Hong Kong, China	735
1965, May 11-12	Windstorm, Bangladesh	17,000
1965, June 1-2	Windstorm, Bangladesh	30,000
1965, Sept. 7-12	H. *Betsy*, FL, MS, LA	74
1965, Dec. 15	Windstorm, Bangladesh	10,000
1966, June 4-10	H. *Alma*, Honduras, SE U.S.	51
1966, Sept. 24-30	H. *Inez*, Carib., FL, Mexico	293
1967, July 9	T. *Billie*, SW Japan	347
1967, Sept. 5-23	H. *Beulah*, Carib., Mex., TX	54
1967, Dec. 12-20	Blizzard, southwest U.S.	51
1969, Aug. 17-18	H. *Camille*, MS, LA	256
1970, Sept. 15	T. *Georgia*, Philippines	300
1970, Oct. 14	T. *Sening*, Philippines.	583
1970, Oct. 15	T. *Titang*, Philippines	526
1970, Nov. 13	C., Bay of Bengal, Bangladesh	300,000
1971, Aug. 1	T. *Rose*, Hong Kong	130
1972, June 19-29	H. *Agnes*, FL to NY	118
1972, Dec. 3	T. *Theresa*, Philippines	169
1973, June-Aug.	Monsoon rains, India	1,217
1974, June 11	TS. *Dinah*, Luzon Isl., Philippines	71
1974, July 11	T. *Gilda*, Japan, S. Korea	108
1974, Sept. 19-20	H. *Fifi*, Honduras.	2,000
1975, Sept. 13-27	H. *Eloise*, Caribbean, NE U.S.	71
1976, May 20	T. *Olga*, floods, Philippines.	215
1976, Sept. 25-Oct. 2	H. *Liza*, W Mexico.	630
1978, Oct. 27	T. *Rita*, Philippines	400
1979, Aug. 30-Sept. 7	H. *David*, Caribbean, E U.S.	1,100
1980, Aug. 4-11	H. *Allen*, Caribbean, TX	272
1981, Nov. 25	T. *Irma*, Luzon Isl., Philippines	176
1983, June	Monsoon, India	900
1984, Sept. 2	T. *Ike*, S Philippines	1,363
1985, May 25	C., Bangladesh	10,000
1985, Oct. 26-Nov. 6	H. *Juan*, SE U.S.	97
1987, Nov. 25	T. *Nina*, Philippines.	650
1988, Sept. 10-17	H. *Gilbert*, Carib., Gulf of Mex.	260
1989, Sept. 16-22	H. *Hugo*, Caribbean, SE U.S.	86
1990, May 6-11	C. (mult.), SE India	450
1991, Apr. 30	C., Bangladesh	139,000
1991, Nov. 5	TS. *Thelma*, flash floods, central Philippines	7,000+
1992, Aug. 24-26	H. *Andrew*, southern FL, LA.	65
1993, Mar. 12-14	Blizzard, eastern U.S.	270+
1993, June	Monsoon, Bangladesh	2,000
1994, Nov. 8-18	TS. *Gordon*, Caribbean, FL	830
1995, Oct. 2-4	H. *Opal*, S Mexico, FL, AL	59
1995, Nov. 2-3	T. *Angela*, Philippines.	600+
1996, Jan. 7-8	Blizzard, northeast U.S.	100
1996, Aug. 22	Blizzard, Himalayas, N India.	239
1996, Aug. 29-Sept. 6	H. *Fran*, Carib., NC, VA, WV	30
1996, Sept. 9	T. *Sally*, S China	114
1996, Nov. 6	C., Andhra Pradesh, India	1,000+
1996, Nov. 24-25	Ice storms, TX to MO	26
1996, Dec. 25	TS. *Greg*, E Malaysia	100+
1997, May 19	C., Bangladesh	108
1997, Aug. 18-21	T. *Winnie*, Taiwan, E China	140+
1997, Oct. 8-10	H. *Pauline*, SW Mexico	230
1998, June 9	C., Gujarat, India	1,320
1998, Aug.	Monsoon, Bangladesh	326
1998, Sept. 21-23	H. *Georges*, Carib., FL, U.S. Gulf	600+
1998, Oct. 27-29	H. *Mitch*, Honduras, Nicaragua, Guatemala, El Salvador	10,866+
1999, Sept. 4-17	H. *Floyd*, Baha., E seaboard U.S	56
1999, Oct. 29	C., E India	9,392
1999, Dec. 26-29	Gales, France, Switz., Germany	120
2000, Dec. 27	Winter storm, TX, OK, AR	40+
2001, July 30	T. *Toraji*, Taiwan	200
2001, Nov. 6-12	T. *Lingling*, S Philip., Vietnam	220+
2002, July 1-11	T. *Chata'an*, Micron., Philip., Jap.	70+
2002, Aug.-Sept.	T. *Rusa*, N. and S. Korea	115+
2003, Feb. 16-17	Blizzard, E seaboard U.S.	59
2003, Sept. 12	T. *Maemi*, S. Korea	130
2003, Sept. 7-19	H. *Isabel*, NC, VA, E seaboard.	40+
2004, Mar. 7-19	C. *Gafilo*, Madagascar	198
2004, May 19	C., Myanmar	220
2004, Aug. 12-15	T. *Rananim*, E China	164
2004, Aug. 13-14	H. *Charley*, FL, SC	36
2004, Aug. 24-Sept. 10	T. *Aere*, China, Taiwan, Philip.	67
2004, Sept. 5-6	H. *Frances*, Bahamas, Florida	35
2004, Sept. 7-16	H. *Ivan*, Barbados, Grenada, U.S. Gulf Coast.	115
2004, Sept. 16-26	H. *Jeanne*, Dom. Rep., Haiti, FL	1,500+
2005, July 7-11	H. *Dennis*, Jamaica, Haiti, Cuba, FL	50
2005, Aug. 25-29	H. *Katrina*, LA, MS, FL, AL, GA	1,833+[3]
2005, Aug. 31-Sept. 1	T. *Talim*, Taiwan, E China	129+
2005, Sept. 21-24	H. *Rita*, TX, LA	62[4]
2005, Sept. 21-28	T. *Damrey*, SE Asia; Philippines; Hainan, China.	145
2005, Oct. 4	H. *Stan*, Central Amer., Mex.	1,000+[5]
2006, Jul. 14	TS. *Bilis*, SE China	612
2006, Aug. 10	T. *Saomai*, SE China	295
2006, Nov. 30	T. *Durian*, Philippines	450-1,000+
2007, June 6-7	C. *Gonu*, Oman, Iran	54[6]
2007, Nov. 15	C. *Sidr*, S Bangladesh	3,363
2008, May 2-3	C. *Nargis*, S Myanmar	84,500-125,000
2008, June 20-25	T. *Fengshen*, Philippines, China	233
2008, Aug. 26-Sept. 1	H. *Gustav*, Haiti, Dom. Rep., U.S.	138
2008, Sept. 1-4	TS. *Hanna*, Haiti	529
2008, Sept. 7-13	H. *Ike*, Haiti; Cuba; Galveston, TX	164
2009, May 23-26	C. *Alia*, India, Bangladesh	260
2009, Aug. 7-9	T. *Morakot*, mudslides, Taiwan	700+
2009, Sept. 23-30	T. *Ketsana*, Philippines, Vietnam, Cambodia, Laos	498+
2009, Oct. 3-10	T. *Parma*, Philippines	375
2009, Oct. 30-Nov. 3	T. *Mirinae*, Philippines, Vietnam	159+
2009, Dec. 11-22	Snowstorms, central Europe	90+
2010, Apr. 13	C. India, Bangladesh	137
2010, May 29	TS. *Agatha*, Guatemala, El Salvador, Honduras	184

(1) What hurricanes are called W of intl. date line and N of equator. (2) Incl. about 500 lost on ships at sea. (3) Official toll as of Aug. 2006 was 1,577 in LA, 238 in MS, 14 in FL, and 2 each in AL and GA. (4) Incl. 55 indirect deaths, among them 20 people, mostly elderly evacuees from a nursing home, whose bus exploded and caught fire outside Dallas. (5) Incl. deaths from floods and landslides generated by heavy rainstorms. (6) First documented super cyclone in Arabian Sea.

"Storm of the Century"

Dates: Mar. 12-14, 1993. **Location:** East Coast, U.S. **Fatalities:** 270+. **Damages:** $5-6 bil.

One of the worst winter storms to strike the eastern U.S. About 90 mil people were subjected to high wind gusts (max. 71-144 mph) and record low temperatures, from 31° in FL to –12°F in VT and ME. Snowfall totals ranged from 4 in. to 56 in. A reported 15 tornadoes struck FL, causing deadly storm surges. For the first time, every major airport on the East Coast experienced closings because of the storm. The National Weather Service estimated that 44 mil acre-ft of water fell as snow during the storm—comparable to the volume of water in the Mississippi R. that flows past New Orleans in 40 days.

Some Notable Floods, Tidal Waves

Date	Location	Deaths
1703	Awa, Japan	100,000+
1889, May 31	Johnstown, PA	2,200+
1903, June 15	Heppner, OR	325
1911	Chang Jiang R., China	100,000
1913, Mar. 25-27	OH, IN	732
1915, Aug. 17	Galveston, TX	275
1927, Jan.-July	Mississippi Valley	246+
1928, Mar. 13	Dam collapse, Saugus, CA	450
1928, Sept. 16	Lake Okeechobee, FL	1,770+
1931, Aug.	Huang He R., China	3,700,000
1937, Jan. 22	OH, MS valleys	250
1939	N China	200,000
1946, Apr. 1	HI, AK	159
1947, Sept. 20	Honshu Isl., Japan	1,900
1951, Aug.	Manchuria	1,800
1953, Jan. 31	W Europe	2,000
1954, Aug. 17	Farahzad, Iran	2,000
1955, Oct. 7-12	India, Pakistan	1,700
1959, Nov. 1	W Mexico	2,000
1959, Dec. 2	Frejus, France	412
1960, Oct. 10	Bangladesh	6,000
1960, Oct. 31	Bangladesh	4,000
1962, Feb. 17	North Sea coast, Germany	343
1962, Sept. 27	Barcelona, Spain	445
1963, Oct. 9	Dam collapse, Vaiont, Italy	1,800
1966, Nov. 3-4	Florence, Venice, Italy	113
1967, Jan. 18-24	E Brazil	894
1967, Mar. 19	Rio de Janeiro, Brazil	436
1967, Nov. 26	Lisbon, Portugal	464
1968, Aug. 7-14	Gujarat state, India	1,000
1968, Oct. 7	NE India	780
1969, Jan. 18-26	Southern CA	100
1969, Mar. 17	Mundau Valley, Alagoas, Brazil	218
1969, Aug. 20-22	Western VA	189
1969, Sept. 15	South Korea	250
1969, Oct. 1-8	Tunisia	500
1970, May 20	Central Romania	160
1970, July 22	Himalayas, India	500
1971, Feb. 26	Rio de Janeiro, Brazil	130
1972, Feb. 26	Buffalo Creek, WV	118
1972, June 9	Rapid City, SD	238
1972, Aug. 7	Luzon Isl., Philippines	454
1972, Aug. 19-31	Pakistan	1,500
1974, Mar. 29	Tubaro, Brazil	1,000
1974, Aug. 12	Monty-Long, Bangladesh	2,500
1976, June 5	Teton Dam collapse, ID	11
1976, July 31	Big Thompson Canyon, CO	140
1976, Nov. 17	East Java, Indonesia	136
1977, July 19-20	Johnstown, PA	68
1977, Nov. 6	Toccoa, GA	39
1978, June-Sept.	N India	1,200
1979, Jan.-Feb.	Brazil	204
1979, July 17	Lomblem Isl., Indonesia	539
1979, Aug. 11	Morvi, India	15,000
1981, Apr.	N China	550
1981, July	Sichuan, Hubei Prov., China	1,300
1982, Jan. 23	Near Lima, Peru	600
1982, May 12	Guangdong, China	430
1982, Sept. 17-21	El Salvador, Guatemala	1,300+
1984, Aug.-Sept.	South Korea	200+
1985, July 19	Dam collapse, N Italy	361
1987, Aug.-Sept.	N Bangladesh	1,000+
1988, Sept.	N India	1,000+
1990, June 14	Shadyside, OH	26
1993, July-Aug.	Midwest, U.S.	47
1995, July	NE China	1,200
1995, Aug. 19	SW Morocco	136
1995, Dec. 25	KwaZulu Natal, South Africa	166
1996, Feb. 17	Biak Isl., Indonesia	105
1996, Apr.	Afghanistan	100+
1996, June-July	S China	950+
1996, Aug. 7	Pyrenees Mts., Spain	71
1997, Mar.	Ohio R. Valley	35
1997, July	Poland, Czech Republic	98
1997, Nov.	Bardera, Somalia	1,300+
1998, Jan.	Kenya	86
1998, Mar.	SW Pakistan	300+
1998, July-Aug.	China	4,150
1998, July-Sept.	Bangladesh	1,441
1998, July 17	Papua New Guinea	3,000
1999, Aug. 1-4	Philippines, SE Asia	188+
1999, Sept.-Oct.	NE Mexico	350+
1999, Oct.-Dec.	Central Vietnam	700+
1999, Feb. 6-11	Botswana	70+
1999, Dec. 15-17	NW Venezuela	9,000+
2000, Feb.-Mar.	Madagascar	150+
2000, Feb.-Mar.	Mozambique	700
2000, Aug. 2	Himachal Pradesh, India	120+
2000, Aug. 2	Bhutan	200+
2000, Sept. 19-30	India, Bangladesh	1,000+
2001, Jan.-Feb.	Mozambique	84+
2001, Aug.-Nov.	S Vietnam, Cambodia	360+
2001, Aug. 1-6	Taiwan	100+
2001, Aug. 10-12	NE Iran	247
2001, Aug.	N Thailand	170
2001, Nov. 9-10	N Algeria	711+
2001, Dec. 23-31	Rio de Janeiro, Brazil	66
2002, Jan. 30-Feb. 15	Java Isl., Indonesia	147
2002, Apr.-May	E Africa	150+
2002, Apr.-Aug.	China	800+
2002, July-Aug.	India, Nepal, Bangladesh	1,100+
2002, Aug.	Russia	110
2002, Aug.	Germany, Hungary, Austria, Czech Rep.	100+
2003, May 17-27	Sri Lanka	250
2003, Aug.-mid-Sept.	E India	200+
2003, early Nov.	Sumatra, Indonesia	65+
2003, Dec. 10-Jan. 23, 2004	Sumatra, Indonesia	148
2003, Dec. 19-Jan. 7, 2004	Central Philippines	200
2004, Jan. 10-Mar. 8	E Brazil	161
2004, May 23-25	Dom. Republic, Haiti	2,000
2004, June-Sept.	Banglad., India, Myan., Nepal	2,000+
2004, June-Sept.	China	500
2004, Nov.-Dec.	Philippines	1,060+
2004, Dec. 26	12 Indian Ocean nations,	226,328[1]
2005, July 26-Aug. 2	W Maharashtra state, India	1,000+
2005, Aug. 21-23	Central Eur., espec. Romania	67
2006, Feb. 17	Leyte Isl., Philippines	1,000
2006, July 17	S of Java, Indonesia	530+
2007, Aug. 19-27	MN, WI, OH	25
2008, June	IL, IN, WI, MN, MO.	24
2008, Sept.	Eastern Orissa, India	173
2008, Oct. 24-25	Hadramaut, Mahaura, Yemen	100
2008, Oct.-Nov.	Central, N Vietnam	80
2008, Nov. 22-Dec. 3	Santa Catarina, S Brazil	116
2009, Mar. 27	Jakarta, Indonesia	77+
2009, Mar.-Apr.	Zambia, Namibia	92
2009, June-July	S China	66
2009, Sept. 29	Amer. Samoa, Samoa, Tonga	170+
2009, Sept. 29-Oct. 14	Southern India	355
2009, Nov. 4-6	El Salvador	192+
2009, Nov. 25	Jeddah, Saudi Arabia	106
2010, May 1-3	KY, TN, MS, AR	29
2010, May 1-7	Afghanistan, Tajikistan	124+
2010, June 28	Dazhai, China	99
2010, Aug. 1-4	Zhouqu, China	1,500+
2010, Aug.	West Africa	200+
2010, Aug.	Pakistan	1,600+

(1) Based on official estimates assembled by the Intl. Fed. of Red Cross and Red Crescent Societies, including 50,773 missing; as reported Dec. 15, 2005. The nearly 176,300 listed as dead include 128,645 from Indonesia; 31,147 from Sri Lanka; 10,749 from India; and 5,395 from Thailand.



Hurricane Katrina

Dates: Aug. 25-29, 2005**. Location:** FL, LA, MS, AL, other inland states.
Fatalities: 1,833+. **Damages:** $125 bil.

The costliest storm to date in U.S. history first made landfall in SE Florida, Aug. 25, as a Category 1 hurricane. Katrina brought heavy rains that led to flooding in the FL peninsula. Katrina then weakened slightly, strengthened over the Gulf of Mexico, but was downgraded again to Category 3 status before hitting land south of Buras, LA, on Aug. 29. Despite weakening, Katrina caused massive storm surges measuring up to 25-28 ft throughout SE Louisiana, S Mississippi, and SW Alabama. These storm surges, combined with strong winds and heavy rainfall, contributed to the failure of New Orleans's levee system Aug. 30. About 80% of the city eventually flooded. Approximately 1 mil were displaced from their homes.

Some Major Earthquakes

Source: Global Volcanism Network, Smithsonian Institution; U.S. Geological Survey, U.S. Dept. of the Interior; World Almanac research

Magnitude of earthquakes (mag.) is based on the Richter scale; an increase of one whole point represents a release of about 30 times more energy. Adopted in 1935, the scale is applied to earthquakes as far back as reliable seismograms are available, but earlier figures should be considered estimates.

Date	Location	Deaths	Mag.
526, May 20	Antioch, Syria	250,000	NA
856	Corinth, Greece	45,000	NA
856, Dec. 22	Damghan, Iran	200,000	NA
893, Mar. 23	Ardabil, Iran	150,000	NA
1057	Chihli, China	25,000	NA
1138, Aug. 9	Aleppo, Syria	230,000	NA
1169, Feb. 11	Nr. Mt. Etna, Sicily	15,000	NA[1]
1268	Silicia, Asia Minor	60,000	NA
1290, Sept. 27	Chihli, China	100,000	NA
1293, May 20	Kamakura, Japan	30,000	NA
1531, Jan. 26	Lisbon, Portugal	30,000	NA
1556, Jan. 24	Shaanxi, China	830,000	NA
1667, Nov.	Shemakha, Caucasia	80,000	NA
1693, Jan. 11	Catania, Italy	60,000	NA
1737, Oct. 11	India, Calcutta	300,000	NA
1755, June 7	N Persia (current-day Iran)	40,000	NA
1755, Nov. 1	Lisbon, Portugal	60,000	8.75[2]
1783, Feb. 4	Calabria, Italy	30,000	NA
1797, Feb. 4	Quito, Ecuador	41,000	NA
1822, Sept. 5	Asia Minor, Aleppo	22,000	NA
1828, Dec. 28	Echigo, Japan	30,000	NA
1868, Aug. 13-15	Peru, Ecuador	40,000	NA
1875, May 16	Venezuela, Colombia	16,000	NA
1886, Aug. 31	Charleston, SC	60	6.6
1896, June 15	Sanriku, Japan (tsunami)	27,120	8.5
1902, Apr. 19	Quezaltenango and San Marcos, Guatemala	2,000	7.5
1902, Dec. 16	Uzbekistan, Russia	4,700	6.4
1903, Apr. 28	Malazgirt, Turkey	3,500	7.0
1903, May 28	Gole, Turkey	1,000	5.8
1905, Apr. 4	Kangra, India	19,000	7.5
1906, Jan. 31	Off coast of Esmeraldas, Ecuador	1,000	8.8
1906, Mar. 16	Chia-i, Taiwan	1,250	6.8
1906, Apr. 18-19	San Francisco, CA	3,000+	7.7[3]
1906, Aug. 17	Valparaiso, Chile	3,882	8.6
1907, Oct. 21	Central Asia	12,000	8.1
1908, Dec. 28	Messina, Italy	72,000	7.2
1909, Jan. 23	Silakhor, Iran	5,000-6,000	7.3
1912, Aug. 9	Murefte, Turkey	2,800	7.4
1914, Oct. 3	Burdur, Turkey	4,000	7.0
1915, Jan. 13	Avezzano, Italy	32,610	7.0
1917, July 30	Yunnan, China	1,800	7.5
1918, Feb. 13	Guangdong, China	1,000	7.4
1920, Dec. 16	Gansu, China	200,000	7.8[4]
1923, Mar. 24	Sichuan, China	3,500	7.3
1923, Mar. 25	Torbat-e Heydariyeh, Iran	2,200	5.7
1923, Sept. 1	Yokohama, Japan	142,800	7.9
1925, Mar. 16	Yunnan, China	5,800	7.0
1927, Mar. 7	Tango, Japan	3,020	7.6
1927, May 22	Gansu, China	40,900	7.6
1929, May 1	Koppeh Dagh, Iran	3,800	7.2
1930, May 6	Salmas, Iran	2,500	7.2
1930, July 23	Irpinia, Italy	1,404	6.5
1931, Mar. 31	Managua, Nicaragua	2,500	6.0
1931, Apr. 27	Armenia-Azerbaijan border	2,800	5.7
1931, Aug. 10	Xinjiang, China	10,000	8.0
1933, Mar. 2	Sanriku, Japan (tsunami)	2,990	8.4
1933, Mar. 10	Long Beach, CA	115	6.2
1933, Aug. 25	Sichuan, China	9,300	7.5
1934, Jan. 15	Bihar, India-Nepal	10,700	8.1
1935, Apr. 21	Miao-li, Taiwan	3,270	7.1
1935, May 30	Quetta, Pakistan	30,000	7.6
1939, Jan. 25	Chillan, Chile	28,000	7.8
1939, Dec. 26	Erzincan, Turkey	32,700	7.8
1940, Nov. 10	Vrancea, Romania	1,000	7.3
1942, Dec. 20	Erbaa, Turkey	1,100	7.3
1943, Sept. 10	Tottori, Japan	1,190	7.4
1943, Nov. 26	Ladik, Turkey	4,000	7.6
1944, Jan. 15	San Juan, Argentina	8,000	7.4
1944, Feb. 1	Gerede, Turkey	2,790	7.4
1945, Jan. 12	Mikawa, Japan	1,961	7.1
1945, Nov. 27	Makran Coast, Pakistan	4,000	8.0
1946, May 31	Ustukran, Turkey	1,300	5.9
1946, Nov. 10	Ancash, Peru	1,400	7.3
1946, Dec. 20	Honshu, Japan	1,362	8.1
1948, June 28	Fukui, Japan	3,769	7.3
1948, Oct. 5	Ashgabat, Turkmenistan	110,000	7.3
1949, July 10	Khait, Tajikistan	12,000	7.5
1949, Aug. 5	Pelileo, Ecuador	5,050	6.8
1950, Aug. 15	Assam, India	1,526	8.6
1951, Aug. 2	Cosiguina, Nicaragua	1,000	5.8
1953, Mar. 18	NW Turkey	1,070	7.3
1954, Sept. 9	Orleansville, Algeria	1,250	6.8
1956, June 10-17	N Afghanistan	2,000	7.7
1957, July 2	N Iran	1,200	7.1
1957, Dec. 13	W Iran	1,130	7.1
1960, Feb. 29	Agadir, Morocco	12,000	5.7
1960, May 21-30	S Chile	1,655	9.5[5]
1962, Sept. 1	NW Iran	12,255	7.1
1963, July 26	Skopje, Yugoslavia	1,100	6.0
1964, Mar. 27	Prince Wm. Sound, Alaska	131	9.2[6]
1966, Mar. 7	Hebei, China	1,000	7.0
1966, Mar. 22	Hebei, China	1,000	6.9
1966, Aug. 19	E Turkey	2,529	6.8
1968, Aug. 31	NE Iran	12,000	7.3
1969, July 25	Guangdong, China	3,000	5.9
1970, Jan. 5	Yunnan Prov., China	10,000	7.5
1970, Mar. 28	W Turkey	1,086	6.9
1970, May 31	Chimbote, Peru	70,000	7.9
1971, Feb. 9	San Fernando Val., CA	65	6.6
1971, May 22	SE of Ankara, Turkey	1,000	6.9
1972, Apr. 10	S Iran	5,054	7.1
1972, Dec. 23	Managua, Nicaragua	5,000	6.2
1974, May 10	China	20,000	6.8
1974, Dec. 28	N Pakistan	5,300	6.2
1975, Feb. 4	Haicheng, China	2,000	7.0
1975, Sept. 6	E Turkey	2,300	6.7
1976, Feb. 4	Guatemala	23,000	7.5
1976, May 6	NE Italy	1,000	6.5
1976, June 25	Irian Jaya, New Guinea	422	7.1
1976, July 28	Tangshan, China	255,000	7.5
1976, Aug. 16	Mindanao, Philippines	8,000	7.9
1976, Nov. 24	NW Iran-Turkey border	5,000	7.3
1977, Mar. 4	Romania	1,500	7.2
1978, Sept. 16	NE Iran	15,000	7.8
1980, Oct. 10	NW Algeria	5,000	7.7
1980, Nov. 23	S Italy	2,735	6.5
1981, June 11	S Iran	3,000	6.9
1981, July 28	S Iran	1,500	7.3
1982, Dec. 13	W Arabian Peninsula	2,800	6.0
1983, Oct. 30	E Turkey	1,342	6.9
1985, Sept. 19	Michoacan, Mexico	9,500	8.0
1986, Oct. 10	El Salvador	1,000+	5.5
1987, Mar. 6	Colombia-Ecuador	1,000	7.0
1988, Aug. 20	India-Nepal border	1,000	6.8
1988, Dec. 7	Spitak, Armenia	25,000	6.8
1989, Oct. 17	San Fran. Bay, CA, area	63	6.9
1990, June 20	W Iran	40,000+	7.4
1990, July 16	Luzon, Philippines	1,621	7.7
1991, Feb. 1	Pakistan-Afgh. border	1,200	6.8
1991, Oct. 19	N India	2,000	7.0
1992, Mar. 13/15	E Turkey	4,000	6.8/6.0
1992, June 28	Landers, CA/Big Bear, CA	3	7.3/6.5
1992, Dec. 12	Flores Isl., Indonesia	2,500	7.5
1993, Sept. 30	Maharashtra, S India	9,748	6.2
1994, Jan. 17	Northridge, CA	61	6.8
1994, June 6	Cauca, SW Colombia	1,000	6.8
1995, Jan. 16	Kobe, Japan	5,502	6.9
1995, May 27	Sakhalin Isl., Russia	1,989	7.5
1997, Feb. 28	NW Iran	1,000+	6.1
1997, May 10	N Iran	1,567	7.3
1998, Feb. 4, 8	Hindu Kush, Afghanistan	2,323	5.9
1998, May 30	Afghanistan-Tajikistan border	4,000+	6.6
1998, July 17	Papua New Guinea	2,183	7.0
1999, Jan. 25	Armenia, Colombia	1,185+	6.1
1999, Aug. 17	Izmit, W Turkey	17,118+	7.6
1999, Sept. 20	Taichung, Taiwan	2,400	7.6
2001, Jan. 26	Gujarat, India	20,085	7.6
2002, Mar. 25-26	Hindu Kush, Afghanistan	1,000+	6.1
2003, May 21	N Algeria	2,266	6.8
2003, Dec. 26	Bam, SE Iran	31,000	6.6
2004, Dec. 26	Sumatra-Andaman Isls., Indonesia	227,898	9.1[7]
2005, Mar. 28	N. Sumatra, Indonesia	1,313	8.6
2005, Oct. 8	Kashmir, Pakistan, India	86,000	7.6
2006, May 26	Java, Indonesia	5,749	6.3
2008, May 12	E Sichuan Prov., China	87,857	7.9
2009, Sept. 30	Sumatra, Indonesia	1,117	7.5
2010, Jan. 12	Haiti	222,570	7.0
2010, Feb. 27	Chile	800	8.8
2010, Apr. 13	Southern Qinghai, China	2,698	6.9

NA = Not available. (1) Once thought to have been a volcanic eruption; evidence indicates a destructive earthquake and tsunami occurred on this date. (2) This earthquake caused the most deadly tsunami to date in the Atlantic Ocean. (3) Incl. deaths from resulting fires; revised estimates of magnitude range from 7.7 to 7.9. (4) Commonly referred to as the Gansu quake; actually located within the Ningxia autonomous region. (5) The largest recorded earthquake; caused a deadly tsunami that spread across the Pacific Ocean as far as Japan. (6) The "Good Friday" earthquake sent a tsunami that hit British Columbia, Canada, and the U.S. Pacific coast. (7) This undersea earthquake triggered devastating tsunamis that hit 12 Indian Ocean nations. See also listing under Floods; Nations of the World.

Some Notable Fires Since 1930

See also Some Notable Explosions Since 1920.

Date	Location	Deaths
1930, Apr. 21	Penitentiary, Columbus, OH	320
1931, July 24	Home for aged, Pittsburgh, PA	48
1934, Dec. 11	Hotel Kerns, Lansing, MI	34
1938, May 16	Terminal Hotel, Atlanta, GA	35
1940, Apr. 23	Nightclub, Natchez, MS	198
1942, Nov. 28	Cocoanut Grove Nightclub, Boston, MA	492
1942, Dec. 12	Hostel, St. John's, NL, Canada	100
1943, Sept. 7	Gulf Hotel, Houston, TX	55
1944, July 6	Ringling Circus, Hartford, CT	168
1946, June 5	LaSalle Hotel, Chicago, IL	61
1946, Dec. 7	Winecoff Hotel, Atlanta, GA	119
1946, Dec. 12	Ice plant, tenement, New York, NY	37
1949, Apr. 5	Hospital, Effingham, IL	77
1950, Jan. 7	Mercy Hospital, Davenport, IA	41
1953, Mar. 29	Nursing home, Largo, FL	35
1953, Apr. 16	Metalworking plant, Chicago, IL	35
1957, Feb. 17	Home for aged, Warrenton, MO	72
1958, Mar. 19	Loft building, New York, NY	24
1958, Dec. 1	Parochial school, Chicago, IL	95
1958, Dec. 16	Store, Bogotá, Colombia	83
1959, June 23	Resort hotel, Stalheim, Norway	34
1960, Mar. 12	Chemical plant, Pusan, Korea	68
1960, July 14	Mental hospital, Guatemala City	225
1960, Nov. 13	Movie theater, Amude, Syria	152
1960, Dec. 19	USS *Constellation*, Brooklyn, NY	49
1961, Jan. 6	Thomas Hotel, San Francisco, CA	20
1961, Dec. 17	Circus, Niteroi, Brazil	323
1963, May 4	Theater, Diourbel, Senegal	64
1963, Nov. 18	Surfside Hotel, Atlantic City, NJ	25
1963, Nov. 23	Rest home, Fitchville, OH	63
1963, Dec. 29	Roosevelt Hotel, Jacksonville, FL	22
1964, May 8	Apt. bldg., Manila, Philippines	30
1964, Dec. 18	Nursing home, Fountaintown, IN	20
1965, Mar. 1	Apartment, LaSalle, Quebec. Can.	28
1965, Aug. 11-16	Watts riot fires, Los Angeles, CA	30+
1966, Mar. 11	2 ski resorts, Numata, Japan	31
1966, Oct. 17	Bldg. (firefighters), New York, NY	12
1966, Dec. 7	Barracks, Erzurum, Turkey	68
1967, Feb. 7	Restaurant, Montgomery, AL	25
1967, May 22	Store, Brussels, Belgium	322
1967, July 16	State prison, Jay, FL	37
1967, July 29	USS *Forrestal*, off N Vietnam	134
1968, May 11	Wedding hall, Vijayawada, India	58
1969, Dec. 2	Nursing home, Notre Dame, Can.	54
1970, Jan. 9	Nursing home, Marietta, OH	27
1970, Nov. 1	Dance hall, Grenoble, France	145
1970, Dec. 20	Hotel, Tucson, AZ	28
1971, Dec., 25	Hotel, Seoul, South Korea	162
1972, May 13	Nightclub, Osaka, Japan	116
1972, July 5	Hospital, Sherborne, England	30
1973, June 24	Bar, New Orleans, LA	32
1973, Aug. 3	Amusement park, Isle of Man, Eng.	51
1973, Sept. 1	Hotel, Copenhagen, Denmark	35
1973, Nov. 29	Dept. store, Kumamoto, Japan	107
1973, Dec. 2	Theater, Seoul, South Korea	50
1974, Feb. 1	Bank building, São Paulo, Brazil	189
1974, June 30	Discotheque, Port Chester, NY	24
1974, Nov. 3	Hotel, disco, Seoul, S. Korea	88
1975, Dec. 12	Tent city, Mina, Saudi Arabia	138
1976, Oct. 24	Social club, Bronx, NY	25
1977, Feb. 25	Rossiya hotel, Moscow, Russia	45
1977, May 28	Nightclub, Southgate, KY	164
1977, June 9	Nightclub, Abidjan, Ivory Coast	41
1977, June 26	Jail, Columbia, TN	42
1977, Nov. 14	Hotel, Manila, Philippines	47
1978, Jan. 28	Coates House Hotel, Kansas City, MO	16
1978, Aug. 19	Movie theater, Abadan, Iran	425+
1979, July 14	Hotel, Saragossa, Spain	80
1979, Dec. 31	Social club, Chapais, Quebec, Can.	42
1980, May 20	Nursing home, Kingston, Jamaica	157
1980, Nov. 21	MGM Grand Hotel, Las Vegas, NV	84
1980, Dec. 4	Stouffer Inn, Harrison, NY	26
1981, Jan. 9	Boarding home, Keansburg, NJ	30
1981, Feb. 10	Las Vegas Hilton, Las Vegas, NV	8
1981, Feb. 14	Discotheque, Dublin, Ireland	44
1982, Nov. 8	County jail, Biloxi, MS	29
1983, Feb. 13	Movie theater, Turin, Italy	64
1983, Dec. 17	Discotheque, Madrid, Spain	83
1984, May 11	Great Adventure Amusement Pk., NJ	8
1985, Apr. 21	Movie theaters, Tabaco, Philippines	44
1985, Apr. 26	Hospital, Buenos Aires, Argentina	79
1985, May 11	Soccer stadium, Bradford, England	53
1985, May 13	MOVE headquarters, row houses, Philadelphia, PA	11
1986, Dec. 31	Dupont Plaza Hotel, Puerto Rico	96
1987, May 6-June 2	Forest fire, N China	193
1987, Nov. 17	Subway, London, England	30
1988, Mar. 20	2000 buildings, Lashio, Burma	134
1990, Mar. 25	Social club, Bronx, NY	87
1991, Mar. 3	Munitions dump, Addis Ababa, Ethiopia	260+
1991, Sept. 3	Processing plant, Hamlet, NC	25
1991, Oct. 20-21	Wildfire, Oakland, Berkeley, CA	24
1993, Apr. 19	Cult compound, Waco, TX	72
1994, May 10	Toy factory, Bangkok, Thailand	213
1994, July 4-10	(Firefighters) Glenwood Springs, CO	14
1994, Nov. 2	Burning fuel flood, Durunka, Egypt	500
1994, Dec. 10	Theater, Karamay, China	300
1995, Oct. 28	Subway train, Baku, Azerbaijan	300
1995, Dec. 23	School, Mandi Dabwali, India	500+
1996, Mar. 19	Nightclub, Quezon City, Philippines	150+
1996, Mar. 28	Shopping mall, Bogor, Indonesia	78
1996, Nov. 20	Building, Hong Kong	39
1997, Feb. 23	Worship site, Baripada, India	164
1997, Apr. 15	Encampment, Mina, Saudi Arabia	343
1997, June 7	Temple, Thanjavur, India	60+
1997, June 13	Movie theater, New Delhi, India	60
1997, July 11	Hotel, Pattaya, Thailand	90
1997, Sept. 29	Children's home, nr. Colina, Chile	30
1998, Dec. 3	Orphanage, Manila, Philippines	28
1999, Mar. 24	Mt. Blanc Tunnel, France and Italy	40
1999, Oct. 30	Karaoke salon, Inchon, S. Korea	55+
2000, Mar. 17	Church, Kanungu, Uganda	530
2000, Oct. 20	Nightclub, Mexico City, Mexico	20
2000, Nov. 11	Cable car, Kaprun, Austria	155
2000, Dec. 25	Shopping center, Luoyang, China	309
2001, Mar. 6	School, Central China	41
2001, Mar. 26	School, Machakos, Kenya	64
2001, Aug. 18	Hotel, Quezon City, Philippines	73
2001, Sept. 1	Nightclub, Tokyo, Japan	44
2001, Dec. 29	Fireworks accident, Lima, Peru	291
2002, Mar. 11	Girls' school, Mecca, Saudi Arabia	15
2002, June 16	Internet cafe, Beijing, China	24
2002, July 7	Coal mine, Donetsk region, Ukraine	34+
2002, July 20	Disco, Lima, Peru	25+
2002, July 31	Coal mine, Donetsk region, Ukraine	20
2003, Feb. 18	Subway train, Taegu, S. Korea	198
2003, Feb. 20	Pyrotechnics in nightclub, Warwick, RI	100
2003, Sept. 15	Prison, Riyadh, Saudi Arabia	94
2003, Nov. 24	Students' hostel, Moscow, Russia	36
2004, May 17	Prison, San Pedro Sula, Honduras	104
2004, July 16	Pvt. school, Kumbakonam, India	80+
2004, Aug. 1	Market, Asunción, Paraguay	400+
2004, Dec. 30	Club, Buenos Aires, Argentina	194
2005, Feb. 14	Mosque, Tehran, Iran	59
2005, Mar. 7	Prison, Higuey, Dom. Republic	159
2005, Apr. 15	Hotel, Paris, France	22
2005, Sept. 5	Theater, Beni Suef, Egypt	32
2006, Dec. 9	Drug treatment center, Moscow, Russia	45
2007, Mar. 20	Nursing home for elderly and disabled, Kamyshevatskaya, Russia	62
2007, Aug. 24-Sept. 2	Wildfires (arson), Greece	65
2008, Apr. 26	Factory fire, Casablanca, Morocco	55
2008, Sept.	Wildfires, Mozambique, S Africa, Swaziland	89
2009, Jan.-Feb.	Wildfires (arson), Victoria, Australia	173

Cocoanut Grove Nightclub Fire

Date: Nov. 28, 1942. **Location:** Boston, MA. **Fatalities:** 492.

More than 1,000 people were packed into the popular Cocoanut Grove nightclub one Saturday night when a lit match accidentally set an artificial palm tree ablaze. The fire quickly spread from a downstairs lounge through the rest of the nightclub, which was furnished with highly flammable material. The crowds—larger than should have been allowed in the club—panicked and mobbed the exits that weren't locked. Hundreds were trampled or were consumed by the conflagration. The survivors suffered burns, smoke inhalation, and other injuries.

Some Notable Explosions Since 1920

See also Principal U.S. Mine Disasters Since 1900. Some bombings related to political conflicts and terrorism are not included.

Date	Location	Deaths
1920, Sept. 16	Wall Street, New York, NY	30
1921, Sept. 21	Chem. storage facility, Oppau, Ger.	561
1924, Jan. 3	Food plant, Pekin, IL.	42
1927, May 18	Bath school, Lansing, MI	38
1928, Apr. 13	Dance hall, West Plains, MO	40
1937, Mar. 18	School, New London, TX	311
1940, Sept. 12	Hercules Powder factory, Kenvil, NJ	55
1942, June 5	Ordnance plant, Elwood, IL	49
1944, Apr. 14	Harbor, Bombay, India	700
1944, July 17	Munitions ships, depot, Port Chicago, CA	322
1944, Oct. 21	Liquid gas tank, Cleveland, OH	135
1947, Apr. 16	Freighter, chemical co. plant, Texas City, TX	576
1948, July 28	Farben works, Ludwigshafen, Ger.	184
1950, May 19	Munitions barges, S. Amboy, NJ	30
1954, May 26	USS *Bennington*, off RI	103
1956, Aug. 7	Dynamite trucks, Cali, Colombia	1,100
1958, Apr. 18	Sunken munitions ship, Okinawa, Japan	40
1958, May 22	Nike missiles, Leonardo, NJ.	10
1959, Apr. 10	WWII bomb, Philippines	38
1959, June 28	Rail tank cars, Meldrim, GA	25
1959, Aug. 7	Dynamite truck, Roseburg, OR.	13
1959, Nov. 2	Explosives, Jamuri Bazar, India	46
1959, Dec. 13	2 apt. bldgs., Dortmund, Ger.	26
1960, Mar. 4	Belgian munitions ship, Havana, Cuba.	100
1962, Oct. 3	Telephone Co. office, New York, NY	23
1963, Jan. 2	Packing plant, Terre Haute, IN	17
1963, Mar. 9	Dynamite plant, S. Africa	45
1963, Aug. 13	Explosives dump, Gauhaiti, India	32
1963, Oct. 31	State Fair Coliseum, Indianapolis, IN	73
1964, July 23	Harbor munitions, Bone, Algeria.	100
1965, Aug. 9	Missile silo, Searcy, AR	53
1965, Oct. 21	Bridge, Tila Bund, Pakistan	80
1965, Nov. 24	Armory, Keokuk, IA.	20
1967, Dec. 25	Apartment bldg., Moscow, USSR	20
1968, Apr. 6	Sports store, Richmond, IN	43
1969, Mar. 31	Coal mine, nr. Barroteran, Mexico	180
1970, Apr. 8	Subway construction, Osaka, Japan	73
1971, June 24	Tunnel, Sylmar, CA	17
1973, Feb., 10	Liquid gas tank, Staten Island, NY	40
1975, Dec. 27	Coal mine, Chasnala, India	431
1976, Apr. 13	Munitions works, Lapua, Finland	40
1977, Nov. 11	Freight train, Iri, S. Korea	57
1977, Dec. 22	Grain elevator, Westwego, LA	35
1978, Feb. 24	Derailed tank car, Waverly, TN.	12
1978, July 11	Propylene tank truck, Tarragona, Spain	150
1980, Oct. 23	School, Ortuella, Spain.	64
1982, Apr. 25	Antiques exhibition, Todi, Italy	33
1982, Nov. 2	Salang Tunnel, Afghanistan	1,000+
1984, Feb. 25	Oil pipeline, Cubatao, Brazil	508
1984, June 21	Naval supply depot, Severomorsk, USSR	200+
1984, Nov. 19	Gas storage area, NE Mexico City	334
1984, Dec. 3	Chemical plant, Bhopal, India.	3,849
1984, Dec. 5	Coal mine, Taipei, Taiwan	94
1985, June 25	Fireworks factory, Hallett, OK.	21
1988, Apr. 10	Army ammunitions dump nr. Rawalpindi and Islamabad, Pakistan	100
1988, July 6	Oil rig, North Sea off NE Scotland	167
1989, June 3	Gas pipeline, between Ufa, Asha, USSR	650+
1992, Mar. 3	Coal mine, Kozlu, Turkey	270+
1992, Apr. 22	Gas leak in sewers, Guadalajara, Mexico	200+
1992, May 9	Coal mine, Plymouth, Nova Scotia	26
1993, Feb. 26	World Trade Center, New York, NY	6
1994, July 18	Jewish com. center, Buenos Aires, Arg.	100
1995, Apr. 19	Fed. office building, Oklahoma City, OK.	168
1995, Apr. 29	Subway construction, S. Korea	110
1995, Nov. 13	Military facility, Riyadh, Saudi Arabia	7
1996, Jan. 31	Bank, Colombo, Sri Lanka	53
1996, Mar. 3-4	Jerusalem and Tel Aviv, Israel	33
1996, June 25	U.S. military housing complex, nr. Dhahran, Saudi Arabia	19
1996, July 24	Train, Colombo, Sri Lanka	86
1996, Nov. 16	Military apt., Dagestan region, Russia	68
1996, Nov. 21	Propane gas leak in bldg., San Juan, Puerto Rico.	33
1996, Nov. 27	Coal mine, Shanxi Prov., China	91+
1996, Dec. 30	Train, Assam, India.	59+
1997, Jan. 18	Nr. courthouse, Lahore, Pakistan	25
1997, July 8	Train, Punjab, India	36
1997, Nov. 19	Car, Hyderabad, India	23
1997, Dec. 2	Coal mine, Novokuznetsk, Siberia	68
1998, Jan. 17	Coal mine, Sokobanja, Serbia	29
1998, Feb. 14	2 oil tankers, Yaounde, Cameroon	120
1998, Feb. 14	17 bombs, Coimbatore, India	50
1998, Mar. 5	Bus, Colombo, Sri Lanka	32
1998, Apr. 4	Coal mine, Donetsk, Ukraine	63
1998, Aug. 7	Bomb, U.S. emb., Nairobi, Kenya.	213
	Bomb, U.S. emb., Dar-es-Salaam, Tanz.	11
1998, Aug. 15	Car bomb, Omagh, Ireland	29
1998, Sept. 8	Two buses, São Paulo, Brazil.	59
1998, Oct. 17	Oil pipeline, Jesse, Nigeria	700+
1999, May 16	Fuel truck, Punjab Prov., Pakistan	75
1999, Sept. 10	Apartment building, Moscow, Russia	94
1999, Sept. 13	Apartment building, Moscow, Russia	118
1999, Sept. 16	Apartment building, Moscow, Russia	18
1999, Sept. 26	Fireworks factory, Celaya, Mexico	56
2000, Feb. 25	Bombs on 2 buses, Ozamis, Philippines	41
2000, Mar. 11	Coal mine, Krasnodon, Ukraine	80
2000, Apr. 16	Airport hangar, Dem. Rep. of Congo	100+
2000, July 16	Oil pipeline, Warri, Nigeria	30
2000, Sept. 9	Truck explosion, Urumqi, China	60
2000, Oct. 12	U.S. destroyer, Yemen	17
2001, Mar. 6	School, Wanzai Co., China.	41
2001, Apr. 21	Coal mine, Shaanxi, China	51
2001, June 1	Dance club, Tel Aviv, Israel	21
2001, July 17	Coal mine, Guanxi, China.	76+
2001, Aug. 19	Coal mine, Donetsk region, Ukraine	52
2001, Sept. 21	Chem. plant, Toulouse, France	29
2002, Jan. 21	Volcanic lava caused gas station blast, Goma, Dem. Rep. of Congo	50+
2002, Jan. 27	Munitions dump, Lagos, Nigeria	1,000+
2002, Apr. 11	Truck nr. synagogue, Djerba, Tunisia.	17
2002, Apr. 21	Bomb, dept. store, Mindanao, Philip.	14
2002, May 8	Bomb on bus outside hotel, Karachi, Pak.	14
2002, May 9	Land mine at parade, Kaspiisk, Russia	34+
2002, June 14	Car bomb outside U.S. consulate, Karachi, Pakistan	12
2002, June 18	Bomb on bus, Jerusalem, Israel	20
2002, July 5	Bomb in market, Larba, Algeria	35+
2002, Aug. 9	Explosion, Jalalabad, Afghanistan	25+
2002, Sept. 5	Car bomb, Kabul, Afghanistan	30
2002, Oct. 12	Nightclub bombings, Bali, Indonesia	202
2003, Aug. 25	Bombs in 2 taxis, Mumbai, India.	52
2003, Dec. 5	Bomb on train, Yessentuki, Russia.	45
2003, Dec. 23	Gas well explosion, Chongqing, China.	233
2004, Jan. 19	Natural gas facility, Skikda, Algeria	27
2004, Feb. 6	Bomb on subway car, Moscow, Russia	39
2004, Mar. 11	Bombs on commuter trains, Madrid, Spain	191
2004, July 19	Coal mine, Ukraine	31
2005, Feb. 14	Coal mine, NE China	214
2005, Mar. 23	Oil refinery, Texas City, TX.	15
2005, May 2	Arms cache, Baghlan Prov., Afghan.	34+
2005, July 7	Bombs in mass transit, London, Eng.	56
2005, Oct. 1	Bombings of restaurants, Bali, Indonesia	26
2005, Nov. 27	Coal mine, NE China	161+
2006, May 12	Oil pipeline, nr. Lagos, Nigeria	200
2006, July 1	Bombings of trains, station, Mumbai, India	207
2007, Mar. 19	Coal mine, Siberia, Russia	108
2007, Mar. 22	Natl. weapons depot, Maputo, Mozambique	117
2007, June 9	Oil pipeline, Pyongan Prov., N. Korea	110
2007, Nov. 18	Methane gas buildup in coal mine, E Ukraine	90
2008, May 15	Pipeline explosion in Lagos, Nigeria.	100+
2008, Sept. 20	Truck bomb outside hotel, Islamabad, Pakistan	40+
2009, Feb. 22	Coal mine, N China	74
2010, Apr. 5	Coal mine, WV	29

Bhopal Industrial Disaster

Date: Dec. 3, 1984. **Location:** Bhopal, India. **Fatalities:** 16,000 (est.). **Damages:** $470 mil+.

Tons of toxic methyl isocyanate gas leaked from a defective storage tank at a Union Carbide pesticide plant in Bhopal, central India. Between 2,000 and 3,000—many of them residents of slums adjacent to the plant—died shortly thereafter. About 50,000 were treated for severe injuries to their eyes, lungs, and kidneys. An estimated 15,000-20,000 may have subsequently died from exposure to the lethal gas. In 1989, Union Carbide settled a lawsuit by agreeing to provide $470 mil in compensation. Bhopal residents still contend with the effects of the disaster, including health problems and contaminated groundwater.

Notable Nuclear Accidents

Oct. 7, 1957: Fire in the Windscale plutonium production reactor N of Liverpool, England, released radioactive material; later blamed for 39 cancer deaths.

Jan. 3, 1961: Reactor explosion at a federal installation near Idaho Falls, ID, killed 3 workers. Radiation contained.

Oct. 5, 1966: Sodium cooling system malfunction caused a partial core meltdown at the Enrico Fermi demonstration breeder reactor, near Detroit, MI. Radiation contained.

Jan. 21, 1969: Coolant malfunction from an experimental underground reactor at Lucens Vad, Switzerland, released radiation into a cavern, which was then sealed.

Mar. 22, 1975: Fire at the Brown's Ferry reactor in Decatur, AL, caused dangerous lowering of cooling water levels.

Mar. 28, 1979: Worst commercial nuclear accident in the U.S. occurred as equipment failures and human mistakes led to a loss of coolant and a partial core meltdown at the Three Mile Island reactor in Middletown, PA.

Feb. 11, 1981: 8 workers were contaminated when 100,000 gallons of radioactive coolant fluid leaked into containment building of TVA's Sequoyah 1 plant near Chattanooga, TN.

Apr. 25, 1981: Some 100 workers were exposed to radiation during repairs of a nuclear plant at Tsuruga, Japan.

Jan. 6, 1986: Cylinder of nuclear material burst after being improperly heated at a Kerr-McGee plant at Gore, OK. One worker died; 100 were hospitalized.

Apr. 26, 1986: In the worst nuclear accident in the history of nuclear power, fires and explosions resulting from an unauthorized experiment at the Chernobyl nuclear power plant near Kiev, USSR (now in Ukraine), left at least 31 dead in the immediate aftermath and spread radioactive material over much of Europe. An estimated 135,000 people were evacuated from the region, some of which was uninhabitable for years. As a result of the radiation released, tens of thousands of excess cancer deaths (as well as increased birth defects) were expected.

Sept. 30, 1999: Japan's worst nuclear accident ever occurred at a uranium-reprocessing facility in Tokaimura, NE of Tokyo, when workers accidentally overloaded a container with uranium, thereby exposing workers and area residents to extremely high radiation levels.

Record Oil Spills

The exact number of barrels in a ton varies with the type of oil, but a good approximation is 7 barrels per ton. Each barrel contains 42 gallons.

Name, location	Date	Cause	Tons
BP *Deepwater Horizon* rig, Gulf of Mexico, U.S.	Apr. 20-July 15, 2010	Explosion	700,000[1]
Ixtoc I oil well, S Gulf of Mexico	June 3, 1979	Blowout	600,000
Nowruz oil field, Persian Gulf	Feb. 1983	Blowout	600,000 (est.)
Atlantic Empress and *Aegean Captain*, off Trinidad and Tobago	July 19, 1979	Collision	300,000
ABT Summer, off Angola	May 28, 1991	Explosion	260,000
Castillo de Bellver, off Cape Town, South Africa	Aug. 6, 1983	Fire	250,000
Amoco Cadiz, near Portsall, France	Mar. 16, 1978	Grounding	223,000
Torrey Canyon, off Land's End, England	Mar. 18, 1967	Grounding	119,000
Sea Star, Gulf of Oman	Dec. 19, 1972	Collision	115,000
Urquiola, La Coruna, Spain	May 12, 1976	Grounding	100,000

Other Notable Oil Spills

Name, location	Date	Cause	Gallons
Persian Gulf	Began Jan. 23, 1991	Spillage by Iraq	130,000,000[2]
Braer, off Shetland Islands, UK	Jan. 5, 1993	Grounding	26,000,000
Prestige, off N Spain	Nov. 13-19, 2002	Ship broke in half	22,600,000
Aegean Sea, off N Spain	Dec. 3, 1992	Unknown	21,500,000
Sea Empress, off SW Wales	Feb. 15, 1996	Grounding	18,000,000
World Glory, off South Africa	June 13, 1968	Hull failure	13,524,000
Newtown Creek, Greenpoint, Brooklyn, NY	Oct. 5, 1950-present	Industrial explosion, preceded by leaks in 1940s-50s	17,000,000
Exxon Valdez, Prince William Sound, AK	Mar. 24, 1989	Grounding	10,080,000
Ashland Oil facility, Floreffe, PA; Monongahela R.	Jan. 2, 1988	Storage tank collapse	3,850,000

(1) The Dept. of Energy estimated the spill at 4.9 mil barrels, or more than 200 mil gallons. See 2010: Year in Review. (2) Est. by Saudi Arabia. Some estimates as low as 25 mil gal.

Some Notable Miscellaneous Disasters Since 1950

Date	Event	Location	Details	Est. deaths
1952, Dec.	Pollution	London, England	Heavy smog blanketed city; caused breathing difficulties	4,000
1973-74	Drought and famine	Ethiopia	Caused by 6-year drought	200,000
1974	Famine	Bangladesh	Caused by flooding	26,000+
1974-75	Famine	Sub-Saharan Africa	Drought in some regions, torrential rains in others, compounded by government mismanagement	40,000+
1980, summer	Heat wave	United States	June through Sept	1,265
1984, Dec. 3	Industrial accident	Bhopal, India	Toxic gas leaked from a Union Carbide factory	16,000
1984	Famine	Africa, espec. Ethiopia	Several years of drought compounded by government mismanagement	800,000-1 mil
1986, Aug. 21	Gas	Nr. Lake Nyos, Cameroon	Volcanic lake released cloud of carbon dioxide gas	1,700
1990, July 2	Stampede	Mecca, Saudi Arabia	Pilgrims panicked in tunnel leading to the holy city	1,426
2003, summer	Heat wave	Europe	Abnormally high temperatures from Russia to Britain; France suffered most, with 14,800 dead	35,000
2005, Aug. 31	Stampede	Baghdad, Iraq	Fear of suicide bomber caused bridge stampede	1,000



The 1918 Flu Pandemic

Dates: 1918-19. **Location:** Worldwide. **Fatalities:** 50-100 mil.

One of the most devastating epidemics in history, also known as the Spanish flu, in which approximately one-third of the world's population, or 500 mil, were infected by the flu virus. In spring of 1918, a deadly new strain of influenza appeared within the army training grounds of Camp Funston, KS. American soldiers are believed to have carried the virus to W Europe, where they had been shipped to fight in World War I. The pandemic peaked in fall 1918: many of those infected with the flu also developed complications from pneumonia and died within days of the first appearance of their symptoms.

AEROSPACE

Memorable Moments in Human Spaceflight

Source: National Aeronautics and Space Administration (NASA); Congressional Research Service; World Almanac research.

The spaceflights listed are a selection of notable U.S. missions by NASA, unless otherwise noted, plus non-U.S. missions (shown with an asterisk). The non-U.S missions were sponsored by the USSR (later, the Commonwealth of Independent States and, from 1997, Russia) or by China. Launch dates are Eastern standard time. EVA = extravehicular activity. ASTP = Apollo-Soyuz Test Project. STS = Space Transportation System, NASA's name for the overall shuttle program.

For shuttle flights, mission name is in parentheses following name of orbiter. Duration of flight is listed in hours:minutes for 1961-Apr. 1970; days (d.), hours (hr.), and minutes (min.) for June 1970-Nov. 1981; days only thereafter. Number of total flights taken by each crew member is given in parentheses when flight listed is not the person's first.

4/12/61: ****Vostok 1*; 1:48; Yuri A. Gagarin. **1st human orbital flight**.

5/5/61: *Mercury-Redstone 3*; 0:15; Alan B. Shepard Jr. **1st American in space**.

7/21/61: *Mercury-Redstone 4*; 0:15; Virgil I. Grissom. Flight successful but spacecraft sank shortly after splashdown, Grissom rescued.

8/6/61: ****Vostok 2*; 25:18; Gherman S. Titov. 1st spaceflight of more than 24 hrs.

2/20/62: *Mercury-Atlas 6*; 4:55; John H. Glenn Jr. **1st American in orbit**; 3 orbits.

5/24/62: *Mercury-Atlas 7*; 4:56; M. Scott Carpenter. Manual retrofire error caused 250-mi landing overshoot.

8/11/62: ****Vostok 3*; 94:22; Andrian G. Nikolayev. *Vostok 3* and *4* made 1st group flight.

8/12/62: ****Vostok 4*; 70:57; Pavel R. Popovich. On 1st orbit, it came within 3 mi of *Vostok 3*.

10/3/62: *Mercury-Atlas 8*; 9:13; Walter M. Schirra Jr. Landed 5 mi from target; 6 orbits.

5/15/63: *Mercury-Atlas 9*; 34:19; L. Gordon Cooper. 1st U.S. evaluation of effects of one day in space on a person; 22 orbits.

6/14/63: ****Vostok 5*; 119:06; Valery F. Bykovsky. *Vostok 5* and *6* made 2nd group flight.

6/16/63: ****Vostok 6*; 70:50; Valentina V. Tereshkova. **1st woman in space**; passed within 3 mi of *Vostok 5*.

10/12/64: ****Voskhod 1*; 24:17; Vladimir M. Komarov, Konstantin P. Feoktistov, Boris B. Yegorov. 1st 3-person orbital flight; 1st without space suits.

3/18/65: ****Voskhod 2*; 26:02; Pavel I. Belyayev, Aleksei A. Leonov. Leonov made **1st "space walk"** (10 min.).

3/23/65: *Gemini-Titan 3*; 4:53; Virgil I. Grissom (2), John W. Young. 1st piloted spacecraft to change its orbital path.

6/3/65: *Gemini-Titan 4*; 97:56; James A. McDivitt, Edward H. White 2nd. White was **1st American to "walk in space"** (36 min.).

8/21/65: *Gemini-Titan 5*; 190:55; L. Gordon Cooper (2), Charles Conrad Jr. Longest-duration human flight to date.

12/4/65: *Gemini-Titan 7*; 330:35; Frank Borman, James A. Lovell. Longest-duration *Gemini* flight.

12/15/65: *Gemini-Titan 6A*; 25:51; Walter M. Schirra Jr. (2), Thomas P. Stafford. Completed 1st U.S. space rendezvous, with *Gemini 7*.

3/16/66: *Gemini-Titan 8*; 10:41; Neil A. Armstrong, David R. Scott. **1st docking of one space vehicle with another**; mission aborted, control malfunction; 1st Pacific landing.

6/3/66: *Gemini-Titan 9A*; 72:21; Thomas P. Stafford (2), Eugene A. Cernan. Performed simulation of lunar module rendezvous.

7/18/66: *Gemini-Titan 10*; 70:47; John W. Young (2), Michael Collins. 1st use of Agena target vehicle's propulsion systems; 1st orbital docking.

9/12/66: *Gemini-Titan 11*; 71:17; Charles Conrad Jr. (2), Richard F. Gordon Jr. 1st tethered flight; highest Earth-orbit altitude (850 mi).

11/11/66: *Gemini-Titan 12*; 94:34; James A. Lovell (2), Edwin E. "Buzz" Aldrin Jr. Final *Gemini* mission; 5-hr. EVA.

4/23/67: ****Soyuz 1*; 26:40; Vladimir M. Komarov (2). Crashed on reentry, killing Komarov; **1st space fatality**.

10/11/68: *Apollo-Saturn 7*; 260:09; Walter M. Schirra Jr. (3), Donn F. Eisele, R. Walter Cunningham. 1st piloted flight of ***Apollo*** spacecraft command-service module only; live TV footage of crew.

12/21/68: *Apollo-Saturn 8*; 147:00; Frank Borman (2), James A. Lovell (3), William A. Anders. **1st lunar orbit** and piloted lunar return reentry (command-service module only); views of lunar surface televised to Earth.

1/14/69: ****Soyuz 4*; 71:21; Vladimir A. Shatalov. Docked with *Soyuz 5*.

1/15/69: ****Soyuz 5*; 72:54; Boris V. Volyanov, Aleksei S. Yeliseyev, Yevgeny V. Khrunov. Docked with *Soyuz 4*; Yeliseyev and Khrunov transferred to *Soyuz 4* via a spacewalk.

3/3/69: *Apollo-Saturn 9*; 241:00; James A. McDivitt (2), David R. Scott (2), Russell L. Schweickart. 1st piloted flight of lunar module.

5/18/69: *Apollo-Saturn 10*; 192:03; Thomas P. Stafford (3), John W. Young (3), Eugene A. Cernan (2). 1st lunar module orbit of Moon, 50,000 ft from Moon's surface.

7/16/69: *Apollo-Saturn 11*; 195:18; Neil A. Armstrong (2), Michael Collins (2), Edwin E. "Buzz" Aldrin Jr. (2). **1st lunar landing** made by Armstrong and Aldrin (7/20); collected 48.5 lbs of soil, rock samples; lunar stay time 21:36.

10/11/69: ****Soyuz 6*; 118:43; Georgi S. Shonin, Valery N. Kubasov. 1st welding of metals in space.

10/12/69: ****Soyuz 7*; 118:40; Anatoly V. Flipchenko, Vladislav N. Volkov, Viktor V. Gorbatko. Space lab construction test made; *Soyuz 6*, *7*, and *8*: 1st time 3 spacecraft, 7 crew members orbited the Earth at once.

10/13/69: ****Soyuz 8*; 118:51; Vladimir A. Shatalov (2), Aleksei S. Yeliseyev (2). Part of space lab construction team.

11/14/69: *Apollo-Saturn 12*; 244:36; Charles Conrad Jr. (3), Richard F. Gordon Jr. (2), Alan L. Bean. Conrad and Bean made **2nd Moon landing** (11/18); collected 74.7 lbs of samples; lunar stay time 31:31.

4/11/70: *Apollo-Saturn 13*; 142:54; James A. Lovell (4), Fred W. Haise Jr., John L. Swigert Jr. Aborted after service module oxygen tank ruptured; crew returned in lunar module.

6/1/70: ****Soyuz 9*; 17 d., 16 hr., 59 min.; Andrian G. Nikolayev (2), Vitaliy I. Sevastyanov. Longest human spaceflight to this date.

1/31/71: *Apollo-Saturn 14*; 9 d., 2 min.; Alan B. Shepard Jr. (2), Stuart A. Roosa, Edgar D. Mitchell. Shepard and Mitchell made **3rd Moon landing** (2/3); collected 96 lbs of lunar samples; lunar stay 33:31.

4/19/71: ****Salyut 1*; launched without crew. **1st space station**.

4/22/71: ****Soyuz 10*; 1 d., 23 hr., 46 min.; Vladimir A. Shatalov (3), Aleksei S. Yeliseyev (3), Nikolay N. Rukavishnikov. **1st successful docking with a space station**; failed to enter space station.

6/6/71: ****Soyuz 11*; 23 d., 28 hr., 22 min.; Georgi T. Dobrovolskiy, Vladislav N. Volkov (2), Viktor I. Patsayev. Docked and entered *Salyut 1* space station; **crew died** during reentry from loss of pressurization.

7/26/71: *Apollo-Saturn 15*; 12 d., 17 hr., 12 min.; David R. Scott (3), James B. Irwin, Alfred M. Worden; Scott and Irwin made **4th Moon landing** (7/30). 1st lunar rover use; 1st deep space walk; 170 lbs of samples; 66:55 stay.

4/16/72: *Apollo-Saturn 16*; 11 d., 1 hr., 51 min.; John W. Young (4), Charles M. Duke Jr., Thomas K. Mattingly 2nd. Young and Duke made **5th Moon landing** (4/20); collected 213 lbs of lunar samples; lunar stay 71:02.

12/7/72: *Apollo-Saturn 17*; 12 d., 13 hr., 52 min.; Eugene A. Cernan (3), Ronald E. Evans, Harrison H. Schmitt. Cernan and Schmitt made 6th and **last lunar landing** (12/11); collected 243 lbs of samples; record lunar stay over 75 hrs.

5/14/73: *Skylab 1*; launched without crew. **1st U.S. space station**; fell out of orbit 7/11/79.

5/25/73: *Skylab 2*; 28 d., 49 min.; Charles Conrad Jr. (4), Joseph P. Kerwin, Paul J. Weitz; 1st U.S.-piloted orbiting space station; crew repaired damage caused in boost.

7/28/73: *Skylab 3*; 59 d., 11 hr., 1 min.; Alan L. Bean (2), Owen K. Garriott, Jack R. Lousma. Crew systems and operational tests; scientific activities; 3 EVAs, 13:44.

11/16/73: *Skylab 4*; 84 d., 1 hr., 16 min.; Gerald P. Carr, Edward G. Gibson, William R. Pogue. Final Skylab mission.

7/15/75: **Soyuz 19 (ASTP)*; 6 d., 11 hr., 31 min.; Aleksei A. Leonov (2), Valery N. Kubasov (2). U.S.-USSR joint flight; crews linked up in space (7/17), conducted experiments, shared meals, held a joint news conf.

7/15/75: *Apollo (ASTP)*; 9 d., 7 hr., 28 min.; Vance D. Brand, Thomas P. Stafford (4), Donald K. Slayton. Joint flight with *Soyuz 19*.

12/10/77: **Soyuz 26*; 96 d., 10 hr.; Yuri V. Romanenko, Georgiy M. Grechko (2). 1st multiple docking at a space station (*Soyuz 26* and *27* docked at *Salyut 6*).

1/10/78: **Soyuz 27*; 5 d., 22 hr., 59 min.; Vladimir A. Dzhanibekov. See *Soyuz 26*.

3/2/78: **Soyuz 28*; 7 d., 22 hr., 16 min.; Aleksei A. Gubarev (2), Vladimir Remek. 1st international crew launch; Remek was 1st Czech in space.

4/12/81: *Columbia (STS-1)*; 2 d., 6 hr., 21 min.; John W. Young (5), Robert L. Crippen. **1st reusable space shuttle** to fly into Earth's orbit.

11/12/81: *Columbia (STS-2)*; 3 days; Joe H. Engle, Richard H. Truly. 1st scientific payload; 1st reuse of space shuttle.

11/11/82: *Columbia (STS-5)*; 6 days; Vance D. Brand (2), Robert F. Overmyer, William Lenoir, Joseph Allen. 1st 4-person crew.

6/18/83: *Challenger (STS-7)*; 7 days; Robert L. Crippen (2), Frederick Hauck, Sally K. Ride, John M. Fabian, Norman E. Thagard. Ride was **1st U.S. woman in space**; 1st 5-person crew.

6/27/83: **Soyuz T-9*; 150 days; Vladimir A. Lyakhov (2), Aleksandr Pavlovich. Docked at *Salyut 7*. 1st construction in space.

8/30/83: *Challenger (STS-8)*; 7 days; Richard H. Truly (2), Daniel Brandenstein, William Thornton, Guion Bluford, Dale Gardner. Bluford was **1st African American in space**; **1st night launch**.

11/28/83: *Columbia (STS-9)*; 11 days; John W. Young (6), Brewster Shaw Jr., Robert Parker, Owen K. Garriott (2), Byron Lichtenberg, Ulf Merbold. 1st 6-person crew; 1st Spacelab mission.

2/3/84: *Challenger (41-B)*; 8 days; Vance Brand (3), Robert Gibson, Ronald McNair, Bruce McCandless, Robert Stewart. 1st untethered EVA.

2/8/84: **Soyuz T-10B*; 63 days; Leonid Kizim, Vladimir Solovyov, Oleg Atkov. Docked with *Salyut 7*; crew set space duration record of 237 days.

4/3/84: **Soyuz T-11*; 182 days; Yury Malyshev (2), Gennady Strekalov (3), Rakesh Sharma. Docked with *Salyut 7*; Sharma was 1st Indian in space.

4/6/84: *Challenger (41-C)*; 7 days; Robert L. Crippen (3), Francis R. Scobee, George D. Nelson, Terry J. Hart, James D. van Hoften. 1st in-orbit satellite repair.

7/17/84: **Soyuz T-12*; 12 days; Vladimir A. Dzhanibekov (4), Svetlana Y. Savitskaya (2), Igor P. Volk. Docked at *Salyut 7*; Savitskaya was 1st woman to perform EVA.

8/30/84: *Discovery (41-D)*; 7 days; Henry W. Hartsfield (2), Michael L. Coats, Richard M. Mullane, Steven A. Hawley, Judith A. Resnik, Charles D. Walker. 1st flight of U.S. non-astronaut (Walker).

10/5/84: *Challenger (41-G)*; 9 days; Robert L. Crippen (4), Jon A. McBride, Kathryn D. Sullivan, Sally K. Ride (2), Marc Garneau, David C. Leestma, Paul D. Scully-Power. 1st 7-person crew.

11/8/84: *Discovery (51-A)*; 8 days; Frederick Hauck (2), David M. Walker, Dr. Anna L. Fisher, Joseph Allen (2), Dale Gardner (2). 1st satellite retrieval/repair.

4/12/85: *Discovery (51-D)*; 7 days; Karol J. Bobko, Donald E. Williams, Jake Garn, Charles Walker (2), Jeffrey A. Hoffman, S. David Griggs, M. Rhea Seddon. Garn (R, UT) was **1st U.S. senator in space**.

6/17/85: *Discovery (51-G)*; 8 days; Daniel Brandenstein (2), John O. Creighton, Shannon W. Lucid, Steven R. Nagel, John M. Fabian (2), Prince Sultan Salman al-Saud, Patrick Baudry. Launched 3 satellites; Salman al-Saud was 1st Arab in space; Baudry was 1st French person on U.S. mission.

10/3/85: *Atlantis (51-J)*; 5 days; Karol J. Bobko (3), Ronald J. Grabe, David C. Hilmers, Robert Stewart (2), William A. Pailes. 1st *Atlantis* flight.

10/30/85: *Challenger (61-A)*; 8 days; Henry W. Hartsfield (3), Steven R. Nagel (2), James F. Buchli (2), Guion Bluford (2), Bonnie J. Dunbar, Wubbo J. Ockels, Richard Furrer, Ernst Messerschmid. 1st 8-person crew; 1st German Spacelab mission.

1/12/86: *Columbia (61-C)*; 7 days; Robert Gibson (2), Charles F. Bolden Jr., Steven A. Hawley (2), George D. Nelson (2), Franklin R. Chang-Diaz, Robert J. Cenker, Bill Nelson. Nelson (D, FL) was **1st U.S. representative in space**.

1/28/86: *Challenger (51-L)*; 73 seconds; Francis R. Scobee (2), Michael J. Smith, Judith A. Resnik (2), Ellison S. Onizuka (2), Ronald E. McNair, Gregory B. Jarvis, Christa McAuliffe. **Exploded 73 seconds after liftoff; all aboard were killed**, including McAuliffe, a New Hampshire schoolteacher who won a national competition to become 1st private citizen in space.

2/20/86: **Mir*[1]; launched without crew. **Space station** with 6 docking ports launched.

3/13/86: **Soyuz T-15*; 125 days; Leonid Kizim (3), Vladimir Solovyov (2). Ferry between stations; docked at *Mir*.

2/5/87: **Soyuz TM-2*; 327 days; Yuri V. Romanenko (3), Aleksandr I. Laveikin. Romanenko set endurance record, since broken.

7/22/87: **Soyuz TM-3*; 161 days; Aleksandr Viktorenko, Aleksandr Pavlovich Aleksandrov (2), Mohammed Faris. Docked with *Mir*; Faris was 1st Syrian in space.

9/29/88: *Discovery (STS-26)*; 4 days; Frederick Hauck (3), Richard O. Covey (2), David C. Hilmers (2), George D. Nelson (3), John M. Lounge (2). **1st shuttle flight since *Challenger* explosion** 1/28/86.

5/4/89: *Atlantis (STS-30)*; 4 days; David M. Walker (2), Ronald J. Grabe (2), Norman E. Thagard (3), Mary L. Cleave (2), Mark C. Lee. Launched Venus orbiter *Magellan*.

10/18/89: *Atlantis (STS-34)*; 5 days; Donald E. Williams (2), Michael J. McCulley, Shannon W. Lucid (2), Franklin R. Chang-Diaz (2), Ellen S. Baker. Launched Jupiter probe and orbiter *Galileo*.

4/24/90: *Discovery (STS-31)*; 6 days; Loren J. Shriver (2), Charles F. Bolden Jr. (2), Steven A. Hawley (3), Bruce McCandless (2), Kathryn D. Sullivan (2). **Launched Hubble Space Telescope**.

10/6/90: *Discovery (STS-41)*; 5 days; Richard N. Richards (2), Robert D. Cabana, Bruce E. Melnick, William M. Shepherd (2), Thomas D. Akers. Launched *Ulysses* spacecraft to investigate interstellar space and the Sun.

5/18/91: **Soyuz TM-12*; 145 days; Anatoly Artsebarskiy, Sergei Krikalev (2) (to *Mir*), Helen Sharman. Docked with *Mir*; Sharman was 1st Briton in space.

3/17/92: **Soyuz TM-14*; 146 days; Aleksandr Viktorenko (3) (to *Mir*), Alexandr Kaleri (to *Mir*), Klaus-Dietrich Flade, Aleksandr

Volkov (3) (from *Mir*), Sergei Krikalev (2) (from *Mir*). 1st human CIS space mission; docked with *Mir* 3/19; Krikalev was in space 313 days.

5/7/92: *Endeavour (STS-49)*; 9 days; Daniel Brandenstein (4), Thomas D. Akers (2), Kevin C. Chilton, Richard J. Hieb (2), Bruce E. Melnick (2), Kathryn Thornton (2), Pierre J. Thuot (2). 1st 3-person EVA; satellite recovery and redeployment.

9/12/92: *Endeavour (STS-47)*; 8 days; Robert Gibson (4), Jay Apt (2), Curtis L. Brown Jr., N. Jan Davis, Mae Carol Jemison, Mark C. Lee (2), Mamoru Mohri. Jemison was **1st black woman in space**; Lee and Davis were **1st married couple to travel together in space**; 1st Japanese Spacelab.

6/21/93: *Endeavour (STS-57)*; 10 days; Ronald J. Grabe (4), Brian J. Duffy (2), G. David Low (3), Nancy J. Sherlock, Janice E. Voss, Peter J. K. Wisoff. Carried Spacelab commercial payload module.

12/2/93: *Endeavour (STS-61)*; 11 days; Richard O. Covey (3), Kenneth D. Bowersox (2), Claude Nicollier (2), F. Story Musgrave (5), Thomas D. Akers (3), Kathryn Thornton (3), Jeffrey A. Hoffman (4). Hubble Space Telescope repaired; Akers set new U.S. EVA duration record (29 hr., 40 min.).

2/3/94: *Discovery (STS-60)*; 9 days; Charles F. Bolden Jr. (3), Kenneth S. Reightler Jr. (2), N. Jan Davis (2), Franklin R. Chang-Diaz (3), Ronald M. Sega, Sergei Krikalev (3). Krikalev was 1st Russian on U.S. shuttle.

7/1/94: **Soyuz TM-19*; 126 days; Yuri I. Malenchenko, Talgat A. Musabayev, Ulf Merbold (2) (from *Mir*). Docked with *Mir*.

9/9/94: *Discovery (STS-64)*; 11 days; Richard N. Richards (4), L. Blaine Hammond Jr. (2), Jerry M. Linenger, Susan J. Helms (2), Carl J. Meade (3), Mark C. Lee (3). Performed atmospheric research; 1st untethered EVA in more than 10 years.

2/3/95: *Discovery (STS-63)*; 9 days; James D. Wetherbee (3), Eileen M. Collins, Bernard A. Harris (2), C. Michael Foale (3), Janice E. Voss (2), Vladimir Titov (4). *Discovery* and Russian space station rendezvous.

3/2/95: *Endeavour (STS-67)*; 17 days; Stephen S. Oswald (3), William G. Gregory, Samuel T. Durrance (2), Ronald Parise (2), Wendy B. Lawrence, Tamara E. Jernigan (3), John M. Grunsfeld. Shuttle data made available on the Internet.

3/14/95: **Soyuz TM-21*; 112 days; Norman E. Thagard (5), Vladimir Dezhurov, Gennady Strekalov (5); Docked with *Mir* 3/16/95. Thagard was 1st American onboard Russian spacecraft; Valery Polyakov returned to Earth, 3/22/95, after record stay in space (439 days).

6/27/95: *Atlantis (STS-71)*; 10 days; Robert Gibson (5), Charles J. Precourt (2), E. Baker (3), Gregory J. Harbaugh (3), Bonnie J. Dunbar (4), Anatoly Solovyev (4) (to *Mir*), Nikolai M. Budarin (to *Mir*), Norman E. Thagard (5) (from *Mir*), Gennady Strekalov (from *Mir*), Vladimir Dezhurov (from *Mir*). **1st shuttle-*Mir* docking**; exchanged crew members with *Mir*.

11/12/95: *Atlantis (STS-74)*; 9 days; Kenneth D. Cameron (3), James D. Halsell Jr. (2), Chris Hadfield, Jerry L. Ross (5), William S. McArthur (2). 2nd shuttle-*Mir* docking (11/15-11/18); erected a 15-ft permanent docking tunnel to *Mir* for future use by U.S. orbiters.

2/22/96: *Columbia (STS-75)*; 16 days; Andrew M. Allen (3), Scott J. Horowitz, Franklin R. Chang-Diaz (5), Umberto Guidoni, Jeffrey A. Hoffman (5), Maurizio Cheli, Claude Nicollier (3). Lost an Italian satellite when its tether was severed; microgravity experiments performed; singe marks found on 2 O-rings.

3/22/96: *Atlantis (STS-76)*; 10 days; Kevin C. Chilton (3), Richard A. Searfoss (2), Ronald M. Sega (2), Michael R. Clifford (3), Linda Godwin (3), Shannon W. Lucid (5) (to *Mir*). 3rd shuttle-*Mir* docking (5 days); 2-person EVA.

9/16/96: *Atlantis (STS-79)*; 11 days; Jay Apt (4), Terry W. Wilcutt (2), William Readdy (3), Thomas D. Akers (4), Carl E. Walz (3), Shannon W. Lucid (5) (from *Mir*), John E. Blaha (5) (to *Mir*). Docked with *Mir* 9/18; exchanged crew members; Lucid set **U.S. and women's duration in space record** (188 days).

11/19/96: *Columbia (STS-80)*; 18 days; Kenneth D. Cockrell (3), Kent V. Rominger (2), Tamara E. Jernigan (4), Thomas D. Jones (3), F. Story Musgrave (6). Longest-duration shuttle flight; Musgrave, 61, oldest thus far to fly in space; 2 science satellites deployed, retrieved.

1/12/97: *Atlantis (STS-81)*; 11 days; Michael A. Baker (4), John M. Grunsfeld (2), Marsha Ivins (4), Brent W. Jett (2), Peter J. K. Wisoff (3), Jerry M. Linenger (2) (to *Mir*), John E. Blaha (5) (from *Mir*). Docked with *Mir* 1/14-1/19; Blaha spent 128 days in space.

2/11/97: *Discovery (STS-82)*; 10 days; Kenneth D. Bowersox (4), Gregory J. Harbaugh (4), Steven A. Hawley (4), Scott J. Horowitz (2), Mark C. Lee (4), Steve Smith (2), Joe Tanner (2). Increased capabilities of Hubble Space Telescope; 5 EVAs used to service it.

5/15/97: *Atlantis (STS-84)*; 10 days; Charles J. Precourt (3), Jean-François Clervoy (2), Eileen M. Collins (2), Elena Kondakova, Edward T. Lu, Carlos Noriega, C. Michael Foale (4) (to *Mir*), Jerry M. Linenger (2) (from *Mir*). Docked with *Mir* 5/16-5/21; stay on *Mir* marked by troubles incl. fire 2/23.

8/5/97: **Soyuz TM-26*; 198 days; Anatoly Solovyev (5), Pavel Vinogradov. Docked with *Mir* 8/7; repaired damaged space station.

8/7/97: *Discovery (STS-85)*; 12 days; Curtis L. Brown Jr. (4), Robert L. Curbeam Jr., N. Jan Davis (3), Stephen K. Robinson, Kent V. Rominger (3), Bjarni V. Tryggvason. Deployed and retrieved satellite designed to study Earth's middle atmosphere; demonstrated robotic arm.

9/25/97: *Atlantis (STS-86)*; 11 days; James D. Wetherbee (4), Michael J. Bloomfield, Vladimir. Titov (4), Scott Parazynski (2), Jean-Loup Chrétien (3), Wendy B. Lawrence (2), David A. Wolf (2) (to *Mir*), C. Michael Foale (4) (from *Mir*). Docked with *Mir* 9/27-10/3; delivered new computer to *Mir*; stay on *Mir* marked by major collision with cargo ship 6/25.

4/17/98: *Columbia (STS-90)*; 16 days; Richard A. Searfoss (3), Scott D. Altman, Richard M. Linnehan (2), Dave R. Williams, Kathryn P. Hire, Jay C. Buckey, James A. Pawelczyk. Studied effects of microgravity on the nervous systems of the crew and more than 2,000 live animals; 1st surgery in space on animals meant to survive.

6/2/98: *Discovery (STS-91)*; 10 days; Charles J. Precourt (4), Dominic L. Gorie, Wendy B. Lawrence (3), Franklin R. Chang-Diaz (6), Janet L. Kavandi, Valery Ryumin (4), Andrew S.W. Thomas (2) (from *Mir*). Final docking mission with *Mir*; Thomas from *Mir*, 141 days in space.

10/29/98: *Discovery (STS-95)*; 10 days; Curtis L. Brown Jr. (5), Steven W. Lindsey (2), Scott Parazynski (3), Stephen K. Robinson (2), Pedro Duque, Chiaki Mukai (2), John H. Glenn Jr. (2). Glenn, one of the original Mercury astronauts, and at that point a senator (D, OH), 77, was **oldest person to fly in space**; Duque was 1st Spaniard in space; experiments to study aging performed on Glenn.

12/4/98: *Endeavour (STS-88)*; 12 days; Robert D. Cabana (4), Frederick W. Sturckow, Nancy J. Currie (3), Jerry L. Ross (6), James H. Newman (3), Sergei Krikalev (4). **1st assembly of International Space Station (ISS)**; attached U.S.-built *Unity* connecting module to Russian-built *Zarya* control module; 1st crew to enter ISS.

7/23/99: *Columbia (STS-93)*; 5 days; Eileen M. Collins (3), Jeffrey S. Ashby, Steven A. Hawley (5), Catherine G. Coleman (2), Michel Tognini (2). Collins was **1st woman space shuttle commander**; deployed Chandra X-ray Observatory telescope.

2/11/00: *Endeavour (STS-99)*; 12 days; Kevin R. Kregel (4), Dominic L. Gorie (2), Janet L. Kavandi (2), Janice E. Voss (5), Mamoru Mohri (2), Gerhard P.J. Thiele. Used radar to make most complete topographic map of Earth's surface ever produced.

9/8/00: ***Atlantis (STS-106)***; 12 days; Terry W. Wilcutt (4), Scott D. Altman (2), Edward T. Lu (2), Richard A. Mastracchio, Daniel C. Burbank, Yuri I. Malenchenko (2), Boris V. Morukov. Prepared ISS for 1st permanent crew; 1 EVA by all 7 crew members.

10/31/00: ***Soyuz TM-31***; William M. Shepherd (4), Yuri Gidzenko (2), Sergei Krikalev (5); Established **1st permanent manning of ISS** with 3-person crew for a 4-month stay.

3/8/01: ***Discovery (STS-102)***; 13 days; James D. Wetherbee (5), James M. Kelly, Susan J. Helms (4) (to ISS), James S. Voss (5) (to ISS), Paul Richards, Andrew S.W. Thomas (2), Yuri V. Usachev (4) (to ISS), William M. Shepherd (4) (from ISS), Gidzenko (2) (from ISS), Krikalev (5) (from ISS). Transported 2nd permanent crew to ISS and returned 1st crew to Earth; 2 EVAs.

7/12/01: ***Atlantis (STS-104)***; 13 days; Steven W. Lindsey (3), Charles O. Hobaugh, Michael L. Gernhardt (4), Janet L. Kavandi (3), James F. Reilly II (2). Installed a Joint Airlock, with nitrogen and oxygen tanks to permit future spacewalks from the ISS; 3 EVAs.

3/1/02: ***Columbia (STS-109)***; 11 days; Scott D. Altman (3), Duane G. Carey, John M. Grunsfeld (4), Nancy J. Currie (4), Richard M. Linnehan (3), James H. Newman (4), Michael J. Massimino. Installed powerful new camera and upgraded other equipment on Hubble Space Telescope; 5 EVAs.

4/8/02: ***Atlantis (STS-110)***; 11 days; Michael J. Bloomfield (3), Stephen N. Frick, Rex J. Walheim, Ellen Ochoa (4), Lee M.E. Morin, Jerry L. Ross (7), Steven L. Smith (4). Installed S0 Truss, backbone for expansion of ISS; Ross set records with 7th spaceflight, 9th spacewalk.

10/30/02: ***Soyuz TMA-1**[3]*; Sergei Zalyotin (2), Frank De Winne, Yuri Lonchakov (2). 1st launch of *Soyuz TMA*; (crew returned 11/10/02 on *Soyuz TM-34* already docked at ISS).

1/16/03: ***Columbia (STS 107)***; 16 days; Rick Husband (2), William McCool, Michael Anderson (2), David Brown, Kalpana Chawla (2), Laurel Clark, Ilan Ramon. **Entire crew lost when *Columbia* burned** during reentry, 2/1; Ramon was 1st Israeli astronaut.

10/15/03: ***Shenzhou 5***; 21 hr.; Yang Liwei. **1st Chinese manned spacecraft**.

6/21/04: ***SpaceShipOne***; 90 min.; Mike Melvill. **1st privately funded manned spaceflight[2]**.

7/26/05: ***Discovery (STS-114)***; 14 days; Charles Camarda, Eileen M. Collins (4), James M. Kelly (2), Wendy B. Lawrence (4), Soichi Noguchi, Stephen K. Robinson (3), Andrew S.W. Thomas (3). **1st space shuttle flight since *Columbia* disaster**; tested new safety modifications to craft.

7/4/06: ***Discovery (STS-121)***; 13 days; Steven W. Lindsey (4), Mark E. Kelly, Michael E. Fossum, Piers J. Sellers (2), Lisa M. Nowak, Thomas Reiter (to ISS), Stephanie D. Wilson. **1st shuttle to launch on Independence Day**; conducted more safety tests to craft; brought supplies to and performed maintenance on ISS.

4/7/07: ***Soyuz TMA-10**[3]*; Oleg Kotov (to ISS), Sheikh Muszaphar Shukor (from ISS), Charles Simonyi (U.S.) Fyodor Yurchikhin (to ISS). Kotov and Yurchikhin joined ISS expedition 15; Simonyi became **5th space tourist** (returned on *TMA-9*); Shukor was 1st Malaysian in space (arrived on *TMA-11*).

6/8/07: ***Atlantis (STS-117)***; 14 days; Frederick Sturckow (3), Lee Archambault, Patrick Forrester (2), John "Danny" Olivas, Jim Reilly (3), Steven Swanson, Clayton Anderson (to ISS), Sunita L. Williams (from ISS). Delivered truss segments and solar arrays to ISS; Williams set record for **longest spaceflight by a woman**.

8/8/07: ***Endeavour (STS-118)***; 13 days; Scott Kelly (2), Alvin Drew, Barbara R. Morgan, Charles O. Hobaugh (2), Tracy Caldwell, Rick Mastracchio (2), Dave R. Williams (2). Brought **Teacher in Space** project participant Morgan to ISS; attached new truss segment, repaired faulty gyroscope.

10/10/07: ***Soyuz TMA-11**[3]*; Yuri I. Malenchenko (3), Sheikh Muszaphar Shukor (to ISS), Peggy A. Whitson (2) (from ISS), Yi So-Yeon (from ISS). Delivered and installed components of ISS; malfunctioned on return to Earth, landing short of its touchdown area but causing no fatalities.

10/23/07: ***Discovery (STS-120)***; 16 days; Pamela A. Melroy (3), Paolo Nespoli, Scott Parazynski (5), Douglas Wheelock, Stephanie Wilson, George Zamka, Daniel M. Tani (2) (to ISS), Clayton Anderson (from ISS). Installed living space (Harmony Node 2) on ISS.

2/7/08: ***Atlantis (STS-122)***; 13 days; Stephen N. Frick (2), Stanley G. Love, Leland D. Melvin, Alan G. Poindexter, Hans Schlegel (2), Léopold Eyharts (to ISS), Daniel M. Tani (from ISS), Rex J. Walheim (2). Installed European Space Agency's Columbus laboratory on the ISS; minor damage to a thermal plate caused concern about the shuttle's safety during reentry, but *Atlantis* landed safely.

3/11/08: ***Endeavor (STS-123)***; 16 days; Dominic L. Gorie (4), Robert L. Behnken, Takao Doi (2), Michael J. Foreman, Gregory H. Johnson, Richard M. Linnehan (4), Léopold Eyharts (from ISS), Garrett Reisman (to ISS). Delivered and installed components of the Japanese Kibo science laboratory.

4/8/08: ***Soyuz TMA-12**[3]*; Oleg Kononenko, Sergei Volkov, Yi So-Yeon (to ISS); Richard Garriott (from ISS). Yi became 1st S. Korean in space.

5/31/08: ***Discovery (STS-124)***; 14 days; Mark E. Kelly (3), Michael E. Fossum (2), Ronald J. Garan Jr., Kenneth T. Ham, Akihiko Hoshide, Karen Nyberg, Gregory E. Chamitoff (to ISS), Garrett Reisman (from ISS). Delivered and installed pressurized and experimental modules of Kibo.

9/25/08: ***Shenzhou 7***; 68 hr.; Jing Haipeng, Liu Boming, Zhai Zhigang. Zhai completed 1st Chinese spacewalk.

10/12/08: ***Soyuz TMA-13**[3]*; Richard Garriott (to ISS), Yuri V. Lonchakov (3), Michael Fincke. Garriott became 6th space tourist.

3/15/09: ***Discovery (STS-119)***; 13 days; Lee J. Archambault (2), Joseph M. Acaba, Dominic A. Antonelli, Richard R. Arnold, John L. Phillips, Steven Swanson (2), Koichi Wakata (to ISS), Sandra H. Magnus (from ISS). Delivered final solar panels and last U.S.-made truss segment.

5/11/09: ***Atlantis (STS-125)***; 13 days; Scott D. Altman (4), Andrew J. Feustel, Michael T. Good, John M. Grunsfeld (5), Gregory C. Johnson, Michael J. Massimino (2), K. Megan McArthur. Final Hubble Space Telescope servicing mission.

11/16/09: ***Atlantis (STS-129)***; 11 days; Charles O. Hobaugh (3), Randolph J. Bresnik, Michael J. Foreman (2), Leland D. Melvin (2), Robert L. Satcher Jr., Barry E. Wilmore, Nicole P. Stott (from ISS). Final Space Shuttle crew rotation flight.

5/14/10: ***Atlantis (STS-132)***; 12 days; Kenneth T. Ham (2), Dominic A. Antonelli (2), Stephen J. Bowen (2), Michael T. Good (2), Garrett E. Reisman (2), Piers J. Sellers (3). Delivered Russian Research Module to ISS; **final Atlantis mission**.

6/15/10: ***Soyuz TMA-19**[3]*; Fyodor Yurchikhin (3), Shannon Walker, Douglas H. Wheelock (2). 100th mission since launching of the International Space Station.

Note: Four Soviet cosmonauts have died during spaceflight: Vladimir Komarov was killed on *Soyuz 1* (1967) when parachute lines tangled during descent; the 3-person *Soyuz 11* crew (1971) was asphyxiated. Six Americans and an Israeli astronaut died aboard the *Columbia*; 7 Americans died in the *Challenger* explosion; and 3 astronauts—Virgil I. Grissom, Edward H. White, and Roger B. Chaffee—died in the Jan. 27, 1967, *Apollo 1* fire on the ground at Cape Canaveral, FL. (1) Space stations, such as the *Salyuts* and *Mir*, were used to house crews starting in 1971. (2) Date of first successful flight; later, SpaceShipOne flew at least 100 km (62 mi) into space, 9/29/04, piloted by Mike Melvill, and 10/4/04, piloted by Brian Binnie, winning the $10 mil Ansari Prize for 1st private venture to accomplish this feat twice within two weeks. (3) *Soyuz* crew often return from ISS on spacecraft that launched and were docked at the station before their arrival.

U.S. Manned Space Program

Source: National Aeronautics and Space Administration (NASA)

After 30 years of flight, the U.S. space shuttle program is expected to be retired after its final scheduled flight in Feb. 2011. The program's success was tempered by two tragedies: the Jan. 28, 1986, *Challenger* explosion, in which six astronauts and schoolteacher Christa McAuliffe were killed 73 seconds after liftoff; and the Jan. 16, 2003, incident in which all seven astronauts aboard died when the *Columbia* burned up on re-entry.

In 2004, Pres. George W. Bush outlined a vision for space exploration that included an orbital capsule, *Orion*, which would be used for carrying astronauts on missions to the International Space Station, and spacecraft to Mars that would be built in space. He wanted astronauts to return to the Moon by 2020.

In a Apr. 15, 2010, speech at NASA's Kennedy Space Center, Pres. Barack Obama announced a new plan, whereby NASA would work with private space companies to spur competition and innovation in spacecraft that could reach low earth orbits. The *Orion* program already underway would be repurposed to create a rescue vehicle for quickly bringing astronauts home from the ISS.

A new heavy-lift rocket would be designed by 2015 to transport crew capsules, other rockets, and large quantities of supplies into space in order to make deep-space explorations more feasible. While Obama's plan eliminated manned missions to the Moon, it called for the creation of a long-range spacecraft by 2025, capable of transporting astronauts to an asteroid. A mission to Mars could follow by the mid-2030s.

International Space Station

Source: National Aeronautics and Space Administration (NASA)

The International Space Station (ISS) is considered the largest cooperative scientific project in history. Construction began in 1998; it has been inhabited by international crew members since 2000.

16 cooperating nations: Brazil, Belgium, Canada, Denmark, France, Germany, Italy, Japan, Netherlands, Norway, Russia, Spain, Sweden, Switzerland, United Kingdom, United States.

The station when completed:

- Mass of 925,000 lbs
- 361 ft long, with almost an acre of solar panels
- Internal volume roughly equivalent to one-and-a-half 747 jumbo jets
- 6 laboratories; living space for up to 7 people

Examples of research conducted or planned:

- Studying the effects of long-term exposure to reduced gravity on plants, crystals, plant and animal cells, and pathogens
- Studying the effects on humans of long-term exposure to reduced gravity
- Recording large-scale long-term changes in Earth's environment by observing the planet from orbit
- Testing recycling technologies for human life support

Summary of Worldwide Successful Launches, 1957-2010

Source: National Aeronautics and Space Administration (NASA); World Almanac research

Year	Total[1]	Russia[2]	U.S.	ESA[3]	China	Japan	France	India	UK	Germany	Canada	Israel	Iran	S. Korea
1957-59	24	6	18	—	—	—	—	—	—	—	—	—	—	—
1960-69	1,035	399	614	2	—	—	4	—	1	—	—	—	—	—
1970-79	1,366	1,028	247	5	8	18	14	1	6	3	4	—	—	—
1980-89	1,431	1,132	191	14	16	26	5	9	4	7	5	—	—	—
1990-99	1,045	542	300	55	33	23	16	11	7	6	4	—	—	—
2000-09[4]	603	246	206	63	52	18	0	13	0	0	0	3	1	1
2010[4]	42	19	9	3	8	1	0	1	0	0	0	1	0	0
Total[4]	**5,546**	**3,372**	**1,585**	**142**	**117**	**86**	**39**	**35**	**18**	**16**	**13**	**4**	**1**	**1**

(1) Includes launches sponsored by countries not shown. (2) Data for 1957-91 apply to the Soviet Union, for 1992-96 to the Commonwealth of Independent States, after 1996 to Russia. (3) European Space Agency. Member states are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and United Kingdom. Canada, Hungary, and Czech Republic also participate in some projects under cooperation agreements. (4) As of Sept. 4, 2010.

Notable Proposed U.S. Space Missions in 2011

Source: National Aeronautics and Space Administration (NASA)

Planned launch	Mission	Purpose
Feb. 26	Space Shuttle Endeavour (STS-134)	Final U.S. space shuttle flight.
TBA	Aquarius	Map salt concentrations in the ocean's surface to understand heat transport and storage in the ocean.
Aug. 5	Juno (solar-powered spacecraft)	Orbit Jupiter's poles 33 times to find out more about its origins, structure, atmosphere, and magnetosphere.
Sept. 8	Gravity Recovery and Interior Laboratory (GRAIL)	Determine the structure of the lunar interior from crust to core and advance understanding of the thermal evolution of the moon.
Oct. 18	National Polar-orbiting Operational Environmental Satellite System Preparatory Project (NPP)	Measure Earth's atmospheric and sea surface temperatures.
Nov. 25	Mars Science Laboratory (Mars Rover)	Assess whether Mars ever was or is still today able to support microbial life and determine the planet's habitability.

Notable Lunar and Planetary Science Missions

Source: National Aeronautics and Space Administration (NASA)

Spacecraft	Launch date[1]	Mission	Remarks
Mariner 2	Aug. 27, 1962	Venus	Passed within 22,000 mi of Venus 12/14/62; confirmed high surface temperature on planet; contact lost 1/3/63 at 54 mil mi.
Ranger 7	July 28, 1964	Moon	Yielded over 4,000 photos of lunar surface.
Mariner 4	Nov. 28, 1964	Mars	1st probe to fly by Mars; passed behind planet 7/14/65; took 22 photos from 6,000 mi above surface.

Spacecraft	Launch date[1]	Mission	Remarks
Ranger 8	Feb. 17, 1965	Moon	Yielded over 7,000 photos of lunar surface.
Venera 3	Nov. 16, 1965	Venus	Soviet probe; 1st artificial probe to impact on the surface of another planet 3/1/66; probe failed to send back data.
Surveyor 3	Apr. 17, 1967	Moon	Scooped and tested lunar soil.
Mariner 5	June 14, 1967	Venus	In solar orbit; closest Venus flyby 10/19/67; allowed scientists to obtain accurate readings on the composition of the Venusian atmosphere.
Mariner 6	Feb. 24, 1969	Mars	Came within 2,000 mi of Mars 7/31/69; collected data, photos.
Mariner 7	Mar. 27, 1969	Mars	Came within 2,000 mi of Mars 8/5/69.
Venera 7	Aug. 17, 1970	Venus	Soviet probe; 1st probe to land safely on the surface of another planet; because of high atmospheric temperatures, probe is thought to have melted.
Mariner 9	May 30, 1971	Mars	1st craft to orbit Mars 11/13/71; sent back over 7,000 photos.
Pioneer 10	Mar. 2, 1972	Jupiter	Passed Jupiter 12/4/73; took readings on Jupiter's composition, found that the planet is composed mostly of hydrogen; exited the planetary system 6/13/83; transmission ended 3/31/97 at 6.39 bil mi.
Pioneer 11	Apr. 5, 1973	Jupiter, Saturn	Passed Jupiter 12/3/74, Saturn 9/1/79; discovered an additional ring and 2 moons around Saturn; operating in outer solar system; transmission ended 9/30/95.
Mariner 10	Nov. 3, 1973	Venus, Mercury	Passed Venus 2/5/74; arrived Mercury 3/29/74. 1st time gravity of 1 planet (Venus) used to whip spacecraft toward another (Mercury); 1st probe to visit 2 planets; took readings of cloud and wind patterns in Venusian atmosphere.
Viking 1	Aug. 20, 1975	Mars	Landed on Mars 7/20/76; 1st probe to land safely on Mars; performed chemical analysis of soil; functioned 6 years.
Viking 2	Sept. 9, 1975	Mars	Sister probe of *Viking 1*; landed on Mars 9/3/76; functioned 3 years.
Voyager 2	Aug. 20, 1977	Jupiter, Saturn, Uranus, Neptune	Encountered Jupiter 7/9/79; Saturn 8/25/81; Uranus 1/24/86; Neptune 8/25/89; confirmed existence of rings around Neptune; observed Neptune's "great dark spot," which has since dissipated. Entered boundary of solar system 10/07.
Voyager 1	Sept. 5, 1977	Jupiter, Saturn	Encountered Jupiter 3/5/79, provided evidence of rings around Jupiter; passed near Saturn 11/12/80; passed *Pioneer 10* to become most distant human-made object 2/17/98; 8/15/06 reached a distance of 100 AUs from sun.
Pioneer Venus 1	May 20, 1978	Venus	Entered Venus orbit 12/4/78; studied atmosphere, magnetic field, weather, and surface; fuel ran out and probe was destroyed in atomospheric entry, 8/92.
Pioneer Venus 2 (multiprobe)	Aug. 8, 1978	Venus	Consisted of a "bus" carrying 1 large and 3 small atmospheric probes. All 4 probes entered the Venus atmosphere 12/9/78, followed by the bus; took readings of Venusian atmosphere; probes impacted on surface.
Magellan	May 4, 1989	Venus	Landed on Venus 8/10/90; monitored geological activity; mapped more than 99% of planet surface, observed more than 1,600 volcanoes and volcanic features, enabling creation of a 3-dimensional map; showed that about 85% of the surface is covered by volcanic flows; ceased operating 10/11/94.
Galileo	Oct. 18, 1989	Jupiter	Used Earth's gravity to propel it toward Jupiter; encountered Venus 2/90; encountered Jupiter 12/7/95; encountered moons; released probe into Jovian atmosphere; intentionally flown into Jupiter 9/21/03 to prevent accidental contamination of Jupiter's moon Europa.
Mars Global Surveyor	Nov. 7, 1996	Mars	Began orbiting Mars 9/11/97; began mapping survey of entire surface 3/9/99; discovered a weak magnetic field on planet; observed Martian moon Phobos; found evidence of liquid water in past 6/22/00.
Mars Pathfinder	Dec. 4, 1996	Mars	Landed on Mars 7/4/97; rover *Sojourner* made measurements of climate and soil composition, sending thousands of surface images; ceased operating 9/27/97.
Cassini-Huygens	Oct. 15, 1997	Saturn	Began orbiting Saturn 6/30/04; 4-year mission to study planet's atmosphere, rings, and moons; spotted evidence of a subterranean ocean and 300-mi-wide hot spot region on Titan; detected an atmosphere on Saturn's moon Enceladus. *Huygens* probe landed on Titan 1/14/05; found a muddy surface, possible deposits of water ice, channels carved by liquid methane springs.
Lunar Prospector	Jan. 6, 1998	Moon	Began orbiting Moon 1/11/98; mapped abundance of 11 elements on Moon's surface; discovered evidence of water ice at both lunar poles; crashed into crater near Moon's south pole 7/31/99 to end mission.
Deep Space 1	Oct. 24, 1998	Comet Borrelly	Flew within 1,500 mi of comet; sent back photos showing a 6-mi-long nucleus.
Stardust	Feb. 7, 1999	Comet Wild-2	Reached comet 1/2/04; gathered dust samples, returned to Earth 1/15/06.
2001 Mars Odyssey	Apr. 7, 2001	Mars	Reached Mars 10/24/01; detected evidence of water ice near south pole; primary mission to study climate and geologic history completed 8/04; began extended mission, aiming to identify minerals on Mars.
Genesis	Aug. 8, 2001	Sun	Orbited Sun, collected particles from solar wind; capsule containing specimens crashed to Earth 9/8/04; some samples survived.
Mars Express/ Beagle 2 lander	June 3, 2003	Mars	1st European Space Agency probe to another planet; arrived at Mars 12/03; performing remote sensing including photography in search for subsurface water; *Beagle 2* lander was deployed 12/19/03 but contact was lost soon after.
Mars Exploration Rovers	June 7 & July 10, 2003	Mars	Rovers *Spirit* and *Opportunity* landed on Mars 1/04, found further evidence that water existed on surface; *Spirit* took 1st photo of a Martian meteor; survived severe dust storms in 2007; *Opportunity* explored massive Victoria Crater Sept. 2007-Aug. 2008 and sighted larger Endeavor Crater 3/09.
MESSENGER	Mar. 2, 2004	Mercury	Flew by Mercury 10/6/08, expected to enter orbit in 2011; provided images of 20% of Mercury's surface; reached 2-bil-mi mark in 9/07.
Deep Impact	Jan. 12, 2005	Comet Tempel 1	Reached Tempel 1; deployed an impact probe which slammed into the comet on 7/4/05, impacting with a force equivalent to roughly 5 tons of TNT; orbiter probe passed Earth 12/31/07; en route to Comet Hartley 2 in 10/10.
Mars Reconnais-sance Orbiter	Aug. 12, 2005	Mars	Reached Mars 3/10/06 and began taking detailed images of the Martian surface; in 3/08, found salt deposits suggesting ancient water supplies; 6/08 found largest known crater in solar system.
New Horizons (Pluto)	Jan. 19, 2006	Pluto & Charon	Flew by Jupiter 7/07. Due to reach Pluto and Charon in 7/15; may examine other Kuiper Belt Objects.
Phoenix Mars Lander	Aug. 4, 2007	Mars	Landed 5/25/08; examining northern polar region, monitoring weather and analyzing minerals; evidence of water ice verified 7/31/08; lost contact 11/2/08.
Dawn	Sept. 27, 2007	Asteroid Belt (bet. Jupiter and Mars)	Will compare the evolution of Ceres, a dwarf planet, with Vesta, an asteroid, in an effort to shed light on the formation of the solar system.
Lunar CRater Observation and Sensing Satellite (LCROSS)	June 18, 2009	Moon	Launch vehicle's upper stage and LCROSS impacted Cabeus crater on 10/9/09; impacts were intended to create plumes of lunar debris that could be analyzed for water content.

(1) Coordinated Universal Time.

General Aviation and Air Taxi Active Aircraft, 2008

Source: Federal Aviation Administration; aircraft not associated with major airlines or the military

	Total active	Personal	Business	Corporate	Instructional	Aerial apps.	Aerial observation	Other work	Sight-seeing	Air medical	Other	On demand operations
Fixed wing	**182,961**	**121,313**	**21,251**	**11,102**	**12,223**	**2,561**	**3,492**	**1,385**	**76**	**279**	**3,413**	**5,865**
Piston	163,013	118,929	18,854	1,874	12,055	1,389	2,943	1,141	70	222	3,131	2,405
Turboprop	8,906	1,354	1,562	2,158	125	1,163	538	211	3	47	117	1,629
Turbojet	11,042	1,030	835	7,070	43	8	11	34	3	10	165	1,830
Rotorcraft	**9,876**	**1,614**	**420**	**342**	**1,405**	**465**	**1,652**	**776**	**108**	**127**	**458**	**2,511**
Piston	3,498	1,322	245	27	1,037	180	288	44	76	3	216	60
Turbine	6,378	291	175	315	368	285	1,364	732	32	124	242	2,450
Other aircraft	**5,652**	**4,530**	**13**	**39**	**448**	**0**	**4**	**57**	**475**	**3**	**49**	**34**
Gliders	1,914	1,594	1	8	269	0	0	8	14	0	20	0
Lighter-than-air	3,738	2,935	12	32	178	0	4	50	461	3	29	34
Experimental	**23,364**	**20,814**	**698**	**222**	**435**	**77**	**138**	**120**	**9**	**2**	**759**	**90**
Amateur	19,767	18,290	476	75	346	5	75	24	2	2	472	0
Exhibition	2,096	1,824	38	8	49	4	0	30	0	0	142	0
Other	1,501	700	183	139	40	67	63	67	7	0	145	90
Light sport	**6,811**	**6,147**	**50**	**8**	**465**	**4**	**18**	**6**	**6**	**0**	**107**	**0**
Total all aircraft	**228,663**	**154,417**	**22,432**	**11,715**	**14,975**	**3,106**	**5,304**	**2,344**	**673**	**411**	**4,786**	**8,499**

Note: Columns may not add up to totals due to rounding. **Personal**—Flying for personal reasons; **Business**—Individual or group use for business transportation without a paid, professional crew; **Corporate**—Individual or group business transportation with a paid, professional crew (includes fractional ownership); **Instructional**—Flying under the supervision of a flight instructor; **Aerial applications**—Includes agriculture, forestry, public health, fire fighting, and other applications; **Aerial observation**—Includes aerial mapping/photography, patrol, search and rescue, hunting, traffic advisory, ranching, surveillance, oil and mineral exploration, etc.; **Other work**—Construction work, parachuting, aerial advertising, towing gliders, etc.; **Sight-seeing**—Commercial sight-seeing; **Air medical**—Air ambulance services, rescue, human organ transportation, emergency medical services; **Other**—Positioning flights, proficiency flights, training, ferrying, sales demos; **On demand operations**—On demand air taxi, air tours, commuter, and air medical services.

Estimated Active Airmen Certificates Held, 2009

Source: Federal Aviation Administration, U.S. Dept. of Transportation

Category	Certificates
Pilot total	**594,285**
Airplane[1]	
Private	211,619
Commercial	125,738
Airline Transport	144,600
Student	72,280
Recreational (only)	234
Sport (only)	3,248
Rotorcraft only (helicopters)	15,298
Glider	21,268
Nonpilot total	**682,315**
Mechanic	329,027
Repairmen	41,389
Parachute Rigger	8,632
Ground Instructor	75,461
Dispatcher	20,132
Flight Navigator	181
Flight Attendant	156,741
Flight Engineer	51,022

Note: The term airmen includes men and women certified as pilots, mechanics, or other aviation technicians. (1) Includes pilots with an airplane-only certificate as well as those with an airplane and a helicopter and/or glider certificate.

Aircraft Operating Statistics

Source: Courtesy of Air Transport Association of America, Inc. Reprinted with permission.

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	No. of seats	Airborne speed (mph)	Flight length (mi)	Fuel (gal per hr.)	Operating cost (per hr.)		No. of seats	Airborne speed (mph)	Flight length (mi)	Fuel (gal per hr.)	Operating cost (per hr.)
B747-200/300*	370	520	3,148	3,625	$9,153	B727-200*	148	430	644	1,289	$4,075
B747-400	367	534	3,960	3,411	8,443	B727-100*	—	417	468	989	13,667
B747-100*	—	503	2,022	1,762	3,852	A320	146	454	1,065	767	2,359
B747-F*	—	506	2,512	3,593	7,138	B737-400	141	409	646	703	2,595
L-1011	325	494	2,023	1,981	8,042	MD-80	134	432	791	953	2,718
DC-10*	286	497	1,637	2,405	7,374	B737-700LR	132	441	879	740	1,692
B767-400	265	495	1,682	1,711	3,124	B737-300/700	132	403	542	723	2,388
B-777	263	525	3,515	2,165	5,105	A319	122	442	904	666	1,913
A330	261	509	3,559	1,407	3,076	A310-200*	—	455	847	1,561	8,066
MD-11*	261	515	2,485	2,473	7,695	B737-100/200	119	396	465	824	2,377
A300-600*	235	460	947	1,638	6,518	B717-200	112	339	175	573	3,355
B757-300	235	472	1,309	985	2,345	B737-500	110	407	576	756	2,347
B767-300ER*	207	497	2,122	1,579	4,217	DC-9	101	387	496	826	2,071
DC-8*	—	437	686	1,712	8,065	F-100	87	398	587	662	2,303
B757-200*	181	464	1,175	1,045	3,312	B737-200C	55	387	313	924	3,421
B767-200ER	175	487	1,987	1,404	3,873	ERJ-145	50	360	343	280	1,142
A321	169	454	1,094	673	1,347	CRJ-145	49	397	486	369	1,433
B737-800/900	151	454	1,035	770	2,248	ERJ-135	37	357	382	267	969
MD-90	150	446	886	825	2,716	SD 340B	33	230	202	84	644

* Data include cargo operations.

Milestones in Aviation History

Source: National Aeronautics and Space Administration (NASA), National Air and Space Museum, Air Transport Association of America, National Museum of the U.S. Air Force, U.S. National Park Service

1903, Dec. 17: Brothers Wilbur and Orville Wright (U.S.) made the first human-carrying, powered flight near Kitty Hawk, NC. Each brother made two flights; the longest, about 852 ft, lasted 59 sec.

1907: Glenn H. Curtiss (U.S.) formed the first American airplane manufacturing company.

1908, May 14: Charles Furnas (U.S.) became first American airplane passenger.

1911, Feb. 1: Glenn H. Curtiss (U.S.) joined forces with the Burgess Company to become the first U.S. airplane manufacturing company.

1911, Sept. 23: First transportation of mail by airplane officially approved by the U.S. Postal Service.

1914, Jan. 1: First scheduled passenger airline service began. A seaplane that landed on water, it operated between St. Petersburg and Tampa, FL.

1918, May 14: First scheduled air mail service began, between New York and Washington, DC, with intermediate stops in Philadelphia. In 1921, scheduled transcontinental airmail service began between New York City and San Francisco.

1919, June 14-15: Capt. John Alcock (UK) and Lt. Arthur W. Brown (U.S.) completed the first non-stop flight across the Atlantic Ocean. They traveled from Newfoundland, Canada, to Ireland in 16 hours and 12 minutes.

1923, Aug. 23: Rotating beacons enabled the first night flights.

1924, Apr. 6-Sept. 28: Two U.S. Army planes landed in Seattle, completing the first circumnavigation of the globe. They completed the 26,000-mi journey in 371 hours of flying time.

1926, May 12-13: Roald Amundsen (Norway), Umberto Nobile (Italy), Lincoln Ellsworth (U.S.), and Oscar Wisting (Norway) made the first flight over the North Pole, in a dirigible that flew between Spitsbergen, Norway, and Teller, Alaska. Two weeks earlier, Adm. Richard E. Byrd (U.S) and Floyd Bennett (U.S.) claimed to have made the first flight over the Pole (May 9, 1926) in a Fokker F-VII. But when Byrd's diary was released to the public in 1996, some historians began to question whether his plane indeed reached the Pole.

1927, May 20-21: Charles Lindbergh (U.S.) completed the first solo transatlantic flight in the *Spirit of St. Louis.* Lucky Lindy traveled 3,610 mi from New York to Paris in 33 hours, 29 minutes, and 30 seconds.

1929, Aug. 8-29: Hugo Eckener (Germany) piloted the *Graf Zeppelin* around the world in record time: 20,373 mi in 21 days, 5 hours, and 31 minutes.

1929, Nov. 28: Adm. Richard E. Byrd (U.S.) and Bernt Balchen (Norway) became the first to fly to the South Pole and back, in 18 hours and 41 minutes.

1930, May 15: Ellen Church (U.S.) became first flight attendant.

1931, June 23-July 1: Wiley Post (U.S.) and Harold Gatty (U.S.) broke the speed record for around-the-world flight. They traveled 15,474 mi in 8 days, 15 hours, and 51 minutes in the monoplane *Winnie Mae*.

1931, Oct. 3-5: Clyde Pangborn (U.S.) and Hugh Herndon (U.S.) completed the first non-stop transpacific flight. They traveled 4,558 mi from Misawa, Japan, to East Wenatchee, WA, in 41 hours and 34 minutes.

1932, May 20-21: Amelia Earhart (U.S.) completed first solo transoceanic flight by a woman. She completed the 2,026-mi journey from Newfoundland, Canada, to Ireland in 14 hours and 56 minutes.

1933, July 15-22: Wiley Post (U.S.) completed the first solo circumnavigation of the globe. His 15,596-mi trip took 7 days, 18 hours, and 49 minutes.

1936, June 25: American Airlines began scheduled passenger service of the first Douglas DC-3 aircraft. The DC-3 was the first aircraft with a kitchen onboard and hence offered the first in-flight hot meal service.

1937, May 6: *Hindenburg* zeppelin exploded and burst into flames in Lakehurst, NJ, killing 35 of the 97 people aboard (and one on the ground). The airship had made 34 transatlantic flights in 1936.

1938, July 10-13: Howard Hughes (U.S.) and four assistants established a new speed record for circumnavigating the globe: 14,824 mi in 3 days, 9 hours, 17 minutes.

1939, Aug. 27: The German-made Heinkel He 178 made the first successful flight powered by a jet engine.

1947, June 17-30: Pan American Airways began the first scheduled around-the-world passenger flights, from New York or San Francisco.

1947, Oct. 14: Chuck Yeager (U.S.) broke the sound barrier, reaching Mach 1 speed in a Bell X-1 rocket-powered aircraft.

1947, Nov. 2: Howard Hughes (U.S.) piloted the *Spruce Goose* on its maiden and only flight. The largest airplane ever built, it could carry 750 troops or two Sherman tanks.

1949, Mar. 2: James Gallagher (U.S.) piloted the first round-the-world flight to be refueled in midair. The *Lucky Lady* USAF B-50 covered 23,452 mi in 94 hours and one minute and was refueled four times.

1950, Sept. 22: Col. David Schilling (USAF) made the first nonstop transatlantic jet flight, covering 3,300 mi in 10 hours and 1 minute.

1952, Aug. 26: The U.K. bomber Canberra made the first round-trip transatlantic crossing on the same day, from Northern Ireland to Newfoundland, Canada, and back in 7 hours and 59 minutes.

1953, May 18: Jacqueline Cochran (U.S.) became first woman to fly faster than the speed of sound.

1956, Nov. 11: Convair B-58, first supersonic bomber, was introduced.

1957, Jan. 15-18: Three USAF B-52 Stratofortresses made the first nonstop global flight by jet planes. They were refueled in flight by KC-97 aerial tankers.

1956, Mar. 10: Britain's Fairey FD-2 aircraft set a world speed record of 1,132 mph.

1958, Oct.: Marcel Dassault (France) flew a Mirage III-A at Mach 2, the first European plane to reach this speed.

1962, Nov. 29: Britain and France signed an agreement to jointly develop the Concorde, a supersonic plane that could fly twice as fast as most U.S. jets.

1969, June 5: The Soviet Tupolev Tu-144 became the first passenger airliner to reach Mach 2 (twice the speed of sound).

1970, May 26: The Tupolev Tu-144 reached a top speed of about 1,335 mph at 53,475 ft.

1976, Aug. 23: The Concorde began first scheduled supersonic commercial service.

1977, Aug. 23: The *Gossamer Condor* successfully demonstrated human-powered flight through pedalling, completing a figure-8 course of 1.15 mi.

1979, June 12: The human-powered *Gossamer Albatross* crossed the English Channel in 2 hours and 49 minutes.

1981, July 7: *Solar Challenger* became the first solar-powered airplane to cross the English Channel.

1995, Aug. 15-16: The Concorde set a new around-the-world speed record of 31 hours, 27 minutes, and 49 seconds.

1999, Mar. 1-21: Bertrand Piccard (Switz.) and Brian Jones (UK) completed the first around-the-world flight in a hot-air balloon. Their 29,055-mi journey began in Chateau-d'Oex, Switzerland, and ended 19 days, 21 hours, and 55 minutes later in the Egyptian desert.

2001, Aug. 13: Solar powered, propeller-driven plane *Helios* (NASA) reached 96,863 ft, breaking altitude record for non-rocket-powered aircraft.

2002, June 19-July 4: Steve Fossett (U.S.) completed the first nonstop solo circumnavigation of globe in a balloon.

2003, Nov. 26: The Concorde flew its final flight.

2005, Mar. 1-3: Steve Fossett (U.S.) achieved the first nonstop solo circumnavigation in an airplane without refueling.

2005, Apr. 27: The Airbus A380, the biggest-ever commercial jet, made its maiden voyage. It was 240 ft long, had a wingspan of 262 ft, and could seat a maximum of 840 passengers. Its first commercial flight was Oct. 25, 2007.

2006, Feb. 8-11: Steve Fossett (U.S.) flew the longest nonstop, non-refueled solo flight.

2009, Dec. 15: Boeing's 787 Dreamliner, the company's most fuel-efficient plane and the first to be constructed primarily from composite materials, made its maiden voyage, two years after it was originally scheduled.

ASTRONOMY

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Celestial Events Summary, 2011

There are 6 eclipses in 2011: 4 partial solar eclipses and 2 total lunar eclipses. None of the solar eclipses is visible in the continental U.S. The second lunar eclipse will be visible over wide portions of N America.

The most likely viewing successes for meteor showers will be the Perseids in Aug., the Orionids in Oct., and the Geminids in Dec. See page 339.

At the start of the year Saturn is up in the evening. Jupiter is low in the West at sunset, while Mars is too close to the Sun to be visible. Mercury begins the year low in the west after sunset. Venus is a bright evening object through the entire first half of the year, becoming a morning object from Sept. onwards. Jupiter is visible in the evening sky through Mar., then moves to the morning sky from Apr. through Oct.; by late fall, it is visible high in the sky throughout the night. Saturn is up all night long from Mar. through May, becoming an early morning object by fall; by the end of the year, it is again in the evening sky. The best opportunities for seeing Mercury occur in late Mar., late July, and mid Nov. in the morning sky and in mid-Jan., early May, early Sept., and late Dec. in the evening sky.

The crescent Moon, with its subdued light, regularly makes pretty pairings with the 2 brightest planets, Venus and Jupiter. Waxing crescent pairings are visible in the early evening soon after sunset, while waning crescent pairings are visible in the early morning before sunrise. The waxing crescent Moon pairs with Venus in each of the months from Sept. through Dec. The waning crescent Moon pairs with Venus in all of the months from Jan. through June. The waxing crescent Moon pairs with Jupiter in the evening in Jan., Feb., and Mar., and the waning crescent pairs with Jupiter twice in May, and in June. In the early morning of May 1, the crescent Moon joins Mercury, Venus, Mars, and Jupiter in the eastern sky.

Astronomical Positions and Constants

Two celestial bodies are in **conjunction** when they are due North and South of each other, either in **right ascension** (with respect to the North celestial pole) or in **celestial longitude** (with respect to the North ecliptic pole). Celestial bodies in conjunction will rise and set at nearly the same time. For the inner planets—Mercury and Venus—**inferior conjunction** occurs when either planet passes between Earth and the Sun, while **superior conjunction** occurs when either Mercury or Venus is on the far side of the Sun. Celestial bodies are in **opposition** when their Right Ascensions differ by exactly 12 hours, or when their Celestial Longitudes differ by 180°. In this case one of the 2 objects in opposition will rise while the other is setting. **Quadrature** refers to the arrangement where the coordinates of 2 bodies differ by exactly 90°. These terms may refer to the relative positions of any 2 bodies as seen from Earth, but one of the bodies is so frequently the Sun that mention of the Sun is omitted in that case.

When objects are in conjunction, the alignment is not perfect, and one is usually passing above or below the other. The geocentric angular separation between the Sun and an object is termed **elongation**. Elongation is limited only for Mercury and Venus; the greatest elongation for each of these bodies is approximately the time for longest observation. **Perihelion** is the point in an orbit that is nearest to the Sun, and **aphelion** is the point farthest from the Sun. **Perigee** is the point in an orbit that is nearest Earth, **apogee** the point that is farthest from Earth. An **occultation** of a planet or a star is an eclipse of it by some other body, usually the Moon. A **transit** of the Sun occurs when Mercury or Venus passes directly between Earth and the Sun, appearing to cross the disk of the Sun.

The following were adopted as part of the International Astronomical Union System of Astronomical Constants (1976): **Speed of light**, 299,792.458 km per sec., or about 186,282 statute mi per sec.; **solar parallax**, 8".794148; **Astronomical Unit** (the mean distance between the Earth and the Sun), 149,597,870 km, or 92,955,807 mi; **constant of nutation**, 9".2025; and **constant of aberration**, 20".49552.

Celestial Events Highlights, 2011

(In Coordinated Universal Time, or UTC, the standard time of the prime meridian.)

January

Mercury and **Venus** are visible low in the SE before sunrise all month.

Mars is too close to the Sun to be seen this month.

Jupiter, **Uranus**, and **Neptune** are high in the SW after sunset and set several hours later.

Saturn rises in the middle of the night and is visible high overhead at sunrise.

Jan. 1: Sun in Sagittarius, Mercury in Ophiuchus, Venus in Libra, Mars in Sagittarius, Jupiter in Pisces, Saturn in Virgo entire year, Uranus in Pisces entire year, Neptune in Capricorn

Jan. 1: Moon passes 2.51° N of Antares

Jan. 2: Moon passes 3.79° S of Mercury, Jupiter passes 0.57° S of Uranus

Jan. 4: New Moon, partial solar eclipse (see details under Eclipses)

Jan. 5: Moon passes 2.78° N of Mars

Jan. 8: Moon passes 5.16° N of Neptune, Venus at greatest elongation 47.0° W

Jan. 9: Mercury at greatest elongation 23.3° W, Venus enters Scorpius

Jan. 10: Moon passes 7.07° N of Jupiter, Moon passes 6.52° N of Uranus, Mercury enters Sagittarius

Jan. 12: First Quarter Moon

Jan. 14: Venus enters Ophiuchus

Jan. 15: Venus passes 8.00° N of Antares, Mars enters Capricorn

Jan. 16: Moon passes 7.48° N of Aldebaran

Jan. 19: Moon passes 8.81° S of Pollux, Full Moon

Jan. 20: Sun enters Capricorn

Jan. 22: Moon passes 5.29° S of Regulus

Jan. 24: Neptune enters Aquarius

Jan. 25: Moon passes 8.08° S of Saturn, Moon passes 2.96° S of Spica

Jan. 26: Last Quarter Moon

Jan. 29: Moon passes 2.58° N of Antares

Jan. 30: Moon passes 3.48° S of Venus

February

Mercury is low in the SE before sunrise the first half of the month but disappears into the Sun's glare by the second half.

Venus is visible low in the SE before sunrise all month.

Mars is too close to the Sun to be seen this month.

Jupiter and **Uranus** are in the SW after sunset and set several hours later.

Neptune begins the month low in the SW after sunset and is lost in the Sun's glare by the end of the month.

Saturn rises in the middle of the night and is visible in the SW at sunrise.

Feb. 1: Moon passes 3.60° N of Mercury, Venus enters Sagittarius

Feb. 3: Moon passes 4.85° N of Mars, New Moon, Mercury enters Capricorn

Feb. 4: Moon passes 5.14° N of Neptune, Mars passes 1.08° S of Sun

Feb. 7: Moon passes 6.82° N of Jupiter, Moon passes 6.36° N of Uranus
Feb. 11: First Quarter Moon
Feb. 12: Moon passes 7.33° N of Aldebaran
Feb. 16: Moon passes 8.88° S of Pollux, Sun enters Aquarius
Feb. 17: Neptune passes 0.49° S of Sun
Feb. 18: Moon passes 5.23° S of Regulus, Full Moon
Feb. 19: Mars enters Aquarius
Feb. 20: Mercury passes 1.06° S of Mars, Mars passes 0.63° S of Neptune, Mercury passes 1.69° S of Neptune, Mercury enters Aquarius
Feb. 21: Moon passes 8.04° S of Saturn
Feb. 22: Moon passes 2.76° S of Spica
Feb. 23: Jupiter enters Cetus
Feb. 24: Last Quarter Moon
Feb. 25: Moon passes 2.79° N of Antares, Mercury in superior conjunction 1.87° S

March

Mercury is low in the SW after sunset all month.
Venus is visible low in the SE before sunrise all month.
Mars is too close to the Sun to be seen this month.
Jupiter and **Uranus** are low in the SW after sunset and set soon afterwards.
Neptune is low in the SE at sunrise.
Saturn rises in late-evening and is visible the rest of the night.

Mar. 1: Moon passes 1.58° N of Venus
Mar. 2: Venus enters Capricorn
Mar. 3: Moon passes 5.19° N of Neptune
Mar. 4: Moon passes 6.21° N of Mars, New Moon
Mar. 5: Moon passes 6.53° N of Mercury
Mar. 6: Moon passes 6.22° N of Uranus, Mercury enters Pisces
Mar. 7: Moon passes 6.51° N of Jupiter
Mar. 8: Jupiter enters Pisces
Mar. 9: Mercury passes 0.37° N of Uranus
Mar. 12: Moon passes 7.07° N of Aldebaran, Sun enters Pisces
Mar. 13: First Quarter Moon
Mar. 15: Moon passes 9.07° S of Pollux
Mar. 16: Mercury passes 2.33° N of Jupiter
Mar. 18: Moon passes 5.29° S of Regulus
Mar. 19: Full Moon
Mar. 20: Vernal Equinox
Mar. 21: Moon passes 8.03° S of Saturn, Moon passes 2.58° S of Spica, Uranus passes 0.71° S of Sun
Mar. 23: Mercury at greatest elongation 18.6° E
Mar. 24: Moon passes 3.05° N of Antares, Mars enters Pisces
Mar. 25: Venus enters Aquarius
Mar. 26: Last Quarter Moon
Mar. 27: Venus passes 0.16° S of Neptune
Mar. 31: Moon passes 5.38° N of Neptune, Moon passes 5.99° N of Venus

April

Mercury is low in the SW after sunset at the start of the month and low in the SE before sunrise at the end of the month.
Venus and **Mars** are visible low in the SE before sunrise all month.
Jupiter and **Uranus** are low in the SE before sunrise by the end of the month.
Neptune is in the SE at sunrise.
Saturn rises around sunset and is visible all night.

Apr. 2: Moon passes 6.43° N of Mars, Moon passes 6.18° N of Uranus
Apr. 3: Mars passes 0.23° S of Uranus, New Moon
Apr. 4: Moon passes 6.21° N of Jupiter, Moon passes 1.33° N of Mercury, Saturn at opposition
Apr. 6: Jupiter passes 1.08° S of Sun
Apr. 8: Moon passes 6.83° N of Aldebaran
Apr. 9: Mercury in inferior conjunction 2.40° N
Apr. 10: Mercury passes 3.52° N of Jupiter
Apr. 11: Moon passes 9.33° S of Pollux, First Quarter Moon, Mars enters Cetus
Apr. 13: Mars enters Pisces
Apr. 14: Moon passes 5.47° S of Regulus
Apr. 17: Moon passes 8.11° S of Saturn, Moon passes 2.53° S of Spica, Venus enters Pisces
Apr. 18: Full Moon
Apr. 19: Mercury passes 0.78° N of Mars, Sun enters Aries
Apr. 20: Moon passes 3.26° N of Antares
Apr. 22: Venus passes 0.92° S of Uranus
Apr. 25: Last Quarter Moon
Apr. 26: Venus enters Cetus
Apr. 27: Moon passes 5.62° N of Neptune
Apr. 30: Moon passes 6.26° N of Uranus, Moon passes 7.02° N of Venus, Venus enters Pisces

May

Mercury is low in the SE before sunrise all month.
Venus and **Mars** are visible low in the SE before sunrise all month.
Jupiter and **Uranus** are low in the SE before sunrise all month.
Neptune is in the SE at sunrise all month.
Saturn rises before sunset and sets before sunrise.

May 1: Mars passes 0.39° N of Jupiter, Moon passes 5.93° N of Jupiter, Moon passes 5.53° N of Mars, Moon passes 7.80° N of Mercury
May 3: New Moon
May 5: Moon passes 6.70° N of Aldebaran
May 7: Mercury at greatest elongation 26.6° W
May 9: Moon passes 9.54° S of Pollux
May 10: Mercury passes 2.20° S of Jupiter, First Quarter Moon, Mars enters Aries
May 11: Venus passes 0.61° S of Jupiter, Moon passes 5.66° S of Regulus
May 14: Moon passes 8.20° S of Saturn, Sun enters Taurus
May 15: Moon passes 2.58° S of Spica
May 17: Full Moon, Venus enters Aries
May 18: Moon passes 3.33° N of Antares, Mercury enters Cetus
May 19: Mercury enters Aries
May 20: Mercury passes 2.35° S of Mars
May 22: Venus passes 1.06° S of Mars
May 24: Moon passes 5.81° N of Neptune, Last Quarter Moon
May 27: Moon passes 6.37° N of Uranus
May 29: Moon passes 5.67° N of Jupiter
May 30: Moon passes 3.83° N of Mars, Mercury enters Taurus
May 31: Moon passes 3.70° N of Mercury, Moon passes 4.42° N of Venus

June

Mercury is low in the SE before sunrise at the start of the month and low in the SW after sunset at the end of the month.
Venus and **Mars** are visible low in the SE before sunrise all month.
Jupiter, **Uranus**, and **Neptune** are high in the SE before sunrise all month.
Saturn is high in the S at sunset and sets after midnight.

June 1: Moon passes 6.68° N of Aldebaran, New Moon, partial solar eclipse (see details under Eclipses)
June 4: Venus enters Taurus
June 5: Moon passes 9.61° S of Pollux
June 6: Jupiter enters Aries
June 7: Moon passes 5.75° S of Regulus

June 8: Mercury passes 5.58° N of Aldebaran
June 9: First Quarter Moon
June 10: Moon passes 8.18° S of Saturn
June 11: Moon passes 2.64° S of Spica
June 12: Mars enters Taurus
June 13: Mercury in superior conjunction 0.89° N
June 14: Moon passes 3.33° N of Antares
June 15: Full Moon, total lunar eclipse (see details under Eclipses)
June 16: Mercury enters Gemini
June 18: Venus passes 4.79° N of Aldebaran
June 21: Moon passes 5.86° N of Neptune, Summer Solstice
June 22: Sun enters Gemini
June 23: Moon passes 6.39° N of Uranus, Last Quarter Moon
June 26: Moon passes 5.37° N of Jupiter
June 28: Mercury passes 4.87° S of Pollux, Moon passes 1.75° N of Mars
June 29: Moon passes 6.68° N of Aldebaran
June 30: Moon passes 0.09° N of Venus, Mercury enters Cancer

July

Mercury is low in the SW after sunset all month.
Venus is visible low in the SE before sunrise at the start of the month.
Mars is in the SE before sunrise all month.
Jupiter, **Uranus**, and **Neptune** are high in the S before sunrise all month.
Saturn is high in the SW at sunset and sets several hours later.

July 1: New Moon, partial solar eclipse (see details under Eclipses)
July 2: Moon passes 9.60° S of Pollux
July 3: Moon passes 5.12° S of Mercury
July 4: Venus enters Gemini
July 5: Moon passes 5.72° S of Regulus
July 6: Mars passes 5.50° N of Aldebaran
July 8: Moon passes 8.00° S of Saturn, Moon passes 2.59° S of Spica, First Quarter Moon
July 12: Moon passes 3.35° N of Antares
July 14: Mercury enters Leo
July 15: Full Moon
July 18: Moon passes 5.78° N of Neptune
July 20: Mercury at greatest elongation 26.8° E
July 21: Moon passes 6.30° N of Uranus, Sun enters Cancer
July 23: Last Quarter Moon
July 24: Moon passes 5.06° N of Jupiter, Venus passes 6.10° S of Pollux
July 26: Moon passes 6.61° N of Aldebaran
July 27: Moon passes 0.48° S of Mars, Venus enters Cancer
July 29: Moon passes 9.59° S of Pollux
July 30: Moon passes 4.35° S of Venus, New Moon

August

Mercury is low in the SW after sunset early in the month and low in the SE before sunrise late in the month.
Venus is too close to the Sun to be visible all month.
Mars is in the SE before sunrise all month.
Jupiter and **Uranus** rise late in the evening and are in the W before sunrise all month.
Neptune rises after sunset and is up most of the night.
Saturn is in the SW at sunset and sets several hours later.

Aug. 1: Moon passes 1.49° S of Mercury, Moon passes 5.63° S of Regulus
Aug. 3: Mars enters Gemini
Aug. 4: Moon passes 7.67° S of Saturn
Aug. 5: Moon passes 2.43° S of Spica
Aug. 6: First Quarter Moon
Aug. 8: Moon passes 3.48° N of Antares
Aug. 11: Sun enters Leo
Aug. 12: Venus enters Leo
Aug. 13: Full Moon
Aug. 14: Moon passes 5.67° N of Neptune
Aug. 15: Mercury passes 6.34° S of Venus
Aug. 16: Venus in superior conjunction 1.29° N
Aug. 17: Moon passes 6.15° N of Uranus, Mercury in inferior conjunction 4.59° S
Aug. 20: Moon passes 4.79° N of Jupiter
Aug. 21: Venus passes 0.96° N of Regulus, Last Quarter Moon
Aug. 22: Moon passes 6.41° N of Aldebaran, Neptune at opposition
Aug. 24: Mercury enters Cancer
Aug. 25: Moon passes 2.69° S of Mars
Aug. 26: Moon passes 9.69° S of Pollux
Aug. 28: Moon passes 2.56° S of Mercury, Moon passes 5.59° S of Regulus, Mercury enters Leo
Aug. 29: Moon passes 6.89° S of Venus, New Moon
Aug. 31: Moon passes 7.29° S of Saturn

September

Mercury is low in the SE before sunrise early in the month.
Venus is low in the SW after sunset late in the month.
Mars is in the SE before sunrise all month.
Jupiter and **Uranus** rise late in the evening and are visible through the night all month.
Neptune rises before sunset and is visible most of the night.
Saturn is low in the SW at sunset.

Sept. 1: Moon passes 2.23° S of Spica
Sept. 3: Mercury at greatest elongation 18.1° W
Sept. 4: Moon passes 3.71° N of Antares, First Quarter Moon
Sept. 9: Mercury passes 0.69° N of Regulus, Venus enters Virgo
Sept. 10: Mars passes 5.96° S of Pollux, Moon passes 5.66° N of Neptune
Sept. 12: Full Moon
Sept. 13: Moon passes 6.05° N of Uranus
Sept. 15: Mars enters Cancer
Sept. 16: Moon passes 4.68° N of Jupiter
Sept. 17: Sun enters Virgo
Sept. 19: Moon passes 6.15° N of Aldebaran
Sept. 20: Last Quarter Moon
Sept. 22: Moon passes 9.90° S of Pollux, Mercury enters Virgo
Sept. 23: Moon passes 4.76° S of Mars, Autumnal Equinox
Sept. 25: Moon passes 5.67° S of Regulus
Sept. 26: Uranus at opposition
Sept. 27: Moon passes 6.78° S of Mercury, New Moon
Sept. 28: Moon passes 6.96° S of Saturn, Moon passes 2.08° S of Spica, Moon passes 5.74° S of Venus, Mercury in superior conjunction 1.36° N
Sept. 30: Venus passes 1.40° S of Saturn

October

Mercury and **Venus** are low in the SW after sunset late in the month.
Mars rises after midnight and is high overhead at sunrise.
Jupiter and **Uranus** rise around sunset and are visible all night.
Neptune is high overhead at sunset and sets after midnight.
Saturn is low in the SW at sunset early in the month and low in the SE at sunrise late in the month.

Oct. 1: Moon passes 3.96° N of Antares
Oct. 3: Venus passes 3.15° N of Spica
Oct. 4: First Quarter Moon
Oct. 7: Mercury passes 1.87° S of Saturn
Oct. 8: Moon passes 5.78° N of Neptune
Oct. 9: Mercury passes 2.55° N of Spica

Oct. 10: Moon passes 6.08° N of Uranus
Oct. 12: Full Moon
Oct. 13: Moon passes 4.79° N of Jupiter, Saturn passes 2.25° N of Sun
Oct. 15: Venus enters Libra
Oct. 16: Moon passes 5.94° N of Aldebaran
Oct. 18: Mercury enters Libra
Oct. 19: Mars enters Leo
Oct. 20: Moon passes 10.14° S of Pollux, Last Quarter Moon
Oct. 22: Moon passes 6.48° S of Mars, Moon passes 5.85° S of Regulus
Oct. 26: Moon passes 6.74° S of Saturn, Moon passes 2.06° S of Spica, New Moon
Oct. 28: Moon passes 0.23° S of Mercury, Moon passes 1.80° S of Venus
Oct. 29: Moon passes 4.12° N of Antares, Jupiter at opposition
Oct. 31: Saturn passes 4.65° N of Spica, Sun enters Libra

November

Mercury and **Venus** are low in the SW after sunset all month.
Mars rises after midnight and is high overhead at sunrise.
Jupiter and **Uranus** are low in the SE after sunset and are visible most of the night.
Neptune is high overhead at sunset and sets after midnight.
Saturn is in the SE at sunrise all month.

Nov. 2: First Quarter Moon, Mercury enters Scorpius, Venus enters Scorpius
Nov. 4: Moon passes 5.96° N of Neptune
Nov. 7: Moon passes 6.20° N of Uranus
Nov. 8: Venus enters Ophiuchus
Nov. 9: Moon passes 5.04° N of Jupiter, Venus passes 3.98° N of Antares, Mercury enters Ophiuchus
Nov. 10: Mars passes 1.40° N of Regulus, Mercury passes 1.94° N of Antares, Full Moon
Nov. 12: Moon passes 5.85° N of Aldebaran, Mercury enters Scorpius
Nov. 14: Mercury at greatest elongation 22.7° E
Nov. 15: Mercury enters Ophiuchus
Nov. 16: Moon passes 10.30° S of Pollux
Nov. 18: Last Quarter Moon
Nov. 19: Moon passes 7.71° S of Mars, Moon passes 6.00° S of Regulus
Nov. 22: Moon passes 6.61° S of Saturn, Moon passes 2.11° S of Spica
Nov. 23: Venus enters Sagittarius
Nov. 24: Sun enters Scorpius
Nov. 25: Moon passes 4.16° N of Antares, New Moon, partial solar eclipse (see details under Eclipses)
Nov. 26: Moon passes 1.75° N of Mercury
Nov. 27: Moon passes 2.82° N of Venus
Nov. 30: Sun enters Ophiuchus

December

Mercury is low in the SE before sunrise by mid-month.
Venus is low in the SW after sunset all month.
Mars rises around midnight and is high overhead at sunrise.
Jupiter and **Uranus** are low in the SE after sunset and are visible most of the night.
Neptune is high overhead at sunset and sets in the late evening.
Saturn is high in the SE at sunrise all month.

Dec. 1: Moon passes 6.06° N of Neptune
Dec. 2: First Quarter Moon
Dec. 4: Moon passes 6.27° N of Uranus, Mercury in inferior conjunction 1.27° N
Dec. 6: Mercury passes 6.55° N of Antares, Moon passes 5.19° N of Jupiter
Dec. 7: Mercury enters Scorpius
Dec. 8: Jupiter enters Pisces
Dec. 10: Moon passes 5.85° N of Aldebaran, Full Moon, total lunar eclipse (see details under Eclipses)
Dec. 13: Moon passes 10.32° S of Pollux
Dec. 16: Moon passes 6.02° S of Regulus
Dec. 17: Moon passes 8.50° S of Mars
Dec. 18: Last Quarter Moon, Sun enters Sagittarius
Dec. 20: Moon passes 6.51° S of Saturn, Moon passes 2.11° S of Spica, Venus enters Capricorn
Dec. 22: Mercury passes 6.80° N of Antares, Winter Solstice, Mercury enters Ophiuchus
Dec. 23: Moon passes 4.16° N of Antares, Moon passes 2.58° S of Mercury, Mercury at greatest elongation 21.8° W
Dec. 24: New Moon
Dec. 27: Moon passes 6.42° N of Venus
Dec. 29: Moon passes 6.03° N of Neptune
Dec. 31: Moon passes 6.19° N of Uranus

Meteorites and Meteor Showers

When a chunk of material, ice or rock, plunges into Earth's atmosphere and burns up in a fiery display, the event is a **meteor**. While the chunk of material is still in space, it is a **meteoroid**. If a portion of the material survives passage through the atmosphere and reaches the ground, the remnant on the ground is a **meteorite**.

Meteorites found on Earth are classified into types, depending on their composition: **irons**, those composed chiefly of iron, a small percentage of nickel, and traces of other metals such as cobalt; **stones**, stony meteors consisting of silicates; and **stony irons**, containing varying proportions of both iron and stone.

Serious study of meteorites as non-earth objects began in the 20th century. Scientists use sophisticated chemical analysis, X-rays, and mass spectrography in determining their origin and composition. Although most meteorites are now believed to be fragments of asteroids or comets, geochemical studies have shown that a few Antarctic stones came from the Moon or from Mars, presumably ejected by the explosive impact of asteroids.

The **largest known meteorite**, estimated to weigh about 55 metric tons, is situated at Hoba West near Grootfontein, Namibia. The Manicouagan impact crater in Quebec, Canada, with an estimated diameter of 60 mi, is one of the largest crater structures still visible on the surface of the Earth. Although not visible to the eye, other still larger impact craters identified include the Vredefort crater in South Africa at 185 mi across and the Sudbury crater in Ontario, Canada, estimated at 125 mi across. The Bedout impact site off the NW coast of Australia gained attention in 2004, when scientists identified further evidence in support of the idea that it may be linked to the Permian extinction event 250 mil years ago.

Meteor showers vary in strength, but usually the 3 best visible meteor showers of the year are the **Perseids**, around Aug. 13, the **Orionids**, around Oct. 21, and the **Geminids**, around Dec. 14. These showers feature meteors at the rate of about 60 per hour. Best observing conditions occur with the absence of moonlight, usually when the Moon's phase is between waning crescent Moon and waxing quarter Moon.

For most meteor showers the cometary debris is relatively uniformly scattered along the comet's orbit. However, in the case of the **Leonid** meteor shower, which occurs every year around Nov. 17-18, the cometary debris, from Comet Temple-Tuttle, seems to be bunched up in one stretch. Hence, most years when Earth crosses the orbit of this comet, the meteor shower produced is relatively weak. However, about every 33 years, Earth encounters the bunched-up debris. Sometimes the storm is a disappointment, as it was in 1899 and 1933; at other times it is a roaring success, as in 1833 and 1866. The Leonids stormed again more recently, producing rates of 1,000-3,000 meteors per hour in 2001. Viewing of the typically best showers of the year (Perseids in mid-Aug., Orionids in late Oct., Leonids in mid-Nov., and Geminids in mid-Dec.) will all be adversely affected by bright Moons during the best viewing hours.

Rising and Setting of Planets, 2011

(In Coordinated Universal Time. 0 in the *h* col. designates 12 AM.)

Venus, 2011

Date	20° N Latitude Rise h m	20° N Latitude Set h m	30° N Latitude Rise h m	30° N Latitude Set h m	40° N Latitude Rise h m	40° N Latitude Set h m	50° N Latitude Rise h m	50° N Latitude Set h m	60° N Latitude Rise h m	60° N Latitude Set h m
Jan. 1	3 07	14 27	3 21	14 13	3 37	13 57	3 59	13 34	4 35	12 58
11	3 12	14 24	3 27	14 09	3 47	13 50	4 13	13 24	4 55	12 41
21	3 20	14 26	3 37	14 09	3 58	13 48	4 28	13 18	5 17	12 28
31	3 29	14 32	3 48	14 13	4 11	13 50	4 43	13 18	5 37	12 23
Feb. 10	3 39	14 40	3 58	14 21	4 22	13 57	4 55	13 24	5 51	12 28
20	3 49	14 51	4 07	14 33	4 30	14 09	5 02	13 37	5 57	12 43
Mar. 2	3 57	15 04	4 14	14 47	4 35	14 25	5 05	13 56	5 53	13 07
12	4 03	15 17	4 17	15 02	4 36	14 44	5 01	14 19	5 42	13 38
22	4 06	15 30	4 18	15 19	4 33	15 04	4 53	14 44	5 24	14 13
Apr. 1	4 08	15 43	4 16	15 35	4 27	15 25	4 41	15 11	5 03	14 49
11	4 08	15 56	4 13	15 51	4 18	15 45	4 26	15 38	4 38	15 26
21	4 06	16 08	4 07	16 07	4 09	16 06	4 10	16 05	4 12	16 04
May 1	4 05	16 20	4 02	16 23	3 58	16 27	3 53	16 33	3 45	16 41
11	4 04	16 32	3 57	16 40	3 48	16 49	3 36	17 01	3 18	17 20
21	4 04	16 46	3 53	16 57	3 40	17 10	3 21	17 29	2 52	18 00
31	4 06	17 00	3 51	17 15	3 33	17 33	3 08	17 58	2 28	18 40
June 10	4 11	17 15	3 53	17 33	3 31	17 55	3 00	18 27	2 07	19 20
20	4 18	17 31	3 58	17 51	3 33	18 17	2 57	18 35	1 53	19 57
30	4 29	17 46	4 07	18 08	3 40	18 35	3 00	19 15	1 49	20 27
July 10	4 42	18 01	4 20	18 23	3 52	18 50	3 12	19 30	1 59	20 43
20	4 57	18 13	4 36	18 34	4 10	19 00	3 32	19 38	2 24	20 46
30	5 14	18 22	4 55	18 41	4 31	19 05	3 57	19 38	2 59	20 35
Aug. 9	5 30	18 28	5 14	18 44	4 54	19 04	4 26	19 32	3 39	20 17
19	5 45	18 32	5 33	18 44	5 18	18 59	4 56	19 20	4 22	19 54
29	6 00	18 33	5 52	18 41	5 41	18 51	5 27	19 05	5 04	19 27
Sept. 8	6 14	18 32	6 10	18 36	6 04	18 41	5 57	18 48	5 46	18 59
18	6 27	18 31	6 27	18 30	6 27	18 30	6 27	18 30	6 27	18 29
28	6 41	18 29	6 45	18 25	6 51	18 19	6 58	18 11	7 09	18 00
Oct. 8	6 55	18 29	7 04	18 20	7 14	18 09	7 29	17 54	7 51	17 31
18	7 10	18 30	7 23	18 17	7 39	18 01	8 00	17 39	8 35	17 04
28	7 26	18 34	7 43	18 18	8 03	17 57	8 32	17 28	9 19	16 41
Nov. 7	7 43	18 41	8 03	18 22	8 27	17 57	9 02	17 22	10 02	16 22
17	8 00	18 52	8 22	18 30	8 50	18 02	9 29	17 23	10 39	16 13
27	8 17	19 06	8 40	18 43	9 08	18 14	9 50	17 33	11 05	16 17
Dec. 7	8 31	19 21	8 54	18 59	9 22	18 31	10 02	17 51	11 15	16 38
17	8 42	19 38	9 03	19 18	9 29	18 52	10 05	18 16	11 09	17 12
27	8 50	19 55	9 08	19 37	9 30	19 15	10 01	18 45	10 52	17 54

Mars, 2011

Date	20° N Latitude Rise h m	20° N Latitude Set h m	30° N Latitude Rise h m	30° N Latitude Set h m	40° N Latitude Rise h m	40° N Latitude Set h m	50° N Latitude Rise h m	50° N Latitude Set h m	60° N Latitude Rise h m	60° N Latitude Set h m
Jan. 1	07 12	18 05	07 33	17 44	07 59	17 18	08 37	16 41	09 42	15 35
11	07 04	18 01	07 23	17 42	07 48	17 17	08 23	16 43	09 22	15 43
21	06 54	17 57	07 12	17 40	07 35	17 17	08 06	16 46	08 58	15 54
31	06 44	17 54	07 00	17 38	07 19	17 18	07 47	16 51	08 32	16 06
Feb. 10	06 32	17 49	06 46	17 36	07 03	17 19	07 26	16 56	08 03	16 19
20	06 19	17 45	06 31	17 33	06 45	17 20	07 03	17 01	07 33	16 31
Mar. 2	06 06	17 40	06 14	17 31	06 25	17 20	06 40	17 06	07 02	16 44
12	05 51	17 34	05 57	17 28	06 05	17 21	06 15	17 11	06 30	16 56
22	05 36	17 28	05 40	17 25	05 44	17 21	05 50	17 16	05 58	17 08
Apr. 1	05 21	17 22	05 22	17 22	05 23	17 21	05 24	17 20	05 25	17 19
11	05 06	17 16	05 04	17 18	05 01	17 20	04 58	17 24	04 53	17 30
21	04 50	17 09	04 45	17 14	04 40	17 20	04 32	17 28	04 20	17 40
May 1	04 34	17 03	04 27	17 10	04 18	17 19	04 06	17 31	03 48	17 51
11	04 19	16 56	04 10	17 06	03 58	17 18	03 41	17 34	03 15	18 01
21	04 05	16 49	03 53	17 01	03 38	17 16	03 17	17 37	02 44	18 11
31	03 50	16 43	03 36	16 57	03 18	17 15	02 54	17 40	02 13	18 21
June 10	03 37	16 36	03 20	16 52	03 00	17 13	02 32	17 42	01 44	18 30
20	03 24	16 29	03 06	16 47	02 43	17 10	02 11	17 42	01 16	18 37
30	03 12	16 22	02 52	16 41	02 27	17 06	01 52	17 42	00 51	18 44
July 10	03 00	16 14	02 39	16 35	02 13	17 01	01 35	17 39	00 28	18 47
20	02 49	16 06	02 27	16 28	02 00	16 55	01 20	17 35	00 08	18 47
30	02 38	15 57	02 16	16 19	01 48	16 47	01 07	17 28	23 51	18 43
Aug. 9	02 28	15 47	02 06	16 09	01 37	16 37	00 56	17 18	23 40	18 34
19	02 18	15 36	01 56	15 58	01 28	16 26	00 47	17 06	23 33	18 20
29	02 07	15 23	01 46	15 45	01 19	16 12	00 39	16 51	23 28	18 01
Sept. 8	01 57	15 10	01 36	15 30	01 10	15 56	00 33	16 33	23 26	17 39
18	01 45	14 55	01 26	15 14	01 01	15 39	00 26	16 14	23 25	17 14
28	01 33	14 38	01 15	14 57	00 52	15 19	00 20	15 52	23 24	16 47
Oct. 8	01 21	14 21	01 04	14 38	00 43	14 59	00 13	15 28	23 23	16 17
18	01 07	14 02	00 52	14 17	00 32	14 37	00 05	15 03	23 21	15 47
28	00 52	13 42	00 38	13 56	00 21	14 13	23 56	14 37	23 18	15 16
Nov. 7	00 36	13 21	00 24	13 33	00 08	13 49	23 46	14 10	23 13	14 43
17	00 19	12 59	00 08	13 09	23 53	13 23	23 35	13 41	23 05	14 10
27	23 58	12 35	23 48	12 44	23 37	12 56	23 21	13 12	22 56	13 37
Dec. 7	23 37	12 10	23 29	12 18	23 19	12 28	23 05	12 42	22 43	13 03
17	23 13	11 43	23 06	11 50	22 58	11 59	22 46	12 11	22 27	12 29
27	22 47	11 14	22 41	11 20	22 34	11 28	22 23	11 38	22 07	11 55

Jupiter, 2011

Date	20° N Latitude Rise	20° N Latitude Set	30° N Latitude Rise	30° N Latitude Set	40° N Latitude Rise	40° N Latitude Set	50° N Latitude Rise	50° N Latitude Set	60° N Latitude Rise	60° N Latitude Set
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Jan. 1	11 08	23 04	11 10	23 02	11 12	23 00	11 15	22 57	11 19	22 52
11	10 33	22 31	10 34	22 29	10 36	22 28	10 38	22 26	10 41	22 23
21	09 59	21 58	09 59	21 58	10 00	21 57	10 01	21 56	10 03	21 54
31	09 25	21 27	09 25	21 27	09 25	21 27	09 25	21 27	09 25	21 27
Feb. 10	08 52	20 56	08 51	20 57	08 51	20 58	08 49	20 59	08 48	21 01
20	08 19	20 26	08 18	20 28	08 16	20 29	08 14	20 32	08 10	20 36
Mar. 2	07 47	16 56	07 45	19 59	07 42	20 01	07 38	20 05	07 33	20 11
12	07 15	19 27	07 12	19 30	07 08	19 34	07 03	19 39	06 55	19 46
22	06 43	18 58	06 39	19 01	06 34	19 06	06 28	19 12	06 18	19 22
Apr. 1	06 11	18 29	06 06	18 33	06 01	18 39	05 53	18 47	05 41	18 59
11	05 39	18 00	05 34	18 05	05 27	18 12	05 18	18 21	05 04	18 35
21	05 07	17 31	05 01	17 37	04 54	17 44	04 43	17 55	04 27	18 11
May 1	04 35	17 01	04 29	17 08	04 20	17 17	04 09	17 28	03 50	17 47
11	04 04	16 32	03 56	16 40	03 47	16 49	03 34	17 02	03 14	17 22
21	03 32	16 02	03 23	16 11	03 13	16 21	02 59	16 35	02 37	16 57
31	02 59	15 32	02 50	15 41	02 39	15 53	02 24	16 08	02 00	16 32
June 10	02 27	15 02	02 17	15 11	02 05	15 23	01 49	15 40	01 23	16 06
20	01 54	14 31	01 44	14 41	01 31	14 54	01 14	15 11	00 46	15 39
30	01 20	13 59	01 10	14 10	00 56	14 23	00 38	14 41	00 09	15 10
July 10	00 46	13 26	00 35	13 38	00 21	13 51	00 02	14 10	23 28	14 41
							23 59			
20	00 12	12 53	00 00	13 04	23 42	13 19	23 22	13 38	22 51	14 10
			23 57							
30	23 32	12 18	23 21	12 30	23 06	12 45	22 46	13 05	22 13	13 37
Aug. 9	22 56	11 43	22 44	11 55	22 29	12 10	22 08	12 30	21 35	13 03
19	22 18	11 06	22 06	11 18	21 51	11 33	21 30	11 54	20 57	12 27
29	21 40	10 27	21 28	10 39	21 13	10 54	20 52	11 15	20 18	11 49
Sept. 8	21 00	09 47	20 48	09 59	20 33	10 14	20 12	10 35	19 39	11 08
18	20 19	09 06	20 07	09 18	19 53	09 33	19 32	09 53	18 59	10 26
28	19 37	08 23	19 26	08 35	19 11	08 49	18 51	09 09	18 19	09 41
Oct. 8	18 55	07 39	18 43	07 51	18 29	08 05	18 10	08 24	17 39	08 55
18	18 11	06 55	18 00	07 06	17 46	07 19	17 28	07 38	16 58	08 08
28	17 27	06 10	17 17	06 20	17 04	06 33	16 46	06 51	16 17	07 20
Nov. 7	16 43	05 24	16 33	05 35	16 21	05 47	16 03	06 05	15 36	06 32
17	16 00	04 40	15 50	04 50	15 38	05 02	15 21	05 19	14 55	05 45
27	15 17	03 56	15 08	04 05	14 56	04 17	14 39	04 33	14 14	04 59
Dec. 7	14 35	03 13	14 26	03 22	14 14	03 34	13 58	03 50	13 33	04 15
17	13 54	02 32	13 45	02 41	13 33	02 52	13 18	03 08	12 53	03 33
27	13 14	01 52	13 05	02 01	12 54	02 13	12 38	02 28	12 13	02 53

Saturn, 2011

Date	20° N Latitude Rise	20° N Latitude Set	30° N Latitude Rise	30° N Latitude Set	40° N Latitude Rise	40° N Latitude Set	50° N Latitude Rise	50° N Latitude Set	60° N Latitude Rise	60° N Latitude Set
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Jan. 1	00 28	12 18	00 31	12 15	00 35	12 10	00 41	12 05	00 49	11 57
11	23 46	11 40	23 50	11 36	23 54	11 32	00 03	11 26	00 12	11 18
							24 00			
21	23 07	11 01	23 11	10 58	23 15	10 53	23 21	10 48	23 30	10 39
31	22 28	10 22	22 32	10 19	22 36	10 14	22 42	10 09	22 50	10 00
Feb. 10	21 48	09 42	21 51	09 39	21 56	09 35	22 01	09 29	22 09	09 21
20	21 07	09 02	21 10	08 59	21 14	08 55	21 20	08 50	21 28	08 42
Mar. 2	20 26	08 21	20 29	08 18	20 33	08 15	20 38	08 10	20 45	08 02
12	19 44	07 40	19 47	07 37	19 50	07 34	19 55	07 29	20 01	07 22
22	19 01	06 59	19 04	06 56	19 07	06 53	19 11	06 49	19 18	06 43
Apr. 1	18 19	06 17	18 21	06 15	18 24	06 12	18 28	06 08	18 33	06 03
11	17 36	05 35	17 38	05 33	17 41	05 31	17 44	05 27	17 49	05 22
21	16 54	04 54	16 56	04 52	16 58	04 50	17 01	04 47	17 05	04 42
May 1	16 12	04 12	16 13	04 11	16 15	04 09	16 18	04 06	16 22	04 02
11	15 30	03 31	15 31	03 30	15 33	03 28	15 35	03 26	15 39	03 22
21	14 49	02 50	14 50	02 49	14 52	02 47	14 54	02 45	14 57	02 42
31	14 08	02 10	14 10	02 09	14 11	02 07	14 13	02 05	14 16	02 02
June 10	13 28	01 30	13 30	01 29	13 31	01 27	13 33	01 25	13 36	01 23
20	12 49	00 51	12 51	00 49	12 52	00 48	12 54	00 46	12 57	00 43
30	12 11	00 12	12 12	00 10	12 14	00 09	12 16	00 07	12 19	00 03
										24 00
July 10	11 33	23 30	11 35	23 28	11 36	23 26	11 39	23 24	11 42	23 20
20	10 56	22 52	10 58	22 50	11 00	22 48	11 03	22 45	11 07	22 41
30	10 19	22 15	10 21	22 13	10 24	22 10	10 27	22 07	10 32	22 02
Aug. 9	09 43	21 38	09 46	21 35	09 48	21 33	09 52	21 29	09 57	21 23
19	09 08	21 01	09 10	20 58	09 14	20 55	09 18	20 51	09 24	20 45
29	08 33	20 25	08 36	20 22	08 39	20 18	08 44	20 13	08 51	20 06
Sept. 8	07 58	19 49	08 01	19 45	08 05	19 41	08 11	19 36	08 19	19 28
18	07 23	19 13	07 27	19 09	07 32	19 05	07 38	18 59	07 47	18 50
28	06 49	18 37	06 53	18 33	06 58	18 28	07 05	18 22	07 15	18 11
Oct. 8	06 15	18 02	06 19	17 57	06 25	17 52	06 32	17 44	06 43	17 33
18	05 41	17 26	05 46	17 21	05 52	17 15	06 00	17 07	06 12	16 55
28	05 07	16 51	05 12	16 46	05 18	16 39	05 27	16 31	05 40	16 17
Nov. 7	04 32	16 15	04 38	16 10	04 45	16 03	04 54	15 54	05 08	15 39
17	03 58	15 40	04 04	15 34	04 11	15 26	04 21	15 17	04 36	15 02
27	03 23	15 04	03 30	14 58	03 37	14 50	03 48	14 40	04 03	14 24
Dec. 7	02 48	14 28	02 55	14 21	03 03	14 13	03 14	14 02	03 30	13 46
17	02 13	13 51	02 19	13 45	02 28	13 36	02 39	13 25	02 56	13 08
27	01 37	13 15	01 44	13 08	01 52	12 59	02 04	12 47	02 22	12 30

Morning and Evening "Stars," 2011

(In Coordinated Universal Time)

	Morning	Evening
Jan.	Mars Jupiter Uranus Neptune	Mercury Venus Saturn
Feb.	Mercury from Feb. 25 Mars to Feb. 3 Jupiter Uranus Neptune to Feb. 16	Mercury to Feb. 24 Venus Mars from Feb. 4 Saturn Neptune from Feb. 17
Mar.	Mercury Jupiter Uranus to Mar. 20	Venus Mars Saturn Uranus Neptune
Apr.	Mercury to Apr. 8 Jupiter to Apr. 5 Saturn from Apr. 4	Mercury from Apr. 9 Venus Mars Jupiter from Apr. 6 Saturn to Apr. 3 Uranus Neptune
May	Saturn	Mercury Venus Mars Jupiter Uranus Neptune
June	Mercury from June 13 Saturn	Mercury to June 12 Venus Mars Jupiter Uranus Neptune
July	Mercury Saturn	Venus Mars Jupiter Uranus Neptune
Aug.	Mercury to Aug. 16 Venus from Aug. 16 Saturn Neptune from Aug. 23	Mercury from Aug. 17 Venus to Aug. 15 Mars Jupiter Uranus Neptune to Aug. 22
Sept.	Mercury from Sept. 28 Venus Saturn Uranus from Sept. 27 Neptune	Mercury to Sept. 27 Mars Jupiter Uranus to Sept. 26
Oct.	Mercury Venus Jupiter from Oct. 30 Saturn to Oct. 12 Uranus Neptune	Mars Jupiter to Oct. 29 Saturn from Oct. 13
Nov.	Mercury Venus Jupiter Uranus Neptune	Mars Saturn
Dec.	Mercury to Dec. 3 Venus Jupiter Uranus Neptune	Mercury from Dec. 4 Mars Saturn

Greenwich Sidereal Time for 0h UTC, 2011

UTC = Coordinated Universal Time. Add 12 hours to obtain right ascension of mean sun.

Date	d	h	m
Jan.	1	6	41.2
	11	7	20.6
	21	8	0.0
	31	8	39.5
Feb.	10	9	18.9
	20	9	58.3
Mar.	2	10	37.8
	12	11	17.2
	22	11	56.6
Apr.	1	12	36.0
	11	13	15.5
	21	13	54.9
May	1	14	34.3
	11	15	13.7
	21	15	53.2
	31	16	32.6
June	10	17	12.0
	20	17	51.4
	30	18	30.9
July	10	19	10.3
	20	19	49.7
	30	20	29.1
Aug.	9	21	8.6
	19	21	48.0
	29	22	27.4
Sept.	8	23	6.8
	18	23	46.3
	28	0	25.7
Oct.	8	1	5.1
	18	1	44.5
	28	2	24.0
Nov.	7	3	3.4
	17	3	42.8
	27	4	22.3
Dec.	7	5	1.7
	17	5	41.1
	27	6	20.5

Largest Telescopes

Astronomers indicate the size of telescopes not by length or magnification, but by the diameter of the primary light-gathering component of the system—such as the lens or mirror. This measurement is a direct indication of the telescope's light-gathering power. The bigger the diameter, the fainter the objects you are able to detect. The Earth's atmosphere limits the resolution of what you see. That is why the Hubble Space Telescope, which is outside the atmosphere, can have better resolution than larger telescopes on the Earth.

Refracting (lens) telescopes are currently not made with lens diameters of more than 40 in. Mirror telescopes can be made less expensively than lens telescopes, so all modern large optical telescopes are made with mirrors. **Radio telescopes**, also reflecting telescopes, view at wavelengths not visible to optical telescopes or to the human eye. Radio telescopes are made larger than optical telescopes because larger diameters are required at longer wavelengths to obtain equivalent resolution. Arrays of telescopes are used to achieve even better resolution through a technique called interferometry. Originally developed for radio telescopes, the technique is now also used with optical and infrared telescopes.

Largest refracting (lens) optical telescope: Yerkes Observatory, 1 m (40 in.), at Williams Bay, WI

Largest reflecting (mirror) optical/infrared telescope: Keck, 9.8 m (32 ft), on Mauna Kea, HI (segmented mirror; 2 equal-size telescopes)

Largest infrared interferometer: Four 8.2 m (27 ft) telescopes of the Very Large Telescope Interferometer (VLTI) with a 200 m (656 ft) baseline on Cerro Paranal in Chile

Largest fully steerable radio dish: Robert Byrd Green Bank Telescope (GBT), 100 m × 110 m (328 ft × 360 ft), in Green Bank, WV

Largest single radio dish: Arecibo Observatory, 305 m (1,000 ft), in Puerto Rico

Largest radio interferometer: Ten 25 m (82 ft) diameter telescopes of the Very Long Baseline Array (VLBA), dispersed from Hawaii to the Virgin Islands with a resolution equal to a radio dish of 8,600 km (5,000 mi), making it the highest resolution telescope in the solar system

Constellations

Culturally, constellations are imagined patterns among the stars that, in some cases, have been recognized through millennia. Knowledge of constellations was once necessary in order to function as an astronomer. For today's astronomers, constellations are simply areas on the entire sky in which interesting objects await observation and interpretation.

Because Western culture has prevailed in establishing modern science, equally viable and interesting constellations and celestial traditions of other cultures are not well known outside their regions of origin. Even the patterns with which we are most familiar today have undergone considerable change over the centuries.

Today, **88 constellations** are officially recognized. Although many have ancient origins, some are modern, devised out of unclaimed stars by astronomers a few centuries ago. Unclaimed stars were those too faint or inconveniently placed to be included in the more prominent constellations. Stars in a constellation are not necessarily near each other; they are just located in the same direction on the celestial sphere.

When astronomers began to travel to South Africa in the 16th and 17th centuries, they found an unfamiliar sky that showed numerous brilliant stars. Thus, we find constellations in the Southern Hemisphere that depict technological marvels of the time, as well as some arguably traditional forms, such as Musca, the fly.

Many of the commonly recognized constellations had their **origins** in ancient Asia Minor. These were adopted by the Greeks and Romans, who translated their names and stories into their own languages, modifying some details in the process. After the declines of these cultures, most such knowledge entered oral tradition or remained hidden in monastic libraries. From the 8th century, the Muslim explosion spread through the Mediterranean world. Wherever possible, everything was translated into Arabic to be taught in the universities the Muslims established all over their newfound world.

In the 13th century, Alfonso X of Castile, an avid student of astronomy, had Ptolemy's *Almagest* translated into Latin. It thus became widely available to European scholars. In the process, the constellation names were translated, but the star names were retained in their Arabic forms. Thus the names of many stars—Altair, Alnitak, and Mirfak, among others—have Arabic roots, although linguistic adaptation and the inaccuracies of transliteration have wrought changes.

Until the 1920s, astronomers used curved boundaries for the constellation areas. As these were rather arbitrary at best, the International Astronomical Union adopted new constellation boundaries that ran due north-south and east-west, filling the sky much as the contiguous states fill up the area of the lower 48 United States.

Common names of stars often referred to parts of the traditional figures they represented: Deneb, the tail of the swan; Betelgeuse, the armpit of the giant. Avoiding traditional names, astronomers may label stars by using Greek letters, generally to denote order of brightness. Thus, the "alpha star" would generally be the brightest star of that constellation. The "of" implies possession, so the genitive (possessive) form of the constellation name is used, as in Alpha Orionis, the first star of Orion (Betelgeuse). Astronomers usually use a 3-letter abbreviation for the constellation name, as indicated here.

Within these boundaries, and occasionally crossing them, popular asterisms are recognized: the so-called Big Dipper is a small part of the constellation Ursa Major, the big bear; the Sickle is the traditional head and mane of Leo, the lion; the three stars of the Summer Triangle are each in a different constellation, with Vega in Lyra the lyre, Deneb in Cygnus the swan, and Altair in Aquila the eagle; the northeast star of the Great Square of Pegasus is Alpha Andromedae.

Name	Genitive case	Abbr.	Meaning
Andromeda	Andromedae	And	Chained Maiden
Antlia	Antliae	Ant	Air Pump
Apus	Apodis	Aps	Bird of Paradise
Aquarius	Aquarii	Aqr	Water Bearer
Aquila	Aquilae	Aql	Eagle
Ara	Arae	Ara	Altar
Aries	Arietis	Ari	Ram
Auriga	Aurigae	Aur	Charioteer
Boötes	Boötis	Boo	Herdsmen
Caelum	Caeli	Cae	Chisel
Camelopardalis	Camelopardalis	Cam	Giraffe
Cancer	Cancri	Cnc	Crab
Canes Venatici	Canum Venaticorum	CVn	Hunting Dogs
Canis Major	Canis Majoris	CMa	Greater Dog
Canis Minor	Canis Minoris	CMi	Littler Dog
Capricornus	Capricorni	Cap	Sea-goat
Carina	Carinae	Car	Keel
Cassiopeia	Cassiopeiae	Cas	Queen
Centaurus	Centauri	Cen	Centaur
Cepheus	Cephei	Cep	King
Cetus	Ceti	Cet	Whale
Chamaeleon	Chamaeleontis	Cha	Chameleon
Circinus	Circini	Cir	Compasses (art)
Columba	Columbae	Col	Dove
Coma Berenices	Comae Berenices	Com	Berenice's Hair
Corona Australis	Coronae Australis	CrA	Southern Crown
Corona Borealis	Coronae Borealis	CrB	Northern Crown
Corvus	Corvi	Crv	Crow
Crater	Crateris	Crt	Cup
Crux	Crucis	Cru	Cross (southern)
Cygnus	Cygni	Cyg	Swan
Delphinus	Delphini	Del	Dolphin
Dorado	Doradus	Dor	Goldfish
Draco	Draconis	Dra	Dragon
Equuleus	Equulei	Equ	Little Horse
Eridanus	Eridani	Eri	River
Fornax	Fornacis	For	Furnace
Gemini	Geminorum	Gem	Twins
Grus	Gruis	Gru	Crane (bird)
Hercules	Herculis	Her	Hercules
Horologium	Horologii	Hor	Clock
Hydra	Hydrae	Hya	Water Snake (female)
Hydrus	Hydri	Hyi	Water Snake (male)
Indus	Indi	Ind	Indian
Lacerta	Lacertae	Lac	Lizard
Leo	Leonis	Leo	Lion
Leo Minor	Leonis Minoris	LMi	Littler Lion
Lepus	Leporis	Lep	Hare
Libra	Librae	Lib	Balance
Lupus	Lupi	Lup	Wolf
Lynx	Lyncis	Lyn	Lynx
Lyra	Lyrae	Lyr	Lyre
Mensa	Mensae	Men	Table Mountain
Microscopium	Microscopii	Mic	Microscope
Monoceros	Monocerotis	Mon	Unicorn
Musca	Muscae	Mus	Fly
Norma	Normae	Nor	Square (rule)
Octans	Octantis	Oct	Octant
Ophiuchus	Ophiuchi	Oph	Serpent Bearer
Orion	Orionis	Ori	Hunter
Pavo	Pavonis	Pav	Peacock
Pegasus	Pegasi	Peg	Flying Horse
Perseus	Persei	Per	Hero
Phoenix	Phoenicis	Phe	Phoenix
Pictor	Pictoris	Pic	Painter
Pisces	Piscium	Psc	Fishes
Piscis Austrinus	Piscis Austrini	PsA	Southern Fish
Puppis	Puppis	Pup	Stern (deck)
Pyxis	Pyxidis	Pyx	Compass (sea)
Reticulum	Reticuli	Ret	Reticle
Sagitta	Sagittae	Sge	Arrow
Sagittarius	Sagittarii	Sgr	Archer
Scorpius	Scorpii	Sco	Scorpion
Sculptor	Sculptoris	Scl	Sculptor
Scutum	Scuti	Sct	Shield
Serpens	Serpentis	Ser	Serpent
Sextans	Sextantis	Sex	Sextant
Taurus	Tauri	Tau	Bull
Telescopium	Telescopii	Tel	Telescope
Triangulum	Trianguli	Tri	Triangle
Triangulum Australe	Trianguli Australis	TrA	Southern Triangle
Tucana	Tucanae	Tuc	Toucan
Ursa Major	Ursae Majoris	UMa	Greater Bear
Ursa Minor	Ursae Minoris	UMi	Littler Bear
Vela	Velorum	Vel	Sail
Virgo	Virginis	Vir	Maiden
Volans	Volantis	Vol	Flying Fish
Vulpecula	Vulpeculae	Vul	Fox

Eclipses, 2011

(In Coordinated Universal Time, standard time of the prime meridian.)

There are 6 eclipses in 2011: four partial eclipses of the Sun, and two total eclipses of the Moon. During a partial eclipse of the Sun, the Moon and Sun are not sufficiently aligned for the solar disk to be completely blocked. The tables below give the times, in UTC, when the Moon or Sun reaches certain phases of eclipse. In the case of the lunar eclipses, the times are relevant for any observer who can see the Moon. In the case of solar eclipses, the tabulated times refer to when the given event may begin or end from specific points along the eclipse path; as the Moon's shadow sweeps quickly across the Earth, observed duration of totality depends precisely on the observer's location.

I. Partial Eclipse of the Sun, Jan. 4

The eclipse will be visible over a wide area extending from NW Africa across most of Europe, the Middle East, and Central and NE Asia. Viewers in N Europe and NW Russia will see as much as 80% of the Sun's diameter blocked by the Moon, while more southerly observers will see less blocked.

Event	Date	h	m
Penumbral eclipse begins	Jan. 4	6	40.2
Greatest eclipse	4	8	51.7
Penumbral eclipse ends	4	10	7.6

II. Partial Eclipse of the Sun, June 1

The eclipse will be visible over a wide area starting from NE China and E Russia, extending across nearly the entire Arctic, including northern Alaska, northern Canada, and Iceland. No more than 60% of the Sun's diameter will be eclipsed for any observers.

Event	Date	h	m
Penumbral eclipse begins	June 1	19	25.3
Greatest eclipse	1	21	17.3
Penumbral eclipse ends	1	23	7.0

III. Total Eclipse of the Moon, June 15

The eclipse will be visible over a wide area including Africa, the Middle East, and most of Europe. Totality will last an unusually long 100 minutes.

Event	Date	h	m
Penumbral eclipse begins	July 15	17	24.5
Total eclipse begins	15	19	22.5
Greatest eclipse	15	20	13.7
Total eclipse ends	15	21	2.2
Penumbral eclipse ends	15	23	0.6

IV. Partial Eclipse of the Sun, July 1

This very minor solar eclipse, in which no more than 10% of the Sun's diameter is blocked, will be visible only in a very isolated region of the Antarctic Ocean, south of Africa.

Event	Date	h	m
Penumbral eclipse begins	July 1	7	53.7
Greatest eclipse	1	8	39.5
Penumbral eclipse ends	1	9	22.8

V. Partial Eclipse of the Sun, Nov. 25

The eclipse will be visible over a wide area that extends from southernmost Africa eastward to New Zealand and all of Antarctica. More than 90% of the Sun's diameter will be blocked for observers who can see the greatest eclipse.

Event	Date	h	m
Penumbral eclipse begins	Nov. 25	4	23.2
Greatest eclipse	25	6	21.4
Penumbral eclipse ends	25	8	17.3

VI. Total Eclipse of the Moon, Dec. 10

The entire eclipse will be visible over a wide area including Asia, Australia, and Alaska. North American observers will be able to see at least part of the total phase, with more visible to observers in the Northwest.

Event	Date	h	m
Penumbral eclipse begins	Dec. 10	11	33.5
Total eclipse begins	10	14	6.2
Greatest eclipse	10	14	32.9
Total eclipse ends	10	14	57.4
Penumbral eclipse ends	10	17	30.0

Total Solar Eclipses, 2010-2020

Total solar eclipses actually take place nearly as often as total lunar eclipses. Total lunar eclipses are visible over at least half of the Earth, while total solar eclipses can be seen only along a very narrow path up to a few hundred miles wide and a few thousand miles long. Observing a total solar eclipse is thus a rarity for most people.

Solar eclipses can be dangerous to observe. This is not because the Sun emits more potent rays, but because the Sun is always dangerous to observe directly and people are particularly likely to stare at it during a solar eclipse.

Date	Duration[1] m	s	Width (mi)	Path of totality
2010, July 11	5	20	164	Pacific Ocean, southern S America
2012, Nov. 13	4	2	112	N Australia, Pacific Ocean
2013, Nov. 3[h]	1	40	36	Atlantic Ocean, Africa
2015, Mar. 20	2	47	304	N Atlantic Ocean, Arctic Ocean
2016, Mar. 9	4	10	96	Indonesia, Pacific Ocean
2017, Aug. 21	2	40	71	Pacific Ocean, U.S., Atlantic Ocean
2019, July 2	4	33	125	S Pacific Ocean, S America
2020, Dec. 14	2	10	56	S Pacific Ocean, S America, S Atlantic Ocean

h = Indicates annular-total hybrid eclipse. (1) Duration refers to length of time at optimal viewing area.

Total Solar Eclipses in the U.S. in the 21st Century

During the 21st century there will be 8 total solar eclipses visible somewhere in the continental U.S. The first comes after a long gap; the last total solar eclipse was on Feb. 26, 1979, in the northwestern U.S.

Date	Path of totality	Date	Path of totality
Aug. 21, 2017	Oregon to South Carolina	Mar. 30, 2052	Florida to Georgia
Apr. 8, 2024	Mexico to Texas and N through Maine	May 11, 2078	Louisiana to North Carolina
Aug. 23, 2044	Montana to North Dakota	May 1, 2079	New Jersey to the lower edge of New England
Aug. 12, 2045	N California to Florida	Sept. 14, 2099	North Dakota to Virginia

Beginnings of the Universe

One of the dominating astronomical discoveries of the 20th century was that the galaxies of the universe all seem to be moving away from us. Doppler redshifts were observed for the spiral nebulae around 1920, even though they were not yet known to be galaxies. By the early 1930s, Edwin Hubble and M. L. Humason had established that the more distant a galaxy, the faster it was receding. It turned out that they are moving away not just from us but from one another—that is, the **universe is expanding**. Scientists conclude that the universe must once, very long ago, have been extremely compact and dense, until an explosion or a similar event caused the matter to spread out. The explosion that gave birth to the universe is called the **Big Bang**.

On the subatomic level, according to this theory, there were vast changes of energy and matter and the way physical laws operated during the first few minutes. After those early minutes the percentages of the basic matter of the universe—hydrogen, helium, and lithium—were set. Everything was so compact and so hot that **radiation dominated the early universe** and there were no stable, un-ionized atoms. At first, the universe was opaque, in the sense that any energy emitted was quickly absorbed and then re-emitted by free electrons. As the universe expanded, **density and temperature continued to drop**. A few hundred thousand years after the Big Bang, the temperature dropped far enough that electrons and nuclei could combine to form stable atoms as the universe became transparent. Once that occurred, the radiation that had been trapped was free to escape.

In the 1940s, George Gamov and others predicted that astronomers should be able to see remnants of this escaped radiation. They were starting to search for this background radiation when physicists Arno Penzias and Robert Wilson, using a radio telescope, inadvertently beat them to the punch (the two were later awarded a Nobel Prize).

In 2003, NASA's Wilkinson Microwave Anisotropy Probe made measurements of the temperature of this **cosmic microwave background** radiation to within millionths of a degree. From these measurements, scientists were able to deduce that our universe is **13.7 bil years old** and that first-generation stars began to form a mere 200 mil years after the Big Bang.

A related mystery is that evidence suggests there is hidden matter and hidden energy that cannot be directly observed. This **dark matter** may be composed of gas, large numbers of cool, small objects, or even sub-atomic particles. The presence of dark matter is indicated by the rotation curves of galaxies and the dynamics of clusters of galaxies. Evidence for **dark energy** is derived from studies of distant Type Ia supernovae in far galaxies indicating that the expansion of the universe is accelerating, rather than slowing. The visible matter we see seems to constitute only about 4% of the total mass of the universe, while the rest of the mass of the universe is in the form of dark matter (23%) and dark energy (73%). Dark energy is a mysterious force that seems to work on the very fabric of the universe, spreading it apart.

Galaxies

The 20th century might be called the century of the galaxy. By the start of the century, more than 10,000 **nebulae**—cloud-like luminous objects in the sky—had been discovered. Some were correctly identified as star clusters and others as clouds of gas and dust. Those nebulae which were spiral or elliptical in shape were found in regions of the sky far from the glowing band that is our own Milky Way Galaxy. Immanuel Kant had written in 1775 that some of these fuzzy objects might be **"island universes"** apart from our own. But the idea remained speculative until 1923-24, when Edwin Hubble discovered the existence of variable stars in some of these nebulae. This provided conclusive evidence that these systems were outside our own island universe, the Milky Way Galaxy.

Galaxies range in size from small dwarf elliptical ones, with perhaps 1 mil stars, to spiral galaxies containing 300 bil stars, to giant elliptical galaxies that may be home to more than 10 tril stars. The diameters of galaxies range from 3,000 light-years in dwarf elliptical galaxies to over 500,000 light-years in giant elliptical galaxies. It is estimated that the Milky Way galaxy is about 100,000 light-years in diameter with about 400 bil stars.

Galaxies also congregate into **clusters**. The smallest are poor clusters of only a few dozen galaxies, while the largest rich clusters may contain thousands of galaxies. The Milky Way is part of a poor cluster of about 3 dozen galaxies called the **Local Group**. The largest member of the Local Group is the Andromeda Galaxy, a spiral galaxy visible to the unaided eye in the constellation of Andromeda on a very dark night away from lights. The Milky Way is the second largest galaxy in this group; most other galaxies in our Local Group are small.

The Solar System

The major planets of the solar system, in order of mean distance from the Sun, are **Mercury**, **Venus**, **Earth**, **Mars**, **Jupiter**, **Saturn**, **Uranus**, and **Neptune**. The dwarf planets in order of average distance from the Sun are **Ceres** (located between Mars and Jupiter), **Pluto**, **Haumea**, **Makemake**, and **Eris**. All planets orbit counterclockwise around the Sun as viewed from above the Earth's North Pole.

Because **Mercury** and **Venus** are nearer to the Sun than is Earth, their motions about the Sun appear from Earth as wide swings first to one side of the Sun then to the other, though both planets move around the Sun in almost circular orbits. When their passage takes them between Earth and the Sun or beyond the Sun as seen from Earth, they cannot be seen.

The **planets that lie farther from the Sun** than does Earth may be seen for longer periods and are invisible only when so located in our sky so that they rise and set at about the same time as the Sun—and thus become overwhelmed by the Sun's light.

The giant planets emit their own energy. On occasion, radio emissions from Jupiter exceed even those emitted by the Sun in intensity.

Mercury and Venus, because they are between Earth and the Sun, show phases much as the Moon does. The planets farther from the Sun are always seen as full, although Mars does occasionally present a slightly gibbous phase—like the Moon when not quite full.

The **planets appear to move rapidly among the stars** because they are relatively closer to Earth than the stars. The stars are also in motion, some at tremendous speeds, but they are so far away that their motion does not change their apparent positions in the heavens enough to be perceived. The nearest star is about 9,000 times farther away than Neptune. The count for identified **moons** in the solar system orbiting planets and dwarf planets stood at 174 in fall 2010.

Planet Superlatives

Largest, most massive planet	Jupiter	Smallest, least massive planet	Mercury
Fastest orbiting planet	Mercury	Slowest orbiting planet	Neptune
Fastest sidereal rotation	Jupiter	Slowest sidereal rotation	Venus
Longest (synodic) day	Mercury	Shortest (synodic) day	Jupiter
Rotational pole closest to ecliptic	Uranus	Hottest planet	Venus
Most moons	Jupiter	No moons	Mercury, Venus
Planet with largest moon	Jupiter	Planet with moon with most eccentric orbit	Neptune
Greatest average density	Earth	Lowest average density	Saturn
Tallest mountain	Mars	Deepest oceans	Jupiter
Strongest magnetic fields	Jupiter	Greatest amount of liquid, surface water	Earth
Most circular orbit	Venus		

Planets and the Sun, by Selected Characteristics

Sun and planets	Radius— at unit distance[1] "	Radius— at mean least distance[2] "	Radius— in mi mean radius	Volume[3]	Mass[3]	Density[3]	Sidereal period d	h	m	s	Gravity at surface[3]	Reflecting power (Pct°)	Daytime surface temp. (°F)
Sun	959.50	976.0	432,500	1,304,000	333,000	0.26	25	9	7		28.00		+9,941
Mercury	3.36	6.5	1,516	0.0562	0.0553	0.98	58	15	36		0.38	0.11	845
Venus	8.34	33.0	3,760	0.857	0.815	0.95	243		30[R]		0.91	0.65	867
Earth	8.78	—	3,959	1.000	1.000	1.00		23	56	4.2	1.00	0.37	59
Moon	2.40	986.2	1,079	0.0203	0.0123	0.61	27	7	43	40	0.16	0.12	260
Mars	4.67	12.8	2,106	0.151	0.107	0.71		24	37	22	0.38	0.15	–24
Jupiter	96.40	24.5	43,441	1,321	317.8	0.24		9	55	30	2.53	0.52	–162
Saturn	80.29	10.05	36,184	764	95.16	0.12		10	39	20	1.06	0.47	–218
Uranus	34.97	2.05	15,759	63.1	14.54	0.23		17	14	20[R]	0.90	0.51	–323
Neptune	33.95	1.2	15,301	57.7	17.15	0.30		16	6	40	1.14	0.41	–330

R = Retrograde rotation. (1) Angular radius, in seconds of arc, if object were seen at a distance of 1 astronomical unit. (2) Angular radius, in seconds of arc, when object is closest to Earth. (3) Earth = 1.

Planets: Motion, Distance, and Brightness

Planet	Mean daily motion[1]	Orbital velocity mi per sec.[2]	Sidereal revolution days[3]	Synodic revolution days[4]	Distance from Sun in millions of mi Max.	Min.	Distance from Earth in millions of mi Max.	Min.	Light at[5] perihelion	aphelion
Mercury	14,732	29.75	87.97	115.9	43.4	28.6	137.9	48	10.56	4.59
Venus	5,768	21.76	224.7	583.9	67.7	66.8	162.2	23.7	1.94	1.89
Earth	3,548	18.50	365.256	—	94.5	91.4	—	—	1.03	0.97
Mars	1,887	15.00	686.98	779.9	154.9	128.4	249.4	33.9	0.52	0.36
Jupiter	299	8.12	4,332.6	398.9	507.4	460.1	602	366	0.041	0.034
Saturn	120	6.02	10,759.2	378.1	941.1	840.4	1,031	743	0.012	0.0098
Uranus	42	4.23	30,685.4	369.7	1,866.4	1,703.4	1,962	1,605	0.0030	0.0025
Neptune	22	3.37	60,189.0	367.5	2,824.5	2,761.7	2,913	2,676	0.0011	0.0011

(1) Average angular motion measured in seconds of arc per day. (2) Speed of revolution around Sun. (3) Number of Earth days to orbit Sun with respect to background stars. (4) Number of Earth days to get back to the same position in its orbit around Sun, relative to Earth. (5) Light at perihelion and aphelion is solar illumination measured in units of mean illumination at Earth.

Planets of the Solar System

Note: AU = astronomical unit (92.96 mil mi, mean distance of Earth from the Sun); **d** = 1 Earth synodic (solar) day (24 hours); **synodic day** = rotation period of a planet measured with respect to the Sun (the "true" day, i.e., the time from midday to midday, or from sunrise to sunrise); **sidereal day** = the rotation period of a planet with respect to the stars.

The International Astronomical Union (IAU) on Aug. 24, 2006, at their General Assembly in Prague, Czech Republic, agreed on a new definition for "planet," and in the process effectively removed Pluto's planet status. The ruling came after years of debate as to whether Pluto, discovered in 1930, should still be considered the ninth planet in our solar system because of its size, orbit, and other characteristics. New discoveries of other Pluto-like objects in the solar system, such as the 2003 discovery of Eris, a **Kuiper Belt object** (KBO) bigger than Pluto, also contributed to the debate.

Under the IAU's new definition, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune are regarded as "classical" planets. A **planet** is now defined as a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape, and (c) has cleared the neighborhood around its orbit.

Pluto, Eris, Ceres, Makemake, and Haumea are now regarded as dwarf planets, with the status of Pluto's largest moon, Charon, to be determined at a later date. A **dwarf planet** is a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape, (c) has not cleared the neighborhood around its orbit, and (d) is not a satellite.

The IAU also created a new category, **small solar system bodies**, for all other objects orbiting the Sun, including comets, asteroids, KBOs, and other small objects, although it has not yet established a process by which other solar system objects will be classified.

Mercury

Distance from the Sun	
Perihelion	28.6 mil mi
Apehileon	43.4 mil mi
Semi-major axis (mean distance)	36 mil mi (0.387 AU)
Period of revolution around Sun	87.97 d
Orbital eccentricity	0.2056
Orbital inclination	7.00°
Synodic day (midday to midday)	175.94 d
Sidereal day	58.65 d
Rotational inclination	0.01°
Mass (Earth = 1)	0.0553
Mean radius	1,516 mi
Mean density (Earth = 1)	0.984
Natural satellites	0
Average surface temperature	333°F

Mercury, named for the Roman gods' messenger, is the closest planet to the Sun and the smallest in the solar system. Mercury is too much in line with the Sun to be observed against a dark sky; therefore it is always seen during morning or evening twilight. In 2008, the MESSENGER spacecraft made the first flybys of Mercury since the 1970s. Messenger is scheduled to go into orbit about Mercury in 2011 for a year-long reconnaisance mission.

Orbit and rotation. Mercury moves with great speed around the Sun, averaging about 30 mi per second to complete its orbit, which takes about 88 Earth days. Mercury takes nearly 59 days to rotate on its axis. Because its orbital period is only about 50% longer than its sidereal rotation, the time from one sunrise to the next on Mercury is about 176 days—twice as long as a Mercurial year. Oddly, Mercury has a magnetic field, albeit very weak. It has been held that both a fluid core and rapid rotation—neither of which Mercury is believed to have—are necessary for the generation of a planetary magnetic field. Mercury may demonstrate the contrary.

Atmosphere. Mercury's atmosphere is almost non-existent. What very little it has is composed of 42% oxygen, 29% sodium, 22% hydrogen, 6% helium, 0.5% potassium, and 0.5% other particles. Because of Mercury's lack of atmosphere to regulate temperatures between day and night, the surface during the day may reach a temperature of about 845°F, while the temperature at night may fall as low as –300°F. Earth-based observation has provided evidence of water ice near the poles.

Surface and composition. Mercury's surface is rocky and cratered similar to that of the Earth's moon. The most imposing feature on Mercury, the Caloris Basin, is a huge impact crater more than 800 mi in diameter. Mercury has a huge iron core that takes up about 75% of the planet's radius; it has higher percentage of iron than any other planet.

Venus

Distance from the Sun	
Perihelion	66.8 mil mi
Semi-major axis (mean distance)	67.2 mil mi (0.723 AU)
Aphelion	67.7 mil mi
Period of revolution around Sun	224.7 d
Orbital eccentricity	0.0067
Orbital inclination	3.39°
Synodic day (midday to midday)	116.75 d (retrograde)
Sidereal day	243.02 d (retrograde)
Rotational inclination	177.4°
Mass (Earth = 1)	0.815
Mean radius	3,760 mi
Mean density (Earth = 1)	0.951
Natural satellites	0
Average surface temperature	867°F

Venus, named for the Roman goddess of love, is the second planet out from the Sun. Almost the same size as Earth, it is believed that the two planets were formed at the same time by the same general process and from the same mixture of chemical elements. Venus can easily be seen from Earth with the naked eye; it is the 3rd-brightest object in the sky, exceeded only by the Sun and the Moon.

Orbit and rotation. It takes Venus 225 Earth days to complete its orbit around the sun. Its synodic revolution—its return to the same relationship with Earth and the Sun, which is a result of the combination of its own motion with that of Earth—is 584 days. Because of this, every 19 months Venus is closer to Earth than any other planet. The rotation period of Venus appears to be 243 days clockwise—in other words, contrary to the spin of the other planets and contrary to its own motion around the Sun. This rate and sense of rotation makes for a solar day (sunrise to sunrise) on Venus of 116.8 Earth days; night lasts 58 days and day lasts 58 days. Venus has no detectible magnetic field.

Atmosphere. The Venusian atmosphere is very thick and toxic. It is composed primarily of 96.5% carbon dioxide, 3.5% nitrogen, and trace concentrations of sulfur dioxide, argon, water, carbon monoxide, helium, and neon. In addition, it exerts an atmospheric pressure at the surface more than 90 times Earth's normal sea-level pressure. The planet is covered with a dense, white, cloudy atmosphere that conceals whatever is below it. These clouds are believed to contain sulfuric acid, meaning that when it rains on Venus, it may rain sulfuric acid. Due to the thickness of the atmosphere and resulting extreme greenhouse effect, the temperature is essentially the same day and night; the planet has an average surface temperature of about 867°F making it the hottest planet in the solar system. Winds of about 200 mph in the clouds may account for the transfer of heat into the night side despite the low rotation speed of the planet. However, at the surface, the winds are very slow.

Surface and composition. Radar-produced maps of the planet show large craters, continent-sized highlands, and extensive dry lowlands. No tectonic activity has been found similar to Earth's moving tectonic plates, but a system of global rift zones and numerous broad, low, dome-like structures, called coronae, may have been produced by the upwelling and subsidence of magma from the mantle. Volcanic surface features, such as vast lava plains, fields of small lava domes, and large shield volcanoes, are common. About 1,600 volcanoes and volcanic features appear on the Venusian surface; more than 85% of the surface is covered by volcanic flows. Theia Mons, a huge shield volcano, has a diameter of over 600 mi and a height of over 3.5 mi. (The largest Hawaiian volcano is only about 125 mi in diameter, but rises nearly 5.5 mi from the ocean floor.) Aside from volcanoes, there are highly deformed mountain belts across Venus along with a few meteor-impact craters more than 20 mi wide. Erosion is a very slow process on Venus due to the lack of water. There are indications of some wind movement of dust and sand. The few impact craters on Venus suggest that the surface is generally geologically young—less than 800 mil years old. Despite the fact that probes have landed on Venus, there are very few pictures because the probes themselves couldn't survive the high temperature and atmospheric pressure.

Mars

Distance from the Sun	
Perihelion	128.4 mil mi
Semi-major axis (mean distance)	141.6 mil mi (1.524 AU)
Aphelion	154.9 mil mi
Period of revolution around Sun	686.98 d (1.88 y)
Orbital eccentricity	0.0935
Orbital inclination	1.85°
Synodic day (midday to midday)	24h 39m 35s
Sidereal day	24h 37m 22s
Rotational inclination	25.19°
Mass (Earth = 1)	0.107
Mean radius	2,106 mi
Mean density (Earth = 1)	0.713
Natural satellites	2
Average surface temperature	–81°F

Named for the Roman god of war, the "Red Planet" has some features much like Earth. Mars has climate, seasons, volcanoes, and possibly once had liquid water flowing across its surface. Mars can easily be seen with the naked eye on most clear nights, which is why it was one of the first planets to be studied by ancient astronomers. Later, when telescopes came into use, many observers claimed that canals made by Martians existed on the planet's surface, which led to speculation as to whether there was intelligent life there. Unmanned probes have since put all those theories to rest; the canals turned out to be topographic patterns and dust storms.

Orbit and rotation. Although Mars's orbital path is nearly circular, it is somewhat more eccentric than that of most other planets; Mars is more than 26 mil mi farther from the Sun at its most distant point compared to its closest approach. Its orbit and speed in relation to Earth's bring it fairly close to Earth about every 2 years. Every 15-17 years the close approaches are especially favorable for observation.

Mars rotates in 24 hours and 37 minutes, almost the same period of time as Earth. Mars's mean distance from the Sun is 142 mil mi. Because Mars's axis of rotation is inclined by about 25° from the vertical to the plane of its solar orbit about the Sun, the planet has seasons.

Unlike Earth's global magnetic field, the Martian magnetic field is small, weak, and localized and may be the remnant of a stronger field from the planet's past.

Atmosphere. The Martian atmosphere is composed primarily of 95.32% carbon dioxide, 2.7% nitrogen, 1.6% argon, 0.13% oxygen, 0.08% carbon monoxide, and in very minor quantities, water, hydrogen oxide, and neon. The atmosphere on Mars is very thin; it has an atmospheric pressure between 1% and 2% of Earth's (if Earth's atmosphere were that thin, we would not have enough oxygen to breathe). Because the Martian atmosphere is so thin and because of the planet's weak magnetic field, its surface is bombarded by cosmic radiation about 100 times as intense as on Earth.

Martian weather systems consist mainly of huge dust storms. On the poles, white caps (believed to be both water ice and carbon dioxide ice) grow in winter and shrink in summer. It is mainly the carbon dioxide that comes and goes with the seasons. The water ice is apparently in many layers with dust between them, indicating climatic cycles.

Surface and composition. Mars is an alien world with rust-red sand and pink skies. In the planet's beginning stages when it was much hotter, Mars's surface melted to a sufficient extent to separate into dense and lighter layers. At some point later, Mars cooled enough to allow liquid water to possibly flow across its surface. Today, Mars is very dry.

Natural satellites. Mars has 2 satellites called Phobos and Deimos, each discovered in 1877 by Asaph Hall. (Phobos measures about 11 by 17 mi and Deimos about 7 by 9 mi.) Deimos, the outer satellite, revolves around the planet in about 31 hours. Phobos, the inner satellite, whips around Mars in a little more than 7 hours, making 3 trips each Martian day. Since it orbits Mars faster than the planet rotates, Phobos rises in the west and sets in the east, opposite to what other bodies appear to do in the Martian sky. Both moons are irregularly shaped and pitted with numerous craters. Their origins are not known; however, some astronomers consider them to be asteroid-like objects that were captured by Mars very early in its history.

Jupiter

Distance from the Sun	
Perihelion	460.1 mil mi
Semi-major axis (mean distance)	483.8 mil mi (5.204 AU)
Aphelion	507.4 mil mi
Period of revolution around Sun	11.862 y
Orbital eccentricity	0.0489
Orbital inclination	1.304°
Synodic day (midday to midday)	9h 55m 33s
Sidereal day	9h 55m 30s
Rotational inclination	3.13°
Mass (Earth = 1)	317.8
Mean radius	43,441 mi
Mean density (Earth = 1)	0.24
Natural satellites	63
Average temperature*	–162°F

*i.e., temperature where atmosphere pressure equals 1 Earth atmosphere.

Jupiter, named for the Roman ruler of the gods, is the largest planet in the solar system (11 times the diameter of Earth). Its mass is more than twice the mass of all the other planets, moons, and asteroids put together. Visible to the naked eye and known to the ancients, it was a focus of the Italian scientist Galileo Galilei who viewed the planet and its 4 largest moons through a homemade telescope.

Orbit and rotation. Jupiter is at an average distance of 484 mil mi from the Sun and takes almost 12 Earth years to make a complete revolution. The largest of the planets, Jupiter has an equatorial diameter of 88,846 mi; however, its polar diameter is more than 5,700 mi shorter. This noticeable oblateness is a result of the liquidity of the planet and its extremely rapid rotation rate—a Jupiter day is less than 10 Earth hours long. For a planet this size, this rotational speed is amazing. A point on Jupiter's equator moves at a speed of 22,000 mph, as compared with 1,000 mph for a point on Earth's equator. Jupiter's magnetic field is by far the strongest of any planet. Electrical activity caused by this field is so strong that it discharges billions of watts into Earth's magnetic field daily.

Atmosphere. Jupiter's atmosphere is primarily composed of 90% molecular hydrogen and 10% helium. Minor constituents include methane, ammonia, hydrogen deuteride, ethane, and water. Jupiter has a turbulent atmosphere characterized by thick clouds, high winds, and huge lightning storms many times larger than those on Earth. The atmospheric temperature varies but the temperature at the tops of clouds may be about –280°F. The Great Red Spot seen prominently on Jupiter is a huge hurricane-like storm that is three times the diameter of Earth. In 2006, the Hubble Space Telescope detected the appearance of a second, smaller red spot.

Surface and composition. Gas giant planets like Jupiter, Saturn, and Neptune do not have a surface like Earth or any of the other rocky planets. The gases become denser with depth, until they may turn into a slush or slurry. Jupiter has a liquid hydrogen ocean more than 35,000 mi deep. It likely has a rocky core about the size of Earth, but 13 times more massive. There is no sharp interface between the gaseous atmosphere and the hydrogen ocean that accounts for most of Jupiter's volume. At lower depths, under enormous pressure, the liquid hydrogen takes on the properties of a metal. It is likely that this liquid metallic hydrogen is the source for both Jupiter's persistent radio noise and for its improbably strong magnetic field.

Natural satellites. Jupiter has 63 known satellites, 23 of which were found as recently as 2003. Four of the moons (in order of distance from Jupiter), Io, Europa, Ganymede, and Callisto—all discovered by Galileo in 1610—are large and bright and are close in diameter to Earth's moon and Mercury. Because they move so rapidly around Jupiter, their change in position from night to night can be seen from Earth using binoculars.

Io is one of the most intriguing moons because it is the most volcanically active body in the solar system. A gaseous, doughnut-shaped ring, or torus, enveloping Io's orbit around Jupiter may have been formed by material ejected from Io's active volcanoes. (This is not to be confused with Jupiter's rings.) These volcanoes, hotter than Earth's volcanoes, erupt mainly molten sulfur.

Europa may have a 30-mi-deep salty, liquid ocean beneath its icy crust, perhaps a small metallic core, and a very tenuous atmosphere. Ganymede is the biggest moon in the solar system. With a diameter of 3,120 mi, it is bigger than both Mercury and Pluto. Ganymede also has it own magnetic field produced by a molten core perhaps of iron sulfide. Callisto has the oldest, most heavily cratered surface in the solar system, a very thin atmosphere of carbon dioxide, and possibly a subsurface liquid ocean.

The other satellites are much smaller, with 4 closer to Jupiter than Io, 5 between Ganymede and Callisto, and the rest farther out. Most of Jupiter's moons revolve around Jupiter clockwise as seen from the north, contrary to the motions of most satellites in the solar system and to the direction of revolution of planets around the Sun. These moons may be captured asteroids.

Jupiter has a set of rings that cannot be seen from Earth without powerful telescopes. They are composed of small dust grains possibly blasted off the 4 innermost moons by meteoroid impacts.

Saturn

Distance from the Sun	
Perihelion	840.44 mil mi
Semi-major axis (mean distance)	890.8 mil mi (9.582 AU)
Aphelion	941.07 mil mi
Period of revolution around Sun	29.458 y
Orbital eccentricity	0.0565
Orbital inclination	2.485°
Synodic day (midday to midday)	10h 39m 23s
Sidereal day	10h 39m 22s
Rotational inclination	26.73°
Mass (Earth = 1)	95.159
Mean radius	36,184 mi
Mean density (Earth = 1)	0.125
Natural satellites	62
Average temperature*	–218°F

*i.e., temperature where atmosphere pressure equals 1 Earth atmosphere.

Saturn, named for the Roman ruler of the Titans, is the 6th planet from the sun and most distant of the planets visible to the unaided eye. Saturn is 2nd in size to Jupiter, but its mass is much smaller. Saturn is the only planet less dense than water, meaning that Saturn would float if there were a pool of water gigantic enough to hold it.

Orbit and rotation. Saturn's diameter is almost 74,900 mi at the equator, while its polar diameter is more than 7,300 mi shorter. Like Jupiter, its noticeable oblateness is a result of the liquidity of the planet and its extremely rapid rate of rotation; a day is little more than 10 Earth hours long.

Atmosphere. Saturn's atmosphere is composed primarily of 96.3% hydrogen, 3.3% helium, and traces of methane, ammonia, hydrogen deuteride, ethane, and water. Saturn's atmosphere is much like that of Jupiter, except that the temperature at the top of its cloud layer is at least 50°F colder.

Surface and composition. Saturn's atmosphere resembles Jupiter's; it likely has a small dense center surrounded by a deep ocean of hydrogen.

Natural satellites. Saturn has 62 known natural satellites, most of which were not discovered until space probes reached the planet. Saturn's moon Mimas has an impact crater 81 mi across (the moon itself is only 249 mi across). Enceladus has an atmosphere and shows evidence of geysers that spit water ice and vapor. Two tiny moons orbit within the rings, plowing through and making gaps in the rings along their orbits. Pan, the innermost satellite, creates the Encke Gap of Saturn's A-ring. 2005 S1 creates the Keeler Gap. The most intriguing Saturnian moon is Titan. The second biggest moon in the solar system, Titan is bigger than Mercury. Its atmosphere is similar to Earth's atmosphere of long ago; it is made up of approximately 95% nitrogen with traces of methane. Titan's atmosphere extends about 360 mi into space whereas Earth's atmosphere extends about 37 mi. Photographs from the surface show a muddy terrain, with possible deposits of water ice, channels carved by liquid methane springs, and an interesting boundary between light

and dark material on the surface. In addition, in 2006, scientists found sand dunes on Titan's surface. The "sand" is believed to be tiny water ice crystals or organic compounds. Surface phenomenon such as sand dunes are signs of erosion and wind. However, unlike on Earth or Mars, Titan's winds are not the result of uneven solar heating on the moon's surface, but rather the strong gravitational pull from Saturn that creates atmospheric "tides" almost in the same way Earth's moon does to the oceans.

Rings. Saturn's ring system is the planet's most recognizable feature. It begins about 4,000 mi above the visible disk of Saturn lying above its equator and extends about 260,000 mi into space. The diameter of the ring system visible from Earth is about 170,000 mi; the rings are estimated to be about 700 ft thick. The rings are composed of rock and ice and range in size from tiny particles to large chunks of material the size of a bus. There are several divisions in the rings. The 2,920 mi Cassini division, the gap between the A and B rings, is the largest division.

Uranus

Distance from the Sun	
Perihelion	1,703.4 mil mi
Semi-major axis (mean distance)	1,784.8 mil mi (19.201 AU)
Aphelion	1,866.4 mil mi
Period of revolution around Sun	84.01 y
Orbital eccentricity	0.0457
Orbital inclination	0.772°
Synodic day (midday to midday)	17h 14m 23s (retrograde)
Sidereal day	17h 14m 24s (retrograde)
Rotational inclination	97.77°
Mass (Earth = 1)	14.536
Mean radius	15,759 mi
Mean density (Earth = 1)	0.23
Natural satellites	27
Average temperature*	–323°F

*i.e., temperature where atmosphere pressure equals 1 Earth atmosphere.

Uranus, discovered by Sir William Herschel in 1781, was the first planet discovered using a telescope. It was named for the father of the Titans in Roman mythology.

Rotation and orbit. Uranus has a diameter of over 31,000 mi and spins once in approximately 17.23 hours, according to flyby magnetic data. One of the most fascinating features of Uranus is how far over it is tipped. Its north pole lies 98° from being directly up and down to its orbit plane. Thus, its seasons are extreme. Over its 84 year orbit, when the Sun rises at the north pole, it shines there for about 42 Earth years; then it sets, and the north pole is in darkness for 42 Earth years. In addition to its rotational tilt, Uranus's magnetic field axis is tipped an incredible 58.6° from its rotational axis and is displaced about 30% of its radius away from the planet's center.

Atmosphere. The atmosphere is composed primarily of 82.5% hydrogen, 15.2% helium, 2.3% methane, with small amounts of hydrogen deuteride, ammonia ice, water ice, ammonia hydrosulfide, and methane ice.

Surface and composition. Uranus has no solid surface, and likely no rocky core but rather a mixture of rocks and assorted ices with about 15% hydrogen and some helium.

Natural satellites. Uranus has 27 known moons, which have orbits lying in the plane of the planet's equator. Five moons are relatively large, while 22 are very small and were only discovered with the *Voyager 2* mission or in later observations. Miranda has grooved markings, reminiscent of Jupiter's Ganymede, but often arranged in a chevron pattern. Rifts and channels on Ariel provide evidence of liquid flowing over its surface in the past. Umbriel is extremely dark, prompting some observers to regard its surface as among the oldest in the system. Titania has rifts and fractures, but not the evidence of flow found on Ariel. Oberon's main feature is its surface saturated with craters, unrelieved by other formations.

In the equatorial plane there is also a complex of 11 rings, 9 of which were discovered in 1978 by observers watching Uranus pass before a star.

Neptune

Distance from the Sun	
Perihelion	2,761.7 mil mi
Semi-major axis (mean distance)	2,793.1 (30.047 AU)
Aphelion	2,824.5 mil mi
Period of revolution around Sun	164.79 y
Orbital eccentricity	0.0113
Orbital inclination	1.769°
Synodic day (midday to midday)	16h 6m 37s
Sidereal day	16h 6m 36s
Rotational inclination	28.32°
Mass (Earth = 1)	17.147
Mean radius	15,301 mi
Mean density (Earth = 1)	0.297
Natural satellites	13
Average temperature*	–330°F

*i.e., temperature where atmosphere pressure equals 1 Earth atmosphere.

Named for the Roman god of the sea, Neptune was the first planet discovered through mathematical calculations and not observation. Its approximate orbit and position was first calculated independently by John Couch Adams and Urbain Le Verrier in 1845. In 1846, Johann Galle first observed Neptune through a telescope.

Orbit and rotation. Neptune orbits the Sun in 164.8 years in a nearly circular orbit. Its magnetic field is considerably asymmetric to the planet's structure, similar to, but not so extreme as, that found at Uranus. Neptune's magnetic field axis is tipped 46.9° from its rotational axis and is displaced more than 55% of its radius away from the planet's center.

Atmosphere. The Neptunian atmosphere is composed primarily of 80% hydrogen, 19% helium, 1.5% methane, and small amounts of hydrogen deuteride, ethane, ammonia ice, water ice, ammonia hydrosulfide, and methane ice. Neptune's atmosphere is quite blue, with quickly changing white clouds often suspended high above an apparent surface. A Great Dark Spot was discovered in 1989 when *Voyager 2* visited the planet, reminiscent of the Great Red Spot of Jupiter. Observations with the Hubble Space Telescope have shown that the Great Dark Spot originally seen by Voyager has apparently dissipated, but a new dark spot has since appeared. Lightning and auroras have been found on other giant planets, but only the aurora phenomenon has been seen on Neptune. As with the other giant planets, Neptune is emitting more energy than it receives from the Sun. The excess has been found to be 2.7 times the solar contribution.

Surface and composition. As with other giant planets, Neptune may have no solid surface, or exact diameter. However, a mean value of 30,600 mi may be assigned to a diameter between atmosphere levels where the pressure is about the same as sea level on Earth.

Natural satellites. Largest of Neptune's 13 satellites is Triton. It is the only large moon in a retrograde orbit, which suggests that it was captured rather than having been there from the beginning. Triton's large size, sufficient to raise significant tides on the planet, may one day, billions of years from now, cause Triton to come close enough to Neptune for it to be torn apart. Triton has a tenuous atmosphere of nitrogen with a trace of hydrocarbons and evidence of active geysers injecting material into it. Triton is the coldest object yet measured in the solar system with a surface temperature of –391°F. Only about half of Triton has been observed, but its terrain shows cratering and a strange regional feature described as resembling the skin of a cantaloupe. Nereid has the highest orbital eccentricity (0.75) of any moon. Its long looping orbit suggests that it was also captured. In 2003, 2 more moons, which orbit farther from their parent planet than any other moons, were discovered. The *Voyager 2* probe in 1989 confirmed the existence of 6 rings around Neptune composed of very fine particles. There may be some clumpiness in the rings' structure. It is not known whether Neptune's satellites influence the formation or maintenance of the rings.

Dwarf Planets

Note: See page 346 for the definition of a dwarf planet.

Ceres

Distance from the Sun	
Perihelion	237 mil mi (2.55 AU)
Semi-major axis (mean distance)	257 mil mi (2.77 AU)
Period of revolution around Sun	4.6 y
Orbital eccentricity	0.0789
Orbital inclination	10.58°
Sidereal day	9.075 hours
Mass (Earth = 1)	0.00016
Mean radius	300 mi

Ceres was the first asteroid ever discovered, on Jan. 1, 1801, by Guiseppe Piazzi. In the 1800s, it was considered a planet, but as more asteroids were discovered, it lost that designation. In Aug. of 2006, it was designated a dwarf planet by the International Astronomical Union.

No probe has ever visited Ceres. NASA's DAWN space probe, launched in Sept. 2007, may become the first. The Dawn probe's mission is to Vesta and Ceres, the solar system's two largest asteroids. When Dawn arrives at Ceres in Feb. 2015, months before the New Horizons probe arrives at Pluto, it will be the first mission to study a dwarf planet.

Orbit and rotation. Ceres orbits the sun in the asteroid belt region between Mars and Jupiter.

Surface and composition. Ceres is in a class of stony meteorites known as carbonaceous chondrites. These are considered to be the oldest materials in the solar system, with a composition reflecting that of the primitive solar nebula. Extremely dark in color, probably because of their hydrocarbon content, they show evidence of having absorbed water of hydration. Thus, unlike the Earth and the Moon, they have never either melted or been reheated since they first formed.

Pluto

Distance from the Sun	
Perihelion	2,756.9 mil mi
Semi-major axis (mean distance)	3,647.2 mil mi (39.482 AU)
Aphelion	4,583.2 mil mi
Period of revolution around Sun	247.68 y
Orbital eccentricity	0.2488
Orbital inclination	17.16°
Synodic day (midday to midday)	6d 9h 17m (retrograde)
Sidereal day	6d 9h 18m (retrograde)
Rotational inclination	122.53°
Mass (Earth = 1)	0.0021
Mean radius	742.5 mi
Mean density (Earth = 1)	0.317
Natural satellites	3
Average surface temperature	–369°F

Pluto, named for the Roman god of the underworld, is the second largest known Kuiper Belt object (KBO) in the solar system. It was first discovered in 1930 by Clyde Tombaugh, and was classified as a planet until 2006 when the International Astronomical Union changed its designation to dwarf planet. The New Horizons spacecraft was launched on a voyage to Pluto and beyond in 2006; the spacecraft will make its closest approach to Pluto in July of 2015. In 2008, Pluto was designated by the IAU as the prototype for a class of objects called **plutoids**, bodies (a) whose average distance from the Sun is greater than Neptune's; (b) are large enough that gravity has determines their shape; and (c) have not cleared their orbit of other objects. Haumea, Makemake and Eris are also Plutoids, and at least 10 other Plutoid candidates have been identified through mid-2010.

Orbit and rotation. Highly irregular. Although Pluto on the average stays about 3.6 bil mi from the Sun, it may get as close as 2.76 bil mi, and for about 20 years of its orbit, it is closer to the Sun than Neptune. Currently, it is beyond Neptune's orbit.

Atmosphere and surface. Because no probes have visited Pluto, it is difficult for astronomers to accurately take readings of the dwarf planet's atmospheric composition. It is believed that an atmosphere of methane, nitrogen, and carbon monoxide exists when the dwarf planet is closer to the Sun. When Pluto is farther away from the sun during its orbit, the atmosphere freezes and becomes part of the surface. Large regions on Pluto are dark, others light; Pluto has spots and perhaps polar caps. There is also evidence of temperature fluctuations on the dwarf planet that may indicate primitive weather. Its core may be rocky with a mantle of water ice surrounding it.

Natural satellites. Pluto has 3 natural satellites. Charon, the biggest, has a diameter of 737 mi—about half of Pluto's diameter of 1,485 mi. No other planet of any kind has a moon so close to its size. Discovered in 1978, Charon orbits Pluto at a distance of 12,200 mi and takes 6.39 days to move around the dwarf planet. In this same length of time, Pluto and Charon both rotate once around their axes, meaning that a person standing on Pluto would always see the same face of Charon in the same part of the sky, every day and night. The Pluto-Charon system thus appears to rotate as virtually a rigid body. Both worlds are roughly spherical and have comparable densities. Because of these similarities and their peculiar relationship, there is a debate as to whether Charon should one day be designated a dwarf planet.

The 2 other moons, discovered in 2005 and 2006, were officially named Nix and Hydra.

Haumea

Distance from the Sun	
Semi-major axis (mean distance)	43.335 AU
Period of revolution around Sun	285 y
Mean radius	420 mi
Orbital eccentricity	0.189
Orbital inclination	28.19°
Mass (Earth = 1)	0.0007
Natural satellites	2

Haumea was discovered in 2004 and was accepted as a dwarf planet by the IAU in 2008.

Orbit and rotation. Haumea has a moderately eccentric orbit and takes about 285 years to go around the Sun.

Surface and composition. Spectra of Haumea indicate the presence of almost pure crystalline water ice. The surface reflects about 60% of sunlight shining on it. Haumea has a very oblong shape, twice as long as it is wide.

Natural satellites. Haumea has two natural satellites.

Makemake

Distance from the Sun	
Semi-major axis (mean distance)	45.791 AU
Period of revolution around Sun	310 y
Mean radius	450 mi
Orbital eccentricity	0.159
Orbital inclination	28.96°
Mass (Earth = 1)	0.0007

Makemake was discovered in 2005 and was accepted as a dwarf planet by the IAU in 2008.

Orbit and rotation. Makemake has a moderately eccentric orbit and takes about 310 years to go around the Sun.

Surface and composition. Spectra of Makemake indicate the presence of frozen methane, as well as several organic compounds. The surface is highly reflective and appears similar to that of Pluto.

Eris

Distance from the Sun	
Semi-major axis (mean distance)	67.6681 AU
Period of revolution around Sun	560 y
Mean radius	925 mi
Orbital eccentricity	0.44177
Orbital inclination	44.177°
Natural satellites	1
Mass (Earth = 1)	0.0027

Eris is the largest dwarf planet. Discovered in 2003 by astronomers at the California Institute of Technology, it is the most distant object ever seen in orbit around the Sun.

Orbit and rotation. Eris has a highly elliptical orbit and takes about 560 years to go around the Sun—more than twice the time it takes Pluto. Its inclination is steep, tilted at 44° to the planetary plane. It also has an extremely eccentric orbit. It will be at its closest, actually coming inside part of Pluto's orbit, in about 280 years.

Surface and composition. Eris, with a surface covered in frozen methane, may be similar to Pluto and the Neptunian moon Triton. Observations made by the Hubble Space Telescope show that Eris's surface is almost white and uniform, reflecting 86% of the light that hits it. This makes it the most reflective body in the solar system. The dwarf planet's interior is likely a mixture of rock and ice.

Natural satellites. Eris has one moon, Dysnomia.

Small Solar System Bodies: Asteroids, Comets, Kuiper Belt, and the Oort Cloud

Asteroids

Besides planets and moons, there are many smaller objects that orbit the sun. In 2006, the IAU officially designated these objects "small solar system bodies." **Asteroids** or minor planets are found mainly in a belt between the orbits of Mars and Jupiter, but some may be found outside this region. Within this belt there may be millions of asteroids of varying sizes. Most of asteroids are very small. Ceres, which can be classified both as an asteroid and a dwarf planet, is 588 mi in diameter is about one-quarter the diameter of our moon.

Some of these objects, or asteroids, are gravitationally locked with Jupiter and the Sun so that they have roughly the same orbit as Jupiter but are either 60° ahead or behind the planet. These are the **Trojan asteroids**. Many of the smaller moons of the solar system, especially those in retrograde orbits, may be captured asteroids. Asteroids whose orbits either cross or come close to the Earth's orbit are labeled **Near Earth asteroids** or NEAs. A handful of asteroids have actually been imaged by the Arecibo and Goldstone radio telescopes, and by the NEAR Shoemaker space probe, while the *Galileo* spacecraft imaged the asteroids Gaspra and Ida (including its moon Dactyl) on its way to Jupiter.

Comets

Comets are small icy bodies that orbit the Sun. When they approach the Sun, the energy from the Sun boils off material from the comet's icy nucleus, producing an enlarged head (or **coma**), and in many cases an extended tail. Because of the proximity to the Sun and the expanded head and tail, comets are brighter when near the Sun. For large comets, the head may be a 100,000 mi across and the tail more than a million mi long, though both are mainly empty space.

Comets have been known since ancient times; ultimately, British astronomer Edmund Halley (1656-1742) realized that a group of historical reports were just repeated visits of the same object. Comets are the only astronomical objects named after their discoverers. In 1986, the European spacecraft *Giotto* took the first close-up images of a comet's nucleus, specifically of Comet Halley, showing it had a peanut-shaped nucleus whose longest dimension was about 10 mi.

In 1995, Alan Hale and Thomas Bopp independently discovered a comet that was then beyond the orbit of Jupiter. It was the farthest comet ever discovered by amateurs and one of the brightest of all time. It also holds the record for length of naked-eye visibility—19 months—and is the most photographed comet in history. In July 2009, an amateur astronomer discovered a large impact scar in the upper atmosphere of Jupiter, likely the results of another cometary impact.

Kuiper Belt

The **Kuiper Belt** is a donut-shaped region that extends to about 50 AU from the Sun and is thought to be the source of short-period comets such as Comet Halley or Comet Swift-Tuttle. It is filled with icy bodies that are in solar orbit. The more than 1,000 objects found in this region in recent years are called Kuiper Belt objects (KBOs). It is estimated that there are more than 70,000 objects 60 mi in diameter or larger within the Kuiper Belt. Dwarf planets Pluto and Eris are considered KBOs. There are at least 6 KBOs larger than 300 mi in diameter.

Oort Cloud

The Oort Cloud is a vast spherical shell hypothesized to exist around the Sun. Astronomer Jan Oort proposed its existence as the origin for long-period comets that enter the inner part of the solar system where the planets orbit. As of yet, our technology is not sufficient to detect any members of the Oort Cloud, other than those comets that have been observed that indicate the most distant parts of their orbits may reach out to 50,000 AU. Recent examples of such long-period comets are Comet Hale-Bopp and Comet Hyakutake.

The Sun

Distance from Earth, mean	92.96 mil mi (1 AU)
Sidereal day	25.38 d
Mass (Earth=1)	332,900
Mean Radius	432,200 mi
Mean Density (Earth=1)	0.255
Average surface temperature	9,941°F

The Sun is the Earth's primary source of light and heat, and its closest star. The biggest object in the solar system, the Sun is 332,900 times more massive than Earth and contains 99.86% of the mass of the entire solar system. On the whole, the Sun is made up of about 92.1% hydrogen and 7.8% helium, with trace amounts of other elements. It has a mass and luminosity greater than that of 90% of the stars in the Milky Way galaxy. Although most of the stars that can be easily seen on a clear night are bigger and brighter than the Sun, its proximity to Earth makes it appear tremendously large and bright. The Sun is 400,000 times as bright as the full moon and it gives Earth 6 mil times as much light as do all other stars put together. Because of the great distance between the Sun and Earth, it takes about 499 seconds, or slightly more than 8 minutes, for light from the Sun to reach Earth.

Composition. The Sun has six regions. The first three from the inside out are the core, the radiative zone, and the convective zone. Together they form the interior. The others, which comprise the visible surface, are the photosphere, the chromosphere, and the outermost region, the corona.

The Sun's core is where its heat and energy are produced. Through a series of nuclear fusion reactions, hydrogen nuclei are converted to helium nuclei. Temperatures in the core are theorized to be 28 mil°F. From the core, photons transport the energy outward through the radiative zone. It can take photons several millions of years to pass through this area. In the convective zone, gases move energy outward at a faster rate. Like a boiling pot, bubbles of gas bring energy to the surface.

The photosphere is the visible surface of the sun, that is, the light from here is what we see as sunlight. When sunlight is analyzed with a spectroscope, it is found to consist of a continuous spectrum composed of all the colors of the rainbow in order, crossed by many dark lines. The dark "absorption lines" are produced by gaseous materials in the outer layers of the Sun. More than 60 of the natural terrestrial elements have been identified in the Sun, all in gaseous form because of the Sun's intense heat.

Just above the photosphere is the chromosphere, which is visible to the naked eye only at total solar eclipses, appearing then to be a pinkish-violet layer with occasional great prominences projecting above its general level. With proper instruments, the chromosphere can be seen or photographed whenever the Sun is visible. Above the chromosphere is the corona, also visible to the naked eye only at times of total eclipse or with instruments that permit the brighter portions of the corona to be seen. The light of the corona surges millions of miles from the Sun, where atoms of which it is composed are all in a state of extreme attenuation and high ionization that indicates temperatures nearly 2 mil°F.

Sunspots. These dark, irregularly shaped regions may reach diameters of thousands of miles. There is an intimate connection between sunspots and the corona. At times of low sunspot activity, the fine streamers of the corona are longer above the Sun's equator than over the polar regions of the Sun; during periods of high sunspot activity, the corona extends fairly evenly outward from all regions of the Sun, but to a much greater distance in space. The average life of a sunspot group is 2 months, but some have lasted for more than a year.

Sunspots reach a low point, on average, every 11.3 years, with a peak of activity occurring irregularly between 2 successive periods of minimal activity. Currently, the number of sunspots is declining. Solar minimum occurred late in 2006.

Solar wind and magnetic field. Magnetic arches, called prominences, may extend tens of thousands of miles into the corona, and may release enormous amounts of energy heating the corona. Coronal mass ejections are enormous releases of solar energy. Coronal holes are regions where the corona appears dark in X-rays, and are associated with open magnetic field lines, where the magnetic field lines project

out into space instead of back towards the Sun. It is in these regions where the high-speed solar wind originates.

The solar wind carries the Sun's magnetic field, which extends beyond the planets. This is called the interplanetary magnetic field (IMF). Far past Pluto and the Kuiper Belt, the solar wind and the IMF lose their influence, and the boundary between them and interstellar space is called the heliopause.

Searching for Extrasolar Planets

During the last 10 years of the 20th century, astronomers began to detect the presence of planets orbiting stars other than the Sun. Except for a few possible instances, they have not seen those objects, but merely inferred their existence by their effect on their parent star. The Sun is a typical star in many respects. With over 200 bil stars in the Milky Way, it seems plausible that many other stars might have planets.

As of summer 2010, astronomers had found a total of 473 planets orbiting 403 stars. Of those, 282 were at least as massive as Jupiter, which is about 318 times more massive than the Earth. About 191 of the planets may be less massive than Jupiter. Planets with masses less than Jupiter are now regularly discovered; at the time of this writing, the minimum confirmed mass for an extrasolar planet was near 3 times the mass of the Earth.

Using the Doppler Effect to detect radial velocity changes in the motions of individual stars, astronomers are more likely to find high-mass planets in close and eccentric orbits around stars, because that situation produces larger and more noticeable changes.

In addition to the radial velocity method, astronomers are now using an optical gravitational lensing means of detecting extrasolar planets. Using this technique, Southern Hemisphere astronomers found the most distant planet yet detected, about halfway to the center of our own Milky Way galaxy. Astronomers have also found planets by looking for the periodic dimming of starlight as orbiting planets pass in front of their host stars. About 25 planets have been discovered this way.

In 2005, astronomers obtained the first direct photograph of an extrasolar planet. The unnamed planet orbits a star called GQ Lupi, which is a star like our Sun but younger. The planet is about 100 AUs away from its star, and it is estimated to be about twice as massive as Jupiter.

In 2006, astronomers discovered what they call a "super Earth" orbiting a red dwarf star 9,000 light-years away. The planet appears to have about 13 times the mass of Earth and may be composed of rock and ice. Although the planet is similar in structure to the Earth, it is believed to orbit too far from its star for there to be any liquid on the surface. In 2007, astronomers for the first time detected water in the atmosphere of an extra-solar planet.

In Apr. 2009, NASA launched Kepler, the first telescope sensitive enough to detect Earth-sized planets around other stars. Kepler's first data release, in summer 2010, included data indicating that small planets are more common than large planets, with hints of planets with diameters as small as twice the diameter of Earth. All of the planet candidates to date orbit their stars much closer than Earth orbits the Sun. Kepler will need to observe for several more years to find evidence of Earth-sized planets at comparable distances from their stars.

Earth: Size, Computation of Time, Seasons

Distance from the Sun	
Perihelion	91.4 mil mi
Semi-major axis	93 mil mi (1.0000 AU)
Aphelion	94.5 mil mi
Period of revolution	365.256 d
Orbital eccentricity	0.0167
Orbital inclination	0°
Sidereal day (rotation period)	23h 56m 4.2s
Synodic day (midday to midday)	24h 0m 0s
Rotational inclination	23.45°
Mass (Earth = 1)	1
Mean radius	3,958.8 mi
Mean density (Earth = 1)	1
Natural satellites	1
Average surface temperature	59°F

Earth is the 5th-largest planet and the 3rd from the Sun. Its mass is 5.9736 x 10^{24} kg. Earth's equatorial diameter is 7,926 mi while its polar diameter is only 7,900 mi.

Size and dimensions. Earth is considered a solid mass, yet it has a large, liquid iron, **magnetic core** with a radius of about 2,160 mi. Surprisingly, it has a solid **inner core** that may be a large iron crystal, with a radius of 760 mi. Around the core is a thick shell, or **mantle**, of dense rock. This mantle is composed of materials rich in iron and magnesium. It is somewhat plastic-like, and under slow steady pressure, it can flow like a liquid. The mantle, in turn, is covered by a thin **crust** forming the solid granite and basalt base of the continents and ocean basins. Over broad areas of Earth's surface, the crust has a thin cover of sedimentary rock such as sandstone, shale, and limestone formed by weathering and by deposits of sands, clays, and plant and animal remains.

The temperature inside the Earth increases about 1°F with every 100 to 200 ft in depth, in the upper 100 km of Earth, and reaches nearly 8,000-9,000°F at the center. The heat is believed to come from radioactivity in rocks, pressures within Earth, and the original heat of formation.

Atmosphere of Earth. Earth's atmosphere is a blanket composed of 78% nitrogen, 21% oxygen, and 1% argon. Present in minute quantities are carbon dioxide, hydrogen, neon, helium, krypton, and xenon. Water vapor displaces other gases and varies from nearly zero to about 4% by volume. The atmosphere rests on Earth's surface with a weight equivalent to a layer of water 34 ft deep. For about 300,000 ft upward, the gases remain in the proportions stated. Gravity holds the gases to Earth. The weight of the air compresses it at the bottom so that the greatest density is at Earth's surface. Pressure and density decrease as height increases.

The lowest layer of the atmosphere extending up about 7.5 mi is the **troposphere**, which contains 90% of the air and the tallest mountains. This is also where most weather phenomena occur. The temperature drops with increasing height throughout this layer. The atmosphere for about 23 mi above the troposphere is the **stratosphere**, where the temperature generally increases with height. The stratosphere contains **ozone**, which prevents ultraviolet rays from reaching Earth's surface. Since there is very little convection in the stratosphere, jets regularly cruise in the lower parts to provide a smoother ride for passengers.

Above the stratosphere is the **mesosphere**, where the temperature again decreases with height for another 19 mi. Extending above the mesosphere to the outer fringes of the atmosphere is the **thermosphere**, a region where temperature once more increases with height to a value measured in thousands of degrees Fahrenheit. The lower portion of this region, extending from 50 to about 400 mi in altitude, is characterized by a high ion density and is thus called the **ionosphere**. Most meteors are in the lower thermosphere or the mesosphere at the time they are observed.

Longitude and latitude. Position on the globe is measured by meridians and parallels. Meridians, which are imaginary lines drawn around Earth through the poles, determine **longitude**. The meridian running through Greenwich, England, is the **prime meridian** of longitude, and all others are either E or W. Parallels, which are imaginary circles parallel with the equator, determine **latitude**. The length of a degree of longitude varies as the cosine of the latitude. At the equator a degree of longitude is 69.171 statute mi; this is gradually reduced toward the poles. Value of a longitude degree at the poles is zero.

Latitude is reckoned by the number of degrees N or S of the **equator**, an imaginary circle on Earth's surface everywhere equidistant between the two poles. According to the International Astronomical Union, the length of a degree of latitude is 68.708 statute mi at the equator and varies slightly N and S because of the oblate form of the globe; at the poles it is 69.403 statute mi.

Definitions of time. Earth rotates on its axis and follows an elliptical orbit around the Sun. The rotation makes the Sun appear to move across the sky from E to W. This rotation determines day and night, and the complete rotation, in relation to

the Sun, is called the **apparent or true solar day**. A sundial thus measures **apparent solar time**. This length of time varies, but an average determines the mean solar day of 24 hours.

The mean solar day and **mean solar time** are in universal use for civil purposes. Mean solar time may be obtained from apparent solar time by correcting observations of the Sun for the **equation of time**. Mean solar time may be up to 16 minutes different from apparent solar time.

Sidereal time is the measure of time defined by the diurnal motion of the vernal equinox and is determined from observation of the meridian transits of stars. One complete rotation of Earth relative to the equinox is called the **sidereal day**. The **mean sidereal day** is 23 hours, 56 minutes, 4.091 seconds of mean solar time.

The interval required for Earth to make one absolute revolution around the Sun is a **sidereal** year; it consisted of 365 days, 6 hours, 9 minutes, and 9.5 seconds of mean solar time (approximately 24 hours per day) in 1900 and has been increasing at the rate of 0.0001 second annually.

The **tropical year**, upon which our calendar is based, is the interval between 2 consecutive returns of the Sun to the vernal equinox. The tropical year consisted of 365 days, 5 hours, 48 minutes, and 46 seconds in 1900. It has been decreasing at the rate of 0.53 second per century. The **calendar year** begins at 12 o'clock midnight precisely, local clock time, on the night of Dec. 31-Jan. 1. The day and the calendar month also begin at midnight by the clock.

On Jan. 1, 1972, the Bureau International des Poids et Mesures in Paris introduced **International Atomic Time** (TAI) as the most precisely determined time scale for astronomical usage. The fundamental unit of TAI in the international system of units is the second, defined as the duration of 9,192,631,770 periods of the radiation corresponding to the transition between 2 hyperfine levels of the ground state of the cesium-133 atom. **Coordinated Universal Time** (UTC), which serves as the basis for civil timekeeping and is the standard time of the prime meridian, is officially defined by a formula which relates UTC to mean sidereal time in Greenwich, England. (UTC has replaced GMT as the basis for standard time for the world.)

Zones and seasons. The 5 zones of Earth's surface are the Torrid, lying between the Tropics of Cancer and Capricorn; the N Temperate, between Cancer and the Arctic Circle; the S Temperate, between Capricorn and the Antarctic Circle; and the 2 Frigid Zones, between the Polar Circles and the Poles.

The inclination, or tilt, of Earth's axis, 23°27′ away from a perpendicular to Earth's orbit of the Sun, determines the seasons. These are commonly marked in the N Temperate Zone, where spring begins at the vernal equinox, summer at the summer solstice, autumn at the autumnal equinox, and winter at the winter solstice. In the S Temperate Zone, the seasons are reversed. Spring begins at the autumnal equinox, summer at the winter solstice, etc.

The points at which the Sun crosses the equator are the **equinoxes**, when day and night are most nearly equal. The points at which the Sun is at a maximum distance from the equator are the **solstices**. Days and nights are then most unequal. However, at the equator, day and night are equal throughout the year.

In June, the North Pole is tilted 23°27′ toward the Sun, and the days in the Northern Hemisphere are longer than the nights, while the days in the Southern Hemisphere are shorter than the nights. In Dec., the North Pole is tilted 23°27′ away from the Sun, and the situation is reversed.

The Seasons in 2011. In 2011, the four seasons begin in the Northern Hemisphere as shown. (Add 1 hour to Eastern Standard Time for Atlantic Time; subtract 1 hour for Central, 2 for Mountain, 3 for Pacific, 4 for Alaska, 5 for Hawaii-Aleutian. Also shown is Coordinated Universal Time.)

Seasons	Date	UTC	EST/EDT
Vernal equinox (spring)	Mar. 20	23:21	19:21 EDT
Northern solstice (summer)	June 21	17:16	13:16 EDT
Autumnal equinox (fall)	Sept. 23	09:05	05:05 EDT
Southern solstice (winter)	Dec. 22	05:30	00:30 EST

Poles of Earth. The geographic (rotation) poles, or points where Earth's axis of rotation cuts the surface, are not absolutely fixed in the body of Earth. The pole of rotation describes an irregular curve about its mean position.

Two periods have been detected in this motion: (1) an annual period due to seasonal changes in barometric pressure, to load of ice and snow on the surface, and to other seasonal phenomena; (2) a period of about 14 months due to the shape and constitution of Earth. In addition, there are small but as yet unpredictable irregularities. The whole motion is so small that the actual pole at any time remains within a circle of 30 or 40 ft in radius centered at the mean position of the pole.

The pole of rotation for the time being is of course the pole having a latitude of 90° and an indeterminate longitude.

Magnetic poles. Although Earth's magnetic field resembles that of an ordinary bar magnet, this magnetic field is probably produced by electric currents in the liquid currents of the Earth's outer core. The **north magnetic pole** of Earth is that region where the magnetic force is vertically downward, and the **south magnetic pole** is that region where the magnetic force is vertically upward. A compass placed at the magnetic poles experiences no directive force in azimuth (i.e., direction).

There are slow changes in the distribution of Earth's magnetic field. This slow temporal change is referred to as the secular change of the main magnetic field, and the magnetic poles shift due to this. The location of the N magnetic pole was first measured in 1831 at Cape Adelaide on the west coast of Boothia Peninsula in Canada's Northwest Territories (about latitude 70°N and longitude 96°W). Since then it has moved over 500 mi. It is now estimated to be at 82.7°N and 114.4°W, northwest of Ellef Ringnes Island in northern Canada. Measurement for several decades by Canadian scientists indicates the motion of the pole has accelerated, now averaging about 25 mi per year.

The direction of the horizontal components of the magnetic field at any point is known as magnetic N at that point, and the angle by which it deviates E or W of true N is known as the magnetic declination.

A compass without error points in the direction of magnetic north. (In general, this is not the direction of the true rotational north pole.) If you follow the direction indicated by the N end of the compass, you will go along an irregular curve that eventually reaches the north magnetic pole (though not usually by a great-circle route). However, the action of the compass should not be thought of as due to any influence of the distant pole, but simply as an indication of the distribution of Earth's magnetism at the place of observation.

Rotation of Earth. The speed of rotation of Earth about its axis is slightly variable. The variations may be classified as:

(A) **Secular.** Tidal friction acts as a brake on the rotation and causes a slow secular increase in the length of the day, about 1 millisecond per century.

(B) **Irregular.** The speed of rotation may increase for a number of years, about 5 to 10, and then start decreasing. The maximum difference from the mean in the length of the day during a century is about 5 milliseconds. The accumulated difference in time has amounted to approximately 44 seconds since 1900. The cause is probably motion in the interior of Earth.

(C) **Periodic.** Seasonal variations exist with periods of 1 year and 6 months. The cumulative effect is such that each year, Earth is late about 30 milliseconds near June 1 and is ahead about 30 milliseconds near Oct. 1. The maximum seasonal variation in the length of the day is about 0.5 millisecond. It is believed that the principal cause of the annual variation is the seasonal change in the wind patterns of the Northern and Southern Hemispheres. The semiannual variation is due chiefly to tidal action of the Sun, which distorts the shape of Earth slightly.

The Moon

Distance from Earth	
Perigee	225,744 mi
Semi-major axis	238,855 mi
Apogee	251,966 mi
Period of revolution	27.322 d
Synodic orbital period (period of phases)	29.53 d
Orbital eccentricity	0.0549
Orbital inclination	5.145°
Sidereal day (rotation period)	27.322 d
Rotational inclination	6.68°
Mass (Earth = 1)	0.0123
Mean radius	1,079 mi
Mean density (Earth = 1)	0.607
Average surface temperature	–100°F

The Moon is the second brightest object in the sky (the sun is the first). Earth's only natural satellite, the Moon is the force behind the rising and falling of tides, and it helps to regulate the Earth's orbit around the sun. Many probes have been sent to the moon and between 1969 and 1972, 12 U.S. astronauts walked on its surface. The Moon is the subject of renewed international interest. In 2007, Japan and China orbited satellites around the Moon, India orbited a spacecraft in fall 2008, and the U.S. sent an orbiter and impactor in 2009. It is expected that several nations, including the U.S. and China, will send humans back to the Moon in the next 15 years. In Sept. 2009, American scientists announced the discovery of a thin layer of water ice near the lunar poles. The LCROSS impactor mission impacted the lunar south polar region in Oct. 2009. The plume of material thrown up in the impact included water plus a variety of other chemical species, indicating that the lunar regolith harbors a rich and active chemistry.

Orbit and rotation. The Moon completes a circuit around Earth in a period that averages 27 days, 7 hours, 43.2 minutes. This is the Moon's sidereal period. Because of the motion of the Moon in common with Earth around the Sun, the mean duration of the lunar month—the period from one New Moon to the next New Moon—is 29 days, 12 hours, 44.05 minutes. This is the Moon's synodic period.

The mean distance of the Moon from Earth is 238,855 mi, but its orbit about Earth is elliptical, and thus the actual distance varies considerably. The maximum distance from Earth that the Moon may reach is 251,966 mi and the least distance is 225,744 mi.

The Moon rotates on its axis in a period of time that is exactly equal to its sidereal revolution about Earth—27.322 days. Thus the backside, or farside, of the Moon always faces away from Earth. But this does not mean that the backside is always dark. The farside of the Moon gets just as much direct sunlight as the nearside; at New Moon phase, the farside of the Moon is fully lit but not visible from Earth.

The Moon's revolution about Earth is irregular because of its elliptical orbit. The Moon's rotation, however, is regular, and this, together with the irregular revolution, produces what is called libration in longitude, which permits an observer on Earth to see first farther around the eastern side and then farther around the western side of the Moon. The Moon's variation north or south of the ecliptic permits one to see farther over first one pole of the Moon and then the other; this is called libration in latitude. These two libration effects permit observers on Earth to see a total of about 60% of the Moon's surface over a period of time.

Atmosphere and surface. The Moon, like the planet Mercury, has no real atmosphere to speak of. What little exists is variable and tenuous. With its long day and night, the daytime temperature can reach 260°F, while the coldest nighttime temperature may reach –280°F. This day-to-night contrast is exceeded only by that on Mercury.

The lunar surface has not changed much since humans have been observing it. The side visible from Earth has large craters and vast dark areas called *maria* that were once lava. The farside has almost no maria but is pockmarked with craters.

Recent findings show that up to 300 mil metric tons of water ice may exist in craters at the lunar poles. In its interior, the Moon may have a small core, which supports the idea that most of the mass of the Moon was ripped away from the early Earth when a Mars-size object collided with Earth. The hidden side of the Moon was first photographed in 1959 by the Soviet space probe *Lunik III*.

Harvest moon and hunter's moon. The harvest moon, the full Moon nearest the autumnal equinox, ushers in a period of several successive days when the Moon rises soon after sunset. This phenomenon gives farmers in temperate latitudes extra hours of light in which to harvest their crops before frost and winter. The 2011 harvest moon falls on Sept. 12. Harvest moon in the Southern Hemisphere temperate latitudes falls on Mar. 19.

The next full Moon after harvest moon is called the hunter's moon; it is accompanied by a similar but less marked phenomenon. In 2011, the hunter's moon occurs on Oct. 12 in the Northern Hemisphere and on Apr. 18 in the Southern Hemisphere.

Moon's Perigee and Apogee, 2011

Perigee is the point in the moon's orbit where it is closest to the Earth. Apogee is the point where it is farthest.

(In Coordinated Universal Time, standard time of the prime meridian.)

Perigee		Perigee		Apogee		Apogee	
Date	Hour	Date	Hour	Date	Hour	Date	Hour
Jan. 22	0	July 7	14	Jan. 10	6	June 24	4
Feb. 19	7	Aug. 2	21	Feb. 6	23	July 21	23
Mar. 19	19	30	18	Mar. 6	8	Aug. 18	16
Apr. 17	6	Sept. 28	1	Apr. 2	9	Sept. 15	6
May 15	11	Oct. 26	12	29	18	Oct. 12	12
June 12	2	Nov. 23	23	May 27	10	Nov. 8	13
		Dec. 22	3			Dec. 6	1

Moon Phases, 2011

(In Coordinated Universal Time, standard time of the prime meridian.)

New Moon				Waxing Quarter				Full Moon				Waning Quarter			
Month	d	h	m	Month	d	h	m	Month	d	h	m	Month	d	h	m
Jan.	4	9	3	Jan.	12	11	31	Jan.	19	21	21	Jan.	26	12	57
Feb.	3	2	31	Feb.	11	7	18	Feb.	18	8	36	Feb.	24	23	26
Mar.	4	20	46	Mar.	12	23	45	Mar.	19	18	10	Mar.	26	12	7
Apr.	3	14	32	Apr.	11	12	5	Apr.	18	2	44	Apr.	25	2	47
May	3	6	51	May	10	20	33	May	17	11	9	May	24	18	52
June	1	21	3	June	9	2	11	June	15	20	14	June	23	11	48
July	1	8	54	July	8	6	29	July	15	6	40	July	23	5	2
	30	18	40												
Aug.	29	3	4	Aug.	6	11	8	Aug.	13	18	57	Aug.	21	21	54
Sept.	27	11	9	Sept.	4	17	39	Sept.	12	9	27	Sept.	20	13	39
Oct.	26	19	56	Oct.	4	3	15	Oct.	12	2	2	Oct.	20	3	30
Nov.	25	6	10	Nov.	2	16	38	Nov.	10	20	16	Nov.	18	15	9
Dec.	24	18	6	Dec.	2	9	52	Dec.	10	14	36	Dec.	18	0	48

CALENDAR

Julian and Gregorian Calendars; Leap Year; Century

The **Julian calendar**, under which all Western nations measured time until 1582 CE, was authorized by Julius Caesar in 46 BCE. It called for a year of 365¼ days, starting in January, with every 4th year being a **leap year** of 366 days. St. Bede, an Anglo-Saxon monk also known as the Venerable Bede, announced in 730 CE that the Julian year was 11 min., 14 sec. too long, a cumulative error of about a day every 128 years, but nothing was done about this for centuries.

By 1582 the accumulated error was estimated at 10 days. In that year Pope Gregory XIII decreed that the day following Oct. 4, 1582, should be called Oct. 15, thus dropping 10 days and initiating the **Gregorian calendar**.

The Gregorian calendar continued a system devised by the monk Dionysius Exiguus (6th century), starting from the first year following the birth of Jesus Christ, which was inaccurately taken to be year 753 in the Roman calendar. Leap years were continued but, to prevent further displacements, centesimal years (years ending in 00) were made common years, not leap years, unless divisible by 400. Under this plan, 1600 and 2000 were leap years (as was 2004); 1700, 1800, and 1900 were not.

The Gregorian calendar was adopted at once by France, Italy, Spain, Portugal, and Luxembourg. Within 2 years most German Catholic states, Belgium, and parts of Switzerland and the Netherlands were brought under the new calendar, and Hungary followed in 1587. The rest of the Netherlands, along with Denmark and the German Protestant states, made the change in 1699-1700.

The British government adopted the Gregorian calendar and imposed it on all its possessions, including the American colonies, in 1752, decreeing that the day following Sept. 2, 1752, should be called Sept. 14, a loss of 11 days. All dates preceding were marked OS, for Old Style. In addition, New Year's Day was moved to Jan. 1 from Mar. 25 (under the old reckoning, for example, Mar. 24, 1700, had been followed by Mar. 25, 1701). Thus George Washington's birthdate, which was Feb. 11, 1731, OS, became Feb. 22, 1732, NS (New Style). In 1753 Sweden also went Gregorian.

In 1793 the French revolutionary government adopted a calendar of 12 months of 30 days each with 5 extra days in September of each common year and 6 extra days every 4th year. Napoleon reinstated the Gregorian calendar in 1806.

The Gregorian system later spread to non-European regions, replacing traditional calendars at least for official purposes. Japan in 1873, Egypt in 1875, China in 1912, and Turkey in 1925 made the change, usually in conjunction with political upheaval. In China, the republican government began reckoning years from its 1911 founding. After 1949, the People's Republic adopted the Common, or Christian Era, year count, even for the traditional lunar calendar, which it retained. In 1918 the Soviet Union decreed that the day after Jan. 31, 1918, OS, would be Feb. 14, 1918, NS. Greece changed over in 1923. For the first time in history, all major nations had one calendar. The Russian Orthodox church and some other Christian sects retained the Julian calendar.

To convert from the Julian to the Gregorian calendar, add 10 days to dates Oct. 5, 1582, through Feb. 28, 1700; after that date add 11 days through Feb. 28, 1800; 12 days through Feb. 28, 1900; and 13 days through Feb. 28, 2100.

A **century** consists of 100 consecutive years. The 1st century CE may be said to have run from the years 1 through 100. The 20th century by this reckoning consisted of the years 1901 through 2000 and ended Dec. 31, 2000, as did the 2nd millennium CE. The 21st century thus technically began Jan. 1, 2001.

For a **Perpetual Calendar**, see pages 360-61.

Gregorian Calendar

Choose the desired year from the table below or from the Perpetual Calendar (for years 1803 to 2080). The number after each year designates which calendar to use for that year, as shown in the Perpetual Calendar. (The Gregorian calendar was inaugurated Oct. 15, 1582. From that date to Dec. 31, 1582, use calendar 6.)

1583-1802

1583	7	1603	4	1623	1	1643	5	1663	2	1683	6	1703	2	1723	6	1743	3	1763	7	1783	4
1584	8	1604	12	1624	9	1644	13	1664	10	1684	14	1704	10	1724	14	1744	11	1764	8	1784	12
1585	3	1605	7	1625	4	1645	1	1665	5	1685	2	1705	5	1725	2	1745	6	1765	3	1785	7
1586	4	1606	1	1626	5	1646	2	1666	6	1686	3	1706	6	1726	3	1746	7	1766	4	1786	1
1587	5	1607	2	1627	6	1647	3	1667	7	1687	4	1707	7	1727	4	1747	1	1767	5	1787	2
1588	13	1608	10	1628	14	1648	11	1668	8	1688	12	1708	8	1728	12	1748	9	1768	13	1788	10
1589	1	1609	5	1629	2	1649	6	1669	3	1689	7	1709	3	1729	7	1749	4	1769	1	1789	5
1590	2	1610	6	1630	3	1650	7	1670	4	1690	1	1710	4	1730	1	1750	5	1770	2	1790	6
1591	3	1611	7	1631	4	1651	1	1671	5	1691	2	1711	5	1731	2	1751	6	1771	3	1791	7
1592	11	1612	8	1632	12	1652	9	1672	13	1692	10	1712	13	1732	10	1752	14	1772	11	1792	8
1593	6	1613	3	1633	7	1653	4	1673	1	1693	5	1713	1	1733	5	1753	2	1773	6	1793	3
1594	7	1614	4	1634	1	1654	5	1674	2	1694	6	1714	2	1734	6	1754	3	1774	7	1794	4
1595	1	1615	5	1635	2	1655	6	1675	3	1695	7	1715	3	1735	7	1755	4	1775	1	1795	5
1596	9	1616	13	1636	10	1656	14	1676	11	1696	8	1716	11	1736	8	1756	12	1776	9	1796	13
1597	4	1617	1	1637	5	1657	2	1677	6	1697	3	1717	6	1737	3	1757	7	1777	4	1797	1
1598	5	1618	2	1638	6	1658	3	1678	7	1698	4	1718	7	1738	4	1758	1	1778	5	1798	2
1599	6	1619	3	1639	7	1659	4	1679	1	1699	5	1719	1	1739	5	1759	2	1779	6	1799	3
1600	14	1620	11	1640	8	1660	12	1680	9	1700	6	1720	9	1740	13	1760	10	1780	14	1800	4
1601	2	1621	6	1641	3	1661	7	1681	4	1701	7	1721	4	1741	1	1761	5	1781	2	1801	5
1602	3	1622	7	1642	4	1662	1	1682	5	1702	1	1722	5	1742	2	1762	6	1782	3	1802	6

The Julian Period

How many days have you lived? To determine this, multiply your age by 365, add the number of days since your last birthday, and account for all leap years. Chances are your calculations will go wrong somewhere. Astronomers, however, find it convenient to express dates and time intervals in days rather than in years, months, and days. This is done by placing events within the Julian period.

The Julian period was devised in 1582 by the French classical scholar Joseph Scaliger (1540-1609), who named it after his father, Julius Caesar Scaliger, not after the Julian calendar as might be supposed.

Scaliger began with a zero hour, or starting time, of noon on Jan. 1, 4713 BCE (on the Julian calendar). This was the most recent time that 3 major chronological cycles began on the same day: (1) the 28-year solar cycle, after which dates in the Julian calendar (e.g., Feb. 11) return to the same days of the week (e.g., Monday); (2) the 19-year lunar cycle, after which the phases of the moon return to the same dates of the year; and (3) the 15-year indiction cycle, used in ancient Rome to regulate taxes.

It will take 7,980 years to complete the period, the product of 28, 19, and 15.

Noon (Universal Time) of Jan. 1, 2011, will be Julian Date (JD) 2,455,563; that many days will have passed since the start of the Julian period. The JD at noon of any date in 2011 may be found by adding to this figure the day of the year for that date, which can be obtained from the left half of the "How Far Apart Are Two Dates?" chart on the next page.

Julian Calendar

To find which of the 14 calendars of the Perpetual Calendar (pages 360-61) applies to any year under the Julian system, find the century for the desired year in the 3 leftmost columns below. Read across and find the year in the 4 top rows. Then read down. The number in the intersection is the calendar designation for that year. For some years and countries the Julian new year did not start Jan. 1; to find the correct Perpetual Calendar for Britain and its possessions, you can generally add one year for dates from Jan. 1-Mar. 24. For example, to look up Feb. 2, 1705, Old Style, use the year 1706.

Year (last 2 figures of desired year)

			01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
			29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
			57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
Century			00	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99												
0	700	1400	12	7	1	2	10	5	6	7	8	3	4	5	13	1	2	3	11	6	7	1	9	4	5	6	14	2	3	4	12
100	800	1500	11	6	7	1	9	4	5	6	14	2	3	4	12	7	1	2	10	5	6	7	8	3	4	5	13	1	2	3	11
200	900	1600	10	5	6	7	8	3	4	5	13	1	2	3	11	6	7	1	9	4	5	6	14	2	3	4	12	7	1	2	10
300	1000	1700	9	4	5	6	14	2	3	4	12	7	1	2	10	5	6	7	8	3	4	5	13	1	2	3	11	6	7	1	9
400	1100	1800	8	3	4	5	13	1	2	3	11	6	7	1	9	4	5	6	14	2	3	4	12	7	1	2	10	5	6	7	8
500	1200	1900	14	2	3	4	12	7	1	2	10	5	6	7	8	3	4	5	13	1	2	3	11	6	7	1	9	4	5	6	14
600	1300	2000	13	1	2	3	11	6	7	1	9	4	5	6	14	2	3	4	12	7	1	2	10	5	6	7	8	3	4	5	13

How Far Apart Are Two Dates?

This table covers a range of 2 years. To use, **find the numbers in the tables for each date and subtract** the smaller from the larger. For example, to find the number of days from Mar. 15, 2010, to Sept. 22, 2011, subtract 74 from 630; the result is 556. For leap years, such as 2008, where Feb. 29 intervenes, one day must be added to the result; thus Feb. 4, 2008, and Mar. 13, 2009, were 403 days apart.

First year

Date	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1	32	60	91	121	152	182	213	244	274	305	335
2	2	33	61	92	122	153	183	214	245	275	306	336
3	3	34	62	93	123	154	184	215	246	276	307	337
4	4	35	63	94	124	155	185	216	247	277	308	338
5	5	36	64	95	125	156	186	217	248	278	309	339
6	6	37	65	96	126	157	187	218	249	279	310	340
7	7	38	66	97	127	158	188	219	250	280	311	341
8	8	39	67	98	128	159	189	220	251	281	312	342
9	9	40	68	99	129	160	190	221	252	282	313	343
10	10	41	69	100	130	161	191	222	253	283	314	344
11	11	42	70	101	131	162	192	223	254	284	315	345
12	12	43	71	102	132	163	193	224	255	285	316	346
13	13	44	72	103	133	164	194	225	256	286	317	347
14	14	45	73	104	134	165	195	226	257	287	318	348
15	15	46	74	105	135	166	196	227	258	288	319	349
16	16	47	75	106	136	167	197	228	259	289	320	350
17	17	48	76	107	137	168	198	229	260	290	321	351
18	18	49	77	108	138	169	199	230	261	291	322	352
19	19	50	78	109	139	170	200	231	262	292	323	353
20	20	51	79	110	140	171	201	232	263	293	324	354
21	21	52	80	111	141	172	202	233	264	294	325	355
22	22	53	81	112	142	173	203	234	265	295	326	356
23	23	54	82	113	143	174	204	235	266	296	327	357
24	24	55	83	114	144	175	205	236	267	297	328	358
25	25	56	84	115	145	176	206	237	268	298	329	359
26	26	57	85	116	146	177	207	238	269	299	330	360
27	27	58	86	117	147	178	208	239	270	300	331	361
28	28	59	87	118	148	179	209	240	271	301	332	362
29	29	—	88	119	149	180	210	241	272	302	333	363
30	30	—	89	120	150	181	211	242	273	303	334	364
31	31	—	90	—	151	—	212	243	—	304	—	365

Second year

Date	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	366	397	425	456	486	517	547	578	609	639	670	700
2	367	398	426	457	487	518	548	579	610	640	671	701
3	368	399	427	458	488	519	549	580	611	641	672	702
4	369	400	428	459	489	520	550	581	612	642	673	703
5	370	401	429	460	490	521	551	582	613	643	674	704
6	371	402	430	461	491	522	552	583	614	644	675	705
7	372	403	431	462	492	523	553	584	615	645	676	706
8	373	404	432	463	493	524	554	585	616	646	677	707
9	374	405	433	464	494	525	555	586	617	647	678	708
10	375	406	434	465	495	526	556	587	618	648	679	709
11	376	407	435	466	496	527	557	588	619	649	680	710
12	377	408	436	467	497	528	558	589	620	650	681	711
13	378	409	437	468	498	529	559	590	621	651	682	712
14	379	410	438	469	499	530	560	591	622	652	683	713
15	380	411	439	470	500	531	561	592	623	653	684	714
16	381	412	440	471	501	532	562	593	624	654	685	715
17	382	413	441	472	502	533	563	594	625	655	686	716
18	383	414	442	473	503	534	564	595	626	656	687	717
19	384	415	443	474	504	535	565	596	627	657	688	718
20	385	416	444	475	505	536	566	597	628	658	689	719
21	386	417	445	476	506	537	567	598	629	659	690	720
22	387	418	446	477	507	538	568	599	630	660	691	721
23	388	419	447	478	508	539	569	600	631	661	692	722
24	389	420	448	479	509	540	570	601	632	662	693	723
25	390	421	449	480	510	541	571	602	633	663	694	724
26	391	422	450	481	511	542	572	603	634	664	695	725
27	392	423	451	482	512	543	573	604	635	665	696	726
28	393	424	452	483	513	544	574	605	636	666	697	727
29	394	—	453	484	514	545	575	606	637	667	698	728
30	395	—	454	485	515	546	576	607	638	668	699	729
31	396	—	455	—	516	—	577	608	—	669	—	730

Signs of the Zodiac

The **zodiac** is the apparent yearly path of the sun among the stars as viewed from earth, and was divided by the ancients into 12 equal sections or signs, each named for the constellation situated within its limits in ancient times. Astrologers claim that the temperament and destiny of each individual depend on the zodiac sign under which the person was born and the relationships between the planets at that time and throughout life.

Below are the 12 traditional signs and the traditional range of dates pertaining to each:


Aries (Ram), March 21–April 19


Taurus (Bull), April 20–May 20


Gemini (Twins), May 21–June 21


Cancer (Crab), June 22–July 22


Leo (Lion), July 23–August 22


Virgo (Virgin), August 23–September 22


Libra (Scales), September 23–October 23


Scorpio (Scorpion), October 24–November 21


Sagittarius (Archer), November 22–December 21


Capricorn (Goat), December 22–January 19


Aquarius (Water Bearer), January 20–February 18


Pisces (Fishes), February 19–March 20

Calendar for the Year 2011

JANUARY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

FEBRUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

MARCH

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JUNE

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

JULY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

OCTOBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Federal Holidays and Other Notable Dates, 2011

Some dates may be subject to change.

The dates marked on the calendar above and shown below *in italics* are U.S. federal holidays, designated by the president or Congress and applicable to federal employees and in the District of Columbia. Most U.S. states also observe these holidays, and many states observe others; practices vary from state to state. In most states the secretary of state's office can provide details.

January

1 New Year's Day (federal holiday observed Dec. 31, 2010); Rose Bowl; Fiesta Bowl
3 Orange Bowl
4 Sugar Bowl
10 BCS Football Championship Game (Glendale, AZ)
17 *Martin Luther King Jr. Day*
17-30 Australian Open tennis tournament
26 Australia Day, Australia
30 NFL Pro Bowl (Honolulu, HI)

February

2 Groundhog Day
6 Super Bowl XLV (Arlington, TX)
12 Lincoln's Birthday
14 Valentine's Day
14-15 Westminster Dog Show
20 Daytona 500; NBA All-Star Game (Los Angeles, CA)
21 *Washington's Birthday* (observed), Presidents' Day, or Washington-Lincoln Day (3rd Mon. in Feb.)
27 Academy Awards

March

4-8 Carnival, Brazil
5 Iditarod Trail Sled Dog Race begins
8 Mardi Gras
9 Ash Wednesday
13 Daylight Saving Time begins in U.S.
17 St. Patrick's Day
20 First day of Spring (Northern Hemisphere); Purim (Feast of Lots), starts previous night
21 Benito Juárez's Birthday, Mexico

April

1 April Fool's Day
2-4 NCAA men's basketball Final Four
3-5 NCAA women's basketball Final Four
4-10 Masters golf tournament
18 Patriots' Day; Boston Marathon (3rd Mon. in Apr.)
19 Passover, 1st full day
22 Good Friday; Earth Day
24 Easter
28 Take Our Daughters and Sons to Work Day
29 Arbor Day, U.S.

May

1 May Day
3 National Teacher Day, U.S.
5 Cinco de Mayo (Battle of Puebla Day), Mexico
7 Kentucky Derby
8 Mother's Day
10 Buddha's Birthday, Korea, Hong Kong
21 Armed Forces Day; Preakness Stakes
22-June 5 French Open tennis tournament
23 Victoria Day, Canada
30 *Memorial Day*, or Decoration Day (last Mon. in May)

June

6 Dragon Boat Festival, China
11 Belmont Stakes
14 Flag Day
16-19 U.S. Open golf tournament (Bethesda, MD)
19 Father's Day
20-July 3 Wimbledon tennis tournament
21 First day of summer (Northern Hemisphere)

July

1 Canada Day, Canada
4 *Independence Day*
7-14 Running of the Bulls (Pamplona, Spain)
14 Bastille Day, France
14-17 British Open golf tournament

August

1 Ramadan (Islamic month of fasting), 1st full day
8-14 PGA Championship

September

5 *Labor Day*, U.S. (1st Monday in Sept.); *Labor Day*, Canada
11 Grandparents' Day, U.S.
16 Independence Day, Mexico
17 Constitution Day and Citizenship Day, U.S.
23 First day of autumn (Northern Hemisphere)
29 Rosh Hashanah (New Year), 1st full day

October

3 U.S. Supreme Court session begins; German Unity Day, Germany
8 Yom Kippur (Day of Atonement), starts previous night
10 *Columbus Day* (2nd Mon. in Oct.); Thanksgiving Day, Canada
12 Día de la Raza, Spain, Mexico
24 United Nations Day
31 Halloween

November

1 All Saints' Day
1-2 Día de los Muertos, Mexico
5 Guy Fawkes Day, UK
6 New York City Marathon; Daylight Saving Time ends in U.S.
8 Election Day (1st Tues. after 1st Mon. in Nov.)
11 *Veterans Day*; Remembrance Day, Canada
13 Remembrance Sunday, UK
24 *Thanksgiving Day* (4th Thurs. in Nov.)
26 Islamic New Year (Muharram 1), starts previous night

December

10 Nobel Prizes awarded (winners announced in Oct.)
12 Día de la Virgen de Guadalupe, Mexico
21-28 Hanukkah (Festival of Lights), starts previous night
22 First day of winter (Northern Hemisphere)
25 Christmas Day
26 *Christmas Day* (federal holiday observed); Boxing Day, New Zealand, UK
26-Jan. 1 Kwanzaa
27 Boxing Day (observed), Australia, Canada; Christmas Day (bank holiday), UK

Chinese Calendar, Asian Festivals

Source: Chinese Information and Culture Center, New York, NY

The Chinese calendar, like the Jewish and Islamic calendars (see the Religion chapter), is a lunar calendar. It is divided into 12 months of 29 or 30 days (compensating for the lunar month's mean duration of 29 days, 12 hr., 44.05 min.). This calendar is synchronized with the solar year by the addition of extra months at fixed intervals.

The Chinese calendar runs on a 60-year cycle. The cycles 1876-1935 and 1936-95, with the years grouped under their 12 animal designations, are printed below, along with the first 24 years of the current cycle. This cycle began in 1996 and will last until 2055. Feb. 14, 2010, marks the beginning of the year 4708 in the Chinese calendar, and is designated the Year of the Tiger. Readers can find the animal name for the year of their birth in the chart below. (Note: The first 3-7 weeks of each Western year belong to the previous Chinese year and animal designation.)

Both the Western (Gregorian) and traditional lunar calendars are used publicly in China and in North and South Korea, and 2 New Year's celebrations are held. In Taiwan, overseas Chinese communities, and Vietnam, the lunar calendar is used only to set the dates for traditional festivals, with the Gregorian system in general use.

The 4-day Chinese New Year, the 3-day Vietnamese New Year festival, Tet, and the 3-to-4-day Korean festival, Suhl, begin at the 2nd new moon after the winter solstice. The new moon in the Far East, which is west of the International Date Line, may be a day later than the new moon in the U.S. The festivals may start, therefore, anywhere between Jan. 21 and Feb. 19 of the Gregorian calendar.

Rat	Ox	Tiger	Hare (Rabbit)	Dragon	Snake	Horse	Sheep (Goat)	Monkey	Rooster	Dog	Pig (Boar)
1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887
1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899
1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019

Other Calendars: Year and New Year's Day, 2011

Era	Year	Begins in 2011	Era	Year	Begins in 2011
Byzantine	7520	Sept. 14	Grecian (Seleucidae)	2323	Sept. 14 or Oct. 14
Jewish	5772	Sept. 29[1]	Diocletian	1728	Sept. 11
Roman (Ab Urbe Condita)	2764	Jan. 14	Indian (Saka)	1933	Mar. 22
Nabonassar (Babylonian)	2760	Apr. 23	Islamic/Muslim (Hijra)	1433	Nov. 27
Japanese (starts at 0 with new emperor)	23	Jan. 1	Chinese (Year of the Rabbit)	4709	Feb. 3

(1) Year begins at sunset of the previous day. (2) Year begins previous evening at moon crescent.

Chronological Cycles, 2011

Dominical Letter . . . . . B	Roman Indiction 4	Solar Cycle 4
Golden Number (Lunar Cycle) 17	Epact 25	Julian Period (year of) 6724

Special Months

There are many thousands of special months, days, and weeks because of anniversaries, official proclamations, and promotional events, both trivial and serious. Here are a few of the special months:

January: Jump Out of Bed Month, National Mentoring Month, National Poverty in America Awareness Month

February: Black History Month, American Heart Month, Library Lovers Month, Youth Leadership Month, Return Shopping Carts to the Supermarket Month

March: Irish-American Heritage Month, Women's History Month, American Red Cross Month, National Frozen Foods Month, National Talk With Your Teen About Sex Month

April: National Child Abuse Prevention Month, National Humor Month, Stress Awareness Month, Grange Month

May: Clean Air Month, Get Caught Reading Month, National Barbecue Month, Asian Pacific American Heritage Month, National Mental Health Month

June: National Candy Month, Gay and Lesbian Pride Month, Potty Training Awareness Month, National Safety Month

July: Cell Phone Courtesy Month, National Hot Dog Month, Women's Motorcycle Month

August: Black Business Month, National Inventors' Month, Happiness Happens Month, National Toddler Month

September: Library Card Sign-Up Month, National Hispanic Heritage Month (Sept. 15-Oct. 15), National Biscuit Month

October: National Domestic Violence Awareness Month, National Breast Cancer Awareness Month, Diversity Awareness Month, National Popcorn Poppin' Month

November: National AIDS Awareness Month, National American Indian Heritage Month, National Adoption Month, American Diabetes Month, Peanut Butter Lovers' Month

December: Universal Human Rights Month, National Drunk and Drugged Driving Prevention Month, National Tie Month, Colorectal Cancer Education and Awareness Month

Wedding Anniversaries

The traditional names for wedding anniversaries go back many years in social usage and have been used to suggest types of appropriate anniversary gifts. Traditional products for gifts are listed here in capital letters, with allowable revisions in parentheses, followed by common modern gifts in each category.

1st	PAPER, clocks	**9th**	POTTERY (CHINA), leather goods	**25th**	SILVER, sterling silver
2nd	COTTON, china	**10th**	TIN, ALUMINUM, diamond	**30th**	PEARL, diamond
3rd	LEATHER, crystal, glass	**11th**	STEEL, fashion jewelry	**35th**	CORAL (JADE), jade
4th	LINEN (SILK), appliances	**12th**	SILK, pearls, colored gems	**40th**	RUBY, ruby
5th	WOOD, silverware	**13th**	LACE, textiles, furs	**45th**	SAPPHIRE, sapphire
6th	IRON, wood objects	**14th**	IVORY, gold jewelry	**50th**	GOLD, gold
7th	WOOL (COPPER), desk sets	**15th**	CRYSTAL, watches	**55th**	EMERALD, emerald
8th	BRONZE, linens, lace	**20th**	CHINA, platinum	**60th**	DIAMOND, diamond

Birthstones

Source: Jewelry Industry Council

Month	Ancient	Modern	Month	Ancient	Modern
January	Garnet	Garnet	**July**	Onyx	Ruby
February	Amethyst	Amethyst	**August**	Carnelian	Sardonyx or Peridot
March	Jasper	Bloodstone or Aquamarine	**September**	Chrysolite	Sapphire
April	Sapphire	Diamond	**October**	Aquamarine	Opal or Tourmaline
May	Agate	Emerald	**November**	Topaz	Topaz
June	Emerald	Pearl, Moonstone, or Alexandrite	**December**	Ruby	Turquoise or Zircon

Standard Time, Daylight Saving Time, and Others

Source: National Geospatial-Intelligence Agency, Dept. of Defense

See also Time Zone map, page 460.

Standard Time

Standard Time is reckoned from the Prime Meridian of Longitude in Greenwich, England. The world is divided into 24 zones, each 15 deg of arc, or one hour in time apart. The Greenwich meridian (0 deg) extends through the center of the initial zone, and the zones to the east are numbered from 1 to 12, with the prefix "minus" indicating the number of hours to be subtracted to obtain Greenwich Time. Each zone extends 7.5 deg on either side of its central meridian.

Westward zones are similarly numbered, but prefixed "plus," showing the number of hours that must be added to get Greenwich Time. Although these zones apply generally to sea areas, the Standard Time maintained in many countries does not coincide with zone time.

The U.S. and possessions are divided into 10 Standard Time zones. Each zone is approximately 15 deg of longitude in width. All places in each zone use, instead of their own local time, the time counted from the transit of the "mean sun" across the Standard Time meridian that passes near the middle of that zone. These time zones are designated as Atlantic, Eastern, Central, Mountain, Pacific, Alaska, Hawaii-Aleutian, Samoa, Wake Island, and Guam; the time in these zones is reckoned from the 60th, 75th, 90th, 105th, 120th, 135th, 150th, and 165th meridians west of Greenwich and the 165th and 150th meridians east of Greenwich. The time zone line wanders to conform to local geographical regions. The time in the various zones in the U.S. and U.S. territories west of Greenwich is earlier than Greenwich Time by 4, 5, 6, 7, 8, 9, 10, and 11 hours, respectively. However, Wake Island and Guam cross the International Date Line and are 12 and 10 hours later than Greenwich Time, respectively.

24-Hour Time

Twenty-four-hour time is widely used in scientific work throughout the world. In the U.S. it is also used in operations of the armed forces. In Europe it is frequently used by the transportation networks in preference to the 12-hour AM and PM system. With the 24-hour system the day begins at midnight, and times are designated 00:00 through 23:59.

International Date Line

The Date Line, approximately coinciding with the 180th meridian, separates the calendar dates. The date must be advanced one day when crossing in a westerly direction and set back one day when crossing in an easterly direction. The Date Line frequently deviates from the 180th meridian because of decisions made by individual nations affected. The line is deflected eastward through the Bering Strait and westward of the Aleutians to prevent separating these areas by date. The line is deflected eastward of the Tonga and New Zealand Islands in the South Pacific for the same reason. In 1995, Kiribati announced that all of its islands east of the Date Line would observe the same date as islands to the west, though most maps and atlases do not depict this as a deviation in the Date Line. The line is established by international custom; there is no international authority prescribing its exact course.

Daylight Saving Time

Daylight Saving Time is achieved by advancing the clock one hour. Since 2007, Daylight Saving Time has begun at 2 AM on the 2nd Sunday in Mar. and ends at 2 AM on the first Sunday in Nov. **In 2011, Daylight Saving Time begins at 2 AM on Mar. 13 and ends at 2 AM on Nov. 6.** Prior to 2007, Daylight Saving Time traditionally ran from the first Sunday in Apr. to the last Sunday in Oct.

Daylight Saving Time was first observed in the U.S. during World War I, and then again during World War II. In the intervening years, some states and communities observed Daylight Saving Time, using whatever beginning and ending dates they chose. In 1966, Congress passed the Uniform Time Act, which provided that any state or territory that chooses to observe Daylight Saving Time must begin and end on the federal dates. Any state could, by law, exempt itself; a 1972 amendment to the act authorized states split by time zones to observe Daylight Saving Time in one time zone and standard time in the other time zone. Currently, Arizona, Hawaii, Puerto Rico, the U.S. Virgin Islands, Guam, and American Samoa do not observe Daylight Saving Time. On Apr. 2, 2006, all of Indiana observed Daylight Saving Time for the first time. The state remains divided between two time zones.

Congress and the secretary of transportation both have authority to change time zone boundaries, which they have done on a number of occasions since 1966. In addition, efforts to conserve energy have prompted various changes in the times that Daylight Saving Time is observed.

Daylight Saving Time: International Usage

Adjusting clock time so as to gain the added daylight on summer evenings is common throughout the world.

Canada, which extends over 6 time zones, generally observes Daylight Saving Time during the same period as the U.S. Most provincial governments—with the exceptions of Newfoundland, Nunavut, and Yukon—pledged to observe the 4 week extension to Daylight Saving Time that went into effect in 2007. Most of Saskatchewan remains on standard time all year. Communities elsewhere in Canada also may exempt themselves from Daylight Saving Time. Except for the state of Sonora, which shares a border with Arizona, most of Mexico observes Daylight Saving Time.

Member nations of the European Union (EU) observe a "summer-time period," a version of Daylight Saving Time, from the last Sunday of Mar. until the last Sunday in Oct.

Russia, which extends over 11 time zones, maintains its Standard Time 1 hour fast for its zone designation. Additionally, it proclaims Daylight Saving Time from the last Sunday in Mar. until the 4th Sunday in Oct.

China, which extends across 5 time zones, has decreed that the entire country be placed on Greenwich Time plus 8 hours. Daylight Saving Time is not observed. Japan, which lies within one time zone, also does not modify its legal time during the summer months.

Many countries in the Southern Hemisphere maintain Daylight Saving Time, generally from Oct. to Mar.; however, most countries near the equator do not deviate from Standard Time.

Perpetual Calendar

The number shown for each year indicates which Gregorian calendar to use. For 1583-1802, see "Gregorian Calendar" on page 355. For 1803-20, use numbers for 1983-2000, respectively. For Julian Calendar, see "Julian Calendar" on page 356.

1821 2	1847 6	1873 4	1899 1	1925 5	1951 2	1977 7	2003 4	2029 2	2055 6
1822 3	1848 14	1874 5	1900 2	1926 6	1952 10	1978 1	2004 12	2030 3	2056 14
1823 4	1849 2	1875 6	1901 3	1927 7	1953 5	1979 2	2005 7	2031 4	2057 2
1824 12	1850 3	1876 14	1902 4	1928 8	1954 6	1980 10	2006 1	2032 12	2058 3
1825 7	1851 4	1877 2	1903 5	1929 3	1955 7	1981 5	2007 2	2033 7	2059 4
1826 1	1852 12	1878 3	1904 13	1930 4	1956 8	1982 6	2008 10	2034 1	2060 12
1827 2	1853 7	1879 4	1905 1	1931 5	1957 3	1983 7	2009 5	2035 2	2061 7
1828 10	1854 1	1880 12	1906 2	1932 13	1958 4	1984 8	2010 6	2036 10	2062 1
1829 5	1855 2	1881 7	1907 3	1933 1	1959 5	1985 3	2011 7	2037 5	2063 2
1830 6	1856 10	1882 1	1908 11	1934 2	1960 13	1986 4	2012 8	2038 6	2064 10
1831 7	1857 5	1883 2	1909 6	1935 3	1961 1	1987 5	2013 3	2039 7	2065 5
1832 8	1858 6	1884 10	1910 7	1936 11	1962 2	1988 13	2014 4	2040 8	2066 6
1833 3	1859 7	1885 5	1911 1	1937 6	1963 3	1989 1	2015 5	2041 3	2067 7
1834 4	1860 8	1886 6	1912 9	1938 7	1964 11	1990 2	2016 13	2042 4	2068 8
1835 5	1861 3	1887 7	1913 4	1939 1	1965 6	1991 3	2017 1	2043 5	2069 3
1836 13	1862 4	1888 8	1914 5	1940 9	1966 7	1992 11	2018 2	2044 13	2070 4
1837 1	1863 5	1889 3	1915 6	1941 4	1967 1	1993 6	2019 3	2045 1	2071 5
1838 2	1864 13	1890 4	1916 14	1942 5	1968 9	1994 7	2020 11	2046 2	2072 13
1839 3	1865 1	1891 5	1917 2	1943 6	1969 4	1995 1	2021 6	2047 3	2073 1
1840 11	1866 2	1892 13	1918 3	1944 14	1970 5	1996 9	2022 7	2048 11	2074 2
1841 6	1867 3	1893 1	1919 4	1945 2	1971 6	1997 4	2023 1	2049 6	2075 3
1842 7	1868 11	1894 2	1920 12	1946 3	1972 14	1998 5	2024 9	2050 7	2076 11
1843 1	1869 6	1895 3	1921 7	1947 4	1973 2	1999 6	2025 4	2051 1	2077 6
1844 9	1870 7	1896 11	1922 1	1948 12	1974 3	2000 14	2026 5	2052 9	2078 7
1845 4	1871 1	1897 6	1923 2	1949 7	1975 4	2001 2	2027 6	2053 4	2079 1
1846 5	1872 9	1898 7	1924 10	1950 1	1976 12	2002 3	2028 14	2054 5	2080 9

1 2006

JANUARY							MAY							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7		1	2	3	4	5	6						1	2
8	9	10	11	12	13	14	7	8	9	10	11	12	13	3	4	5	6	7	8	9
15	16	17	18	19	20	21	14	15	16	17	18	19	20	10	11	12	13	14	15	16
22	23	24	25	26	27	28	21	22	23	24	25	26	27	17	18	19	20	21	22	23
29	30	31					28	29	30	31				24	25	26	27	28	29	30

FEBRUARY							JUNE							OCTOBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4					1	2	3	1	2	3	4	5	6	7
5	6	7	8	9	10	11	4	5	6	7	8	9	10	8	9	10	11	12	13	14
12	13	14	15	16	17	18	11	12	13	14	15	16	17	15	16	17	18	19	20	21
19	20	21	22	23	24	25	18	19	20	21	22	23	24	22	23	24	25	26	27	28
26	27	28					25	26	27	28	29	30		29	30	31				

MARCH							JULY							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4							1				1	2	3	4
5	6	7	8	9	10	11	2	3	4	5	6	7	8	5	6	7	8	9	10	11
12	13	14	15	16	17	18	9	10	11	12	13	14	15	12	13	14	15	16	17	18
19	20	21	22	23	24	25	16	17	18	19	20	21	22	19	20	21	22	23	24	25
26	27	28	29	30	31		23	24	25	26	27	28	29	26	27	28	29	30		
							30	31												

APRIL							AUGUST							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
						1			1	2	3	4	5						1	2
2	3	4	5	6	7	8	6	7	8	9	10	11	12	3	4	5	6	7	8	9
9	10	11	12	13	14	15	13	14	15	16	17	18	19	10	11	12	13	14	15	16
16	17	18	19	20	21	22	20	21	22	23	24	25	26	17	18	19	20	21	22	23
23	24	25	26	27	28	29	27	28	29	30	31			24	25	26	27	28	29	30
30														31						

2 2007

JANUARY							MAY							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6			1	2	3	4	5							1
7	8	9	10	11	12	13	6	7	8	9	10	11	12	2	3	4	5	6	7	8
14	15	16	17	18	19	20	13	14	15	16	17	18	19	9	10	11	12	13	14	15
21	22	23	24	25	26	27	20	21	22	23	24	25	26	16	17	18	19	20	21	22
28	29	30	31				27	28	29	30	31			23	24	25	26	27	28	29
														30						

FEBRUARY							JUNE							OCTOBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3						1	2			1	2	3	4	5
4	5	6	7	8	9	10	3	4	5	6	7	8	9	7	8	9	10	11	12	13
11	12	13	14	15	16	17	10	11	12	13	14	15	16	14	15	16	17	18	19	20
18	19	20	21	22	23	24	17	18	19	20	21	22	23	21	22	23	24	25	26	27
25	26	27	28				24	25	26	27	28	29	30	28	29	30	31			

MARCH							JULY							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3	1	2	3	4	5	6	7					1	2	3
4	5	6	7	8	9	10	8	9	10	11	12	13	14	4	5	6	7	8	9	10
11	12	13	14	15	16	17	15	16	17	18	19	20	21	11	12	13	14	15	16	17
18	19	20	21	22	23	24	22	23	24	25	26	27	28	18	19	20	21	22	23	24
25	26	27	28				29	30	31					25	26	27	28	29	30	

APRIL							AUGUST							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4							1
8	9	10	11	12	13	14	5	6	7	8	9	10	11	2	3	4	5	6	7	8
15	16	17	18	19	20	21	12	13	14	15	16	17	18	9	10	11	12	13	14	15
22	23	24	25	26	27	28	19	20	21	22	23	24	25	16	17	18	19	20	21	22
29	30						26	27	28	29	30	31		23	24	25	26	27	28	29
														30	31					

3 2013

JANUARY							MAY							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5				1	2	3	4	1	2	3	4	5	6	7
6	7	8	9	10	11	12	5	6	7	8	9	10	11	8	9	10	11	12	13	14
13	14	15	16	17	18	19	12	13	14	15	16	17	18	15	16	17	18	19	20	21
20	21	22	23	24	25	26	19	20	21	22	23	24	25	22	23	24	25	26	27	28
27	28	29	30	31			26	27	28	29	30	31		29	30					

FEBRUARY							JUNE							OCTOBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
					1	2							1					1	2	3
3	4	5	6	7	8	9	2	3	4	5	6	7	8	6	7	8	9	10	11	12
10	11	12	13	14	15	16	9	10	11	12	13	14	15	13	14	15	16	17	18	19
17	18	19	20	21	22	23	16	17	18	19	20	21	22	20	21	22	23	24	25	26
24	25	26	27	28			23	24	25	26	27	28	29	27	28	29	30	31		
							30													

MARCH							JULY							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
					1	2		1	2	3	4	5	6						1	2
3	4	5	6	7	8	9	7	8	9	10	11	12	13	3	4	5	6	7	8	9
10	11	12	13	14	15	16	14	15	16	17	18	19	20	10	11	12	13	14	15	16
17	18	19	20	21	22	23	21	22	23	24	25	26	27	17	18	19	20	21	22	23
24	25	26	27	28	29	30	28	29	30	31				24	25	26	27	28	29	30
31																				

APRIL							AUGUST							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3	1	2	3	4	5	6	7
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
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21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30					25	26	27	28	29	30	31	29	30	31				

4 2014

JANUARY							MAY							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4					1	2	3							
5	6	7	8	9	10	11	4	5	6	7	8	9	10	7	8	9	10	11	12	13
12	13	14	15	16	17	18	11	12	13	14	15	16	17	14	15	16	17	18	19	20
19	20	21	22	23	24	25	18	19	20	21	22	23	24	21	22	23	24	25	26	27
26	27	28	29	30	31		25	26	27	28	29	30	31	28	29	30				

FEBRUARY							JUNE							OCTOBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
						1	1	2	3	4	5	6	7				1	2	3	4
2	3	4	5	6	7	8	8	9	10	11	12	13	14	5	6	7	8	9	10	11
9	10	11	12	13	14	15	15	16	17	18	19	20	21	12	13	14	15	16	17	18
16	17	18	19	20	21	22	22	23	24	25	26	27	28	19	20	21	22	23	24	25
23	24	25	26	27	28		29	30						26	27	28	29	30	31	

MARCH							JULY							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
						1			1	2	3	4	5							1
2	3	4	5	6	7	8	6	7	8	9	10	11	12	3	4	5	6	7	8	9
9	10	11	12	13	14	15	13	14	15	16	17	18	19	10	11	12	13	14	15	16
16	17	18	19	20	21	22	20	21	22	23	24	25	26	17	18	19	20	21	22	23
23	24	25	26	27	28	29	27	28	29	30	31			24	25	26	27	28	29	30
30	31																			

APRIL							AUGUST							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
												1	2							
6	7	8	9	10	11	12	3	4	5	6	7	8	9	1	2	3	4	5	6	7
13	14	15	16	17	18	19	10	11	12	13	14	15	16	8	9	10	11	12	13	14
20	21	22	23	24	25	26	17	18	19	20	21	22	23	15	16	17	18	19	20	21
27	28	29	30				24	25	26	27	28	29	30	22	23	24	25	26	27	28
							31							29	30	31				

5 2009/2015

JANUARY							MAY							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3						1	2							
4	5	6	7	8	9	10	3	4	5	6	7	8	9	6	7	8	9	10	11	12
11	12	13	14	15	16	17	10	11	12	13	14	15	16	13	14	15	16	17	18	19
18	19	20	21	22	23	24	17	18	19	20	21	22	23	20	21	22	23	24	25	26
25	26	27	28	29	30	31	24	25	26	27	28	29	30	27	28	29	30			
							31													

FEBRUARY							JUNE							OCTOBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7		1	2	3	4	5	6							1
8	9	10	11	12	13	14	7	8	9	10	11	12	13	4	5	6	7	8	9	10
15	16	17	18	19	20	21	14	15	16	17	18	19	20	11	12	13	14	15	16	17
22	23	24	25	26	27	28	21	22	23	24	25	26	27	18	19	20	21	22	23	24
							28	29	30					25	26	27	28	29	30	31

MARCH							JULY							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4	1	2	3	4	5	6	7
8	9	10	11	12	13	14	5	6	7	8	9	10	11	8	9	10	11	12	13	14
15	16	17	18	19	20	21	12	13	14	15	16	17	18	15	16	17	18	19	20	21
22	23	24	25	26	27	28	19	20	21	22	23	24	25	22	23	24	25	26	27	28
29	30	31					26	27	28	29	30	31		29	30					

APRIL							AUGUST							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
													1							
5	6	7	8	9	10	11	2	3	4	5	6	7	8	6	7	8	9	10	11	12
12	13	14	15	16	17	18	9	10	11	12	13	14	15	13	14	15	16	17	18	19
19	20	21	22	23	24	25	16	17	18	19	20	21	22	20	21	22	23	24	25	26
26	27	28	29	30			23	24	25	26	27	28	29	27	28	29	30	31		
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6 2010

JANUARY							MAY							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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3	4	5	6	7	8	9	2	3	4	5	6	7	8	5	6	7	8	9	10	11
10	11	12	13	14	15	16	9	10	11	12	13	14	15	12	13	14	15	16	17	18
17	18	19	20	21	22	23	16	17	18	19	20	21	22	19	20	21	22	23	24	25
24	25	26	27	28	29	30	23	24	25	26	27	28	29	26	27	28	29	30		
31							30	31												

FEBRUARY							JUNE							OCTOBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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7	8	9	10	11	12	13	6	7	8	9	10	11	12	3	4	5	6	7	8	9
14	15	16	17	18	19	20	13	14	15	16	17	18	19	10	11	12	13	14	15	16
21	22	23	24	25	26	27	20	21	22	23	24	25	26	17	18	19	20	21	22	23
28							27	28	29	30				24	25	26	27	28	29	30
														31						

MARCH							JULY							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
7	8	9	10	11	12	13	4	5	6	7	8	9	10	1	2	3	4	5	6	7
14	15	16	17	18	19	20	11	12	13	14	15	16	17	8	9	10	11	12	13	14
21	22	23	24	25	26	27	18	19	20	21	22	23	24	15	16	17	18	19	20	21
28	29	30	31				25	26	27	28	29	30	31	22	23	24	25	26	27	28
														29	30					

APRIL							AUGUST							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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4	5	6	7	8	9	10	1	2	3	4	5	6	7	6	7	8	9	10	11	12
11	12	13	14	15	16	17	8	9	10	11	12	13	14	13	14	15	16	17	18	19
18	19	20	21	22	23	24	15	16	17	18	19	20	21	20	21	22	23	24	25	26
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7 2011

JANUARY

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FEBRUARY

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MARCH

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APRIL

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MAY

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JUNE

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JULY

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AUGUST

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SEPTEMBER

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OCTOBER

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NOVEMBER

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DECEMBER

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8 2012

JANUARY

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FEBRUARY

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MARCH

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APRIL

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JULY

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AUGUST

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SEPTEMBER

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OCTOBER

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NOVEMBER

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DECEMBER

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JANUARY

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FEBRUARY

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JULY

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DECEMBER

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FEBRUARY

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MARCH

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APRIL

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MAY

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JUNE

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JULY

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AUGUST

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SEPTEMBER

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OCTOBER

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NOVEMBER

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DECEMBER

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JANUARY

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FEBRUARY

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MARCH

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APRIL

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MAY

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JULY

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AUGUST

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OCTOBER

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JANUARY

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FEBRUARY

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MARCH

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APRIL

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JULY

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OCTOBER

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14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

AUGUST

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

SEPTEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

OCTOBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

NOVEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

DECEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

14 2000

JANUARY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

FEBRUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29				

MARCH

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

APRIL

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

MAY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

JUNE

S	M	T	W	T	F	S

Standard Time Differences: World Cities

The time indicated in the table is fixed by law and is called the legal time or, more generally, Standard Time. Use of Daylight Saving Time varies widely. *Indicates morning of the following day. At 12:00 noon, Eastern Standard Time, the Standard Time (in 24-hour time) in selected cities is as follows:

Addis Ababa	20	00	Helsinki	19	00	Paris	18	00
Amsterdam	18	00	Ho Chi Minh City	0	00*	Prague	18	00
Ankara	19	00	Hong Kong	1	00*	Quito	12	00
Athens	19	00	Islamabad	22	00	Rio de Janeiro	14	00
Auckland	5	00*	Istanbul	19	00	Riyadh	20	00
Baghdad	20	00	Jakarta	0	00*	Rome	18	00
Bangkok	0	00*	Jerusalem	19	00	St. Petersburg	20	00
Beijing	1	00*	Johannesburg	19	00	Santiago	13	00
Belfast	17	00	Kabul	21	50	Sarajevo	18	00
Belgrade	18	00	Karachi	22	00	Seoul	2	00*
Berlin	18	00	Kathmandu	22	45	Shanghai	1	00*
Bogotá	12	00	Kiev	19	00	Singapore	1	00*
Bombay (Mumbai)	22	30	Lagos	18	00	Stockholm	18	00
Brussels	18	00	Lima	12	00	Sydney	3	00*
Bucharest	19	00	Lisbon	17	00	Taipei	1	00*
Budapest	18	00	London	17	00	Tashkent	22	00
Buenos Aires	14	00	Madrid	18	00	Tehran	20	30
Cairo	19	00	Manila	1	00*	Tel Aviv	19	00
Calcutta (Kolkata)	22	30	Mecca	20	00	Tokyo	2	00*
Cape Town	19	00	Melbourne	3	00*	Vladivostok	3	00*
Caracas	13	00	Montevideo	14	00	Vienna	18	00
Casablanca	17	00	Moscow	20	00	Warsaw	18	00
Copenhagen	18	00	Munich	18	00	Wellington	5	00*
Dhaka	23	00	Nagasaki	2	00*	Yangon (Rangoon)	23	30
Dublin	17	00	Nairobi	20	00	Yokohama	2	00*
Edinburgh	17	00	New Delhi	22	30	Zurich	18	00
Geneva	18	00	Oslo	18	00			

Standard Time Differences: North American Cities

At 12:00 noon, Eastern Standard Time, the Standard Time in selected North American cities is as follows:

Akron, OH	12	00	Noon	Fort Wayne, IN[1]	12	00	Noon	Ottawa, ON	12	00	Noon
Albuquerque, NM	10	00	AM	Frankfort, KY	12	00	Noon	*Panama City, Panama	12	00	Noon
Anchorage, AK	8	00	AM	Havana, Cuba	12	00	Noon	Peoria, IL	11	00	AM
Atlanta, GA	12	00	Noon	Helena, MT	10	00	AM	*Phoenix, AZ	10	00	AM
Austin, TX	11	00	AM	*Honolulu, HI	7	00	AM	Pierre, SD	11	00	AM
Baltimore, MD	12	00	Noon	Houston, TX	11	00	AM	Pittsburgh, PA	12	00	Noon
Birmingham, AL	11	00	AM	Indianapolis, IN[1]	12	00	Noon	*Regina, SK	11	00	AM
Bismarck, ND	11	00	AM	Jackson, MS	11	00	AM	Reno, NV	9	00	AM
Boise, ID	10	00	AM	Jacksonville, FL	12	00	Noon	Richmond, VA	12	00	Noon
Boston, MA	12	00	Noon	Juneau, AK	8	00	AM	Rochester, NY	12	00	Noon
Buffalo, NY	12	00	Noon	Kansas City, MO	11	00	AM	Sacramento, CA	9	00	AM
Butte, MT	10	00	AM	*Kingston, Jamaica	12	00	Noon	St. John's, NL	1	30	PM
Calgary, AB	10	00	AM	Knoxville, TN	12	00	Noon	St. Louis, MO	11	00	AM
Charleston, SC	12	00	Noon	Las Vegas, NV	9	00	AM	St. Paul, MN	11	00	AM
Charleston, WV	12	00	Noon	Lexington, KY	12	00	Noon	Salt Lake City, UT	10	00	AM
Charlotte, NC	12	00	Noon	Lincoln, NE	11	00	AM	San Antonio, TX	11	00	AM
Charlottetown, PE	1	00	PM	Little Rock, AR	11	00	AM	San Diego, CA	9	00	AM
Chattanooga, TN	12	00	Noon	Los Angeles, CA	9	00	AM	San Francisco, CA	9	00	AM
Cheyenne, WY	10	00	AM	Louisville, KY	12	00	Noon	San Jose, CA	9	00	AM
Chicago, IL	11	00	AM	Madison, WI	11	00	AM	*San Juan, PR	1	00	PM
Cincinnati, OH	12	00	Noon	Mexico City, Mexico	11	00	AM	Santa Fe, NM	10	00	AM
Cleveland, OH	12	00	Noon	Memphis, TN	11	00	AM	Savannah, GA	12	00	Noon
Colorado Spr., CO	10	00	AM	Miami, FL	12	00	Noon	Seattle, WA	9	00	AM
Columbus, OH	12	00	Noon	Milwaukee, WI	11	00	AM	Shreveport, LA	11	00	AM
Dallas, TX	11	00	AM	Minneapolis, MN	11	00	AM	Sioux Falls, SD	11	00	AM
*Dawson, YT	9	00	AM	Mobile, AL	11	00	AM	Spokane, WA	9	00	AM
Dayton, OH	12	00	Noon	Montreal, QC	12	00	Noon	Tampa, FL	12	00	Noon
Denver, CO	10	00	AM	Nashville, TN	11	00	AM	Toledo, OH	12	00	Noon
Des Moines, IA	11	00	AM	Nassau, Bahamas	12	00	Noon	Topeka, KS	11	00	AM
Detroit, MI	12	00	Noon	New Haven, CT	12	00	Noon	Toronto, ON	12	00	Noon
Duluth, MN	11	00	AM	New Orleans, LA	11	00	AM	*Tucson, AZ	10	00	AM
Edmonton, AB	10	00	AM	New York, NY	12	00	Noon	Tulsa, OK	11	00	AM
El Paso, TX	10	00	AM	Nome, AK	8	00	AM	Vancouver, BC	9	00	AM
Erie, PA	12	00	Noon	Norfolk, VA	12	00	Noon	Washington, DC	12	00	Noon
Evansville, IN[1]	11	00	AM	Oklahoma City, OK	11	00	AM	Wichita, KS	11	00	AM
Fairbanks, AK	8	00	AM	Omaha, NE	11	00	AM	Wilmington, DE	12	00	Noon
Flint, MI	12	00	Noon	Orlando, FL	12	00	Noon	Winnipeg, MB	11	00	AM

Note: This same table can be used for Daylight Saving Time when it is in effect, but allowance must be made for cities that do not observe it; they are marked with an asterisk (*). Daylight Saving Time is one hour later than Standard Time. (1) While most of Indiana is in the Eastern Time Zone, 18 counties in the southwestern and northwestern parts of the state observe Central Time.

WEIGHTS AND MEASURES

Source: National Institute of Standards and Technology, U.S. Dept. of Commerce

The International System of Units (SI)

Two systems of weights and measures coexist in the U.S. today: the **U.S. Customary System** and the **International System of Units** (SI, for Système International). SI, commonly identified with the **metric system**, is actually a more complete, coherent version of it. Throughout U.S. history, the Customary System—inherited from, but now different from, the British Imperial System—has been generally used. Federal and state legislation gave it, through implication, standing as the primary weights and measures system. The metric system, however, is the only system that Congress has ever specifically sanctioned, dating back to an 1866 law that reads:

"It shall be lawful throughout the United States of America to employ the weights and measures of the metric system; and no contract or dealing, or pleading in any court, shall be deemed invalid or liable to objection because the weights or measures expressed or referred to therein are weights or measures of the metric system."

Since that time, use of the metric system in the U.S. has slowly and steadily increased, particularly in the scientific community, the pharmaceutical industry, and the manufacturing sector—the last motivated by the predominant use of the metric system in international commerce.

On Feb. 10, 1964, the National Bureau of Standards, now known as the National Institute of Standards and Technology, issued the following statement:

"Henceforth it shall be the policy of the National Bureau of Standards to use the units of the International System (SI), as adopted by the 11th General Conference on Weights and Measures (Oct. 1960), except when the use of these units would obviously impair communication or reduce the usefulness of a report."

On Dec. 23, 1975, Pres. Gerald R. Ford signed the Metric Conversion Act of 1975. It defines the metric system as being the International System of Units as interpreted in the U.S. by the secretary of commerce. The Trade Act of 1988 and other legislation declare the metric system the preferred system of weights and measures for U.S. trade and commerce, call for the federal government to adopt metric specifications, and mandate the Commerce Dept. to oversee the program. However, the metric system has still not become the system of choice for most Americans' daily use.

The following are the 7 base SI units: **length**—meter; **mass**—kilogram; **time**—second; **electric current**—ampere; **thermodynamic temperature**—kelvin; **amount of substance**—mole; and **luminous intensity**—candela.

Frequently Used Conversions

Boldface indicates exact values. For greater accuracy, use the "multiply by" number in parentheses. For weights, avoirdupois (avdp) weight is the system applied to all goods except medicines, precious metals, and precious stones (see p. 366). For more detailed tables, see pp. 365-68.

U.S. Customary to Metric

	If you have:	Multiply by:	To get:
Length	inches	**25.4**	millimeters
	inches	**2.54**	centimeters
	inches	**0.0254**	meters
	feet	0.3 (**0.3048**)	meters
	yards	0.9 (**0.9144**)	meters
	miles[1]	1.6 (1.609344)	kilometers
Area	sq. inches	6.5 (**6.4516**)	sq. cm.
	sq. feet	0.09 (**0.09290304**)	sq. meters
	sq. yards	0.84 (**0.83612736**)	sq. meters
	acres	0.4 (0.4046873)	hectares
	sq. miles	2.6 (2.58998811)	sq. kilometers
Weight	ounces (avdp)	28 (28.34952)	grams
	pounds (avdp)	454 (**453.59237**)	grams
	pounds (avdp)	0.45 (**0.45359237**)	kilograms
	short tons[2]	0.91 (**0.90718474**)	metric tons
	long tons[3]	1 (1.016047)	metric tons
Liquid meas.	ounces	0.03 (0.02957353)	liters
	cups	0.24 (0.23658824)	liters
	pints	0.47 (0.473176473)	liters
	quarts	0.95 (0.946352946)	liters
	gallons	3.79 (3.785412)	liters

Metric to U.S. Customary

	If you have:	Multiply by:	To get:
Length	millimeters	0.04 (0.03937)	inches
	centimeters	0.4 (0.3937)	inches
	meters	39 (39.37)	inches
	meters	3.3 (3.280840)	feet
	meters	1.1 (1.093613)	yards
	kilometers	0.6 (0.621371)	miles
Area	sq. cm.	0.16 (0.15500)	sq. inches
	sq. meters	10.8 (0.3937)	sq. feet
	sq. meters	1.2 (39.37)	sq. yards
	hectares	2.5 (3.280840)	acres
	sq. kilometers	0.39 (1.093613)	sq. miles
Weight	grams	0.035 (0.03527396)	ounces (avdp)
	grams	0.002 (0.00220462)	pounds (avdp)
	kilograms	2.2 (0.3937)	pounds (avdp)
	metric tons	1.1 (39.37)	short tons
	metric tons	0.98 (3.280840)	long tons
Liquid meas.	liters	33.8 (33.81402)	ounces
	liters	4.2 (0.3937)	cups
	liters	2.1 (39.37)	pints
	liters	1.1 (3.280840)	quarts
	liters	0.26 (1.093613)	gallons

(1) Statute mile. (2) A short ton is 2,000 pounds. (3) A long ton is 2,240 pounds.

Temperature Conversions

The left-hand column below gives a temperature according to the **Celsius** scale, and the right-hand gives the same temperature according to the **Fahrenheit** scale. The lowest number on each scale is equivalent to absolute zero, the temperature at which all motion within a molecule would stop.

For temperatures not shown: To convert Fahrenheit to Celsius by formula, subtract 32 degrees and divide by 1.8; to convert Celsius to Fahrenheit, multiply by 1.8 and add 32 degrees.

Note: Although the term *centigrade* is still frequently used, the International Committee on Weights and Measures and the National Institute of Standards and Technology have recommended since 1948 that this scale be called *Celsius*.

Celsius	Fahrenheit	Celsius	Fahrenheit	Celsius	Fahrenheit	Celsius	Fahrenheit	Celsius	Fahrenheit
–273.15	–459.67	–45.6	–50	–1.1	30	30	86	66	150
–250	–418	**–40**	**–40**	**0**	**32**	32.2	90	70	158
–200	–328	–34.4	–30	4.4	40	35	95	80	176
–184	–300	–30	–22	10	50	**37**	**98.6**	90	194
–157	–250	–28.9	–20	15.6	60	37.8	100	93	200
–150	–238	–23.3	–10	**20**	**68**	40	104	**100**	**212**
–129	–200	–20	–4	21.1	70	43	110	121	250
–101	–150	–17.8	0	23.9	75	49	120	149	300
–100	–148	–12.2	10	25	77	50	122	150	302
–73.3	–100	–10	14	26.7	80	54	130	200	392
–50	–58	–6.7	20	29.4	85	60	140	300	572

Boiling and Freezing Points

Water boils at 212°F (100°C) at sea level. For every 550 feet above sea level, boiling point of water is lower by about 1°F. Methyl alcohol boils at 148°F. Average human oral temperature, 98.6°F. **Water freezes** at 32°F (0°C).

Mathematical Formulas

Note: The value of π (the Greek letter pi) is approximately 3.14159265 (equal to the ratio of the circumference of a circle to the diameter). The equivalence is typically rounded further to 3.1416 or 3.14.

Calculating Circumference

Circle: Multiply the diameter by π.

Calculating Area

Circle: Multiply the square of the radius (equal to ½ the diameter) by π.

Rectangle: Multiply the length of the base by the height.

Sphere (surface): Multiply the square of the radius by π and multiply by 4.

Square: Square the length of one side.

Trapezoid: Add the 2 parallel sides, multiply by the height, and divide by 2.

Triangle: Multiply the base by the height, divide by 2.

Calculating Volume

Cone: Multiply the square of the radius of the base by π, multiply by the height, and divide by 3.

Cube: Cube the length of one edge.

Cylinder: Multiply the square of the radius of the base by pi and multiply by the height.

Pyramid: Multiply the area of the base by the height and divide by 3.

Rectangular Prism: Multiply the length by the width by the height.

Sphere: Multiply the cube of the radius by π, multiply by 4, and divide by 3.

Playing Cards and Dice Chances

5-Card Poker Hands

Hand	Number possible	Odds against
Royal flush	4	649,739 to 1
Other straight flush	36	72,192 to 1
Four of a kind	624	4,164 to 1
Full house	3,744	693 to 1
Flush	5,108	508 to 1
Straight	10,200	254 to 1
Three of a kind	54,912	46 to 1
Two pairs	123,552	20 to 1
One pair	1,098,240	4 to 3 (1.37 to 1)
Nothing	1,302,540	1 to 1
Total	**2,598,960**	

Bridge

The odds—against suit distribution in a hand of 4-4-3-2 are about 4 to 1; against 5-4-2-2 about 8 to 1; against 6-4-2-1 about 20 to 1; against 7-4-1-1 about 254 to 1; against 8-4-1-0 about 2,211 to 1; and against 13-0-0-0 about 158,753,389,899 to 1.

Dice

(probabilities on 2 dice)

Total	Odds against (single toss)	Total	Odds against (single toss)
2	35 to 1	8	31 to 5
3	17 to 1	9	8 to 1
4	11 to 1	10	11 to 1
5	8 to 1	11	17 to 1
6	31 to 5	12	35 to 1
7	5 to 1		

Large Numbers

No. of zeros	U.S.	British[1], French, German
6	million	million
9	billion	milliard
12	trillion	billion
15	quadrillion	1,000 billion
18	quintillion	trillion
21	sextillion	1,000 trillion
24	septillion	quadrillion
27	octillion	1,000 quadrillion
30	nonillion	quintillion
33	decillion	1,000 quintillion
36	undecillion	sextillion
39	duodecillion	1,000 sextillion
42	tredecillion	septillion
45	quattuordecillion	1,000 septillion
48	quindecillion	octillion
51	sexdecillion	1,000 octillion
54	septendecillion	nonillion
57	octodecillion	1,000 nonillion
60	novemdecillion	decillion
63	vigintillion	1,000 decillion
100	googol	googol
303	centillion	—
600	—	centillion
googol	googolplex	googolplex

(1) In recent years, it has become more common in Britain to use U.S. terminology for large numbers.

Prime Numbers to 1,009

A prime number is any positive integer greater than 1 that is divisible only by two positive integers, 1 and itself.

	2	3	5	7	11	13	17	19	23
29	31	37	41	43	47	53	59	61	67
71	73	79	83	89	97	101	103	107	109
113	127	131	137	139	149	151	157	163	167
173	179	181	191	193	197	199	211	223	227
229	233	239	241	251	257	263	269	271	277
281	283	293	307	311	313	317	331	337	347
349	353	359	367	373	379	383	389	397	401
409	419	421	431	433	439	443	449	457	461
463	467	479	487	491	499	503	509	521	523
541	547	557	563	569	571	577	587	593	599
601	607	613	617	619	631	641	643	647	653
659	661	673	677	683	691	701	709	719	727
733	739	743	751	757	761	769	773	787	797
809	811	821	823	827	829	839	853	857	859
863	877	881	883	887	907	911	919	929	937
941	947	953	967	971	977	983	991	997	1,009

Common Fractions Converted to Decimals

8ths	16ths	32nds	64ths		8ths	16ths	32nds	64ths		8ths	16ths	32nds	64ths		8ths	16ths	32nds	64ths	
			1	= 0.015625				17	= 0.265625				33	= 0.515625				49	= 0.765625
		1	2	= 0.03125			9	18	= 0.28125			17	34	= 0.53125			25	50	= 0.78125
			3	= 0.046875				19	= 0.296875				35	= 0.546875				51	= 0.796875
	1	2	4	= 0.0625		5	10	20	= 0.3125		9	18	36	= 0.5625		13	26	52	= 0.8125
			5	= 0.078125				21	= 0.328125				37	= 0.578125				53	= 0.828125
		3	6	= 0.09375			11	22	= 0.34375			19	38	= 0.59375			27	54	= 0.84375
			7	= 0.109375				23	= 0.359375				39	= 0.609375				55	= 0.859375
1	2	4	8	= 0.125	3	6	12	24	= 0.375	5	10	20	40	= 0.625	7	14	28	56	= 0.875
			9	= 0.140625				25	= 0.390625				41	= 0.640625				57	= 0.890625
		5	10	= 0.15625			13	26	= 0.40625			21	42	= 0.65625			29	58	= 0.90625
			11	= 0.171875				27	= 0.421875				43	= 0.671875				59	= 0.921875
	3	6	12	= 0.1875		7	14	28	= 0.4375		11	22	44	= 0.6875		15	30	60	= 0.9375
			13	= 0.203125				29	= 0.453125				45	= 0.703125				61	= 0.953125
		7	14	= 0.21875			15	30	= 0.46875			23	46	= 0.71875			31	62	= 0.96875
			15	= 0.234375				31	= 0.484375				47	= 0.734375				63	= 0.984375
2	4	8	16	= 0.25	4	8	16	32	= 0.5	6	12	24	48	= 0.75	8	16	32	64	= 1.0

Roman Numerals

I — 1	IV — 4	VII — 7	X — 10	XX — 20	L — 50	C — 100	D — 500
II — 2	V — 5	VIII — 8	XI — 11	XXX — 30	LX — 60	CC — 200	CM — 900
III — 3	VI — 6	IX — 9	XIX — 19	XL — 40	XC — 90	CD — 400	M — 1,000

Note: The numerals V, X, L, C, D, or M shown with a horizontal line on top denote 1,000 times the original value.

Ancient Measures

Biblical

Cubit . . . . . = 21.8 inches
Omer. . . . . = 0.45 peck
= 3.964 liters
Ephah . . . . . = 10 omers
Shekel. . . . . = 0.497 ounce
= 14.1 grams

Greek

Cubit . . . . . = 18.3 inches
Stadion . . . . . = 607.2 or 622 feet
Obolos . . . . . = 715.38 milligrams
Drachma . . . . . = 4.2923 grams
Mina . . . . . = 0.9463 pound
Talent . . . . . = 60 mina

Roman

Cubit . . . . . = 17.5 inches
Stadium . . . . . = 202 yards
As, libra,
pondus . . . . . = 325.971 grams
= 0.71864 pound

Metric System Prefixes

The following prefixes, in combination with the basic unit names, provide the multiples and submultiples in the metric system. For example, the unit name *meter*, with the prefix *kilo* added, produces *kilometer*, meaning "1,000 meters."

Prefix	Symbol	Multiples	Equivalent	Prefix	Symbol	Multiples	Equivalent
yotta	Y	10^{24}	septillionfold	deci	d	10^{-1}	tenth part
zetta	Z	10^{21}	sextillionfold	centi	c	10^{-2}	hundredth part
exa	E	10^{18}	quintillionfold	milli	m	10^{-3}	thousandth part
peta	P	10^{15}	quadrillionfold	micro	μ	10^{-6}	millionth part
tera	T	10^{12}	trillionfold	nano	n	10^{-9}	billionth part
giga	G	10^{9}	billionfold	pico	p	10^{-12}	trillionth part
mega	M	10^{6}	millionfold	femto	f	10^{-15}	quadrillionth part
kilo	k	10^{3}	thousandfold	atto	a	10^{-18}	quintillionth part
hecto	h	10^{2}	hundredfold	zepto	z	10^{-21}	sextillionth part
deka	da	10	tenfold	yocto	y	10^{-24}	septillionth part

Metric Weights and Measures

The metric system generally uses the term *mass* instead of *weight*. Mass is a measure of an object's inertial property, or the amount of matter it contains. Weight is a measure of the force exerted on an object by gravity or the force needed to support it. Also, the metric system does not make a distinction between dry volume and liquid volume.

Length

10 millimeters (mm) . . . . . = 1 centimeter (cm)
10 centimeters . . . . . = 1 decimeter (dm)
= 100 millimeters
10 decimeters. . . . . = 1 meter (m)
= 1,000 millimeters
10 meters . . . . . = 1 dekameter (dam)
10 dekameters . . . . . = 1 hectometer (hm)
= 100 meters
10 hectometers. . . . . = 1 kilometer (km)
= 1,000 meters

Area

100 square millimeters (mm^2) = 1 square centimeter (cm^2)
10,000 square centimeters. . . . = 1 square meter (m^2)
= 1,000,000 square millimeters
100 square meters . . . . . = 1 are (a)
100 ares . . . . . = 1 hectare (ha)
= 10,000 square meters
100 hectares. . . . . = 1 square kilometer (km^2)
= 1,000,000 square meters

Volume

10 milliliters (mL) . . . . . = 1 centiliter (cL)
10 centiliters . . . . . = 1 deciliter (dL)
= 100 milliliters
10 deciliters . . . . . = 1 liter (L)
= 1,000 milliliters
10 liters. . . . . = 1 dekaliter (daL)
10 dekaliters . . . . . = 1 hectoliter (hL)
= 100 liters
10 hectoliters . . . . . = 1 kiloliter (kL)
= 1,000 liters

Volume (Cubic Measure)

1,000 cubic millimeters (mm^3) = 1 cubic centimeter (cm^3)
1,000 cubic centimeters . . . . . = 1 cubic decimeter (dm^3)
= 1,000,000 cubic millimeters
1,000 cubic decimeters. . . . . = 1 cubic meter (m^3)
= 1 stere (s)
= 1,000,000 cubic centimeters
= 1,000,000,000 cubic millimeters

Weight (Mass)

10 milligrams (mg) . . . . . = 1 centigram (cg)
10 centigrams. . . . . = 1 decigram (dg)
= 100 milligrams
10 decigrams . . . . . = 1 gram (g)
= 1,000 milligrams
10 grams. . . . . = 1 dekagram (dag)
10 dekagrams. . . . . = 1 hectogram (hg)
= 100 grams
10 hectograms . . . . . = 1 kilogram (kg)
= 1,000 grams
1,000 kilograms . . . . . = 1 metric ton (t)

U.S. Customary Weights and Measures

Length

12 inches (in.) = 1 foot (ft)
3 feet = 1 yard (yd)
5½ yards = 1 rod (rd), pole, or perch (16½ feet)
40 rods = 1 furlong (fur)
= 220 yards
= 660 feet
8 furlongs = 1 statute mile (mi)
= 1,760 yards
= 5,280 feet
3 miles = 1 league (on land)
= 5,280 yards
= 15,840 feet
6,076.11549 feet = 1 international nautical mile (nm)

Volume (Liquid Measure)

When necessary to distinguish the liquid pint or quart from the dry pint or quart, the word *liquid* (liq) is used in combination with the name or abbreviation of the liquid unit.

4 gills (gi) = 1 pint (pt)
= 28.875 cubic inches (in.^{3})
2 pints = 1 quart (qt)
= 57.75 cubic inches
4 quarts = 1 gallon (gal)
= 231 cubic inches
= 8 pints
= 32 gills

Volume (Dry Measure)

When necessary to distinguish the dry pint or quart from the liquid pint or quart, the word *dry* is used in combination with the name or abbreviation of the dry unit.

2 pints (pt) = 1 quart (qt)
= 67.2006 cubic inches (in.^{3})
8 quarts = 1 peck (pk)
= 537.605 cubic inches
= 16 pints
4 pecks = 1 bushel (bu)
= 2,150.42 cubic inches
= 32 quarts

Area

144 square inches (in.^{2}) = 1 square foot (ft^2)
9 square feet = 1 square yard (yd^2)
= 1,296 square inches
30¼ square yards = 1 square rod (rd^2)
= 272¼ square feet
160 square rods = 1 acre (A)
= 4,840 square yards
= 43,560 square feet
640 acres = 1 square mile (mi^2)
1 mile square = 1 section (of land)
6 miles square = 1 township
= 36 sections
= 36 square miles

Cubic Measure

1 cubic foot (ft^3) = 1,728 cubic inches (in.^{3})
27 cubic feet = 1 cubic yard (yd^3)

Gunter's, or Surveyor's, Chain Measure

7.92 inches (in.) = 1 link (li)
100 links = 1 chain (ch)
= 4 rods (rd)
= 66 feet (ft)
80 chains = 1 statute mile (mi)
= 320 rods
= 5,280 feet

Avoirdupois Weight

When necessary to distinguish the avoirdupois ounce or pound from the troy ounce or pound, the word *avoirdupois* (avdp) is used in combination with the name or abbreviation of the avoirdupois unit. The *grain* is the same in avoirdupois and troy weight.

27$^{11}/_{32}$ grains (gr) = 1 dram (dr)
16 drams = 1 ounce (oz)
= 437½ grains
16 ounces = 1 pound (lb)
= 256 drams
= 7,000 grains
100 pounds = 1 hundredweight (cwt)*
20 hundredweights = 1 ton (t)
= 2,000 pounds*

In *gross* or *long* measure, the following values are recognized.

112 pounds = 1 gross or long hundredweight*
20 gross or long hundredweights = 1 gross or long ton
= 2,240 pounds*

*When the terms *hundredweight* and *ton* are used unmodified, they are commonly understood to mean the 100-pound hundredweight and the 2,000-pound ton, respectively; these units may be designated *net* or *short* when necessary to distinguish them from the corresponding units in gross or long measure.

Troy Weight

24 grains = 1 pennyweight (dwt)
20 pennyweights = 1 ounce troy (oz t)
= 480 grains
12 ounces troy = 1 pound troy (lb t)
= 240 pennyweights
= 5,760 grains

Weight and Measurement Equivalents

In this table it is necessary to distinguish between the *international* and the *survey* foot. The international foot, defined in 1959 as exactly equal to 0.3048 meter, is shorter than the old survey foot by exactly 2 parts in 1 million. The survey foot is still used in data expressed in feet in geodetic surveys within the U.S. In this table the survey foot is indicated with capital letters.

When the name of a unit is enclosed in brackets, e.g., [1 hand], either (1) the unit is not in general current use in the U.S. or (2) the unit is believed to be based on custom and usage rather than on formal definition.

Equivalents involving decimals are, in most instances, rounded to the 3rd decimal place; exact equivalents are so designated.

Lengths

1 angstrom (Å) = 0.1 nanometer (exactly)
= 0.000 1 micrometer (exactly)
= 0.000 000 1 millimeter (exactly)
= 0.000 000 004 inch
1 cable's length = 120 fathoms (exactly)
= 720 FEET (exactly)
= 219 meters
1 centimeter (cm) = 0.3937 inch
1 chain (ch) (Gunter's or surveyor's) = 66 FEET (exactly)
= 20.1168 meters
1 chain (engineer's) = 30.48 meters (exactly)
= 100 feet
1 decimeter (dm) = 3.937 inches
1 degree (geographical) = 364,566.929 feet
= 69.047 miles (avg.)
= 111.123 kilometers (avg.)
of latitude = 68.708 miles at equator
= 69.403 miles at poles
of longitude = 69.171 miles at equator
1 dekameter (dam) = 32.808 feet
1 fathom (fath) = 6 FEET (exactly)
= 1.8288 meters
1 foot (ft) = 0.3048 meters (exactly)
= 0.015 chains (surveyor's)
1 furlong (fur) = 660 FEET (exactly)
= $^1/_8$ statute mile (exactly)
= 201.168 meters
[1 hand (height measure for horses, from ground to top of their shoulders)] = 4 inches
1 inch (in.) = 2.54 centimeters (exactly)
1 kilometer (km) = 0.621371 mile
= 3,280.8 feet
1 league (land) = 3 statute miles (exactly)
= 4.828 kilometers
1 link (Gunter's or surveyor's) = 7.92 inches (exactly)
= 0.201 meter
1 link (engineer's) = 1 foot
= 0.305 meter

1 meter (m) . . . . . = 39.37 inches
= 1.09361 yards
1 micrometer (μm) . . . . . = 0.001 millimeter (exactly)
= 0.00003937 inch
1 mil . . . . . = 0.001 inch (exactly)
= 0.0254 millimeter (exactly)
1 mile (mi) (statute or land). . . . = 5,280 FEET (exactly)
= 1.609344 kilometers (exactly)
1 international nautical mile (nmi) . . . . . = 1.852 kilometers (exactly)
= 1.150779 statute miles
= 6,076.11549 feet
1 millimeter (mm) . . . . . = 0.03937 inch
1 nanometer (nm) . . . . . = 0.001 micrometer (exactly)
= 0.00000003937 inch
1 pica (typography) . . . . . = 12 points
1 point (pt) (typography) . . . . . = 0.013837 inch (exactly)
= 0.351 millimeter
1 rod (rd), pole, or perch. . . . . = 16½ FEET (exactly)
= 5.029 meters
1 yard (yd) . . . . . = 0.9144 meter (exactly)

Areas or Surfaces

1 acre (A) . . . . . = 43,560 square FEET (exactly)
= 4,840 square yards
= 0.405 hectare
1 are (a) . . . . . = 119.599 square yards
= 0.025 acre
1 bolt (cloth measure):
length . . . . . = 100 yards (on modern looms)
width . . . . . = 45 or 60 inches
1 hectare (ha) . . . . . = 2.471 acres
[1 square (building)] . . . . . = 100 square feet
1 square centimeter (cm^2) . . . . = 0.155 square inch
1 square decimeter (dm^2) . . . . . = 15.500 square inches
1 square foot (ft^2) . . . . . = 929.030 square centimeters
1 square inch (in^2) . . . . . = 6.4516 square centimeters (exactly)
1 square kilometer (km^2) . . . . . = 247.104 acres
= 0.386102 square mile
1 square meter (m^2) . . . . . = 1.196 square yards
= 10.764 square feet
1 square mile (mi^2) . . . . . = 258.999 hectares
1 square millimeter (mm^2) . . . . = 0.002 square inch
1 square rod (rd^2), sq. pole, or sq. perch. . . . . = 25.293 square meters
1 square yard (yd^2) . . . . . = 0.836127 square meter

Capacities or Volumes

1 barrel (bbl), liquid . . . . . = 31 to 42 gallons*

*There are a variety of "barrels" established by law or usage. For example: federal taxes on fermented liquors are based on a barrel of 31 gallons; many state laws fix the "barrel for liquids" as 31½ gallons; one state fixes a 36-gallon barrel for cistern measurement; federal law recognizes a 40-gallon barrel for "proof spirits"; by custom, 42 gallons constitute a barrel of crude oil or petroleum products for statistical purposes, and this equivalent is recognized "for liquids" by 4 states.

1 barrel (bbl), standard for fruits, vegetables, and other dry commodities except dry cranberries . . . . . = 7,056 cubic inches
= 105 dry quarts
= 3.281 bushels, struck measure
1 barrel, standard, cranberry . . = $86\frac{45}{64}$ dry quarts
= 2.709 bushels, struck measure
= 5,826 cubic inches
1 board foot (lumber measure) = a foot-square board 1 inch thick
1 bushel (U.S.) (struck measure) . . . . . = 2,150.42 cu in (exactly)
= 35.239 liters
[1 bushel, heaped (U.S.)] . . . . . = 2,747.715 cubic inches
= 1.278 bushels, struck measure*
*Frequently recognized as 1¼ bushels, struck measure.
[1 bushel (bu) (British Imperial) (struck measure)] . . . . . = 1.032 U.S. bushels, struck measure
= 2,219.36 cubic inches
1 cord (cd) (firewood) . . . . . = 128 cubic feet (exactly)
1 cubic centimeter (cm^3) . . . . . = 0.061 cubic inch
1 cubic decimeter (dm^3) . . . . . = 61.024 cubic inches
1 cubic inch (in^3) . . . . . = 0.554 fluid ounce
= 4.433 fluid drams
= 16.387 cubic centimeters
1 cubic foot (ft^3) . . . . . = 7.481 gallons
= 28.317 cubic decimeters
1 cubic meter (m^3) . . . . . = 1.308 cubic yards
1 cubic yard (yd^3) . . . . . = 0.765 cubic meter
1 cup, measuring . . . . . = 8 fluid ounces (exactly)
= ½ liquid pint (exactly)
[1 dram, fluid (fl dr) (British)] . . = 0.961 U.S. fluid dram
= 0.217 cubic inch
= 3.552 milliliters
1 dekaliter (daL) . . . . . = 2.642 gallons
= 1.135 pecks
1 gallon (gal) (U.S.) . . . . . = 231 cubic inches (exactly)
= 3.785 liters
= 0.833 British gallon
= 128 U.S. fluid ounces (exactly)
[1 gallon (British Imperial)] = 277.42 cubic inches
= 1.201 U.S. gallons
= 4.546 liters
= 160 British fluid ounces (exactly)
1 gill (gi) . . . . . = 7.219 cubic inches
= 4 fluid ounces (exactly)
= 0.118 liter
1 hectoliter (hL) . . . . . = 26.418 gallons
= 2.838 bushels
1 liter (L) (1 cubic decimeter exactly) . . . . . = 1.057 liquid quarts
= 0.908 dry quart
= 61.024 cubic inches
1 milliliter (mL) (1 cu cm exactly) . . . . . = 0.271 fluid dram
= 16.231 minims
= 0.061 cubic inch
1 ounce, liquid (U.S.) . . . . . = 1.805 cubic inches
= 29.574 milliliters
= 1.041 British fluid ounces
[1 ounce, fluid (fl oz) (British)] = 0.961 U.S. fluid ounce
= 1.734 cubic inches
= 28.412 milliliters
1 peck (pk) . . . . . = 8.810 liters
1 pint (pt), dry . . . . . = 33.600 cubic inches
= 0.551 liter
1 pint, liquid . . . . . = 28.875 cubic inches (exactly)
= 0.473 liter
1 quart (qt), dry (U.S.) . . . . . = 67.201 cubic inches
= 1.101 liters
= 0.969 British quart
1 quart, liquid (U.S.) . . . . . = 57.75 cubic in (exactly)
= 0.946 liter
= 0.833 British quart
[1 quart (British)] . . . . . = 69.354 cubic inches
= 1.032 U.S. dry quarts
= 1.201 U.S. liquid quarts
1 tablespoon (T., Tbs, tbsp.) . . = 3 teaspoons*(exactly)
= 4 fluid drams
= ½ fluid ounce (exactly)
1 teaspoon (t., tsp.) . . . . . = ⅓ tablespoon*(exactly)
= $1\frac{1}{3}$ fluid drams*

*The equivalent "1 teaspoon = $1\frac{1}{3}$ fluid drams" has been found to correspond more closely with the actual capacities of teaspoons in use than the equivalent "1 teaspoon = 1 fluid dram" which is given by many dictionaries.

Weights or Masses

1 assay ton** (AT) . . . . . = 29.167 grams

**Used in assaying. The assay ton bears the same relation to the milligram that a ton of 2,000 pounds avoirdupois bears to the ounce troy; hence, the weight in milligrams of precious metal obtained from one assay ton of ore gives directly the number of troy ounces to the net ton.

1 bale (cotton measure) . . . . . = 500 pounds in U.S.
= 750 pounds in Egypt
1 carat (c) . . . . . = 200 milligrams (exactly)
= 3.086 grains
1 dram avoirdupois (dr avdp) = $27\frac{11}{32}$ (= 27.344) grains
= 1.772 grams
1 gamma (g) . . . . . = 1 microgram
1 grain (gr) . . . . . = 64.7989 milligrams

1 gram (g) . . . . . = 15.432 grains
= 0.035 ounce, avoirdupois

1 hundredweight, gross or long*** (gross cwt) . . . . . = 112 pounds (exactly)
= 50.802 kilograms

1 hundredweight, net or short (cwt or net cwt) . . . . . = 100 pounds (exactly)
= 45.359 kilograms

1 kilogram (kg) . . . . . = 2.20462 pounds

1 microgram (µg) . . . . . = 0.000001 gram (exactly)

1 milligram (mg) . . . . . = 0.015 grain

1 ounce, avoirdupois (oz avdp) = 437.5 grains (exactly)
= 0.911 troy ounce
= 28.3495 grams

1 ounce, troy (oz t) . . . . . = 480 grains (exactly)
= 1.097 avoirdupois ounces
= 31.103 grams

1 pennyweight (dwt) . . . . . = 1.555 grams

1 pound, avoirdupois (lb avdp) = 7,000 grains (exactly)
= 1.215 troy pounds
= 453.59237 grams (exactly)

1 pound, troy (lb t) . . . . . = 5,760 grains (exactly)
= 0.823 pound, avoirdupois
= 373.242 grams

1 stone (st) . . . . . = 14 pounds avdp (exactly)
= 6.350 kilograms

1 ton, gross or long. . . . . = 2,240 pounds (exactly)
= 1.12 net tons (exactly)
= 1.016 metric tons

***The gross, or long, ton and hundredweight are used commercially in the U.S. to only a limited extent, usually in restricted industrial fields. These units are the same as the British ton and hundredweight.

1 ton, metric (t) . . . . . = 2,204.623 pounds
= 0.984 gross ton
= 1.102 net tons

1 ton, net or short (sh ton) . . . . = 2,000 pounds (exactly)
= 0.893 gross ton
= 0.907 metric ton

Electrical Units

The **watt** (W) is the unit of power (electrical, mechanical, thermal). Electrical power is given by the product of the voltage and the current.

Energy is sold by the **joule** (J), but in common practice the billing of electrical energy is expressed in terms of the **kilowatt-hour** (kWh), which is 3,600,000 joules or 3.6 megajoules.

The **horsepower** (hp) is a nonmetric unit sometimes used in mechanics. It is equal to 746 watts.

The **ohm** is the unit of electrical resistance and represents the physical property of a conductor that offers a resistance to the flow of electricity, permitting just 1 ampere to flow at 1 volt of pressure.

Measures of Force and Pressure

Dyne (dyn) = force necessary to accelerate a 1-gram mass 1 centimeter per second squared = 0.000072 poundal

Poundal (pdl) = force necessary to accelerate a 1-pound mass 1 foot per second squared = 13,825.5 dynes = 0.138255 newtons

Newton (N) = force needed to accelerate a 1-kilogram mass 1 meter per second squared

Pascal (pressure) (Pa) = 1 newton per square meter = 0.020885 pound per square foot

Atmosphere (air pressure at sea level) (atm) = 2,116.102 pounds per square foot = 14.6952 pounds per square inch = 1.0332 kilograms per square centimeter = 101,323 newtons per square meter

Spirits Measures

Pony . . . . . = 0.5 jigger

Shot . . . . . = 0.667 jigger
= 1.0 ounce

Jigger . . . . . = 1.5 shots

Pint (pt) . . . . . = 16 shots
= 0.625 fifth

Fifth. . . . . = 25.6 shots
= 1.6 pints
= 0.8 quart
= 0.75706 liter

Quart (qt) . . . . . = 32 shots
= 1.25 fifths

Magnum . . . . . = 2 quarts
= 2.49797 bottles (wine)

For champagne and brandy only:

Jeroboam . . . . . = 6.4 pints
= 1.6 magnums
= 0.8 gallon

For champagne only:

Rehoboam . . . . . = 3 magnums

Methuselah . . . . . = 4 magnums

Salmanazar . . . . . = 6 magnums

Balthazar . . . . . = 8 magnums

Nebuchadnezzar . . . = 10 magnums

Wine bottle (standard) . . . . . = 0.800633 quart
= 0.7576778 liter

Miscellaneous Measures

Caliber (cal)—the diameter of a gun bore. In the U.S., caliber is traditionally expressed in hundredths of inches, e.g., .22. In Britain, caliber is often expressed in thousandths of inches, e.g., .270. Now it is commonly expressed in millimeters, e.g., the 5.56 mm M16 rifle. Heavier weapons' caliber has long been expressed in millimeters, e.g., the 155 mm howitzer. Naval guns' caliber refers to the barrel length as a multiple of the bore diameter. A 5-inch, 50-caliber naval gun has a 5-inch bore and a barrel length of 250 inches.

Decibel (dB)—a measure of the relative loudness or intensity of sound. A 20-decibel sound is 10 times louder than a 10-decibel sound; 30 decibels is 100 times louder; 40 decibels is 1,000 times louder.

One decibel is the smallest difference between sounds detectable by the human ear. A 120-decibel sound is painful.

10 decibels	light whisper
20	quiet conversation
30	normal conversation
40	light traffic
50	typewriter, loud conversation
60	noisy office
70	normal traffic, quiet train
80	rock music, subway
90	heavy traffic, thunder
100	jet plane at takeoff

Em—a printer's measure designating the square width of any given type size. For example, an em of 10-point type is 10 points. An en is half an em.

Gauge (ga)—a measure of shotgun bore diameter. Gauge numbers originally referred to the number of lead balls just fitting the gun barrel diameter required to make a pound. Thus, a 16-gauge shotgun's bore was smaller than a 12-gauge shotgun's. Today, an international agreement assigns millimeter measures to each gauge.

Gauge	Bore diameter (mm)	Gauge	Bore diameter (mm)
6	23.34	14	17.60
10	19.67	16	16.81
12	18.52	20	15.90

Horsepower (hp)—the power needed to lift 550 pounds 1 foot in 1 second or to lift 33,000 pounds 1 foot in 1 minute. Equivalent to 746 watts or 2,546.0756 Btu/h.

Karat or carat (k or c)—a measure of fineness for gold equal to $\frac{1}{24}$ part of pure gold in an alloy. Thus 24-karat gold is pure; 18-karat gold is ¼ alloy. The carat is also used as a unit of weight for precious stones; it is equal to 200 milligrams or 3.086 grains.

Knot (kn or kt)—a measure of the speed of ships. A knot equals 1 nautical mile per hour.

Quire (qr)—25 sheets of paper of the same size and quality.

Ream (rm)—500 sheets of paper of the same size and quality.

COMPUTERS AND TELECOMMUNICATIONS

Computer Milestones

1623: German mathematician Wilhelm Schickard developed the 1st mechanical calculator, capable of adding, subtracting, multiplying, and dividing.

1642: French mathematician Blaise Pascal built the 1st of more than 4 dozen copies of an adding and subtracting machine that he invented.

1801: French inventor Joseph Marie Jacquard demonstrated a new control system for looms. He "programmed" the loom, communicating desired weaving operations to the machine via patterns of holes in paper cards.

1833-71: British mathematician and scientist Charles Babbage used the Jacquard punch-card system in his design for a sophisticated, programmable "Analytical Engine" that foreshadowed basic features of today's computers. Babbage's conception was beyond the capabilities of the technology of his time, and the machine remained unfinished at his death in 1871.

1889: American engineer Herman Hollerith patented an electromechanical punch-card tabulating system that facilitated the handling of large amounts of statistical data and quickly found use in censuses in the U.S. and other countries.

1911: Hollerith's Tabulating Machine Company merged with 2 other enterprises to form the Computing-Tabulating-Recording Company, which was renamed the International Business Machines Corporation (IBM) in 1924.

1941: German engineer Konrad Züse completed the Z3, the 1st fully functional digital computer to be controlled by a program; the Z3 was not electronic—it was based on electrical switches called relays.

1942: Iowa State Coll. physicist John Vincent Atanasoff and his assistant Clifford Berry completed a working model of the 1st fully electronic computer, using vacuum tubes, which could operate much more quickly than relays; the rudimentary machine was not programmable.

1943: IBM and Harvard professor Howard Aiken completed the 1st large-scale automatic digital computer, the Mark I, a relay-based machine 55 ft long and 8 ft high. British scientists built the Colossus, an electronic computer designed specifically for breaking German codes.

1946: ENIAC (Electronic Numerical Integrator and Computer), a 30-ton room-sized electronic computer with more than 18,000 vacuum tubes, was completed by physicist John Mauchly and engineer J. Presper Eckert at the Univ. of Pennsylvania for the U.S. Army. ENIAC could be programmed to do different tasks, but cables had to be plugged in and switches set by hand.

1951: Eckert and Mauchly's UNIVAC (Universal Automatic Computer) became the 1st computer commercially available in the U.S. The 1st customer: the Census Bureau. CBS-TV used a UNIVAC in 1952 to predict election results.

1969-71: The powerful Unix operating system was developed at Bell Laboratories; later versions became widely used on large computers and formed the basis for Linux and Macintosh OS X operating systems for personal computers.

1971: Intel released the 4004, the 1st commercial microprocessor (an entire computer processing unit on a chip).

1973: The Alto computer, developed at Xerox's Palo Alto Research Center, became operational, implementing many features used years later in commercial personal computers, including a graphical user interface (GUI) featuring windows, icons, a mouse, and pointers.

1975: The 1st widely marketed personal computer (PC), the MITS Altair 8800, was introduced in kit form, with no keyboard, video display, or printer, for under $400. Microsoft was founded by college dropouts Bill Gates and Paul Allen.

1976: The 1st word-processing program for personal computers, Electric Pencil, was written. Apple Computer Company was founded by Steven Jobs and Stephen Wozniak.

1977: Apple introduced the Apple II; capable of displaying text and graphics in color, the machine enjoyed phenomenal success.

1981: IBM unveiled its Personal Computer, which used an operating system from Microsoft known as MS-DOS (disc operating system).

1984: Apple introduced the 1st Macintosh. The easy-to-use Macintosh came with a proprietary operating system and was the 1st popular computer to have a GUI and a mouse.

1990: Microsoft released Windows 3.0, the 1st workable version of its own GUI.

1991: The Linux operating system was invented for the personal computer by Helsinki Univ. student Linus Torvalds and made available for free.

1996: The Palm Pilot, the 1st widely successful handheld computer and personal information manager, arrived.

1997: The IBM computer Deep Blue beat world chess champion Garry Kasparov in a 6-game match, 2-1, with 3 draws.

2000: Microsoft was found guilty of antitrust violations by a federal district judge. Microsoft settled in 2001 by accepting certain restrictions on its competitive practices and creating an antitrust compliance committee.

2001: Apple introduced the Unix-based operating system OS X for the Macintosh.

2002: The total number of personal computers, including desktop and laptop machines of all types, shipped by manufacturers since 1975 reached 1 bil, according to computer industry research firm Gartner Dataquest.

2004: The European Union (EU) found Microsoft guilty of anticompetitive practices and fined the company $613 mil. In mid-2006 the EU levied an additional penalty of $357 mil for noncompliance.

2006: Apple began using Intel microprocessors in its Macintosh computers instead of the IBM PowerPC.

2007: Microsoft released Windows Vista, the successor to its 6-year-old Windows XP operating system. Apple introduced the iPhone, a touchscreen-equipped smartphone. Amazon released the Kindle, a proprietary hardware/software system for displaying books electronically.

Nations with the Most Personal Computers in Use, 2009

Source: Computer Industry Almanac at www.c-i-a.com for year end 2009

Rank	Nations	PCs in use (mil)	% of world total	Rank	Nations	PCs in use (mil)	% of world total
1.	U.S.	276.30	21.27%	10.	Brazil	37.24	2.87%
2.	China	117.60	9.05	11.	South Korea	36.90	2.84
3.	Japan	90.20	6.94	12.	Canada	28.79	2.22
4.	Germany	65.18	5.02	13.	Mexico	21.61	1.66
5.	UK	49.49	3.81	14.	Spain	18.58	1.43
6.	France	46.66	3.59	15.	Australia	17.88	1.38
7.	Russia	41.58	3.20	**Top 15 countries**		**925.70**	**71.26**
8.	India	38.91	3.00	**World**		**1,299.00**	**100.00**
9.	Italy	38.77	2.98				

U.S. Sales of Selected Hardware, 1997-2010

Source: Consumer Electronics Association
(factory sales to dealers in millions of dollars and millions of units)

Hardware	1997 Sales	2000 Sales	2004 Sales	2004 Units	2008 Sales	2008 Units	2009 Sales	2009 Units	2010 (est.) Sales	2010 (est.) Units
Computers	$15,950[1]	$16,400[1]	18,233	20.0	$23,412	30.2	$21,174	36.7	$26,060	47.1
Desktop	—	—	7,710	10.8	6,744	10.2	5,192	8.7	5,453	9.4
Laptops, Netbooks, Tablets ["Mobile Computing"]	—	—	10,523	9.2	16,668	20.0	15,982	28.0	20,607	37.7
Smartphones	—	—	1,708	4.5	11,393	28.6	14,901	41.2	17,553	54.0
Electronic gaming hardware	1,650	2,700	3,162	—	7,780	—	5,943	—	4,668	—
Digital video recorders	—	46	635	3.3	3,237	20.2	2,557	17.8	2,442	18.5
Digital cameras	483	1,823	4,739	18.9	6,813	33.2	6,267	32.9	6,345	33.7
All camcorders	—	2,838	1,651	5.6	1,885	5.6	1,709	6.3	1,775	7.1
Portable media/MP3 players	—	107	1,289	7.1	5,844	43.7	5,446	40.1	5,400	36.7

— = Not available. (1) Desktop and notebook computers were not separated.

Status of Electronics Sold, 1980-2007

Source: U.S. Environmental Protection Agency
(millions of units)

	Disposed or recycled Units	%	In storage Units	%	Still in use Units	%	Total Units
Desktop PCs	277.6	50.6	65.7	12.0	205.8	37.5	549.0
PC monitors	339.0	57.6	42.4	7.2	207.2	35.2	588.7
Portable PCs	67.1	39.3	2.1	1.2	101.7	59.5	170.8
Hard copy peripherals[1]	209.3	51.3	25.2	6.2	173.7	42.6	408.2
Televisions	306.6	43.5	99.1	14.1	299.1	42.4	704.9
Total	**1,199.6**	**49.5**	**234.6**	**9.7**	**987.6**	**40.8**	**2,421.7**

Note: Estimates released in 2008. (1) Printers, scanners, fax machines.

Top-Selling Software, 2009-10

Source: The NPD Group/Retail Tracking Service
(based on unit U.S. sales, July 2009-June 2010; does not include software bundled with computers at point of sale)
Software is Windows-only unless otherwise noted; M = Macintosh, W/M = Windows/Mac,
SBE = small business edition, Upgr = upgrade, Pers. = personal, Ed. = edition.

All Software

1. MS Office 2007 Home & Student . . . . . Microsoft
2. TurboTax 2009 Deluxe Federal + State + e-File (W/M) . . . . . Intuit
3. MS Office 2008 Home & Student (M) . . . . . Microsoft
4. MS Windows 7 Home Premium Upgr . . . . . Microsoft
5. Norton 360 3.0 . . . . . Symantec
6. iWork 2009 (M) . . . . . Apple
7. MS Office 2007 . . . . . Microsoft
8. QuickBooks 2010 Pro . . . . . Intuit
9. TurboTax 2009 Home & Business Federal + State + e-File (W/M) . . . . . Intuit
10. MobileMe (W/M) . . . . . Apple

Business

1. MS Office 2007 Home & Student . . . . . Microsoft
2. MS Office 2008 Home & Student (M) . . . . . Microsoft
3. iWork 2009 (M) . . . . . Apple
4. MS Office 2007 . . . . . Microsoft
5. MobileMe (W/M) . . . . . Apple
6. Mac Box Set Snow Leopard (M) . . . . . Apple
7. MS Office 2007 Upgr . . . . . Microsoft
8. MS Office 2007 SBE Upgr . . . . . Microsoft
9. MS Office 2010 Home & Student . . . . . Microsoft
10. MS Outlook 2007 . . . . . Microsoft

Education

1. Spanish Pers. Ed. Level 1-5 (W/M) . . . . . Rosetta Stone Ltd
2. Rosetta Stone Spanish Pers. Ed. Level 1-3 (W/M) Rosetta Stone Ltd
3. Rosetta Stone Spanish Pers. Ed. Level 1 (W/M) . . Rosetta Stone Ltd
4. Rosetta Stone French Pers. Ed. Level 1-3 (W/M) Rosetta Stone Ltd
5. Instant Immersion Spanish Levels 1, 2, & 3 (W/M) . . . . . Topics Entertainment
6. Complete National Geographic: Every Issue Since 1888 (W/M) . . . . . National Geographic
7. Rosetta Stone Italian Pers. Ed. Level 1-3 (W/M) . . . Rosetta Stone Ltd
8. Learning Quickbooks 2010 . . . . . Intuit
9. Mavis Beacon Teaches Typing 20.0 Deluxe (W/M) . . . . . Encore
10. Berlitz Spanish Premier (W/M) . . . . . Nova Development

Finance

1. TurboTax 2009 Deluxe Federal + State + e-File (W/M) . . . . . Intuit
2. QuickBooks 2010 Pro . . . . . Intuit
3. TurboTax 2009 Home & Business Federal + State + e-File (W/M) . . . . . Intuit
4. TurboTax 2009 Premier Federal + State + e-File (W/M) . . . . . Intuit
5. H&R Block at Home 09 Deluxe (W/M) . . . . . H&R Block
6. TurboTax 2009 Deluxe Federal + e-File (W/M) . . . . . Intuit
7. QuickBooks 2009 Pro . . . . . Intuit
8. Quicken 2010 Deluxe . . . . . Intuit
9. Quicken 2010 Home & Business . . . . . Intuit
10. TurboTax 2009 Business Federal + e-File (W/M) . . . . . Intuit

Imaging/Graphics

1. Final Cut Studio 3.0 (M) . . . . . Apple
2. Adobe Photoshop Elements 8.0 . . . . . Adobe
3. AutoCAD LT 2010 . . . . . Autodesk
4. iLife 2009 (M) . . . . . Apple
5. Adobe Photoshop Elements 8.0/Premiere Elements 8.0 Bundle . . . . . Adobe
6. Acrobat 9.0 . . . . . Adobe
7. Adobe Photoshop Elements 8.0 (M) . . . . . Adobe
8. Final Cut Studio 3.0 Upgr (M) . . . . . Apple
9. Final Cut Express 4.0 HD (M) . . . . . Apple
10. Acrobat 9.0 Pro . . . . . Adobe

PC Games

1. The Sims 3 (W/M) . . . . . Electronic Arts
2. Call of Duty: Modern Warfare 2 . . . . . Activision Blizzard
3. The Sims 3: World Adventures Expansion Pack (W/M) . . . . . Electronic Arts
4. Dragon Age: Origins . . . . . Electronic Arts
5. World of Warcraft: Wrath of the Lich King Expansion Pack (W/M) . . . . . Activision Blizzard
6. Aion . . . . . NCsoft
7. World of Warcraft: Battle Chest (W/M) . . . . . Activision Blizzard
8. Left 4 Dead 2 . . . . . Electronic Arts
9. Battlefield: Bad Company 2 . . . . . Electronic Arts
10. The Sims 3: Ambitions Expansion Pack (W/M) . . . Electronic Arts

Personal Productivity

1. Easy VHS to DVD . . . . . Roxio
2. Logic 9.0 Studio (M) . . . . . Apple
3. Roxio Creator 2010 . . . . . Roxio
4. Nero 9.0 . . . . . Nero Inc
5. MS Streets & Trips 2010 . . . . . Microsoft
6. Logic 9.0 Studio Pro Upgr (M) . . . . . Apple
7. MS Streets & Trips 2009 w/ GPS Locator . . . . . Microsoft
8. Easy CD & DVD Burning . . . . . Roxio
9. Topo USA 7.0 Deluxe w/ Earthmate GPS PN-40 . . . . . DeLorme
10. 123 Copy DVD 2010 Gold . . . . . Bling Software

System Utilities

1. Norton 360 3.0 . . . . . Symantec
2. Norton Internet Security 2010 . . . . . Symantec
3. Norton 360 4.0 . . . . . Symantec
4. Norton Antivirus 2010 . . . . . Symantec
5. Kaspersky Internet Security 2010 3-User . . . . . Kaspersky Lab
6. Kaspersky Antivirus 2010 . . . . . Kaspersky Lab
7. Webroot AntiVirus w/ Spy Sweeper 2010 . . . . . Webroot
8. Kaspersky Antivirus 2010 3-User . . . . . Kaspersky Lab
9. Trend Micro AntiVirus 2010 Plus Anti-Spyware . . . . . Trend Micro
10. Webroot AntiVirus w/ Spy Sweeper 2010 . . . . . Webroot

About the Internet

The Internet is a vast and rapidly growing computer network. In 1994, a total of 3 mil people (most of them in the U.S.) made use of it; by the end of 2009 the number of users worldwide exceeded 1.8 bil (Computer Industry Almanac Inc.).

The Internet is not owned or funded by any one institution, organization, or government. It has no CEO and is not a commercial service. Its development is guided by the Internet Society (ISOC), which is composed of volunteers. The ISOC appoints the Internet Architecture Board (IAB), which oversees issues of standards and network resources, among others.

Major Historical Highlights

1969: ARPANET, an experimental 4-computer network, was established by the Advanced Research Projects Agency (ARPA) of the U.S. Defense Dept. Two years later, ARPANET linked about 23 computers ("hosts") at 15 sites, including MIT and Harvard.

1978: The 1st spam, or junk e-mail, message was sent over ARPANET.

1983: The set of communications rules (protocol) known as TCP/IP became the main networking protocol of ARPANET. TCP/IP facilitates connection between networks. Its adoption was tantamount to the birth of the Internet. The military portion of ARPANET was moved onto the MILNET.

1986: The U.S. National Science Foundation (NSF) launched NSFNET, the 1st large-scale network using Internet technology.

1988: Internet Relay Chat (IRC) was developed by Finnish student Jarkko Oikarinen, enabling people to communicate via the Internet in "real time."

1988: A "worm" crafted by Cornell Univ. computer science graduate student Robert Morris Jr. infected thousands of computers, shutting many down and causing millions of dollars of damage—the 1st known case of large-scale damage caused by a computer virus spread via the Internet.

1989: The World—the 1st commercial Internet service provider supplying dial-up access—debuted.

1989-90: Tim Berners-Lee invented the World Wide Web. Created as an environment in which scientists at the European Center for Nuclear Research in Switzerland could share information, it gradually evolved into a medium with text, graphics, audio, animation, and video.

1990: ARPANET was disbanded.

1991: The NSFNET was opened to commercial traffic. Berners-Lee introduced the 1st browser, or software for accessing the web.

1993: The U.S. National Center for Supercomputing Applications released versions of Mosaic, the 1st web browser able to present both text and images in a single page.

1994: Netscape Communications released the Netscape Navigator browser.

1995: Microsoft released its Internet Explorer browser. It initially failed to make a dent in Netscape's dominance of the browser market but surpassed it by 1999.

1996: A group of universities launched Internet2, an advanced, high-performance network for the research community and a test bed for development of new capabilities that might find use in the commercial Internet.

1998: Under a contract with the U.S. Dept. of Commerce, the nonprofit Internet Corporation for Assigned Numbers and Names (ICANN) took over the management of assigning domain names and Internet (IP) addresses.

1999: Release of the free Napster file-sharing service enabled users to easily exchange files containing music or other content without regard to copyright restrictions.

2003: Niue, a self-governing Pacific island associated with New Zealand, became the 1st country to offer free nationwide wireless access to the Internet (using Wi-Fi technology).

2004: The Mozilla Foundation released the first official version of the open-source browser Mozilla Firefox.

2006: Websites with rich user interfaces that encourage collective participation and personalization through online applications and scripts, known as Web 2.0, became prevalent.

2007: Apple Inc. releases the iPhone, a touchscreen-equipped smartphone; the company sold 1 mil units within 3 days of its launch.

2010: A U.S. appellate court rules that the FCC cannot regulate an Internet provider's ability to charge tiered rates for different download speeds.

Safety and Security on the Internet

Common sense dictates some basic security rules:

- Pick passwords that are difficult to guess, preferably consisting of both letters and numbers, and other symbols, if permitted. Using the same password at multiple websites is not recommended.
- Do not give out your phone number, address, credit card number, or other personal information unless needed for a transaction at a site you trust.
- If you feel someone is being threatening or dangerous, inform your Internet service provider.
- Use protective "firewall," antivirus, and antispyware software to guard your system against attacks by hackers.
- Be careful about opening e-mail and file attachments from unknown correspondents.
- If you have programs that can make use of macros—bits of auxiliary coding that are meant to play a helpful role but can be taken advantage of by some viruses—make sure the programs' macro virus protection is turned on. Disable macros if you do not know how to use them.
- Users of so-called **peer-to-peer** (P2P) file-sharing networks or protocols should open up only part of their computer system to sharing, not the entire hard drive.
- When manufacturers provide **patches** to solve security flaws or other problems with operating systems, software, or web browsers, it is usually advisable to install these fixes. If a fix is not available for a serious security problem, you may want to consider switching to an alternative program.

Malware. Software designed to harm a computer system—such as a virus (malicious code carried within a program) or a worm (a self-contained malicious program)—may be transmitted via the Internet, received on a disk, or communicated via e-mail.

Malicious software may install a "back door" on an infected system, giving hackers access; attempt to turn off any antivirus program on the system; or try to log the user's keystrokes.

A **Trojan horse** is computer code concealed within harmless code or data that is capable of taking control and causing damage. It can be used to mount a massive **denial-of-service** attack, which overwhelms targeted computers by inundating them with messages. The infected computers, acting under hacker control without their owners' knowledge, are called **zombies**, and the network of zombie computers that carry out an attack is called a **botnet**.

Spyware. Software that observes your computer activity without your knowledge is often regarded as a type of malware. Spyware programs, which can gain entry to your machine via a Trojan horse, may record your keystrokes and report passwords or other personal information to a hacker. Some can flood your screen with ads.

Phishing. A popular scam is **phishing**—the use of a forged e-mail message purportedly from a respectable organization, such as a bank, to elicit personal data. The e-mail typically contains a hyperlink that leads to a fabricated website resembling the site of the ostensible sender. To avoid falling victim to a phishing scam, do not click on any links in e-mails sent by companies with whom you do business. If you want to visit a company's website, open your browser and manually enter the site's address.

Spam. Junk e-mail, or **spam**, can be a time-wasting annoyance or worse—spam may offer pornography or products dangerous to health; seek to defraud the recipient; carry a destructive virus; or turn the recipient's machine into a zombie that stores illicit material, takes part in a denial-of-service attack, or distributes spam. Net administrators worry that the flood of spam could cause a breakdown in the flow of Internet traffic.

In 2003 Congress enacted a law that attempted to restrict spam, but it had little effect on the volume of spam received by e-mail accounts.

While filtering software can help reduce the deluge of spam—some e-mail programs include filters—it is not completely accurate. Experts recommend that you be wary of revealing your e-mail address as you surf the web. If possible, do not list your e-mail address on a public website.

Internet Addresses

The fundamental part of an address on the Internet is called the domain. The final part of a domain name, known as the **top-level domain (TLD)**, is its most basic part. For example, in *The World Almanac*'s web address (www.worldalmanac.com), .com is the top-level domain.

So-called generic top-level domains (gTLDs), consisting of 3 or more letters, include the following:

Domain	What it is (usually)
.aero	an organization in the air-transport industry
.asia	legal entities within the Pan-Asia and Asia-Pacific region
.biz	a business
.cat	a site associated with Catalan language and culture
.com	generally a commercial organization, business, or company
.coop	a nonprofit business cooperative, such as a rural electric co-op
.edu	an educational institution
.gov	a nonmilitary U.S. governmental entity, usually federal
.info	an informational site for an individual or organization, without restriction
.int	an international organization
.jobs	information about employment, such as job openings
.mil	a U.S. military organization
.mobi	a site providing content for mobile devices
.museum	a museum
.name	an individual
.net	suggested for a network administration, but actually used by a wide variety of sites
.org	suggested for a nonprofit organization, but actually used by a wide variety of sites
.post	postal services
.pro	a professional, such as an accountant, lawyer, or physician
.tel	Internet communications identifier for an individual or organization
.travel	information about travel

Domain names with 2 letters are generally for countries or regions. The **top-level domain** .us, for instance, is available to persons, organizations, and entities in the U.S. More examples: .eu (European Union), .jp (Japan), .ru (Russia), .uk (United Kingdom).

Internet Lingo

The following abbreviations are sometimes used on the Internet and in e-mail.

BTW	By the way	**GOK**	God only knows	**LOL**	Laughing out loud
CBLO	See below	**GTG**	Got to go	**PLS**	Please
F2F	Face to face; a personal meeting	**HHOK**	Ha, ha—only kidding	**ROFL**	Rolling on the floor laughing
FCOL	For crying out loud	**IMHO**	In my humble opinion	**TAFN**	That's all for now
FWIW	For what it's worth	**IMO**	In my opinion	**TTFN**	Ta-ta for now

Emoticons, or **smileys**, are a series of typed characters that, when turned sideways, resemble a face and express an emotion. Here are some smileys often encountered on the Internet.

:-)	Smile	:-D	Laugh	:-(	Unhappy	:-b..	Drooling
;-)	Wink	:-*	Kiss	:-o	Surprised	{*}	A hug and a kiss

Nations with the Most Internet Users, 2009

Source: Computer Industry Almanac at www.c-i-a.com for year-end 2009

Rank	Country	Internet users (thous.)	% of worldwide users	Rank	Country	Internet users (thous.)	% of worldwide users	Rank	Country	Internet users (thous.)	% of worldwide users
1.	China	310,900	17.03%	7.	UK	47,010	2.58%	13.	Mexico	27,760	1.52%
2.	U.S.	244,780	13.41	8.	Russia	43,020	2.36	14.	Canada	27,120	1.49
3.	India	125,110	6.85	9.	France	42,880	2.35	15.	Spain	25,220	1.38
4.	Japan	102,320	5.61	10.	Italy	40,050	2.19	**Top 15 total**		**1,224,330**	**67.07**
5.	Germany	60,360	3.31	11.	Indonesia	38,410	2.10	**World total**		**1,825,409**	**100.00**
6.	Brazil	51,130	2.80	12.	South Korea	38,260	2.10				

Most-Visited World Websites, June 2010

Source: comScore Media Metrix, Inc.

Some websites represent an aggregation of commonly owned domain names; popular domains within a group added in parentheses by World Almanac editors.

Rank	Website	Visitors[1]	Rank	Website	Visitors[1]
1.	Google sites (YouTube; Blogger)	943,791	11.	CBS Interactive	204,230
2.	Microsoft sites (Bing)	801,034	12.	Tencent Inc.	177,789
3.	Yahoo! sites (Flickr; Delicious)	621,089	13.	Baidu.com Inc.	174,673
4.	Facebook.com	551,143	14.	Glam Media (Glam; Brash; Tinker)	167,487
5.	Wikimedia Foundation sites (Wikipedia)	379,344	15.	WordPress	165,782
6.	AOL LLC	255,978	16.	Fox Interactive Media (MySpace; Photobucket)	156,933
7.	Amazon sites (IMDb)	221,815	17.	The Mozilla Organization	153,165
8.	eBay (PayPal; Skype; Stubhub)	217,690	18.	Vevo	149,636
9.	Apple Inc. (iTunes)	213,757	19.	Adobe sites	142,272
10.	Ask Network (Evite; Dictionary.com)	208,454	20.	Sohu.com Inc.	141,924

(1) Number of persons age 15 or older, in thousands, who visited a website from any location at least once in June 2010.

U.S. Broadband Internet Access, 2009-10

Source: *Home Broadband 2010*, Pew Internet & American Life Project, Aug. 2010

	% with broadband at home 2009	% with broadband at home 2010	% change, 2009-10
All adults	63%	66%	5%
Gender			
Male	64	66	3
Female	63	65	3
Age			
18-29	77	80	4
30-49	72	75	4
50-64	61	63	3
65+	30	31	3
Race/ethnicity			
White (not Hispanic)	65	67	3
Black (not Hispanic)	46	56	22
Hispanic (English-speaking)	68	66	–3
Educational attainment			
Less than high school	30%	33%	10%
High school grad.	52	54	4
Some college	71	76	7
College+	83	86	4
Annual household income			
Less than $30,000	42	45	7
$30,000-$49,999	62	67	8
$50,000-$74,999	80	79	–1
$75,000+	85	87	2
Community type			
Nonrural	67	70	4
Rural	46	50	9

NA = Not applicable. **Note:** Survey of adults on which report is based takes place annually in Apr.-May.

Most-Visited U.S. Websites, June 2010

Source: comScore Media Metrix

Some websites represent an aggregation of commonly owned domain names; popular domains within a group added in parentheses by World Almanac editors.

All U.S. Sites

Rank	Website	Visitors[1]
1.	Google sites (Blogger; YouTube)	178,785
2.	Yahoo! sites (Delicious; Flickr)	170,221
3.	Microsoft sites (Bing)	160,846
4.	Facebook.com	141,638
5.	AOL (Mapquest; TMZ; Engadget)	107,477
6.	Fox Interactive Media (MySpace; Photobucket)	88,826
7.	Ask Network (Evite; Dictionary.com)	87,405
8.	Glam Media (Brash; Glam; Tinker)	85,439
9.	Turner Network	85,294
10.	Amazon sites (IMDb)	75,968
11.	CBS Interactive	74,445
12.	Wikimedia Foundation sites (Wikipedia)	72,127
13.	New York Times Digital (About.com)	68,912
14.	Apple Inc. (iTunes)	68,265
15.	eBay (PayPal; Skype; StubHub)	67,006
16.	Viacom Digital (BET; Comedy Central; MTV)	66,038
17.	Demand Media (eHow)	54,619
18.	craigslist, inc.	50,715
19.	Vevo	48,107
20.	Comcast Corporation	45,680

Social Networking Sites

Rank	Website	Visitors[1]
1.	Facebook.com	141,638
2.	MySpace	66,633
3.	Twitter.com	23,319
4.	LinkedIn.com	20,745
5.	Yahoo! Pulse	18,063
6.	MyLife.com sites	12,321
7.	Classmates.com sites	11,332
8.	Windows Live Profile	11,102
9.	Digg Inc.	8,650
10.	Formspring.me	8,094

Blog Sites

Rank	Website	Visitors[1]
1.	Blogger	55,996
2.	Technorati Media	36,971
3.	Federated Media Publishing (BoingBoing; Mashable)	34,644
4.	WordPress	33,389
5.	Gawker Media (Gizmodo; Jezebel; Lifehacker)	19,272
6.	Six Apart Sites (Movable Type; TypePad)	17,142
7.	BlogHer	11,623
8.	HubPages.com	10,797
9.	LiveJournal.com	4,140
10.	Tumblr.com	3,875

Video Sites

Rank	Website	Visitors[1]
1.	Google sites (YouTube)	144,501
2.	Yahoo! sites (Flickr)	44,938
3.	Vevo	43,700
4.	Facebook.com	43,307
5.	Fox Interactive Media (MySpace; Photobucket)	41,570
6.	Microsoft sites (MSNBC; Xbox Live; Zune)	38,995
7.	Viacom Digital (BET; Comedy Central; MTV)	32,049
8.	Turner Network (Cartoon Network; CNN)	31,712
9.	Break Media	26,889
10.	Hulu	24,001

Search and Navigation

Rank	Website	Searches (mil)	Searchers[1]	% of searches
1.	Google sites	10,292	181,429	62.6%
2.	Yahoo! sites	3,114	120,894	18.9
3.	Microsoft Sites	2,082	93,681	12.7
4.	Ask Network	584	68,422	3.6
5.	AOL LLC	368	27,214	2.2

E-mail

Rank	Website	Visitors[1]
1.	Yahoo! Mail	96,440
2.	Windows Live Hotmail	46,732
3.	Google Gmail	44,996
4.	MySpace Mail	33,140
5.	AOL Email	25,222

(1) Number of persons age 2 and older in any U.S. location, in thousands, who visited a website at least once in June 2010.

Internet Access in the U.S., 2000-09

Source: 2010 Digital Future Report, USC Annenberg School Center for the Digital Future

Type of Internet access	% of Americans accessing internet[1]						Avg. hours per week spent online[1]					
	2000	2002	2005	2007	2008	2009	2000	2002	2005	2007	2008	2009
All access	**67%**	**71%**	**79%**	**79%**	**80%**	**82%**	**9.4**	**11.1**	**13.3**	**15.3**	**17.3**	**19.0**
at home	47	59	66	66	72	71	3.3	6.8	7.8	10.0	10.1	10.6
at school[2]	55	63	67	70	66	66	NA	NA	NA	NA	NA	NA
at work[3]	42	40	55	52	59	59	NA	5.5	5.6	7.4	8.3	9.0
by cell phone/mobile devices[4]	NA	5	9	13	16	25	NA	NA	2.0	1.4	1.7	2.5
by wireless computer[4]	NA	3	7	27	32	41	NA	NA	5.7	7.2	9.7	10.3

NA = Not available. (1) Internet users age 12 and older who connect from all locations. (2) Adult respondents with children in household. (3) Active Use. Work outside the home. (4) Via wireless device.

Frequency of Internet Activities in the U.S., 2009

Source: 2010 Digital Future Report, USC Annenberg School Center for the Digital Future

(among Internet users age 12 and older who connect from any location)

Online activities	Daily[1]	Weekly	Monthly	Occasionally	Never	Online activities	Daily[1]	Weekly	Monthly	Occasionally	Never
Browse (surf)	56%	23%	7%	6%	8%	Find or check a fact	23%	33%	17%	17%	11%
Pay bills	3	19	29	7	42	Read blogs	10	13	9	18	50
Use E-mail	78	14	3	2	3	Watch/download videos	12	21	13	13	41
Read news	43	22	9	12	14	Make/receive phone calls	4	3	2	6	85
Social networking or video sharing	36	22	NA	17	27	Work on a blog	4	6	3	9	79
Play games	20	14	8	14	44	Buy products/services	2	11	34	38	16
Instant message	20	11	8	12	50	Gamble	1.4	2	2	8	87
Listen/download music	17	22	14	16	31	Online banking	15	29	14	9	33

(1) One or more times daily.

Informative and Useful Websites

Name	URL	Description
Daily Data		
Federal Register	*www.federalregister.gov*	Online magazine approach to the government's daily journal. Browse by topic, location, agency, etc.
Flowing Data	*flowingdata.com*	Online data visualizations and statistics.
ResourceShelf	*www.resourceshelf.com*	Librarians and researchers share the websites they find.
Today's Front Pages	*www.newseum.org/todaysfrontpages*	Today's front page from more than 500 newspapers worldwide.
Education and Exhibits		
American Memory	*memory.loc.gov*	More than 5 million items from the Library of Congress, including audio, maps, movies, photos, prints, and sheet music.
Europeana	*europeana.eu*	Network of European cultural organizations linking to more than 6 million digital items.
Internet Archive	*www.archive.org*	Digital library of free cultural artifacts and Internet sites.
MIT OpenCourseWare	*ocw.mit.edu*	Free and open educational course material from Massachusetts Institute of Technology.
New York Public Library Digital Gallery	*digitalgallery.nypl.org*	More than 700,000 images digitized from primary sources and printed rarities in the library's collections.
Our Documents	*www.ourdocuments.gov*	Digitized images and text of 100 milestone documents from America's history.
SmART History	*smarthistory.org*	Open educational resource on art history.
World Digital Library	*www.wdl.org*	Collection of significant primary documents from countries around the world.
Statistics		
DATA.gov	*www.data.gov*	Open access to raw government data files.
FedStats	*www.fedstats.gov*	Statistics by topic or program from more than 100 federal agencies.
Swivel	*www.swivel.com*	Community for users to visually map out and share statistics.
United Nations Statistics Division	*unstats.un.org*	International data sets and country profiles with demographics and stats on society, industry, and the environment.
U.S. Economy at a Glance	*stats.bls.gov/eag*	Quick reference tables on employment and wages from the Bureau of Labor Statistics.
Online Tools		
Kayak	*www.kayak.com*	One stop search of multiple travel-booking sites for the lowest fares and price trends.
LibraryThing	*www.librarything.com*	Track the books you've read, receive suggestions for new books, and compare lists with similar readers.
Wolfram Alpha	*www.wolframalpha.com*	Ready reference through computation of databases maintained by Wolfram Research.
Open Congress	*www.opencongress.org*	Easily follow Congress and find news about specific members, bills, committees, and issues. Receive updates by RSS feed.
Downloadable Tools		
Google Earth	*earth.google.com*	Free downloadable interactive world atlas and mapping software.
Stellarium	*www.stellarium.org*	Free downloadable planetarium that visualizes astronomical phenomena in real time from any point on Earth.

Note: Websites are subject to change. The World Almanac cannot take responsibility for contents.

Worldwide Telecommunications: Market Data, 1990-2009

Source: © International Telecommunication Union

	1990	1999	2000	2005	2006	2007	2008	2009
Total market revenue (bil $)[1]	$508	$1,123	$1,210	NA	NA	NA	NA	NA
Intl. phone traffic (bil minutes)[2]	33	103	114	179	183	NA	NA	NA
Main telephone lines (mil)	520	904	975	1,259	1,280	1,272	1,251	1,219
Mobile cellular subscriptions (mil)	11	490	738	2,217	2,755	3,358	4,037	4,673

NA = Not available. (1) Revenue from installation, subscription, and local, trunk, and international call charges. (2) From 1994, includes traffic between countries of the former Soviet Union.

World Cellular Telephones Use by Nation, 2009

Source: © International Telecommunication Union, estimated; top countries ranked by subscriptions at year-end

Country	Subscriptions (thous.)	Per 100 pop.	Country	Subscriptions (thous.)	Per 100 pop.
China	747,000.0	55.51	Saudi Arabia	44,864.4	174.43
India	525,090.0	43.83	Poland	44,553.1	117.02
United States	298,404.0	94.83	Colombia	42,159.6	92.33
Russia	230,500.0	163.62	Algeria	32,729.8	93.79
Brazil	173,959.4	89.79	Malaysia	30,379.0	110.60
Indonesia	159,247.6	69.25	Venezuela	28,123.6	98.39
Japan	114,917.0	90.37	Taiwan	26,958.8	116.70
Germany	105,000.0	127.79	Romania	25,377.0	119.28
Pakistan	102,980.0	56.96	Morocco	25,310.8	79.11
Italy	90,613.0	151.35	Peru	24,700.4	84.69
Vietnam	88,566.0	100.56	Australia	24,220.0	113.75
Mexico	83,527.9	76.20	Canada	23,081.0	68.75
Thailand	83,057.0	122.57	Netherlands	21,182.0	127.66
United Kingdom	80,375.4	130.55	Iraq	19,722.0	64.14
Philippines	74,489.0	80.98	Kenya	19,364.6	48.65
Nigeria	73,099.3	47.24	Tanzania	17,469.5	39.94
Turkey	62,779.6	83.91	Guatemala	17,307.5	123.39
France	59,543.0	95.51	Chile	16,450.2	96.94
Egypt	55,352.2	66.69	Uzbekistan	16,417.9	59.73
Ukraine	55,333.2	121.06	Sudan	15,339.9	36.29
Iran	52,555.0	70.83	Portugal	15,178.0	141.76
Argentina	51,891.0	128.84	Ghana	15,108.9	63.38
Spain	50,991.1	113.56	Kazakhstan	14,995.3	95.90
Bangladesh	50,400.0	31.07	Czech Republic	14,258.4	137.51
South Korea	47,944.2	99.20	**World**	**4,676,174.4**	**68.30**
South Africa	46,436.0	92.67			

U.S. Wireless Industry, 1985-2009

Source: The CTIA Semi-Annual Industry Survey, used with permission of CTIA. As of Dec. in year shown.

Date	Est. total subscribers	Total service revenues (thous.)	Cell phone antennas	Avg. local monthly bill	Avg. local call length (min.)
1985	340,213	$482,428	913	NA	NA
1987	1,230,855	1,151,519	2,305	$96.83	2.33
1988	2,069,441	1,959,548	3,209	98.02	2.26
1989	3,508,944	3,340,595	4,169	89.30	2.48
1990	5,283,055	4,548,820	5,616	80.90	2.20
1991	7,557,148	5,708,522	7,847	72.74	2.38
1992	11,032,753	7,822,726	10,307	68.68	2.58
1993	16,009,461	10,892,175	12,824	61.49	2.41
1994	24,134,421	14,229,922	17,920	56.21	2.24
1995	33,785,661	19,081,239	22,663	51.00	2.15
1996	44,042,992	23,634,971	30,045	47.70	2.32
1997	55,312,293	27,485,633	51,600	42.78	2.31
1998	69,209,321	33,133,175	65,887	39.43	2.39
1999	86,047,003	40,018,489	81,698	41.24	2.38
2000	109,478,031	52,466,020	104,288	45.27	2.56
2001	128,374,512	65,316,235	127,540	47.37	2.74
2002	140,766,842	76,508,187	139,338	48.40	2.73
2003	158,721,981	87,624,093	162,986	49.91	3.07
2004	182,140,362	102,121,210	175,725	50.64	3.05
2005	207,896,198	113,538,221	183,689	49.98	3.00
2006	233,040,781	125,456,825	195,613	50.56	3.03
2007	255,395,599	138,869,304	213,299	49.79	NA
2008	270,333,881	148,084,170	242,130	50.07	2.27
2009	285,646,191	152,551,854	247,081	48.16	1.81

NA = Not available.

U.S. Sales and Household Penetration, Selected Products, 1985-2010

Source: Consumer Electronics Association

Product	1985 Sales (mil)	1985 % of all households	1990 Sales (mil)	1990 % of all households	1995 Sales (mil)	1995 % of all households	2000 Sales (mil)	2000 % of all households	2009 Sales (mil)	2009 % of all households	2010 (est.) Sales (mil)	2010 (est.) % of all households
Cordless telephones	$280	11%	$842	28%	$1,141	55%	$1,307	80%	$271	NA	$182	NA
Pagers	—	—	118	1	300	11	750	23	64	NA	21	NA
Modems/fax modems	10	0	191	2.7	770	16	1,564	55	1,110	67%	1,154	69%
Telephone answering devices	325	7	827	35	1,077	57	984	75	824	75	784	72
Cellular phones	116	0.1	1,098	5	2,574	29	8,995	60	24,048	90	25,169	91

NA = Not available.

Telephone Area Codes, by Number

As of Aug. 2010.

Code	Location or *Service*
201	New Jersey
202	District of Columbia
203	Connecticut
204	Manitoba
205	Alabama
206	Washington
207	Maine
208	Idaho
209	California
210	Texas
211	*Community Info.*
212	New York
213	California
214	Texas
215	Pennsylvania
216	Ohio
217	Illinois
218	Minnesota
219	Indiana
224	Illinois
225	Louisiana
226	Ontario
228	Mississippi
229	Georgia
231	Michigan
234	Ohio
239	Florida
240	Maryland
242	Bahamas
246	Barbados
248	Michigan
250	British Columbia
251	Alabama
252	North Carolina
253	Washington
254	Texas
256	Alabama
260	Indiana
262	Wisconsin
264	Anguilla
267	Pennsylvania
268	Antigua/Barbuda
269	Michigan
270	Kentucky
276	Virginia
281	Texas
284	British Virgin Islands
289	Ontario
301	Maryland
302	Delaware
303	Colorado
304	West Virginia
305	Florida
306	Saskatchewan
307	Wyoming
308	Nebraska
309	Illinois
310	California
311	*Non-Emergency Access*
312	Illinois
313	Michigan
314	Missouri
315	New York
316	Kansas
317	Indiana
318	Louisiana
319	Iowa
320	Minnesota
321	Florida
323	California
325	Texas
330	Ohio
331	Illinois
334	Alabama
336	North Carolina
337	Louisiana
339	Massachusetts
340	U.S. Virgin Islands
343	Ontario
345	Cayman Islands
347	New York
351	Massachusetts
352	Florida
360	Washington
361	Texas
385	Utah
386	Florida
401	Rhode Island
402	Nebraska
403	Alberta
404	Georgia
405	Oklahoma
406	Montana
407	Florida
408	California
409	Texas
410	Maryland
411	*Directory Assistance*
412	Pennsylvania
413	Massachusetts
414	Wisconsin
415	California
416	Ontario
417	Missouri
418	Quebec
419	Ohio
423	Tennessee
424	California
425	Washington
430	Texas
432	Texas
434	Virginia
435	Utah
438	Quebec
440	Ohio
441	Bermuda
442	California
443	Maryland
450	Quebec
456	Inbound Intl.
458	Oregon
469	Texas
470	Georgia
473	Grenada
475	Connecticut
478	Georgia
479	Arkansas
480	Arizona
484	Pennyslvania
500	*Personal Comm. Serv.*
501	Arkansas
502	Kentucky
503	Oregon
504	Louisiana
505	New Mexico
506	New Brunswick
507	Minnesota
508	Massachusetts
509	Washington
510	California
511	*Traffic Info.*
512	Texas
513	Ohio
514	Quebec
515	Iowa
516	New York
517	Michigan
518	New York
519	Ontario
520	Arizona
530	California
533	*Personal Comm. Serv.*
534	Wisconsin
540	Virginia
541	Oregon
551	New Jersey
559	California
561	Florida
562	California
563	Iowa
567	Ohio
570	Pennsylvania
571	Virginia
573	Missouri
574	Indiana
575	New Mexico
579	Quebec
580	Oklahoma
581	Quebec
585	New York
586	Michigan
587	Alberta
600	*Canadian Services*
601	Mississippi
602	Arizona
603	New Hampshire
604	British Columbia
605	South Dakota
606	Kentucky
607	New York
608	Wisconsin
609	New Jersey
610	Pennsylvania
611	*Repair Service*
612	Minnesota
613	Ontario
614	Ohio
615	Tennessee
616	Michigan
617	Massachusetts
618	Illinois
619	California
620	Kansas
623	Arizona
626	California
630	Illinois
631	New York
636	Missouri
641	Iowa
646	New York
647	Ontario
649	Turks and Caicos Isls.
650	California
651	Minnesota
657	California
660	Missouri
661	California
662	Mississippi
664	Montserrat
670	N. Mariana Islands
671	Guam
678	Georgia
681	West Virginia
682	Texas
684	American Samoa
700	*Interexchange carriers*
701	North Dakota
702	Nevada
703	Virginia
704	North Carolina
705	Ontario
706	Georgia
707	California
708	Illinois
709	Newfoundland
710	U.S. Government
711	*Telecommunications Relay Service (TRS)*
712	Iowa
713	Texas
714	California
715	Wisconsin
716	New York
717	Pennsylvania
718	New York
719	Colorado
720	Colorado
724	Pennsylvania
727	Florida
731	Tennessee
732	New Jersey
734	Michigan
740	Ohio
747	California
754	Florida
757	Virginia
758	St. Lucia
760	California
762	Georgia
763	Minnesota
765	Indiana
767	Dominica
769	Mississippi
770	Georgia
772	Florida
773	Illinois
774	Massachusetts
775	Nevada
778	British Columbia
779	Illinois
780	Alberta
781	Massachusetts
784	St. Vincent and Gren.
785	Kansas
786	Florida
787	Puerto Rico
800	*Toll-Free Service*
801	Utah
802	Vermont
803	South Carolina
804	Virginia
805	California
806	Texas
807	Ontario
808	Hawaii
809	Dominican Republic
810	Michigan
811	*Utility location*
812	Indiana
813	Florida
814	Pennsylvania
815	Illinois
816	Missouri
817	Texas
818	California
819	Quebec
828	North Carolina
829	Dominican Republic
830	Texas
831	California
832	Texas
843	South Carolina
845	New York
847	Illinois
848	New Jersey
849	Dominican Republic
850	Florida
856	New Jersey
857	Massachusetts
858	California
859	Kentucky
860	Connecticut
862	New Jersey
863	Florida
864	South Carolina
865	Tennessee
866	*Toll-Free Service*
867	Yukon, NW Terr., Nunavut
868	Trinidad and Tobago
869	St. Kitts and Nevis
870	Arkansas
872	Illinois
876	Jamaica
877	*Toll-Free Service*
878	Pennsylvania
880	*Paid Toll-Free Serv.*
881	*Paid Toll-Free Serv.*
882	*Paid Toll-Free Serv.*
888	*Toll-Free Service*
900	*Premium Service*
901	Tennessee
902	Nova Scotia, Prince Ed. Isl.
903	Texas
904	Florida
905	Ontario
906	Michigan
907	Alaska
908	New Jersey
909	California
910	North Carolina
911	*Emergency*
912	Georgia
913	Kansas
914	New York
915	Texas
916	California
917	New York
918	Oklahoma
919	North Carolina
920	Wisconsin
925	California
928	Arizona
931	Tennessee
936	Texas
937	Ohio
938	Alabama
939	Puerto Rico
940	Texas
941	Florida
947	Michigan
949	California
951	California
952	Minnesota
954	Florida
956	Texas
970	Colorado
971	Oregon
972	Texas
973	New Jersey
978	Massachusetts
979	Texas
980	North Carolina
985	Louisiana
989	Michigan

POSTAL INFORMATION

Basic U.S. Postal Service

The Postal Reorganization Act, creating a government-owned postal service under the executive branch and replacing the old Post Office Department, was signed into law by Pres. Richard Nixon, Aug. 12, 1970. The service officially came into being on July 1, 1971. The U.S. Postal Service is governed by an 11-person board of governors. Nine of the members are appointed by the president, with Senate approval. These 9 choose a postmaster general. The board and the postmaster general choose the 11th member, who serves as deputy postmaster general.

Congress passed the Postal Accountability and Enhancement Act, which overhauled postal service operations for the first time since 1971, on Dec. 8, 2006. New operating provisions included the ability to adjust rates annually, negotiate for contracts, and invest profits in internal improvements.

U.S. Domestic Rates

Domestic rates apply to the U.S., to its territories and possessions, and to APOs and FPOs. Many changes in domestic postal rates, fees, and services took effect May 11, 2009.

First-Class Mail

First-Class Mail includes written matter such as letters, postal cards, and postcards (private mailing cards), plus all other matter wholly or partly in writing, whether sealed or unsealed, except book manuscripts, periodical articles and music, manuscript copy accompanying proof sheets or corrected proof sheets of the same, and writing authorized by law on matter of other classes. Also included: matter sealed or closed against inspection, bills, and statements of accounts.

Written letters and matter sealed against inspection cost **44¢** for first ounce, 17¢ for each additional ounce or fraction thereof, up to 3.5 oz. Postcard postage is **28¢**. Large envelopes measuring up to 12 in. by 15 in. (or standard envelopes over 3.5 oz.) cost **88¢** for the first ounce and 17¢ for each additional ounce or fraction thereof. Presort- and automation-compatible mail can qualify for lower rates if certain piece minimums, mailing permits, and other requirements are met.

Express Mail

Express Mail provides guaranteed expedited service for any mailable article (up to 70 lbs and not over 108 in. in combined length and girth). Offers next day delivery by noon to most destinations; there is a $12.50 extra charge for Sunday or holiday delivery. Second-day service is available to locations not on the Next Day Delivery Network. Prices start at $13.65 for items weighing up to 8 oz., dependent on distance. All rates include insurance up to $100, shipment receipt, record of delivery at the destination post office, and free tracking.

Express Mail Flat Rate: $18.30, regardless of weight, if matter fits into a designated Postal Service flat-rate envelope.

Pickup On Demand service is available for **$15.30** per stop, regardless of the number of pieces or service used.

Standard Mail

Standard Mail is limited to items less than 16 oz. such as solicitations, newsletters, advertising materials, books, cassettes, and other merchandise. It may not be used for personal correspondence. A minimum volume of 200 pieces or 50 lbs of such items is necessary, and specific bulk mail preparation and sortation requirements apply.

The minimum rate per piece for pieces 3.3 oz. or less is $0.330 for basic nonmachinable letters. Contact your post office for the discounts offered for automation, presorted, carrier route, destination entry, and other discounts. Separate rates are available for some nonprofit organizations.

Any mailer who uses standard mail is required to pay an annual fee of $185, good for 365 days. Additional standards apply to mailings of nonidentical-weight pieces.

Priority Mail

Due to expeditious handling and transportation, Priority Mail is delivered in 2 days, in most cases. Priority Mail may include any mailable article up to 70 lbs and not over 108 in. in length and girth combined, including written and other First-Class material.

Pickup On Demand service costs an additional $15.30, regardless of the number of pieces or service used (e.g., Express Mail, Priority Mail, or Parcel Post can be picked up together).

Priority Mail Flat Rate: $4.90, regardless of weight, if matter fits into a designated Postal Service flat-rate envelope. **$4.95**, **$10.70**, or **$14.50**, regardless of weight (under 70 lbs), if matter fits into special Postal Service flat-rate boxes.

Priority Mail Rates

Weight not over	ZONES						
	1-2	3	4	5	6	7	8
1 lb	$4.90	$4.95	$5.05	$5.15	$5.25	$5.35	$5.55
2	5.00	5.35	5.95	7.50	8.10	8.60	9.55
3	5.70	6.55	7.50	9.00	9.95	10.70	12.70
4	6.45	7.55	8.60	11.90	13.00	13.80	15.30
5	7.65	8.75	9.85	13.50	14.85	15.85	17.65
6	8.30	9.65	11.00	15.05	16.65	17.80	19.90
7	8.95	10.55	11.75	16.80	18.40	20.05	22.40
8	9.60	11.45	13.30	18.20	20.20	22.05	25.10
9	10.25	12.35	14.40	19.75	22.00	23.95	27.95
10	10.90	13.25	15.70	21.35	23.75	26.30	30.40
11	11.70	14.20	16.90	23.05	25.55	29.05	33.35
12	12.50	15.20	18.15	24.70	27.75	31.40	35.85
13	13.25	16.15	19.20	26.15	29.75	32.65	37.10
14	14.05	17.10	20.35	27.80	31.40	34.50	38.95
15[1]	14.65	18.10	21.50	29.40	32.80	35.25	40.05

(1) See postmaster for pieces over 15 lbs.

Periodicals

Periodicals include newspapers and magazines.

For the general public, the applicable Package Services or First-Class postage is paid for periodicals.

For publishers, rates vary according to the following:

(1) whether item is sent to same county,
(2) percentage of editorial and advertising matter,
(3) whether the publishing org. is nonprofit or produces educational material for use in classrooms,
(4) weight,
(5) distance,
(6) level of presort, and
(7) automation compatibility.

Historical Postage Rates, 1851-2010

Postage cost for a prepaid, one-ounce letter (the first-class standard after July 1, 1885).

Effective date	Rate	2010 dollars	Effective date	Rate	2010 dollars	Effective date	Rate	2010 dollars
July 1, 1851	$0.06[1]	$1.57	Jan. 7, 1968	$0.06	$0.38	Feb. 3, 1991	$0.29	$0.46
July 1, 1863	0.06	1.06	May 16, 1971	0.08	0.43	Jan. 1, 1995	0.32	0.46
Oct. 1, 1883	0.04	0.93	Mar. 2, 1974	0.10	0.44	Jan. 10, 1999	0.33	0.43
July 1, 1885	0.02	0.48	Dec. 31, 1975	0.13	0.53	Jan. 7, 2001	0.34	0.42
Nov. 2, 1917	0.03	0.51[2]	May 29, 1978	0.15	0.50	June 30, 2002	0.37	0.45
July 1, 1919	0.02	0.25[2]	Mar. 22, 1981	0.18	0.43	Jan. 8, 2006	0.39	0.42
July 6, 1932	0.03	0.48	Nov. 1, 1981	0.20	0.48	May 14, 2007	0.41	0.43
Aug. 1, 1958	0.04	0.30	Feb. 17, 1985	0.22	0.45	May 12, 2008	0.42	0.43
Jan. 7, 1963	0.05	0.36	Apr. 3, 1988	0.25	0.46	May 11, 2009	0.44	0.44

(1) For domestic letters traveling under 3,000 miles. (2) The price increased one cent during World War I; Congress restored the prewar rate in 1919.

Package Services

Package Services, formerly Standard Mail (B), is any mailable matter that is not included in First-Class or Periodicals (unless permitted or required by regulations). There are currently 5 subclasses of Package Services: Parcel Post, Parcel Select, Bound Printed Matter, Media Mail (formerly Special Standard Mail), and Library Mail.

The post office determines charges for Package Services according to the weight of the package in pounds and the zone distance shipped (Media Mail and Library Mail rates are determined by weight alone). There is no minimum weight; see separate headings for maximum weight. Presort- and automation-compatible mail for all Package Services can qualify for lower rates if certain piece minimums, mailing permits, and other requirements are met. Contact your local post office for further information. Package Services is not sealed against postal inspection.

Parcel Post

Parcel Post is any Package Services not mailed as Bound Printed Matter, Media Mail, or Library Mail. (Parcel Select, a separate service, is used for medium-to-large volumes of packages.) Any Package Services matter may be mailed at Parcel Post rates provided it does not exceed 70 lbs or 130 in. in combined length and girth. Packages over 84 in. and up to 108 in. in combined length and girth and under 20 lbs use the 20-lb "balloon price." Packages exceeding 108 in. use the oversized price—consult postal worker. All fractions of a pound are counted as a full pound. Parcel Post subclass consists of two basic retail rate categories and three drop-shipped categories, the latter collectively known as Parcel Select.

Parcel Post Basic Rates

(Inter BMC/ASF ZIP codes only, machinable[1] parcels, no discount, no surcharge)

Weight not over	ZONES 1-2	3	4	5	6	7	8
1 lb	$4.90	$4.90	$4.90	$4.90	$4.90	$4.90	$4.90
2	4.90	5.15	5.70	7.02	7.33	7.62	8.09
3	5.45	6.20	7.05	8.18	8.85	9.27	9.92
4	6.05	7.05	7.94	9.20	10.05	10.66	11.57
5	6.80	8.10	9.02	10.05	10.78	11.37	12.34
6	7.50	9.20	9.94	10.94	11.45	12.02	13.03
7	8.25	10.00	10.49	11.80	12.36	13.01	14.15
8	8.56	10.34	10.86	12.17	12.96	13.74	15.03
9	8.87	10.69	11.24	12.55	13.56	14.47	15.90
10	9.18	11.03	11.61	12.92	14.16	15.21	16.77
11	9.49	11.38	11.99	13.29	14.76	15.94	17.65
12	9.80	11.72	12.36	13.66	15.36	16.67	18.52
13	10.11	12.06	12.74	14.03	15.96	17.40	19.39
14	10.42	12.41	13.11	14.40	16.56	18.13	20.27
15	10.73	12.75	13.49	14.77	17.16	18.86	21.14
16	11.04	13.10	13.87	15.14	17.76	19.59	22.01
17	11.34	13.44	14.24	15.51	18.36	20.33	22.89
18	11.65	13.79	14.60	15.99	18.96	21.06	23.76
19	11.96	14.13	14.95	16.47	19.56	21.79	24.64
20[2]	12.27	14.48	15.30	16.94	20.16	22.52	25.51

(1) Machinable parcels must be not less than 6 in. long, 3 in. high, and 0.25 in. thick or more than 34 in. long, 17 in. high, and 17 in. thick; at least 6 oz. but not more than 35 lbs. (2) Consult postmaster for pieces greater than 20 lbs.

Library Mail

(minimum weight: none; maximum weight: 70 lbs)

Applies to books, printed music, bound academic theses, periodicals, sound recordings, museum materials, and other library materials mailed between schools, colleges, universities, public libraries, museums, veteran and fraternal organizations, and nonprofit religious, educational, scientific, and labor organizations or associations (or to or from these organizations). Advertising restrictions apply. All packages must be marked "Library Mail," and may not exceed 108 in. in combined length and girth. Contact your local post office for further information.

Rates are calculated by weight only. Single-piece rates: $2.26, up to 1 lb; 37¢ for each additional pound or fraction thereof.

Media Mail

(minimum weight: none; maximum weight: 70 lbs)

Applies to books of at least 8 printed pages; 16-mm or narrower-width films; printed music; printed test materials; sound recordings, playscripts, and manuscripts for books; printed educational charts; loose-leaf pages and binders consisting of medical information; computer-readable media. Advertising restrictions apply. Packages must be marked "Media Mail" and may not exceed 108 in. in combined length and girth. Contact your local post office for further information.

Rates are calculated by weight only. Single-piece rates: $2.38, up to 1 lb; additional pounds thereafter, 39¢ each.

Bound Printed Matter

(minimum weight: none; maximum weight: 15 lbs)

Applies to advertising, promotional, directory, or editorial material that is bound by permanent fastening and consists of sheets of which at least 90% are imprinted by any process other than handwriting or typewriting. Does not include stationery (or pads of blank forms) or personal correspondence. Packages may not exceed 108 in. in combined length and girth and must be marked "Bound Printed Matter" or "BPM."

Bound Printed Matter Rates

(zone rate for parcels)

Weight not over	ZONES 1-2	3	4	5	6	7	8
1.0 lb	$2.33	$2.37	$2.43	$2.52	$2.63	$2.69	$2.88
1.5	2.33	2.37	2.43	2.52	2.63	2.69	2.88
2.0	2.43	2.49	2.57	2.69	2.83	2.91	3.17
2.5	2.54	2.61	2.71	2.86	3.04	3.14	3.46
3.0	2.64	2.73	2.85	3.03	3.24	3.36	3.75
3.5	2.75	2.85	2.99	3.20	3.45	3.59	4.04
4.0	2.85	2.97	3.13	3.37	3.65	3.81	4.33
4.5	2.96	3.09	3.27	3.54	3.86	4.04	4.62
5.0	3.06	3.21	3.41	3.71	4.06	4.26	4.91
6.0	3.27	3.45	3.69	4.05	4.47	4.71	5.49
7.0	3.48	3.69	3.97	4.39	4.88	5.16	6.07
8.0	3.69	3.93	4.25	4.73	5.29	5.61	6.65
9.0	3.90	4.17	4.53	5.07	5.70	6.06	7.23
10.0	4.11	4.41	4.81	5.41	6.11	6.51	7.81
11.0	4.32	4.65	5.09	5.75	6.52	6.96	8.39
12.0	4.53	4.89	5.37	6.09	6.93	7.41	8.97
13.0	4.74	5.13	5.65	6.43	7.34	7.86	9.55
14.0	4.95	5.37	5.93	6.77	7.75	8.31	10.13
15.0	5.16	5.61	6.21	7.11	8.16	8.76	10.71

Domestic Mail Special Services

Delivery Confirmation

Applies to First-Class Mail parcels, Priority Mail, and Package Services. Available for purchase at the time of mailing only. Provides mailer with the date and time an article was delivered or date and time of any unsuccessful delivery attempts. Electronic confirmation is available for bar-coded matter.

Confirmation is accessible to retail purchasers on the Internet (www.usps.com) or toll-free by phone at (800) 222-1811).

Priority Mail fees: retail, 70¢; electronic, free. First-Class Mail parcels and Package Services fees: retail, 80¢; electronic, 19¢. Standard Mail fee: electronic, 19¢.

Change of Address

The USPS will forward mail to another address provided a Change of Address (COA) card has been filed, either in person (free), on www.usps.com ($1 fee), or by phone at (800) ASK-USPS ($1). The COA card, which can be picked up at any post office or printed off the Internet, can also be dropped in any mailbox for filing, free of charge.

Special Handling

Provides preferential handling, but not preferential delivery, to the extent practicable in dispatch and transportation. Available for First-Class Mail, Priority Mail, and Package Services for the following surcharge: up to 10 lb, $7.40; over 10 lb, $10.40. Pieces must be marked "Special Handling."

The USPS introduced the "Forever" stamp Apr. 12, 2007. The Forever stamp initially cost 41¢ and will always be valid as First-Class postage on standard envelopes weighing one ounce or less, even if rates change. The Forever stamp can be purchased at the current First-Class standard rate (44¢ as of Sept. 2010).

Registered Mail

Provides sender with mailing receipt, and a delivery record is maintained. Only matter prepaid with postage at First Class or Priority Mail rates may be registered. Stamps or meter stamps must be attached. The face of the article must be at least 5 in. long, 3½ in. high.

Declared value	Fee
$0.00	$10.60
$0.01 to $100.00	11.50
$100.01 to $500.00	13.10
$500.01 to $1,000.00	14.45
$1,000.01 to $2,000.00	15.80
$2,000.01 to $3,000.00	17.15
$3,000.01 to $4,000.00	18.50
$4,000.01 to $5,000.00	19.85
$5,000.01 to $6,000.00	21.20
$6,000.01 to $7,000.00	22.55
$7,000.01 to $8,000.00	23.90
$8,000.01 to $9,000.00	25.25
$9,000.01 to $10,000.00	26.60
$10,000.01 to $25,000.00	27.95 plus $1.35 for each $1,000 or fraction thereof over $11,000
$25,000.01 to $15 million	46.85 plus $1.35 for each $1,000 or fraction thereof over $25,000
Over $15 million	20,263.10 plus any additional amount determined by the Postal Service

Note: The mailer is required to declare the value of mail presented for registration. Fee for articles with declared value over $0.00 up to $25,000 includes insurance.

Collect on Delivery (C.O.D.): Fee: $5.50 for up to $50; increases incrementally. Items must be sent as bona fide orders or be in conformity with agreements between senders and addressees. Maximum amount collectible is $1,000. For details, consult postmaster.

Certified mail: Available for any matter having no intrinsic value on which First Class or Priority Mail postage is paid. A receipt is furnished at the time of mailing, and evidence of delivery is obtained. Basic fee is $2.80 in addition to regular postage. Return receipt and restricted delivery available upon payment of additional fees. No indemnity.

Insured Mail

Applicable to Standard Mail, Package Services, and First-Class or Priority Mail items eligible to be mailed as Package Services. Matter for sale addressed to prospective purchasers who have not ordered it or authorized its sending cannot be insured. **Note:** For Express Mail, insurance is included up to $100, and additional insurance can be purchased for significantly lower than those shown here.

Declared value	Insured mail fee[1]
$0.01 to $50.00	$1.75
$50.01 to $100.00	2.25
$100.01 to $200.00	2.75
$200.01 to $300.00	4.70
$300.01 to $400.00	5.70
$400.01 to $500.00	6.70
$500.01 to $600.00	7.70
$600.01 to $5,000.00	7.70 plus $1.00 per each $100 or fraction thereof over $600 in desired coverage

(1) In addition to postage. (Maximum liability is $5,000.) See postmaster for details on bulk discounts.

International Mail Special Services

Insurance: Available to many countries for loss of or damage to items paid at parcel post rate. Consult postmaster for indemnity limits for individual countries.

Priority Mail Intl. Insurance Rates

Limit of indemnity not over	Canada[1]	Other countries[1]
$50	$1.75	$2.50
$100	2.25	3.40
$200	2.75	4.40
$300	4.70	5.40
$400	5.70	6.40
$500	6.70	7.40
$600	7.70	8.40
$675	8.70	—
$700	—	9.40
Each additional $100 or fraction thereof	—	1.00

(1) Not all countries insure items up to the amounts listed in the table. Canada does not insure items for more than $675.

International postcards (single): 75¢ to Canada; 79¢ to Mexico; 98¢ to all other countries.

Registration: Available, for letter-post items only, to most countries. Fee: $11.50.

Return Receipt: Shows to whom and when delivered. Fee: $2.30 (must be purchased at time of mailing).

First-Class Mail International: Letter-post items weighing under 1 oz. can be sent airmail for 98¢ to most countries daily; 75¢ to Canada; 79¢ to Mexico.

International Reply Coupons (IRC): Provide foreign addressees with a prepaid means of responding to communications initiated by a U.S. sender. Each IRC is equivalent to the destination country's minimum postage rate for an unregistered airmail letter. Fee: $2.10 per coupon.

Restricted Delivery: Places restrictions on who receives an item. Available to many countries for registered mail; some limitations. Fee: $4.50.

Post Office-Authorized 2-Letter State Abbreviations

The abbreviations below are approved by the U.S. Postal Service for use in addresses.

Alabama	AL	Hawaii	HI	Missouri	MO	Pennsylvania	PA
Alaska	AK	Idaho	ID	Montana	MT	Puerto Rico	PR
American Samoa	AS	Illinois	IL	Nebraska	NE	Rhode Island	RI
Arizona	AZ	Indiana	IN	Nevada	NV	South Carolina	SC
Arkansas	AR	Iowa	IA	New Hampshire	NH	South Dakota	SD
California	CA	Kansas	KS	New Jersey	NJ	Tennessee	TN
Colorado	CO	Kentucky	KY	New Mexico	NM	Texas	TX
Connecticut	CT	Louisiana	LA	New York	NY	Utah	UT
Delaware	DE	Maine	ME	North Carolina	NC	Vermont	VT
District of Columbia	DC	Marshall Islands[1]	MH	North Dakota	ND	Virgin Islands	VI
Federated States of Micronesia[1]	FM	Maryland	MD	Northern Mariana Isls.	MP	Virginia	VA
Florida	FL	Massachusetts	MA	Ohio	OH	Washington	WA
Georgia	GA	Michigan	MI	Oklahoma	OK	West Virginia	WV
Guam	GU	Minnesota	MN	Oregon	OR	Wisconsin	WI
		Mississippi	MS	Palau[1]	PW	Wyoming	WY

(1) Although an independent nation, this country is currently subject to domestic rates and fees.

Canadian Province and Territory Postal Abbreviations

Source: Canada Post

Alberta	AB	Newfoundland and Labrador	NL	Nunavut	NU	Quebec	QC
British Columbia	BC	Northwest Territories	NT	Ontario	ON	Saskatchewan	SK
Manitoba	MB	Nova Scotia	NS	Prince Edward Island	PE	Yukon	YT
New Brunswick	NB						

SOCIAL SECURITY AND WELFARE

Social Security Coverage

Source: Social Security Administration; World Almanac research; provisions shown are as under current law, Sept. 2010

Social Security Benefits

Social Security's **Old-Age, Survivors, and Disability Insurance (OASDI)** program benefits are based on a worker's **primary insurance amount (PIA)**, which is related by law to the average indexed monthly earnings (AIME) on which Social Security contributions have been paid. The full PIA is currently payable to a worker retiring at age 66 (varies depending on birth year), and to an entitled disabled worker at any age. Spouses and children of retired or disabled workers and survivors of deceased workers receive set proportions of the PIA subject to a family maximum amount.

The PIA is calculated by applying varying percentages to succeeding parts of the AIME. The formula is adjusted annually to reflect changes in average annual wages.

Automatic increases in Social Security benefits are initiated for Dec. of each year, assuming the Consumer Price Index (CPI) for the 3rd calendar quarter of the year increased relative to the base quarter, which is either the 3rd calendar quarter of the preceding year or the quarter in which an increase legislated by Congress became effective. The size of the benefit increase is determined by the percentage rise of the CPI between the quarters measured.

The **average monthly benefit** payable to all retired workers amounted to $1,164 in Dec. 2009. The average benefit for disabled workers in that month amounted to $1,064.

Maximum monthly retired-worker benefits payable for individuals who retired at age 65[1]

Year attaining age 65	Maximum benefit Payable at retirement	Payable effective Dec. 2009
1990	$975	$1,701
1995	1,199	1,762
1996	1,248	1,789
1997	1,326	1,847
1998	1,342	1,831
1999	1,373	1,848
2000	1,435	1,885
2001	1,538	1,952
2002	1,660	2,054
2003	1,721	2,100
2004	1,784	2,133
2005	1,874	2,181
2006	1,961	2,193
2007	1,998	2,163
2008	2,030	2,148
2009	2,172	2,172
2010	2,191	2,191

(1) Assumes retirement at beginning of year.

Amount of Work Required

To qualify for benefits, the worker generally must have worked a certain length of time in covered employment. Just how long depends on when the worker reaches age 62 or, if earlier, when he or she dies or becomes disabled. A person born after 1929 who dies, becomes disabled, or reaches age 62 after 1991 must generally have had at least 10 years work credit to qualify for benefits.

Contribution and Benefit Base

Calendar year	OASDI[1]	Calendar year	OASDI[1]	Calendar year	OASDI[1]
1994	$60,600	2000	$76,200	2006	$94,200
1995	61,200	2001	80,400	2007	97,500
1996	62,700	2002	84,900	2008	102,000
1997	65,400	2003	87,000	2009	106,800
1998	68,400	2004	87,900	2010	106,800
1999	72,600	2005	90,000		

(1) Old-Age, Survivors, and Disability Ins.

A person is **fully insured** who has 1 quarter of coverage for every year after age 21 is reached (or 1950, if later) up to but not including the year the worker reaches 62, dies, or becomes disabled. In 2010, a person earns 1 quarter of coverage for each $1,120 of annual earnings in covered employment, up to 4 quarters per year.

To receive **disability benefits**, the worker, in addition to being fully insured, must generally have credit for 20 quarters of coverage out of the 40 calendar quarters before he or she became disabled. A disabled blind worker need meet only the fully insured requirement. Persons disabled before age 31 can qualify with a briefer period of coverage. Certain survivor benefits are payable if the deceased worker had 6 quarters of coverage in the 13 quarters preceding death.

Tax Rate Schedule

(percentage of covered earnings)

Year	Total	OASDI[1]	HI[2]
	(for employees and employers, each)		
1979-80	6.13%	5.08%	1.05%
1981	6.65	5.35	1.30
1982-83	6.70	5.40	1.30
1984	7.00	5.70	1.30
1985	7.05	5.70	1.35
1986-87	7.15	5.70	1.45
1988-89	7.51	6.06	1.45
1990 and after	7.65	6.20	1.45
	(for self-employed)		
1979-80	8.10%	7.05%	1.05%
1981	9.30	8.00	1.30
1982-83	9.35	8.05	1.30
1984	14.00	11.40	2.60
1985	14.10	11.40	2.70
1986-87	14.30	11.40	2.90
1988-89	15.02	12.12	2.90
1990 and after	15.30	12.40	2.90

(1) Old-Age, Survivors, and Disability Ins. (2) Hospital Insurance (Medicare).

What Aged Workers Receive

A person may receive monthly old-age benefits when he or she has enough work in covered employment and has reached retirement age—age 62 for reduced benefits, the age below for full benefits.

Full-Benefit Retirement Age (FRA) by Birth Year

Year of birth	FRA	Year of birth	FRA
1937 or earlier	65	1955	66 and 2 months
1938	65 and 2 months	1956	66 and 4 months
1939	65 and 4 months	1957	66 and 6 months
1940	65 and 6 months	1958	66 and 8 months
1941	65 and 8 months	1959	66 and 10 months
1942	65 and 10 months	1960 or later	67
1943-54	66		

Note: If born on Jan. 1, refer to the previous birth year.

In 2000, the retirement **earnings test** was eliminated beginning with the month when the beneficiary reaches **full-benefit retirement age (FRA)**. A person at and above FRA no longer has benefits reduced because of earnings. However, in the calendar year a beneficiary reaches FRA, benefits are reduced $1 for every $3 of earnings above the limit allowed by law ($37,680 in 2010) for the months prior to FRA. For years before the beneficiary attains FRA, the reduction is $1 for every $2 of earnings over the exempt amount ($14,160 for 2010).

For workers who reached age 65 between 1982 and 1989, Social Security benefits are raised by 3% for each year for which the worker failed to receive benefits between FRA and 70 (72 before 1984), whether because of earnings from work, because the worker had not applied for benefits, or because the worker declined benefits after entitlement. The **delayed retirement credit** is 1% per year for workers who reached age 65 before 1982. The delayed retirement credit rose to 8% per year for 2008 and years after. The rate for workers who reached age 65 in 1998-99 is 5.5%; 2000-01, 6.0%; 2002-03, 6.5%; 2004-05, 7.0%. For 2006-07 it is 7.5%.

For workers retiring early, before full retirement age, benefits are permanently reduced $\frac{5}{9}$ of 1% for each month before FRA, up to 36 months. If the number of months exceeds 36, then the benefit is further reduced $\frac{5}{12}$ of 1% per month.

For example, when FRA reaches 67, for workers who retire at exactly age 62, there are a total of 60 months of reduction. The reduction for the first 36 months is $\frac{5}{9}$ of 36%, or 20%. The reduction for the remaining 24 months is $\frac{5}{12}$ of 24%, or 10%. Thus, when the FRA reaches 67, the amount of reduction at age 62 will be 30%. The nearer to FRA the worker is when he or she begins collecting a benefit, the larger the monthly benefit will be.

Benefits for Worker's Spouse

The spouse of a worker who is getting Social Security retirement or disability payments may become entitled to an insurance benefit of **one-half of the worker's PIA** if claiming benefits at full retirement age. Reduced spouse's benefits are available at age 62 and are permanently reduced $^{25}/_{36}$ of 1% for each month before FRA, up to 36 months. If the number of months exceeds 36, then the benefit is further reduced $^{5}/_{12}$ of 1% per month. Benefits are also payable to the aged divorced spouse of an insured worker if he or she was married to the worker for at least 10 years. To qualify for divorced spouse benefits, the insured worker does not have to be receiving benefits if the divorce occurred at least 2 years earlier. Benefits received as a spouse are reduced by the amount of one's own PIA.

Benefits for Children of Workers

If a retired or disabled worker has a child under age 18, the **child** will usually get a benefit equal to half of the worker's unreduced benefit. So will the worker's spouse, even if under age 62, if he or she is **caring for an entitled child** of the worker who is under 16 or who became disabled before age 22. However, total benefits paid on a worker's earnings record are subject to a family maximum. Total monthly benefits paid to the family of a worker who retired in 2010 at age 66 and always had the maximum earnings creditable under Social Security cannot exceed $4,141.

When entitled children reach age 18, their benefits generally stop, but a child disabled before age 22 may get a benefit as long as the disability meets the definition in the law. Benefits will be paid until age 19 to a child attending elementary or secondary school full-time.

Benefits may also be paid to a grandchild or step-grandchild of a worker or of his or her spouse, in special circumstances.

OASDI Beneficiaries

Beneficiaries	May 2006	May 2007	May 2008	May 2009	May 2010
Total (in thousands)[1]	**48,877**	**49,614**	**50,417**	**51,800**	**53,349**
Aged 65 and over, total	34,232	34,752	35,478	36,182	36,914
Retired workers	27,898	28,448	29,152	29,920	30,734
Disabled workers	143	200	285	336	339
Survivors/dependents	6,192	6,105	6,041	5,926	5,841
Under age 65, total	14,645	14,862	14,939	15,618	16,435
Retired workers	2,883	2,874	2,749	3,002	3,314
Disabled workers	6,465	6,702	6,924	7,227	7,628
Survivors/dependents	5,297	5,286	5,266	5,389	5,492
Total monthly benefits (in millions)	**$44,956**	**$47,592**	**$49,948**	**$54,797**	**$56,966**

(1) Numbers may not add up to totals due to rounding or incomplete enumeration.

What Disabled Workers Receive

A worker who becomes unable to work may be eligible for a monthly **disability benefit**. Benefits continue until it is determined that the individual is no longer disabled. When a disabled-worker beneficiary reaches FRA (66 years for workers born in 1943), the disability benefit becomes a retired-worker benefit.

Benefits—generally like those for dependents of retired-worker beneficiaries—may be paid to dependents of disabled beneficiaries. However, the maximum family benefit in disability cases is generally lower than in retirement cases.

Survivor Benefits

If an insured worker should die, one or more types of benefits may be payable to survivors, again subject to a maximum family benefit as described above.

1. If claiming benefits at FRA, the **surviving spouse** will receive a benefit equal to 100% of the deceased worker's benefit. Benefits claimed before FRA are reduced for age with a maximum reduction of 28.5% at age 60. However, if the deceased worker claimed benefits before FRA, the surviving spouse's benefits are limited to the reduced amount the worker would be getting if alive, but not less than 82.5% of the worker's PIA. Remarriage after the worker's death ends the surviving spouse's benefit rights. However, if the widow(er) marries and the marriage is ended, he or she regains benefit rights. (A marriage after age 60, age 50 if disabled, is deemed not to have occurred for benefit purposes.) Survivor benefits may also be paid to a divorced spouse if the marriage lasted for at least 10 years.

Disabled widows and widowers may under certain circumstances qualify for benefits after attaining age 50 at the rate of 71.5% of the deceased worker's PIA. The widow or widower must have become totally disabled before or within 7 years after the spouse's death or the last month in which he or she received mother's or father's insurance benefits.

2. There is a benefit for each **child under age 18**. The monthly benefit for a child of a deceased worker is $^{3}/_{4}$ of the PIA, subject to the family maximum. A child with a disability that began before age 22 may also receive benefits. Also, a child may receive benefits until age 19 if he or she is in full-time attendance at an elementary or secondary school.

3. There is a **mother's or father's benefit** for the widow(er) if children of the worker under age 16 are in his or her care. The benefit is 75% of the PIA (subject to the family maximum), and it continues until the youngest child reaches age 16, at which time payments stop even if the child's benefit continues. However, if the widow(er) has a disabled child beneficiary age 16 or over in his or her care, benefits may continue.

4. Dependent parents may be eligible for benefits if they have been receiving at least half their support from the worker before his or her death, have reached age 62, and (except in certain circumstances) have not remarried since the worker's death. Each parent gets 75% of the worker's PIA; if only one parent survives, the benefit is 82%, but could be reduced for the family maximum.

5. A **lump sum** cash payment of **$255** is made when there is a spouse who was living with the worker or a spouse or child eligible for immediate monthly survivor benefits.

Self-Employed Workers

A self-employed person who has **net earnings of $400 or more** in a year must report such earnings for Social Security tax and credit purposes. The person reports net returns from the business. Income from real estate, savings, dividends, loans, pensions, or insurance policies are not included unless it is part of the business.

A self-employed person receives 1 quarter of coverage for each $1,120 (for 2010), up to a maximum of 4 quarters per year.

The nonfarm self-employed have the option of reporting their earnings as $^{2}/_{3}$ of their gross income from self-employment. This option can be used only if actual net earnings from self-employment income are less than $1,600 and less than $^{2}/_{3}$ of their gross income. The option may be used only 5 times. Also, the self-employed person must have actual net earnings of $400 or more in 2 of the 3 taxable years immediately preceding the year in which he or she uses the option.

When a person has both taxable wages and earnings from self-employment, wages are credited for Social Security purposes first; only as much self-employment income as brings total earnings up to the current taxable maximum becomes subject to the self-employment tax.

Farm Owners and Workers

Self-employed farmers whose gross annual earnings from farming are from **$600-2,400** may report $^{2}/_{3}$ of their gross earnings instead of net earnings for Social Security purposes. (Farmers whose gross annual earnings are under $600 cannot use the optional method.) Farmers whose gross income is over $2,400 and whose net earnings are less than $1,600 can report $1,600. Cash or crop shares received from a tenant or share farmer count if the owner participated materially in production or management. The self-employed farmer pays contributions at the same rate as other self-employed persons.

Agricultural employees. A worker's earnings from farm work count toward benefits (1) if the employer pays the worker $150 or more in cash during the year; or (2) if the employer spends $2,500 or more in the year for agricultural labor. Under these rules, a person gets credit for 1 calendar quarter for each $1,120 in cash pay in 2010.

Foreign farm workers admitted to the U.S. on a temporary basis are not covered.

Household Workers

If an employer pays a household worker (e.g. maid, cook, laundry worker, nurse, babysitter, chauffeur, gardener, or other worker) who is age 18 or older $1,700 or more in wages in 2010, the wages are covered under Social Security. This includes transportation costs paid for in cash. The job need not be regular or full-time. The employee should get a Social Security card at the Social Security office and show it to the employer. The employer deducts the amount of the employee's Social Security tax from the worker's pay, adds an identical amount as the employer's Social Security tax, and sends the total amount to the federal government.

Medicare Coverage

The Medicare health insurance program provides acute-care coverage for Social Security and Railroad Retirement beneficiaries age 65 and over; workers and spouses age 65 and over with sufficient Medicare-only coverage in Federal, State, or local government employment; certain persons entitled to receive Social Security or Railroad Retirement disability benefits; certain disabled persons with Medicare-only coverage through government employment; and certain persons with end-stage kidney disease. What follows is a basic description and may not cover all circumstances.

The **basic Medicare plan**, available nationwide, is a fee-for-service arrangement, where the beneficiary may use any provider accepting Medicare; some services are not covered and there are some out-of-pocket costs.

Hospital insurance (Part A). The basic hospital insurance program pays covered services for hospital and posthospital care including the following:

- All necessary inpatient hospital care for the first 60 days of each benefit period, except for a deductible ($1,100 in 2010). For days 61-90, Medicare pays for services over and above a coinsurance amount ($275 per day in 2010). After 90 days, the beneficiary has 60 lifetime reserve days for which Medicare helps pay. The coinsurance amount for reserve days was $550 in 2010.
- Up to 100 days of care in a skilled-nursing facility in each benefit period. Hospital insurance pays for all covered services for the first 20 days; for days 21-100, the beneficiary pays coinsurance ($137.50 per day in 2009).
- Part-time home health care provided by nurses or other health workers.
- Limited coverage of hospice care for individuals certified to be terminally ill.
- There is a premium for this insurance in certain cases.

Medical insurance (Part B). Eligible elderly and disabled persons can receive benefits under this supplementary program only if they sign up for them and agree to a monthly premium. As of 2007, the monthly premium is tied to annual income. Individuals with income less than $85,000 and couples with income under $170,000 pay $110.50 per person if they sign up upon becoming eligible in 2010. The federal government pays the covered costs of treatment. The Part B deductible was $155 in 2010. As of 2006, the deductible rose annually in proportion to the increase in average cost of Part B services to aged beneficiaries. After the deductible, the medical insurance program usually pays 80% of the approved amount for the following services:

- Covered services received from a doctor in his or her office, in a hospital, in a skilled-nursing facility, at home, or in other locations.
- Medical and surgical services, including anesthesia.
- Diagnostic tests and procedures that are part of the patient's treatment.
- Radiology and pathology services by doctors while the individual is a hospital inpatient or outpatient.
- Other services such as X-rays, services of a doctor's office nurse, drugs and biologicals that cannot be self-administered, transfusions of blood and blood components, medical supplies, physical/occupational therapy, and speech pathology services.

In addition to the above, certain other tests or preventive measures are now covered without an additional premium. These include a "Welcome to Medicare" physical exam and related services, mammograms, bone mass measurement, colorectal cancer screening, and flu shots. Routine physical exams, dental care, hearing aids, and routine eye care are generally not covered under the basic plan. There is limited coverage for nonhospital treatment of mental illness.

To get medical insurance (Part B), persons approaching age 65 may enroll during the **Initial Enrollment Period** that lasts from 3 months before to 3 months after the 65th birthday, and the month of their birthday. If new enrollers desire coverage to begin in the month they reach age 65, they must enroll in the 3 months before their birthday. Persons who did not enroll during their first enrollment period may enroll later, but late-enrollment premiums may apply.

The monthly premium is deducted from the cash benefit for persons receiving Social Security, Railroad Retirement, or Civil Service retirement benefits. Income from the medical premiums and the federal matching payments are put in a Supplementary Medical Insurance Trust Fund, from which benefits and administrative expenses are paid.

Medicare Advantage (Part C) (formerly Medicare+Choice). Persons eligible for Medicare may have the option of getting services through a health maintenance organization (HMO), a preferred provider organization (PPO), or other **managed care** plan. Any such plan must provide at least the same benefits, except for hospice services, and may provide added benefits—such as lower or no deductibles and coverage for some prescription drugs—but is usually subject to restrictions in choice of health care providers. In some plans services by outside providers are still covered for an extra out-of-pocket cost. Also available as options in some areas are Medicare-approved private fee-for-service plans and, for certain beneficiaries, special needs plans.

Prescription Drug Coverage (Part D). Effective Jan. 1, 2006, a Medicare prescription drug plan provides insurance coverage for prescription drugs. Medicare recipients pay a monthly premium (averaging $30 in 2010, depending on the provider) and a portion of drug costs. **Enrollment is scheduled to take place Nov. 15-Dec. 31 each year**, and is optional. Coverage varies depending on the drug plan selected.

Part D Benefits

(parameters determined annually by the Centers for Medicare and Medicaid Services)

Standard benefit parameters	2009	2010
Deductible	$295	$310
Initial coverage limit	2,700	2,830
Out-of-pocket threshold	4,350	4,550
Minimum generic cost-sharing[1]	2.40	2.50
Minimum other drug cost-sharing	6.00	6.30
Retiree drug subsidy		
Cost threshold	$295	$310
Cost limit	6,000	6,300

(1) For generic/preferred multi-source drugs in the catastrophic coverage phase.

Further details are available on the Internet at www.medicare.gov or by calling 1-800-MEDICARE (1-800-633-4227).

Medicare card. Persons qualifying for hospital insurance under Social Security receive a health insurance card similar to cards used by other health insurers. The card indicates whether the individual has taken out medical insurance protection. It is to be shown to the hospital, skilled-nursing facility, home health agency, doctor, or whoever provides the covered services.

Payments are generally made only in the 50 states, Puerto Rico, Virgin Islands, Guam, and American Samoa.

Social Security Financing

Social Security is paid for by a tax on certain earnings (for 2010, on earnings up to $106,800) for **Old Age, Survivors, and Disability Insurance** and on all earnings (no upper limit) for Hospital Insurance with the **Medicare** Program; the taxable earnings base for OASDI has been adjusted annually to reflect increases in average wages. The employed worker and his or her employer share Social Security taxes equally.

Employers remit amounts withheld from employee wages for Social Security and income taxes to the Internal Revenue Service; employer Social Security taxes are also payable at

the same time. (Self-employed workers pay Social Security taxes when filing their regular income tax forms.) The Social Security taxes (along with revenues arising from partial taxation of the Social Security benefits of certain high-income people) are transferred to the Social Security Trust Funds; they can be used only to pay benefits, the cost of rehabilitation services, and administrative expenses. Money not immediately needed for these purposes is by law invested in obligations of the federal government, which must pay interest on the money borrowed and must repay the principal when the obligations are redeemed or mature.

Supplemental Security Income

On Jan. 1, 1974, the **Supplemental Security Income (SSI)** program established by the 1972 Social Security Act amendments replaced the former federal grants to states for aid to the needy aged, blind, and disabled in the 50 states and the District of Columbia. The program provides both for federal payments, based on uniform national standards and eligibility requirements, and for state supplementary payments varying from state to state. The Social Security Administration administers the federal payments financed from general funds of the Treasury—and the state supplements as well, if the state elects to have its supplementary program federally administered. States may supplement the federal payment for all recipients and must supplement it for persons otherwise adversely affected by the transition from the former public assistance programs. In May 2010, the number of persons receiving federally administered SSI payments was 7,800,015 and the payments totaled about $4.2 billion.

The **maximum monthly federal SSI payment** for individuals with no other countable income, living in their own household, was $674 in 2010. For couples the maximum payment was $1,011.

Social Security Statement

On Oct. 1, 1999, the Social Security Administration initiated regular mailings of an annual *Social Security Statement* to all workers age 25 and older not already receiving benefits. Workers will automatically receive statements about 3 months before their birth month. The statement provides estimates of potential monthly Social Security retirement, disability, and survivor benefits as well as a record of lifetime earnings. The statement also gives workers an easy way to determine whether their earnings are accurately posted in Social Security records.

For further information contact the Social Security Administration toll-free at 1-800-772-1213 or visit its website at www.socialsecurity.gov

Examples of Monthly Social Security Benefits Available, 2010

Description of benefit or beneficiary	For low earnings ($18,480)[1]	For med. earnings ($41,068)[1]	For max. earnings ($94,802)[1,2]
Primary insurance amount (worker retiring at 66 years, 0 months)	$905.10	$1,491.30	$2,346.80
Maximum family benefit (worker retiring at 66 years, 0 months)	1,357.60	2,722.30	4,107.50
Maximum family disability benefit (worker disabled at 55; in 2010)	1,341.30	2,345.40	3,710.70
Disabled worker (worker disabled at 55):			
Worker alone	946.00	1,563.00	2,473.00
Worker, spouse, and 1 child	1,341.00	2,343.00	3,708.00
Retired worker claiming benefits at age 62:			
Worker alone[3]	702.00	1,157.00	1,809.00
Worker with spouse claiming benefits at—			
NRA or over	1,170.00	1,928.00	3,015.00
Age 62[3]	1,029.00	1,697.00	2,653.00
Widow or widower claiming benefits at—			
Age 66 or over[4]	905.00	1,491.00	2,346.00
Age 60[4]	650.00	1,072.00	1,687.00
Disabled widow or widower claiming benefits at age 50-59[5]	647.00	1,066.00	1,677.00
1 surviving child[4]	678.00	1,118.00	1,760.00
Widow or widower NRA or over and 1 child[4]	1,356.00	2,609.00	4,106.00
Widowed mother or father and 1 child[4]	1,356.00	2,236.00	3,520.00
Widowed mother or father and 2 children[4]	1,356.00	2,721.00	4,107.00

Note: Effective Jan. 2010. NRA = Normal retirement age. (1) Career average earnings: an average of lifetime earnings indexed to the year prior to entitlement (2009 in this case). (2) Assumes work beginning at age 22. (3) Assumes maximum reduction. (4) Assumes worker lived and worked until NRA without receiving reduced benefits. (5) Effective Jan. 1984, disabled widow(er) claiming a benefit at age 50-59 receives a benefit equal to 71.5% of the PIA.

Social Security Recipients by Age, Sex, Race, and Hispanic Origin, 2009

Source: Social Security Administration

Social Security beneficiaries[1] (thousands)	Total[2]	White	Black	American Indian, Alaska Native	Asian	Hispanic
Total	**42,963**	**36,823**	**4,294**	**284**	**1,071**	**2,920**
Sex						
Male	18,761	16,149	1,812	125	453	1,323
Female	24,203	20,673	2,483	159	618	1,596
Age						
15-54	4,970	3,674	998	97	93	505
55-64	5,588	4,596	732	50	126	419
65-74	16,764	14,571	1,406	85	490	1,173
75 or older	15,642	13,981	1,158	52	362	823
Supplemental Security Income recipients[1] (thousands)						
Total	**5,541**	**3,683**	**1,455**	**77**	**215**	**847**
Sex						
Male	2,365	1,605	585	30	83	346
Female	3,177	2,077	870	47	132	500
Age						
15-54	3,282	2,152	958	55	44	482
55-64	1,121	778	291	10	22	137
65-74	610	417	105	6	69	117
75 or older	529	335	102	6	80	111
Average annual benefit in 2008 (dollars)						
Social Security	$12,452	$12,655	$11,091	$10,836	$11,785	$10,494
Supplemental Security Income	6,807	6,804	6,769	7,650	7,301	6,355

Note: Race categories include people who reported being of that race alone. Persons of Hispanic origin may be of any race. (1) Persons 15 or older receiving Social Security benefits or Supplemental Security Income in Mar. 2009. (2) The sum of the individual categories may not add up to totals because of independent rounding, and because the totals include persons who reported being of more than one race.

OASDI Recipients and Monthly Payments, 1940-2009

Source: Social Security Administration

Year	Total recipients	Monthly benefits: Total (thousands)	Monthly benefits: Avg.[1]	Monthly benefits: Avg. (2009 dollars[2])	Year	Total recipients	Monthly benefits: Total (thousands)	Monthly benefits: Avg.[1]	Monthly benefits: Avg. (2009 dollars[2])
1940	222,488	$4,070	$18.29	$271.78	1995	43,387,259	$28,148,078	$648.76	$907.65
1945	1,288,107	23,801	18.48	214.02	2000	45,414,794	34,848,920	767.35	951.94
1950	3,477,243	126,857	36.48	315.95	2001	45,877,506	36,504,206	795.69	960.79
1955	7,960,616	411,613	51.71	402.01	2002	46,444,317	37,854,453	815.05	970.97
1960	14,844,589	936,321	63.07	444.18	2003	47,038,486	39,541,528	840.62	979.52
1965	20,866,767	1,516,802	72.69	480.32	2004	47,687,722	41,574,363	871.80	990.12
1970	26,228,629	2,628,326	100.21	538.02	2005	48,434,445	44,351,772	915.71	1,004.63
1975	32,085,372	5,727,903	178.52	690.95	2006	49,122,831	46,938,176	955.53	1,015.54
1980	35,618,840	10,694,022	300.23	758.56	2007	49,864,982	49,218,232	987.03	1,020.43
1985	37,058,353	15,901,643	429.10	840.89	2008	50,898,396	53,666,202	1,054.38	1,047.27
1990	39,832,125	21,686,763	544.45	884.00	2009	52,522,819	55,905,731	1,064.41	1,064.41

Note: OASDI = Old Age, Survivors, and Disability Insurance. Disability insurance payments began in 1957. (1) Avg. monthly benefit does not necessarily reflect individual payments to OASDI recipients. (2) Monthly benefit adjusted for inflation.

Social Security Trust Funds

Old-Age and Survivors Insurance Trust Fund, 1940-2009

(in millions)

Fiscal year[1]	INCOME: Total	Net contribs.[2]	Income from taxing benefits	Payments from the Treasury fund[3]	Net interest[4]	DISBURSEMENTS: Total	Benefit pymts.[5]	Admin. expenses	Transfers to Railroad Retirement program	Net increase in fund[6]	Year-end balance
1940	$592	$550	—	—	$42	$28	$16	$12	—	$564	$1,745
1950	2,367	2,106	—	$4	257	784	727	57	—	1,583	12,893
1960	10,360	9,843	—	—	517	11,073	10,270	202	$600	–713	20,829
1970	31,746	29,955	—	442	1,350	27,321	26,268	474	579	4,425	32,616
1980	100,051	97,608	—	557	1,886	103,228	100,626	1,160	1,442	–3,177	24,566
1990	278,607	261,506	$2,924	34	14,143	223,481	218,948	1,564	2,969	55,126	203,445
1995	326,067	289,529	5,114	7	31,417	294,456	288,607	1,797	4,052	31,611	447,946
2000	484,228	418,219	12,476	—	53,532	353,396	347,868	1,990	3,538	130,832	893,003
2001	513,834	440,819	11,771	—	61,243	372,996	367,654	2,069	3,273	140,837	1,033,840
2002	529,257	448,133	12,597	414	68,113	389,546	383,942	2,111	3,493	139,711	1,173,551
2003	542,343	456,014	12,340	—	73,990	402,814	396,710	2,522	3,580	139,530	1,313,080
2004	556,523	466,807	13,269	1	76,446	417,053	411,148	2,274	3,628	139,470	1,452,550
2005	599,992	502,998	15,332	—	81,662	436,919	430,439	2,900	3,579	163,073	1,615,623
2006	632,157	530,006	15,176	–350	87,324	455,560	449,191	2,911	3,458	176,597	1,792,220
2007	663,376	553,414	16,661	—	93,300	488,553	481,828	3,151	3,575	174,822	1,967,042
2008	692,873	573,750	16,396	—	102,727	509,864	502,973	3,259	3,632	183,009	2,150,052
2009	697,326	571,228	18,967	—	107,131	551,542	544,484	3,369	3,690	145,784	2,295,835

(1) Fiscal years 1980 and later consist of the 12 months ending on Sept. 30 of each year. Fiscal years prior to 1977 consisted of the 12 months ending on June 30 of each year. (2) Beginning in 1983, includes transfers from general fund of Treasury representing contributions that would have been paid on deemed wage credits for military service in 1957 and later, if such credits were considered covered wages. (3) Includes payments (a) in 1947-52 and in 1967 and later, for costs of noncontributory wage credits for military service performed before 1957; (b) in 1972-83, for costs of deemed wage credits for military service performed after 1956; and (c) in 1969 and later, for costs of benefits to certain uninsured persons who attained age 72 before 1968. (4) Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses were charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the next fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, the method of accounting for administrative expenses is described in the 1970 Annual Report. Beginning in Oct. 1973, the figures shown include relatively small amounts of gifts to the fund. During 1983-91, interest paid from the trust fund to the general fund on advance tax transfers is reflected. (5) Beginning in 1967, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. (6) Net change in assets during fiscal year, including amounts borrowed or repaid by other funds.

Disability Insurance Trust Fund, 1960-2009

(in millions)

Fiscal year[1]	INCOME: Total	Net contribs.[2]	Income from taxing benefits	Payments from the Treasury fund[3]	Net interest[4]	DISBURSEMENTS: Total	Benefit pymts.[5]	Admin. expenses	Transfers to Railroad Retirement program	Net increase in fund[6]	Year-end balance
1960	$1,034	$987	—	—	$47	$533	$528	$32	–$27	$501	$2,167
1970	4,380	4,141	—	$16	223	2,954	2,795	149	10	1,426	5,104
1980	17,376	16,805	—	118	453	15,320	14,998	334	–12	2,056	7,680
1990	28,215	27,291	$158	—	766	25,124	24,327	717	80	3,091	11,455
1995	70,209	67,987	335	—	1,888	41,374	40,234	1,072	68	28,835	35,206
2000	77,023	70,001	756	—	6,266	56,008	54,244	1,608	159	21,014	113,752
2001	82,079	74,611	732	–836	7,573	59,930	58,098	1,762	10	22,149	135,901
2002	85,720	76,067	936	—	8,717	66,364	64,138	2,005	154	19,356	155,258
2003	87,909	77,431	919	—	9,559	71,907	69,716	1,968	167	16,002	171,260
2004	90,105	79,269	1,047	—	9,789	78,471	76,139	2,070	215	11,634	182,893
2005	96,765	85,418	1,164	—	10,183	86,360	83,721	2,301	338	10,405	193,298
2006	101,571	90,001	1,174	—	10,396	92,932	90,064	2,480	388	8,640	201,938
2007	108,396	93,973	1,351	—	13,072	96,758	93,955	2,357	445	11,638	213,577
2008	109,816	97,432	1,373	8	11,003	107,153	104,222	2,513	418	2,663	216,239
2009	109,681	97,008	1,841	–	10,832	118,144	115,073	2,623	448	–8,462	207,777

(1) Fiscal years 1977 and later consist of the 12 months ending Sept. 30 of each year. Fiscal years prior to 1977 consisted of the 12 months ending June 30 of each year. (2) Beginning in 1983, includes transfers from general fund of Treasury representing contributions that would have been paid on deemed wage credits for military service in 1957 and later, if such credits were considered to be covered wages. (3) Includes payments (a) for costs of noncontributory wage credits for military service performed before 1957; and (b) in 1972-83, for costs of deemed wage credits for military service performed after 1956. (4) Net interest includes net profits or losses on marketable investments. Administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. Figures shown include relatively small amounts of gifts to the fund. During the years 1983-91, interest paid from the trust fund to the general fund on advance tax transfers is reflected. (5) Includes payments for vocational rehabilitation services. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. (6) Net change in assets during fiscal year, including amounts borrowed or repaid by other funds. **Note:** Totals may not add because of rounding.

Supplementary Medical Insurance Trust Fund (Medicare SMI), 1975-2009

(in millions)

	INCOME					DISBURSEMENTS				
Fiscal year[1]	Total	Premium from participants[2]	Government contribs.[3]	Transfers from states[4]	Interest and other income[5,6]	Total	Benefit pymts.[6,7,8]	Admin. expenses	Net change	Year-end balance[9]
1975	$4,322	$1,887	$2,330	—	$106	$4,170	$3,765	$404	$152	$1,424
1980	10,275	2,928	6,932	—	416	10,737	10,144	593	–462	4,532
1990	46,138[10]	11,494[10]	33,210	—	1,434[10]	43,022[10]	41,498	1,524[10]	3,115[10]	14,527[10]
1995	58,169	19,244	36,988	—	1,937	65,213	63,491	1,722	–7,044	13,874
1996	82,025	18,931	61,702	—	1,392	68,946	67,176	1,771	13,079	26,953
1997	80,806	19,141	59,471	—	2,193	72,553	71,133	1,420	8,252	35,206
1998	81,955	19,427	59,919	—	2,608	76,272	74,837	1,435	5,683	40,889
1999	85,278	20,160	62,185	—	2,933	80,518	79,008	1,510	4,760	45,649
2000	89,239	20,515	65,561	—	3,164	88,992	87,212[11]	1,780	247	45,896
2001	95,336	22,307	69,838	—	3,191	99,452	97,466[11]	1,986	–4,116	41,780
2002	105,705	24,427	78,318	—	2,960	108,825	106,995[11]	1,830	–3,120	38,659
2003	110,194	26,834	80,905	—	2,455	124,055	121,699[11]	2,356	–13,861	24,799
2004	126,805	30,341	94,734	—	1,730	134,490	131,673	2,817	–7,684	17,114
2005	152,505	35,939	115,200	—	1,366	152,735	149,820[12]	2,914	–230	16,885
2006	211,951	44,241[13]	162,601	$3,630	1,478	195,557	192,083[12,13]	3,474	16,394	33,279
2007	237,864	49,641[13]	179,181	6,977	2,065	231,997	228,570[12,13]	3,426	5,867	39,146
2008	244,832	54,118[13]	180,434	7,042	3,238	224,829	221,405[13,14]	3,423	20,003	59,149
2009	262,527	57,663[13]	194,267	7,504	3,093	260,211	256,892[13]	3,318	2,317	61,466

(1) Fiscal year 1975 consists of the 12 months ending on June 30, 1975; fiscal years 1980 and later consist of the 12 months ending on Sept. 30 of each year. (2) For Part D, premiums include both amounts withheld from Social Security benefit checks (and certain other federal benefit payments) and amounts paid directly to Part D plans (estimated). (3) For Part B, includes matching payments from the general fund, plus certain interest-adjustment items. For Part D, includes all federal govt. transfers. Includes amounts for the transitional assistance benefits in 2004-06. (4) As of 2006, Medicaid is no longer the primary payer for full-benefit dual eligibles. States must pay a portion of their estimated forgone drug costs for this population. As of 2006, states pay 90% of estimated costs, with the percentage phasing down, to 75% in 2015 and later. (5) "Other income" includes recoveries of amounts reimbursed from the trust fund that are not obligations of the trust fund and other small amounts of miscellaneous income. (6) Values after 2005 include additional premiums for Medicare Advantage (MA) plans that are deducted from beneficiaries' Social Security checks, transferred to HI and SMI trust funds and then to the plans. In 2008, includes an adjustment of $812 mil for interest inadvertently unearned as a result of HI hospice costs that were misallocated to, and paid from, the Part B account from May 2005 to Sept. 2007. (7) Includes costs of Peer Review Organizations from 1983-2001 and costs of Quality Review Organizations beginning in 2002. (8) For Part D, includes payments to plans, subsidies to employer-sponsored retiree drug plans, payments to states for low-income eligibility determinations, and Part D drug premiums (the amount collected from beneficiaries and transferred to plans and an estimated amount for premiums paid directly by enrollees to plans). Includes amounts for the transitional assistance benefits in 2004-06. (9) The financial status of SMI depends on the assets and liabilities of the trust fund. (10) Includes the impact of the Medicare Catastrophic Coverage Act of 1988. (11) Benefit payments less monies transferred from the HI trust fund for home health agency costs. (12) Certain HI hospice costs were misallocated to, and paid from, the Part B account of the SMI trust fund. See also footnote (14). (13) Includes an estimated $1.804 bil (2006), $2.270 bil (2007), $2.930 bil (2008), and $3.653 bil (2009) for premiums paid directly to Part D plans. (14) Benefit payments were $229,898 mil shown includes –$8,484 mil, which represents a transfer from the general fund of the Treasury to the Part B account of the SMI trust fund for HI hospice costs that were misallocated to, and paid from, the Part B account from May 2005 to Sept. 2007. (The HI trust fund, in turn, transferred $8,484 mil to the general fund.) **Note:** Numbers may not add up to totals because of rounding.

Hospital Insurance Trust Fund (Medicare HI), 1975-2009

(in millions)

	INCOME								DISBURSEMENTS				
Fiscal year[1]	Total	Payroll taxes	Taxation of benefits	Transfers from Railroad Retire-ment acct.	Rmbrs. or uninsured persons	Premiums from voluntary enrollees	Pymts. for military wage credits	Interest and other income[2,3]	Total	Benefit pymts.[3,4]	Admin. expenses[5]	Net change	Year-end balance
1975	$12,568	$11,291	—	$132	$481	$6	$48	$609	$10,612	$10,353	$259	$1,956	$9,870
1980	25,415	23,244	—	244	697	17	141	1,072	24,288	23,790	497	1,127	14,490
1990	79,563	70,655	—	367	413	113	107	7,908	66,687	65,912	774	12,876	95,631
1995	114,847	98,053	$3,913	396	462	998	61	10,963	114,883	113,583	1,300	–36	129,520
1996	121,135	106,934	4,069	401	419	1,107	–2,293[6]	10,496	125,317	124,088	1,229	–4,182	125,338
1997	128,548	112,725	3,558	419	481	1,279	70	10,017	137,836	136,175	1,661	–9,287	116,050
1998	138,203	121,913	5,067	419	34	1,320	67	9,382	137,140	135,487[7]	1,653	1,063	117,113
1999	153,015	134,385	6,552	430	652	1,401	71	9,523	131,441	129,463[7]	1,978	21,574	138,687
2000	159,681	137,738	8,787	465	470	1,392	2	10,827	130,284	127,934[7]	2,350	29,397	168,084
2005	196,921	168,954	8,765	445	286	2,303	0	16,168	184,142	181,292[8]	2,850	12,779	277,723
2006	210,309	180,392	10,319	471	408	2,632	0	16,086	184,901	181,815[8]	3,086	25,408	303,130
2007	219,207	187,992	10,593	483	468	2,761	0	16,910	202,827	200,191[8]	2,636	16,380	319,510
2008	229,729	197,195	11,733	526	506	2,913	0	16,856	230,240	227,008[9]	3,231	–511	319,000
2009	228,915	194,102	12,376	524	614	2,817	968[10]	17,514	238,001	234,659	3,343	–9,086	309,914

(1) Fiscal year 1975 consists of the 12 months ending on June 30, 1975; fiscal years 1980 and later consist of the 12 months ending Sept. 30 of each year. (2) Other income includes recoveries of amounts reimbursed from the trust fund that are not obligations of the trust fund, receipts from the fraud and abuse control program, and other small amounts of miscellaneous income. In 2008, includes an adjustment of –$853 mil for interest inadvertently earned as a result of HI hospice costs that were misallocated to, and paid from, the Part B account of the SMI trust fund from May 2005 to Sept. 2007. (3) Values after 2005 include additional premiums for Medicare Advantage (MA) plans that are deducted from beneficiaries' Social Security checks, transferred to the HI and SMI trust funds, and then transferred to the plans. (These additional premiums are incurred when an MA plan is chosen with a monthly payment exceeding the benchmark amount. Enrollees may pay plans directly or have the amounts deducted from their Social Security checks.) (4) Includes costs of Peer Review Organizations from 1983 through 2001 (beginning with the implementation of the Prospective Payment System on Oct. 1, 1983), and costs of Quality Improvement Organizations beginning in 2002. (5) Includes costs of experiments and demonstration projects. Beginning in 1997, includes fraud and abuse control expenses, as provided for by PL 104-191. (6) Includes the lump-sum general revenue adjustment of –$2,366 mil, as provided for by sec. 151 of PL 98-21. (7) Includes monies transferred to the SMI trust fund for home health agency costs, as provided for by PL 105-33. (8) Certain HI hospice costs were misallocated to, and paid from, the Part B account of the SMI trust fund. (9) Benefit payments were $218,525 mil. Amount shown includes a transfer of $8,484 mil to the general fund of the Treasury for HI hospice costs that were misallocated to, and paid from, the Part B account of the SMI trust fund from May 2005 to Sept. 2007. (The general fund, in turn, transferred $8,484 mil to the Part B account.) (10) Includes the lump-sum general revenue adjustment of –$968 mil, as provided for by sec. 151 of PL 98-21. **Note:** Numbers may not add up to totals because of rounding.

Temporary Assistance for Needy Families, 2008

Source: Office of Family Assistance, Admin. for Children and Families, U.S. Dept. of Health and Human Services

State	Total federal and state TANF expenditures, 2008[1]	2008 average monthly expenditure per— Family	Recipient	2008 average monthly number of— Families	Recipients	Children
Alabama	$142,703	$670.46	$284.65	17,737	41,778	32,303
Alaska	62,619	1,706.41	646.70	3,058	8,069	5,662
Arizona	348,648	801.51	375.79	36,249	77,314	58,250
Arkansas	144,429	1,413.64	622.45	8,514	19,336	14,372
California	6,687,297	1,146.50	453.32	486,066	1,229,326	976,189
Colorado	230,523	2,179.02	882.95	8,816	21,757	17,002
Connecticut	496,434	2,167.08	1,056.93	19,090	39,141	27,404
Delaware	68,011	1,408.79	676.81	4,023	8,374	6,792
Dist. of Columbia	160,829	2,493.47	1,115.19	5,375	12,018	9,790
Florida	948,327	1,622.67	1,009.10	48,702	78,315	65,868
Georgia	614,971	2,322.78	1,291.26	22,063	39,688	36,885
Guam	NA	NA	NA	927	2,852	2,287
Hawaii	229,161	3,434.67	1,415.10	5,560	13,495	10,014
Idaho	34,737	1,940.18	1,313.41	1,492	2,204	2,083
Illinois	1,013,299	4,254.84	2,079.02	19,846	40,616	36,339
Indiana	307,914	821.66	332.39	31,229	77,197	59,575
Iowa	172,540	904.47	359.25	15,897	40,023	27,940
Kansas	176,156	1,174.84	466.02	12,495	31,500	21,805
Kentucky	193,155	552.30	275.81	29,144	58,361	46,164
Louisiana	172,784	1,376.02	656.51	10,464	21,932	19,207
Maine	126,825	1,031.70	448.86	10,244	23,546	15,847
Maryland	405,148	1,742.93	762.80	19,371	44,261	34,382
Massachusetts	915,029	1,669.20	863.43	45,682	88,313	60,967
Michigan	1,229,605	1,539.59	588.72	66,555	174,050	128,769
Minnesota	434,520	1,570.46	701.04	23,057	51,652	38,488
Mississippi	91,104	673.77	322.15	11,268	23,567	18,126
Missouri	332,477	771.27	404.86	35,923	68,434	42,281
Montana	39,140	1,044.75	417.31	3,122	7,816	5,628
Nebraska	94,113	1,168.12	491.77	6,714	15,948	12,577
Nevada	84,706	981.34	390.01	7,193	18,099	13,667
New Hampshire	85,297	1,603.45	771.87	4,433	9,209	6,881
New Jersey	954,549	2,376.91	957.37	33,466	83,088	59,971
New Mexico	128,692	826.03	318.11	12,983	33,713	24,112
New York	4,422,855	3,149.29	1,414.45	117,033	260,576	198,292
North Carolina	446,893	1,543.74	804.12	24,124	46,313	38,356
North Dakota	37,086	1,533.76	616.13	2,015	5,016	3,652
Ohio	1,501,163	1,548.33	720.92	80,795	173,524	132,402
Oklahoma	175,918	1,722.26	866.73	8,512	16,914	14,003
Oregon	309,177	1,387.51	615.50	18,569	41,860	30,863
Pennsylvania	961,552	1,537.93	646.89	52,102	123,868	94,918
Puerto Rico	NA	NA	NA	11,978	32,640	22,076
Rhode Island	109,183	1,125.64	474.45	8,083	19,177	13,800
South Carolina	170,362	950.70	386.74	14,933	36,709	26,360
South Dakota	28,545	835.24	407.81	2,848	5,833	4,954
Tennessee	290,194	453.20	177.31	53,360	136,385	99,880
Texas	821,876	1,266.75	575.06	54,067	119,100	103,122
Utah	85,708	1,508.10	689.92	4,736	10,357	8,127
Vermont	72,144	1,678.85	723.90	3,581	8,305	5,692
Virgin Islands	NA	NA	NA	409	1,213	849
Virginia	271,077	792.29	353.17	28,512	63,963	46,790
Washington	704,949	1,163.31	497.78	50,499	118,016	83,312
West Virginia	115,182	1,105.82	526.46	8,680	18,232	14,326
Wisconsin	452,885	2,158.57	1,018.72	17,484	37,047	31,247
Wyoming	27,254	8,538.35	4,515.31	266	503	430
2008 totals	**28,129,745**	**1,438.71**	**620.06**	**1,629,344**	**3,780,543**	**2,911,078**
2007 totals	**26,921,973**	**1,321.70**	**566.92**	**1,697,432**	**3,957,330**	**3,047,043**
2006 totals	**25,593,809**	**1,191.88**	**510.33**	**1,789,460**	**4,179,295**	**3,207,216**
2005 totals	**25,580,110**	**1,120.87**	**474.21**	**1,901,810**	**4,495,175**	**3,428,885**
2004 totals	**25,821,230**	**1,094.51**	**455.63**	**1,965,960**	**4,722,588**	**3,581,448**
2003 totals	**26,339,994**	**1,092.22**	**447.88**	**2,009,666**	**4,900,889**	**3,693,056**
2002 totals	**25,414,383**	**1,039.00**	**417.89**	**2,038,373**	**5,067,963**	**3,791,560**
2001 totals	**25,667,381**	**1,024.57**	**400.86**	**2,087,646**	**5,335,891**	**3,968,499**
2000 totals	**24,780,711**	**926.32**	**353.72**	**2,229,315**	**5,838,043**	**4,303,943**
1999 totals	**23,114,572**	**267.99**	**267.99**	**2,673,610**	**7,187,658**	**NA**
1998 totals	**22,036,420**	**208.91**	**208.91**	**3,199,700**	**8,790,149**	**NA**
1997 totals	**19,010,190**	**144.87**	**144.87**	**3,936,610**	**10,935,125**	**NA**

NA = Not available. **Note:** Under 1996 legislation, the Aid to Families with Dependent Children (AFDC) program, commonly known as welfare, was converted to the Temporary Assistance for Needy Families (TANF) state block-grant program. Covers period from Oct. to Sept. in fiscal years shown. (1) In thousands.

Adults Receiving TANF Funds, by Employment Status, 2008

Source: Office of Family Assistance, Admin. for Children and Families, U.S. Dept. of Health and Human Services

State	Adults	Employed	State	Adults	Employed	State	Adults	Employed	State	Adults	Employed
AL	9,475	28.2%	IL	4,277	16.2%	NE	3,371	60.8%	SC	10,349	37.2%
AK	2,407	31.7	IN	17,622	34.2	NV	4,432	47.2	SD	879	14.6
AZ	19,064	23.4	IA	12,083	42.6	NH	2,328	27.3	TN	36,505	30.3
AR	4,964	30.7	KS	9,695	25.5	NJ	23,117	14.9	TX	15,978	32.4
CA	253,137	29.8	KY	12,197	20.6	NM	9,601	21.5	UT	2,230	25.5
CO	4,755	29.3	LA	2,725	35.1	NY	62,284	28.3	VT	2,613	23.5
CT	11,737	24.8	ME	7,699	23.1	NC	7,957	19.3	Virgin Isls.	364	4.7
DE	1,582	33.5	MD	9,879	18.6	ND	1,364	38.2	VA	17,173	31.1
DC	2,228	27.6	MA	27,346	14.0	OH	41,122	18.9	WA	34,704	15.3
FL	12,447	16.4	MI	45,281	29.1	OK	2,911	13.2	WV	3,906	12.7
GA	2,803	20.1	MN	13,164	30.1	OR	10,997	6.5	WI	5,800	17.9
Guam	565	90.4	MS	5,441	24.5	PA	28,950	26.0	WY	73	11.3
HA	3,481	37.4	MO	26,153	16.5	Puerto Rico	10,564	1.6			
ID	121	37.4	MT	2,188	25.5	RI	5,377	21.7	**U.S.**	**869,463**	**25.9**

NA = Not available. **Note:** TANF = Temporary Assistance for Needy Families state block-grant program. For fiscal year 2008; covers period from Oct. 2007 to Sept. 2008.

TAXES

Federal Income Tax

Source: George W. Smith III, CPA, Managing Partner, George W. Smith & Company, P.C.

Highlights of Recent Legislation

Health Care and Education Reconciliation Act

On Mar. 25, 2010, Pres. Barack H. Obama signed into law the 2010 Reconciliation Act. The roughly $800 billion package includes over $300 billion in revenue raisers, and new taxes on employers and individuals.

Higher Income Earners. Taxpayers with adjusted gross income that exceeds $200,000 ($250,000 married filing jointly) will pay an additional 3.8% Medicare tax on net investment income. Investment income includes interest, dividends, capital gains, annuities, royalties, and passive rental income.

Hospital Insurance. This portion of the law imposes an additional tax rate of 0.9% on earned income (wages, etc.) that exceeds $200,000 ($250,000 for married filing jointly).

Medical Expense. Also beginning in 2013, the 7.5% adjustment for medical expense deduction on Schedule A, Form 1040 increases to 10%. For taxpayers age 65 and older it goes into effect in 2017.

Tanning. Congress added another provision on qualified indoor tanning salons. Starting July 1, 2010, a 10% excise tax will apply to tanning services.

Adoption. The adoption expense amount will be indexed for inflation in 2011. In addition, the total adoption credit is allowed even if it exceeds the filer's tax liability.

Hiring Incentives to Restore Employment Act

Pres. Obama passed the HIRE Act on Mar. 18, 2010; it provides additional tax breaks for businesses to encourage hiring.

Payroll Tax. This provision temporarily suspends the employer's Social Security payroll tax paid for qualified employees. The law applies to wages paid to covered workers who are on the employer's payroll after Mar. 18, 2010, and before Jan. 1, 2011. The employee must begin employment after Feb. 3, 2010.

The newly hired worker must not have been employed for more than 40 hours during the 60-day period ending on the date that the individual begins employment. The act provides an employer up to $1,000 credit for each qualified new hire.

Expenses. The HIRE Act also extends the increased deduction for business equipment expensing limitation (Section 179) of $250,000 and the investment limitation expensing of $800,000. This increase had been set to expire at the end of 2009.

American Recovery and Reinvestment Act of 2009

On Feb. 17, 2009, Pres. Barack H. Obama signed into law a massive stimulus package. The total cost was estimated at $787 billion, including $300 billion in tax relief.

Homebuyer Credit. A $7,500 credit for first-time homebuyers was increased to a maximum $8,000 for purchases made after Dec. 31, 2008, and before Dec. 1, 2009. The repayment requirement is eliminated for purchases made during this period, unless the home is disposed of within 36 months. The credit was extended to Apr. 30, 2010.

Existing Home. The home buyer credit was also extended for the purchase of an existing residence for a maximum credit of $6,500 or 10% of the purchase price of the replacement residence, whichever is less. Contracts that closed prior to Oct. 1, 2010, were eligible.

American Opportunity Tax Credit. This addition to the Hope educational credit increased the credit to a maximum $2,500 per year for each eligible student. The tax credit can be claimed each year for up to four years. Forty percent of the eligible expenses are refundable for 2009 and 2010.

Alternative Powered Vehicles. A new 10% credit up to $4,000 is available for the conversion of existing vehicles into plug-in electric drive motor vehicles before 2012.

Energy Credit. The law increased the tax credit for residential energy property to a maximum $1,500 for 2009 and 2010. The credit includes insulation, exterior windows and doors, central air conditioners, and furnaces.

Military Tax Relief Bill of 2008

Congress unanimously passed this legislation in May 2008; it includes tax breaks for members of the military.

Retaining Jobs. A provision requires civilian employers of service members to keep their jobs available when they return from active duty.

Home Buyers. Military personnel on official extended duty outside the U.S. are given an extra year to apply for the home owner credit.

Combat Pay. This provision allows military personnel to permanently treat combat pay as tax-free. Military personnel can include tax-free combat pay to compute the Earned Income Credit.

Retirement. The law makes permanent the ability to make penalty-free withdrawals from IRAs for military reservists called to active duty.

IRS Rulings and Other Tax Matters

Haiti Earthquake. Taxpayers may claim a deduction for a qualified Haiti earthquake contribution made between Jan. 11 and Mar. 1, 2010, on their 2009 return. Alternatively, taxpayers may claim the deduction on their 2010 returns filed in 2011.

Bicycling. A maximum $20 per month commuting reimbursement is excludable from income for employees who bicycle between their home and work. Expenses include the purchase of a bicycle, repair, and storage.

Weight Loss. The IRS allows a medical deduction for costs of certain weight-loss programs. Participation must be for treatment of a physician-diagnosed disease, including obesity. No deduction is allowed for diets that are used for purely cosmetic reasons or special diet foods.

Same-Sex Marriage. The IRS ruled that it is unlawful for same-sex couples to file federal tax returns under any married status, even if the jurisdiction in which the couple lives recognizes such marriages.

Employee Parking. Fringe benefit reimbursement for parking expense provided to an employee who commutes caps out at $230 per month. The limit also applies to employees who commute by mass transportation.

Auto Damage. Damage to a person's car may be a deductible casualty loss unless it was caused by the person's willful conduct, such as drunken driving.

Smoking. Taxpayers can deduct the cost of two types of aids for quitting cigarette smoking as a medical expense: (1) participation in a smoking-cessation program; (2) prescription drugs to alleviate the effects of nicotine withdrawal. Over-the-counter products such as nicotine patches and chewing gum remain nondeductible.

Alimony. Payments to an individual under a written separation agreement constitute alimony for federal tax purposes even if the agreement is not enforceable under state law.

Working Abroad. Many Americans who live and work abroad are eligible to exclude a certain amount of their pay from U.S. income taxes. The amount of earned income that is excludable for 2010 is $91,400.

Penalties. Penalties and fines paid to a governmental agency or department are not deductible. This includes parking and speeding tickets as well as penalties for late filing of a tax return.

Death Benefits. Qualified accelerated death benefits paid under a life insurance contract to terminally ill persons (certified as expected to die within 24 months) are excludable from gross income.

Sale of Residence. Married couples filing jointly who have lived in their principal residence for at least two years out of the last five years can exclude up to $500,000 of the gain on the sale of their residence. Single taxpayers can exclude up to $250,000.

Household Workers. The annual threshold dollar amount for reporting and paying social security and federal unemployment taxes on domestic employees, including nannies and housekeepers, for 2010 is $1,700. Household workers under 18 are exempt unless household work is their principal occupation.

Student Loans. For 2010, the income phase-out range for the student loan interest deduction up to $2,500 is $60,000-$75,000 for single taxpayers and $120,000-$150,000 for married taxpayers filing jointly.

Personal Auto Mileage. The mileage allowance deduction for moving and medical expense decreased from 24 cents per mile for 2009 to 16.5 cents in 2010. The rate used for volunteer work for charitable activities remains at 14 cents per mile. Charitable rates are set by Congress, not the IRS.

Business Auto Mileage. Starting in 2010, the standard mileage rate method for calculating the business use of an individual's automobile is 50 cents. The business portion of parking fees and tolls may be deducted in addition to the standard mileage rate.

Investment Expenses. Investors may take a miscellaneous deduction on Schedule A, Form 1040 for financial newspapers, reports, and other expenses incurred in managing their investment portfolio. However, investors cannot deduct expenses for attending a convention, seminar, or similar meeting.

Garage Sales. Revenues received from a garage sale usually do not result in taxable income. In most cases, the item that was sold cost more than the revenue received. These losses are considered personal and, therefore, not deductible.

"Hands Off." In a unanimous decision, the U.S. Supreme Court held that Individual Retirement Accounts (IRAs) are beyond the reach of creditors. This includes IRA assets of taxpayers who have filed for bankruptcy.

Full-Time Student. A taxpayer in 2010 may not claim a dependency exemption for an individual who qualifies as a full-time student and is over age 23 at the end of the year, unless the student's gross income is less than $3,650.

First Job. Graduates may not deduct the expenses of seeking their first job. Expenses include auto rental, plane travel, motel costs, and meals.

Day Camps. The cost of computer camps, soccer camps, and other specialty day camps (not overnight) for children may qualify for the child care credit. The child must be under age 13 and the expenses must be incurred so the parent or parents can work.

Income Tax Errors

Periodically, the IRS issues a list of the most commonly made income tax errors. The top five last year were:

1. Incorrect or missing Social Security numbers.
2. Incorrect tax entered from tax tables.
3. Mathematical errors or wrong ID numbers listed for tax credits.
4. Entering withholding and estimated tax payments on the wrong line.
5. General math mistakes.

Income Tax Filing and Payment Due Dates

Filing Dates. The due date for filing a 2010 U.S. Individual Income Tax Return Form 1040, 1040A, or 040EZ including U.S. Partnership tax returns, Form 1065, is Fri., Apr. 15, 2011. Calendar year-ending 2010 corporate returns are due Tues., Mar. 15, 2011.

Estimated Payments. Due dates for filing individual quarterly federal estimated tax payments, Form 1040-ES: 1st quarter, Fri., Apr. 15, 2011; 2nd quarter, Wed., June 15; 3rd quarter, Thu., Sept. 15; and 4th quarter, Mon., Jan. 16, 2012. Different filing dates may apply for state/local taxes.

Refunds. Individuals can check on the status of their expected refund by calling the IRS toll-free number at (800) 829-4477, or by checking at www.irs.gov.

Filing Penalties. The IRS can levy two potential penalties after the filing due date when there is a balance owed. One penalty is for failing to file a timely tax return; the other is for failure to pay the tax when due. In addition, interest will be charged on any unpaid tax balance.

Business Returns. The late filing penalty for S corporations and partnerships soars to $195 per owner or partner per month for up to 12 months. The previous monthly penalty was $89.

Need More Time to File? Individuals who cannot file their 2010 individual income tax return by the due date, Apr. 15, 2011, may apply for an automatic six-month extension to Mon., Oct. 17, 2011. To qualify for an extension, Form 4868 must be filed no later than the tax return due date Apr. 15, 2011. Approximately 9 million extensions were filed last year.

Other Due Dates. The extension of time to file for calendar year partnerships, estates, and trusts has been reduced to five months; they are due Thurs., Sept. 15, 2011. Calendar year corporations on extension are due the same date.

Statute of Limitations. Taxpayers who have not yet filed their 2007 federal tax return have until Apr. 15, 2011, to file and claim their refund. After that date any refunds for income tax or withholding tax for 2007, including the refundable earned income tax credit, will be lost.

Electronic Filing. The IRS reported that e-filing for individual tax returns grew from 4.2 million returns in 1990, the first year it was available, to 95 million returns in 2009. For 2009, 66% of all individual returns were filed electronically.

Tax Tip. For security purposes, taxpayers should request that tax refunds be deposited directly into their bank accounts.

IRS Contact Information

For Tax Questions: (800) 829-1040
Website: www.irs.gov
Fax: (703) 368-9694
For Forms/Publications: (800) TAX-FORM (829-3676)

For English and Spanish: The IRS provides videotaped instructions both in English and Spanish at participating libraries. Many IRS publications and tax forms, including instructions, are also printed in Spanish. For more information, call (800) TAX-FORM and ask for the free IRS Publication 1SP, *Derechos del Contribuyente*.

For Hearing Impaired: The IRS telephone service for hearing impaired persons is available for taxpayers with access to TDD equipment. The toll-free number is (800) 829-4059.

Meeting With a Tax Preparer

More than 65% of all individual income tax returns are now signed by paid tax professionals. Here are some ideas to keep in mind when visiting a tax preparer:

- **Review** last year's tax return. Make notes of any changes since then such as marriage, divorce, number of dependents, retirement, job changes, additional income, new deductions, etc.
- **Organize** your records with income items first, followed by itemized deductions in sequence: medical, taxes, interest, charitable, and other miscellaneous deductions, followed by gains, losses, rentals, or other items.
- **Time** spent with your preparer may affect your bill. If you bring in jumbled records and deductions, there may be an additional cost to have your tax preparer organize your records.
- **Prepare** a list of questions in advance. Bring with you any invoices or bills that you are not sure of.
- **Alert** your preparer if you're waiting to receive additional information. He or she can begin preparing your tax return and include the missing data later to finalize your return.
- **Don't hesitate** to call the preparer if you receive additional information at a later time. However, if you call after the return is completed, changes may cost you additional fees.
- **Don't forget** to review your tax return before signing it. Ask questions about any item you don't understand. Remember, even though your preparer is required to sign the return, *you are responsible for its contents*.

Additional Help: For more information about choosing tax preparers, call the IRS Tele-Tax information at (800) 829-4477. Follow the prompts and select Topic 254. This information is also available online at www.irs.gov/taxtopics/tc254.html.

Individual Income Tax Rates and Tax Brackets for 2010

Tax rate	Single	Married filing jointly or qualifying widow(er)	Married filing separately	Head of household
10%	$1 to $8,375	$1 to $16,750	$1 to $8,375	$1 to 11,950
15%	$8,376 to $34,000	$16,751 to $68,000	$8,376 to $34,000	$11,951 to $45,550
25%	$34,001 to $82,400	$68,001 to $137,300	$34,001 to $68,650	$45,551 to $117,650
28%	$82,401 to $171,850	$137,301 to $209,250	$68,651 to $104,625	$117,651 to $190,550
33%	$171,851 to $373,650	$209,251 to $373,650	$104,626 to $186,825	$190,551 to $373,650
35%	Over $373,650	Over $373,650	Over $186,825	Over $373,650

Note: The 2010 income tax brackets were only slightly increased from the prior year because of mild inflation during the 12-month period from Sept. 2008 through Aug. 2009. The tax rates are identical to the prior year's rates.

Personal Exemptions

Dollar Amounts. The personal exemption amount for each taxpayer, spouse, and dependent for 2010 is $3,650. The exemption amount is adjusted each year for cost-of-living increases. The personal exemption of an individual who is a dependent of another taxpayer is zero.

Exemption Phase-Out. The exemption deduction phase-out rule for higher-income taxpayers was eliminated for 2010.

Standard Deduction

The standard deduction is a flat dollar amount that is subtracted from the adjusted gross income of taxpayers who do not itemize their deductions.

2010 Standard Deduction Amount

Single	$5,700
Married filing jointly or qualifying widow(er)	$11,400
Married filing separately	$5,700
Head of household	$8,400

Dependents Tax Returns. An individual reported as a dependent on another person's 2010 income tax return generally may claim on his or her own tax return only the greater of $950 or the sum of $300 plus earned income not to exceed the regular standard deduction.

Additional Standard Deduction

Taxpayers in 2010 who do not itemize, are 65 or older, and/or blind may claim an additional standard deduction.

Single or head of household, 65 or older OR blind	$1,400
Single or head of household, 65 or older AND blind	$2,800
Married filing jointly or qualifying widow(er), 65 or older OR blind (per person)	$1,100
older AND blind (per person)	$2,200
Married filing separately, 65 or older OR blind	$1,100
Married filing separately, 65 or older AND blind	$2,200

Savings Plans for Traditional and Roth IRAs

Traditional IRA. For 2010 the maximum tax-deferred Individual Retirement Arrangement (IRA) deduction for a married couple filing jointly is $10,000 ($5,000 for singles). Each spouse can contribute up to $5,000 annually even if one spouse has little or no income. Individuals age 50 or older can fund an additional "catch-up" amount of $1,000. However, there are income limitations and phase-outs.

Withdrawals. There is a 10% penalty for IRA distributions before age 59½. Distributions paid to the beneficiary due to a disability or death of the owner are not subject to this penalty, nor are payments used for certain unreimbursed medical expenses, higher-education expenses, or first-time homebuyer acquisition costs (up to $10,000).

Contributions to a traditional IRA or Roth IRA made after Apr. 15, 2011, will automatically be considered deposits for the year 2011.

Roth IRA. Although contributions paid into a Roth IRA are not tax deductible, distributions of funds including investment earnings held in the account for five years or longer and distributed after age 59½ are both free of income tax and the 10% early withdrawal penalty at the time of distribution. Withdrawals from the account in less than five years can be subject to income tax and the 10% withdrawal penalty regardless of age. There are income limitations on contributions. Beginning in 2010, the income limitation for converting traditional IRAs to Roth IRAs has been eliminated.

401(k) Plan. The maximum amount that an individual under age 50 can contribute to a 401(k) plan for 2010 is $16,500. Individuals age 50 or older can put away an additional $5,500, for a total of $22,000.

Distributions. The owner of a traditional IRA (or a SIMPLE, pension, or profit-sharing plan account) must begin receiving distributions by Apr. 1 of the calendar year following the year in which he or she reaches age 70½. Any employee who works beyond 70½ and is not a 5% or more owner of the business can continue to defer profit-sharing and pension plan distributions.

IRA Publication. For more information on IRAs call the IRS at (800) TAX-FORM (829-3676) for a free copy of Publication 590, *Individual Retirement Arrangements (IRAs)*.

Itemized Deductions for 2010

If the total amount of itemized deductions is more than the standard deduction, taxpayers generally should itemize their deductions on Schedule A, Form 1040. The following examples are just a few of the many deductions that may be itemized. Some are subject to income limitations.

Medical expenses that exceed 7.5% of the taxpayer's adjusted gross income are deductible. Medicines, birth control pills, and insulin qualify if prescribed by a physician. Cosmetic surgery for congenital abnormality, for personal injury from an accident or trauma, or for a disfiguring disease is also allowed as a medical deduction.

Tax Tip. A mother-to-be may deduct the cost of classes taken for Lamaze breathing and relaxation techniques, stages of labor, and delivery procedures as a medical expense.

Medical Traveling. Taxpayers may deduct part of the travel expense to seek health care. Travel can include auto and plane expense.

Long-Term Care. Based on various annual limits, long-term care insurance premiums are deductible as medical expenses. For 2010 taxpayers age 71 and older can claim as much as $4,110 per person; 61 to 70 up to $3,290. Individuals age 51 to 60 can deduct up to $1,230; 41 to 50, up to $620; and age 40 and younger are limited to $330.

Interest. Mortgage interest paid on a primary residence or a second home is deductible. However, there are limitations on mortgages in excess of $1 million. Interest on home equity loans also is deductible, but only covering the first $100,000 of equity debt. Personal credit card interest is not deductible.

Taxes. State and local income taxes including real estate taxes are deductible. An auto license fee based on weight, model, year, or horsepower is not deductible. A tax based on the car's value qualifies as a personal property tax.

Charitable Contributions. Individuals may not deduct the value of volunteer work they personally perform for charities.

Personal Losses. Casualty and theft losses are deductible subject to a $100 reduction and further reduced 10% for each occurrence. Separate rules apply for federally declared disasters. Unreimbursed automobile accident damage may be a deductible casualty loss.

Miscellaneous Deductions. Certain miscellaneous expenses are deductible, but only the amount that exceeds 2% of adjusted gross income. Expenses include investment expenses, union

and professional dues, tax preparation fees, safe deposit box rental fees, and most (but not all) expenses for a job search.

Business Expenses. Deductible miscellaneous expenses include unreimbursed employee business expenses such as travel, automobile, telephone, and gifts. However, only 50% of the cost of customer meals and entertainment is deductible.

Moving Expenses. Taxpayers who change jobs or are transferred usually can deduct part of their moving expenses, including travel and the cost of moving household goods, but not cost of meals.

Gambling. Lottery, slots, Texas Hold-Em poker, craps, bingo, or other gambling expenses are deductible if the taxpayer itemizes on Schedule A. However, expenses are limited to gambling winnings reported on page one, Form 1040. If there are no winnings on page one, there are no deductions allowed on Schedule A.

Tax Credits

A tax deduction reduces a taxpayer's taxable income. Tax credits reduce, dollar-for-dollar, the amount of tax owed. Credits are better!

Energy Credits. There are many energy-related credits—from the purchase of an alternative fuel vehicle, the installation of solar/fuel cell property in a residence to the production of biodiesel or ethanol.

Earned Income Credit. Lower-income workers who maintain a household may be eligible for an Earned Income Credit (EIC). This credit is based on total earned income such as wages, commissions, and tips. Military personnel can include tax-free combat pay in income to compute the credit. There are phase-out rules. Refer to the income tax instructions for guidance.

American Opportunity Tax Credit. Modifying the Hope credit, this provides a partially refundable $2,500 credit to cover each of four years of college. The credit begins to phase out for higher income individuals.

Adoption Credit. The adoption credit for qualified expenses increased to $13,170 in 2010. The credit limit is per person, not per year, and is adjusted annually for inflation. The exclusion phases out for taxpayers whose income is between $182,520 and $222,520, when the credit is completely phased out.

Alternative Minimum Tax

AMT. The Alternative Minimum Tax was established in 1969 to prevent people with very high incomes from using special tax breaks to pay little or no tax. It hasn't been indexed or adjusted for inflation. Because of changes in the tax law, this tax now affects more and more middle-income taxpayers every year.

Assistance. Instructions included with tax forms 1040 and 1040A provide help for individuals to determine if they are subject to the AMT. Tax Form 6251 is used to figure how much additional tax, if any, is owed.

Estate and Gift Taxes Exclusion

Estate Tax. The Tax Relief Reconciliation Act increased the estate tax exclusion from $675,000 in 2001 to $3.5 million in 2009. As the law stands now, the estate tax changes for 2010 have expired.

Rates. The maximum tax rate in 2001, based on the value of an estate, was 55%. The rate was decreased over the years to a maximum 45% in 2009. Like the estate tax exclusion, the rates expired in 2010.

Legislation. Starting in 2011, the estate tax laws revert to the old lower exclusion of $1 million and the higher maximum tax rate of 55%.

Resident Aliens. The estate of a resident alien is subject to the same rules as that of an American citizen. All property owned worldwide is subject to the U.S. estate tax rules and regulations.

Gifting. U.S. citizens, residents, and non-resident aliens can make tax-free gifts of up to $13,000 in 2010 to as many individuals as he or she chooses. For married couples the gift is twice that amount, $26,000, even if only one spouse does all the gifting.

Lifetime Gifting. A $1 million gift tax exclusion is the total limit an individual is allowed to give to other individuals (other than charities and the annual $13,000 gifting) during his or her lifetime before having to pay gift taxes.

Tax-Free Gifting. The gift tax does not apply for tuition that donors pay directly to schools or for medical expenses that donors pay on behalf of donees.

Taxable Social Security Benefits

Earnings Limitations. In 2010 Social Security recipients who have not reached full retirement age of 66 will lose $1 of their benefits for every $2 of earned income over $14,160. Recipients who reach full retirement age in 2010 will not lose any benefits if they earn $37,680 or less. Recipients will have to pay back some benefits if their income exceeds that amount.

Taxable Benefits. Up to 50% of Social Security benefits may be taxable if the person's total income is more than $25,000 but less than $34,000 for a single individual, head of household, qualifying widow(er), or a married person who is filing separately if spouses lived apart all year; or more than $32,000 but less than $44,000 for married individuals filing jointly. For higher incomes, 85% of Social Security benefits may become taxable.

Tax-Free. If the only income received during the year was Social Security, these benefits are not taxable and you probably do not have to file a tax return.

Retention of Income Tax Records

How long should a taxpayer keep copies of their tax returns and supporting records? The answer is a combination of judgment and the statutes of limitations. Since federal tax returns generally can be audited for up to three years after filing, or six years if the IRS suspects underreported income, it's wise to keep copies of the income tax return and records at least seven years after a return is filed.

IRS Tax Audits

In 2009, the IRS conducted more than 1,452,888 audits of individual taxpayers. Business audits numbered 58,144. Most taxpayers have no reason to be concerned about being audited—unless they happen to be one of the 1.03% returns being audited.

Decisions. The IRS audit selection process is not done randomly. It is based on a set of formulas that are designed to spot questionable returns. If the IRS concludes that the taxpayer owes more tax and he or she disagrees with the findings, the taxpayer can meet with a supervisor. If the taxpayer still does not agree, he or she can appeal to a separate Appeals Office, or take it to the U.S. Tax Court, Federal District Court, or the U.S. Court of Federal Claims.

Tax Court. The U.S. Tax Court is a federal court where taxpayers can dispute tax deficiencies as determined by the Commissioner of Internal Revenue before payment of the disputed amounts. The Tax Court is composed of presidentially appointed members. Many taxpayers will choose the Tax Court because they are not required to pay the contested tax up front.

Appeals. For more information about audits, call the IRS at (800) TAX-FORM (829-3676) for its free Publication 556, *Examination of Returns, Appeal Rights, and Claims for Refund*. Or visit www.irs.gov.

Your Rights as a Taxpayer

Congress has enacted "Taxpayer Bill of Rights" legislation and created an Office of the Taxpayer Advocate within the IRS, with authority to order IRS personnel to issue refund checks and meet deadlines for resolving disputes. Taxpayer advocates can be contacted at (877) 777-4778; (800) 829-4059 for TTY/TDD.

The IRS must pay legal fees if the taxpayer wins the case and the IRS cannot show it was "substantially justified" in pursuing the disputed amount. For more information ask for free IRS Publication 1, *Your Rights As a Taxpayer*, by calling (800) TAX-FORM (829-3676).

Reporting Wrongdoings

To confidentially report misconduct, waste, fraud or abuse by an IRS employee, call (800) 366-4484; (800) 877-8339 for TTY/TDD.

More IRS Services

To find out what additional services are available, ask for Publication 910, *IRS Guide to Free Tax Services*. This guide contains a list of free tax publications and other information including tax education and assistance programs and a list of Tele-Tax topics.

State Government Personal Income Tax Rates, 2010

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Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming did not have state income taxes and are thus not listed. Tax rates apply in stages—for example, a single person in Arizona making $60,000 in taxable income would pay 2.59% on the first $10,000 of income, 2.88% on the next $15,000 and so on. For further details, see notes at end of table.

Alabama

Single, Head of household, or Married filing separately
- $0 to $500 . . . 2%
- $501 to $3,000 . . . 4%
- $3,001 and over . . . 5%

Married filing jointly
- $0 to $1,000 . . . 2%
- $1,001 to $6,000 . . . 4%
- $6,001 and over . . . 5%

Arizona[1]

Single or Married filing separately
- $0 to $10,000 . . . 2.59%
- $10,001 to $25,000 . . . 2.88%
- $25,001 to $50,000 . . . 3.36%
- $50,001 to $150,000 . . . 4.24%
- $150,001 and over . . . 4.54%

Married filing jointly, Head of household
- $0 to $20,000 . . . 2.59%
- $20,001 to $50,000 . . . 2.88%
- $50,001 to $100,000 . . . 3.36%
- $100,001 to $300,000 . . . 4.24%
- $300,001 and over . . . 4.54%

Arkansas[2,3]

Single, Head of household, Married filing jointly, or Married filing separately
- $0 to $3,899 . . . 1%
- $3,900 to $7,799 . . . 2.5%
- $7,800 to $11,699 . . . 3.5%
- $11,700 to $19,599 . . . 4.5%
- $19,600 to $32,599 . . . 6%
- $32,600 and over . . . 7%

California[1,2]

Single, Married filing separately, or Registered domestic partners filing separately
- $0 to $7,124 . . . 1.25%
- $7,125 to $16,890 . . . 2.25%
- $16,891 to $26,657 . . . 4.25%
- $26,658 to $37,005 . . . 6.25%
- $37,006 to $46,766 . . . 8.25%
- $46,767 and over . . . 9.55%

Head of household
- $0 to $14,257 . . . 1.25%
- $14,258 to $33,780 . . . 2.25%
- $33,781 to $43,545 . . . 4.25%
- $43,546 to $53,893 . . . 6.25%
- $53,894 to $63,657 . . . 8.25%
- $63,658 and over . . . 9.55%

Married filing jointly, Registered domestic partners filing jointly, or Qualifying widow(er)
- $0 to $14,248 . . . 1.25%
- $14,249 to $33,780 . . . 2.25%
- $33,781 to $53,314 . . . 4.25%
- $53,315 to $74,010 . . . 6.25%
- $74,011 to $93,532 . . . 8.25%
- $93,533 and over . . . 9.55%

Colorado

4.63% of federal taxable income

Connecticut

Single or Married filing separately
- $0 to $10,000 . . . 3%
- $10,001 to $500,000 . . . 5%
- $500,001 and over . . . 6.5%

Head of household
- $0 to $16,000 . . . 3%
- $16,001 to $800,000 . . . 5%
- $800,001 and over . . . 6.5%

Married filing jointly or Qualifying widow(er)
- $0 to $20,000 . . . 3%
- $20,001 to $1,000,000 . . . 5%
- $1,000,001 and over . . . 6.5%

Delaware

Single, Head of household, Married filing jointly, or Married filing separately
- $0 to $2,000 . . . 0%
- $2,001 to $5,000 . . . 2.2%
- $5,001 to $10,000 . . . 3.9%
- $10,001 to $20,000 . . . 4.8%
- $20,001 to $25,000 . . . 5.2%
- $25,001 to $60,000 . . . 5.55%
- $60,001 and over . . . 6.95%

District of Columbia

- $0 to $10,000 . . . 4%
- $10,001 to $40,000 . . . 6%
- $40,001 and over . . . 8.5%

Georgia

Single
- $0 to $750 . . . 1%
- $751 to $2,250 . . . 2%
- $2,251 to $3,750 . . . 3%
- $3,751 to $5,250 . . . 4%
- $5,251 to $7,000 . . . 5%
- $7,001 and over . . . 6%

Head of household, Married filing jointly, or Qualifying widow(er)
- $0 to $1,000 . . . 1%
- $1,001 to $3,000 . . . 2%
- $3,001 to $5,000 . . . 3%
- $5,001 to $7,000 . . . 4%
- $7,001 to $10,000 . . . 5%
- $10,001 and over . . . 6%

Married filing separately
- $0 to $500 . . . 1%
- $501 to $1,500 . . . 2%
- $1,501 to $2,500 . . . 3%
- $2,501 to $3,500 . . . 4%
- $3,501 to $5,000 . . . 5%
- $5,001 and over . . . 6%

Hawaii

Single or Married filing separately
- $0 to $2,400 . . . 1.4%
- $2,401 to $4,800 . . . 3.2%
- $4,801 to $9,600 . . . 5.5%
- $9,601 to $14,400 . . . 6.4%
- $14,401 to $19,200 . . . 6.8%
- $19,201 to $24,000 . . . 7.2%
- $24,001 to $36,000 . . . 7.6%
- $36,001 to $48,000 . . . 7.9%
- $48,001 to $150,000 . . . 8.25%
- $150,001 to $175,000 . . . 9%
- $175,001 to $200,000 . . . 10%
- $200,001 and over . . . 11%

Head of household
- $0 to $3,600 . . . 1.4%
- $3,601 to $7,200 . . . 3.2%
- $7,201 to $14,400 . . . 5.5%
- $14,401 to $21,600 . . . 6.4%
- $21,601 to $28,800 . . . 6.8%
- $28,801 to $36,000 . . . 7.2%
- $36,001 to $54,000 . . . 7.6%
- $54,001 to $72,000 . . . 7.9%
- $72,001 to $225,000 . . . 8.25%
- $225,001 to $262,500 . . . 9%
- $262,501 to $300,000 . . . 10%
- $300,001 and over . . . 11%

Married filing jointly or Surviving spouse
- $0 to $4,800 . . . 1.4%
- $4,801 to $9,600 . . . 3.2%
- $9,601 to $19,200 . . . 5.5%
- $19,201 to $28,800 . . . 6.4%
- $28,801 to $38,400 . . . 6.8%
- $38,401 to $48,000 . . . 7.2%
- $48,001 to $72,000 . . . 7.6%
- $72,001 to $96,000 . . . 7.9%
- $96,001 to $300,000 . . . 8.25%
- $300,001 to $350,000 . . . 9%
- $350,001 to $400,000 . . . 10%
- $400,001 and over . . . 11%

Idaho[1,2,3]

Single or Married filing separately
- $0 to $1,320 . . . 1.6%
- $1,321 to $2,641 . . . 3.6%
- $2,642 to $3,962 . . . 4.1%
- $3,963 to $5,283 . . . 5.1%
- $5,284 to $6,603 . . . 6.1%
- $6,604 to $9,906 . . . 7.1%
- $9,907 to $26,417 . . . 7.4%
- $26,418 and over . . . 7.8%

Head of household, Married filing jointly, or Surviving spouse
- $0 to $2,641 . . . 1.6%
- $2,642 to $5,283 . . . 3.6%
- $5,284 to $7,925 . . . 4.1%
- $7,926 to $10,567 . . . 5.1%
- $10,568 to $13,207 . . . 6.1%
- $13,208 to $19,813 . . . 7.1%
- $19,814 to $52,835 . . . 7.4%
- $52,836 and over . . . 7.8%

Illinois

3% of federal AGI with modifications

Indiana

3.4% of adjusted gross income

Iowa[2]

- $0 to $1,428 . . . 0.36%
- $1,429 to $2,856 . . . 0.72%
- $2,857 to $5,712 . . . 2.43%
- $5,713 to $12,852 . . . 4.5%
- $12,853 to $21,420 . . . 6.12%
- $21,421 to $28,560 . . . 6.48%
- $28,561 to $42,840 . . . 6.8%
- $42,841 to $64,260 . . . 7.92%
- $64,261 and over . . . 8.98%

Kansas

Single, Head of household, or Married filing separately
- $0 to $15,000 . . . 3.5%
- $15,001 to $30,000 . . . 6.25%
- $30,001 and over . . . 6.45%

Married filing jointly
- $0 to $30,000 . . . 3.5%
- $30,001 to $60,000 . . . 6.25%
- $60,001 and over . . . 6.45%

Kentucky

Single, Head of household, Married filing jointly, or Married filing separately
- $0 to $3,000 . . . 2%
- $3,001 to $4,000 . . . 3%
- $4,001 to $5,000 . . . 4%
- $5,001 to $8,000 . . . 5%
- $8,001 to $75,000 . . . 5.8%
- $75,001 and over . . . 6%

Louisiana[1]

Single, Head of household, or Married filing separately
- $0 to $12,500 . . . 2%
- $12,501 to $50,000 . . . 4%
- $50,001 and over . . . 6%

Married filing jointly
- $0 to $25,000 . . . 2%
- $25,001 to $100,000 . . . 4%
- $100,001 and over . . . 6%

Maine[2]

Single or Married filing separately
- $0 to $4,949 . . . 2%
- $4,950 to $9,849 . . . 4.5%
- $9,850 to $19,749 . . . 7%
- $19,750 and over . . . 8.5%

Head of household
- $0 to $7,449 . . . 2%
- $7,450 to $14,799 . . . 4.5%
- $14,800 to $29,649 . . . 7%
- $29,650 and over . . . 8.5%

Married filing jointly, Qualifying widow(er)
- $0 to $9,949 . . . 2%
- $9,950 to $19,749 . . . 4.5%
- $19,750 to $39,549 . . . 7%
- $39,550 and over . . . 8.5%

Maryland

Single or Married filing separately
- $0 to $1,000 . . . 2%
- $1,001 to $2,000 . . . 3%
- $2,001 to $3,000 . . . 4%
- $3,001 to $150,000 . . . 4.75%
- $150,001 to $300,000 . . . 5%
- $300,001 to $500,000 . . . 5.25%
- $500,001 to $1,000,000 . . 5.5%
- $1,000,001 and over . . . 6.25%

Head of household, Married filing jointly, or Qualifying widow(er)
- $0 to $1,000 . . . 2%
- $1,001 to $2,000 . . . 3%
- $2,001 to $3,000 . . . 4%
- $3,001 to $200,000 . . . 4.75%
- $200,001 to $350,000 . . . 5%
- $350,001 to $500,000 . . . 5.25%
- $500,001 to $1,000,000 . . 5.5%
- $1,000,001 and over . . . 6.25%

Massachusetts

Short-term capital gains . . 12.0%
All other income . . . 5.3%

Michigan

4.35% of taxable income

Minnesota[2]

Single
- $0 to $22,770 . . . 5.35%
- $22,771 to $74,780 . . . 7.05%
- $74,781 and over . . . 7.85%

Head of household
- $0 to $28,030 . . . 5.35%
- $28,031 to $112,620 . . . 7.05%
- $112,621 and over . . . 7.85%

Married filing jointly
- $0 to $33,280 . . . 5.35%
- $33,281 to $132,220 . . . 7.05%
- $132,221 and over . . . 7.85%

Married filing separately
- $0 to $16,640 . . . 5.35%
- $16,641 to $66,110 . . . 7.05%
- $66,111 and over . . . 7.85%

Mississippi

- $0 to $5,000 . . . 3%
- $5,001 to $10,000 . . . 4%
- $10,001 and over . . . 5%

Missouri

- $0 to $1,000 . . . 1.5%
- $1,001 to $2,000 . . . 2%
- $2,001 to $3,000 . . . 2.5%
- $3,001 to $4,000 . . . 3%
- $4,001 to $5,000 . . . 3.5%
- $5,001 to $6,000 . . . 4%
- $6,001 to $7,000 . . . 4.5%
- $7,001 to $8,000 . . . 5%
- $8,001 to $9,000 . . . 5.5%
- $9,001 and over . . . 6%

Montana[2]

- $0 to $2,600 . . . 1%
- $2,601 to $4,600 . . . 2%
- $4,601 to $6,900 . . . 3%
- $6,901 to $9,400 . . . 4%
- $9,401 to $12,100 . . . 5%
- $12,101 to $15,601 . . . 6%
- $15,601 and over . . . 6.9%

Nebraska

Single
- $0 to $2,400 . . . 2.56%
- $2,401 to $17,500 . . . 3.57%
- $17,501 to $27,000 . . . 5.12%
- $27,001 and over . . . 6.84%

Head of household
- $0 to $4,500 . . . 2.56%
- $4,501 to $28,000 . . . 3.57%
- $28,001 to $40,000 . . . 5.12%
- $40,001 and over . . . 6.84%

Married filing jointly or Surviving spouse
- $0 to $4,800 . . . 2.56%
- $4,801 to $35,000 . . . 3.57%
- $35,001 to $54,000 . . . 5.12%
- $54,001 and over . . . 6.84%

Married filing separately
- $0 to $2,400 . . . 2.56%
- $2,401 to $17,500 . . . 3.57%
- $17,501 to $27,000 . . . 5.12%
- $27,001 and over . . . 6.84%

New Hampshire

5% on interest and dividends only

New Jersey

Single or Married/Civil union partner filing separately
- $0 to $20,000 . . . 1.4%
- $20,001 to $35,000 . . . 1.75%
- $35,001 to $40,000 . . . 3.5%
- $40,001 to $75,000 . . . 5.525%
- $75,001 to $500,000 . . . 6.37%
- $500,001 and over . . . 8.97%

Head of household, Married/civil-union couple filing jointly, or Qualifying widow(er)/Surviving civil-union partner
- $0 to $20,000 . . . 1.4%
- $20,001 to $50,000 . . . 1.75%
- $50,001 to $70,000 . . . 2.45%
- $70,001 to $80,000 . . . 3.5%
- $80,001 to $150,000 . . . 5.525%
- $150,001 to $500,000 . . . 6.37%
- $500,001 and over . . . 8.97%

New Mexico[1]

Single
- $0 to $5,500 . . . . . 1.7%
- $5,501 to $11,000. . . . . 3.2%
- $11,001 to $16,000. . . . . 4.7%
- $16,001 and over 4.9%

Head of household
- $0 to $8,000 . . . . . 1.7%
- $8,001 to $16,000. . . . . 3.2%
- $16,001 to $24,000. . . . . 4.7%
- $24,001 and over 4.9%

Married filing jointly or Qualifying widow(er)
- $0 to $8,000 . . . . . 1.7%
- $8,001 to $16,000. . . . . 3.2%
- $16,001 to $24,000. . . . . 4.7%
- $24,001 and over 4.9%

Married filing separately
- $0 to $4,000 . . . . . 1.7%
- $4,001 to $8,000. . . . . 3.2%
- $8,001 to $12,000. . . . . 4.7%
- $12,001 and over 4.9%

New York

Single or Married filing separately
- $0 to $8,000 . . . . . 4%
- $8,001 to $11,000. . . . . 4.5%
- $11,001 to $13,000. . . . . 5.25%
- $13,001 to $20,000. . . . . 5.9%
- $20,001 to $200,000. . . . 6.85%
- $200,001 to $500,000. . . 7.85%
- $500,001 and over 8.97%

Head of household
- $0 to $11,000 . . . . . 4%
- $11,001 to $15,000. . . . . 4.5%
- $15,001 to $17,000. . . . . 5.25%
- $17,001 to $30,000. . . . . 5.9%
- $30,001 to $250,000. . . . 6.85%
- $250,001 to $500,000. . . 7.85%
- $500,001 and over 8.97%

Married filing jointly or Qualifying widow(er)
- $0 to $16,000 . . . . . 4%
- $16,001 to $22,000. . . . . 4.5%
- $22,001 to $26,000. . . . . 5.25%
- $26,001 to $40,000. . . . . 5.9%
- $40,001 to $300,000. . . . 6.85%
- $300,001 to $500,000. . . 7.85%
- $500,001 and over 8.97%

North Carolina

Single
- $0 to $12,750 . . . . . 6%
- $12,751 to $60,000. . . . . 7%
- $60,001 and over 7.75%

Head of household
- $0 to $17,000 . . . . . 6%
- $17,001 to $80,000. . . . . 7%
- $80,001 and over 7.75%

Married filing jointly or Surviving spouse
- $0 to $21,250 . . . . . 6%
- $21,251 to $100,000. . . . . 7%
- $100,001 and over 7.75%

Married filing separately
- $0 to $10,625 . . . . . 6%
- $10,626 to $50,000. . . . . 7%
- $50,001 and over 7.75%

North Dakota[2]

Single
- $0 to $34,000 . . . . . 1.84%
- $34,001 to $82,400. . . . . 3.44%
- $82,401 to $171,850. . . . 3.81%
- $171,851 to $373,650. . . 4.42%
- $373,651 and over 4.86%

Head of household
- $0 to $45,550 . . . . . 1.84%
- $45,551 to $117,650. . . . 3.44%
- $117,651 to $190,550. . . 3.81%
- $190,551 to $373,650. . . 4.42%
- $373,651 and over 4.86%

Married filing jointly or Surviving spouse
- $0 to $56,850 . . . . . 1.84%
- $56,851 to $137,300. . . . 3.44%
- $137,301 to $209,250. . . 3.81%
- $209,251 to $373,650. . . 4.42%
- $373,651 and over 4.86%

Married filing separately
- $0 to $28,425 . . . . . 1.84%
- $28,426 to $68,650. . . . . 3.44%
- $68,651 to $104,625. . . . 3.81%
- $104,626 to $186,825. . . 4.42%
- $186,826 and over 4.86%

Ohio

Single or Married filing separately
- $0 to $5,050 . . . . . 0.618%
- $5,051 to $10,100. . . . . 1.236%
- $10,101 to $15,150. . . . 2.473%
- $15,151 to $20,200. . . . 3.091%
- $20,201 to $40,350. . . . 3.708%
- $40,351 to $80,700. . . . 4.327%
- $80,701 to $100,900. . . 4.945%
- $100,901 to $201,800. . 5.741%
- $201,801 and over 6.24%

Oklahoma

Single or Married filing separately
- $0 to $1,000 . . . . . 0.5%
- $1,001 to $2,500. . . . . 1%
- $2,501 to $3,750. . . . . 2%
- $3,751 to $4,900. . . . . 3%
- $4,901 to $7,200 . . . . . 4%
- $7,201 to $8,700 . . . . . 5%
- $8,701 and over 5.5%

Head of household, Married filing jointly, or Qualifying widow(er)
- $0 to $2,000 . . . . . 0.5%
- $2,001 to $5,000. . . . . 1%
- $5,001 to $7,500. . . . . 2%
- $7,501 to $9,800. . . . . 3%
- $9,801 to $12,200. . . . . 4%
- $12,201 to $15,000. . . . . 5%
- $15,001 and over 5.5%

Oregon[2]

Single or Married filing separately
- $0 to $2,000 . . . . . 5%
- $2,001 to $5,000. . . . . 7%
- $5,001 to $125,000. . . . . 9%
- $125,001 to $250,000. . . 10.8%
- $250,001 and over.. . . . . 11%

Married filing jointly, Head of household, or Qualifying widow(er)
- $0 to $4,000 . . . . . 5%
- $4,001 to $10,000. . . . . 7%
- $10,001 to $250,000. . . . . 9%
- $250,001 to $500,000. . . 10.8%
- $500,001 and over 11%

Pennsylvania

3.07% of taxable compensation, net profits, net gains from the sale of property, rent, royalties, patents or copyrights, income from estates or trusts, dividends, interest, and winnings

Rhode Island[2]

Single
- $0 to $34,000 . . . . . 3.75%
- $34,001 to $82,400. . . . . 7%
- $82,401 to $171,850. . . . 7.75%
- $171,851 to $373,650. . . . . 9%
- $373,651 and over 9.9%

Head of household
- $0 to $45,550 . . . . . 3.75%
- $45,551 to $117,650. . . . . 7%
- $117,651 to $190,550. . . 7.75%
- $190,551 to $373,650. . . . . 9%
- $373,651 and over 9.9%

Married filing jointly or Surviving spouse
- $0 to $56,800 . . . . . 3.75%
- $56,801 to $137,300. . . . . 7%
- $137,301 to $209,250. . . 7.75%
- $209,251 to $373,650. . . . . 9%
- $373,651 and over 9.9%

Married filing separately
- $0 to $28,400 . . . . . 3.75%
- $28,401 to $68,650. . . . . 7%
- $68,651 to $104,625. . . . 7.75%
- $104,626 to $186,825. . . . . 9%
- $186,826 and over 9.9%

South Carolina[2]

- $0 to $2,740 . . . . . 0%
- $2,741 to $5,480. . . . . 3%
- $5,481 to $8,220. . . . . 4%
- $8,221 to $10,960. . . . . 5%
- $10,961 to $13,700. . . . . 6%
- $13,701 and over 7%

Tennessee

6% upon interest and dividend income

Utah

5% on state taxable income

Vermont[2,4]

Single
- $0 to $34,000 . . . . . 3.55%
- $34,001 to $82,400. . . . . 6.8%
- $82,401 to $171,850. . . . . 7.8%
- $171,851 to $373,650. . . . 8.8%
- $373,651 and over 8.95%

Head of household
- $0 to $45,550 . . . . . 3.55%
- $45,551 to $117,650. . . . . 6.8%
- $117,651 to $190,550. . . . 7.8%
- $190,551 to $373,650. . . . 8.8%
- $373,651 and over 8.95%

Married filing jointly, Qualifying widow(er), Civil union filing jointly
- $0 to $56,800 . . . . . 3.55%
- $56,801 to $137,300. . . . . 6.8%
- $137,301 to $209,250. . . . 7.8%
- $209,251 to $373,650. . . . 8.8%
- $373,651 and over 8.95%

Married or Civil union filing separately
- $0 to $28,400 . . . . . 3.55%
- $28,401 to $68,650. . . . . 6.8%
- $68,651 to $104,625. . . . . 7.8%
- $104,626 to $186,825. . . . 8.8%
- $186,826 and over 8.95%

Virginia

Single, Head of household, Married filing jointly, or Married filing separately
- $0 to $3,000 . . . . . 2%
- $3,001 to $5,000. . . . . 3%
- $5,001 to $17,000. . . . . 5%
- $17,001 and over 5.75%

West Virginia

Single, Head of household, or Married filing jointly
- $0 to $10,000 . . . . . 3%
- $10,001 to $25,000. . . . . 4%
- $25,001 to $40,000. . . . . 4.5%
- $40,001 to $60,000. . . . . 6%
- $60,001 and over 6.5%

Married filing separately
- $0 to $5,000 . . . . . 3%
- $5,001 to $12,500. . . . . 4%
- $12,501 to $20,000. . . . . 4.5%
- $20,001 to $30,000. . . . . 6%
- $30,001 and over 6.5%

Wisconsin[1,2]

Single or Head of household
- $0 to $10,070. . . . . 4.6%
- $10,071 to $20,130 . . . . 6.15%
- $20,131 to $151,000 . . . . 6.5%
- $151,001 to $221,660 . . 6.75%
- $221,661 and over. 7.75%

Married filing jointly
- $0 to $13,420. . . . . 4.6%
- $13,421 to $26,850 . . . . 6.15%
- $26,851 to $201,340 . . . . 6.5%
- $201,341 to $295,550 . . 6.75%
- $295,551 and over. 7.75%

Married filing separately
- $0 to $6,710. . . . . 4.6%
- $6,711 to $13,420 . . . . . 6.15%
- $13,421 to $100,670 . . . . 6.5%
- $100,671 to $147,770 . . 6.75%
- $147,771 and over. 7.75%

AMT = Alternative minimum tax; AGI = Adjusted gross income; MFS = Married filing separately. (1) Community property state in which, in general, one-half of the community income is taxable to each spouse. (2) Brackets indexed for inflation annually. (3) 2010 adjusted brackets were not available. Bracketed rates listed are for 2009. (4) These are preliminary 2010 tax rates and brackets. **Arkansas:** Married filing separately combined-status couples calculate taxes separately and add the results. **California:** An additional 1% tax is imposed on taxable income in excess of $1 million. **Colorado:** Individual taxpayers are subject to an AMT equal to the amount by which 3.47% of their Colorado alternative minimum taxable income exceeds their Colorado normal tax. **Connecticut:** Additional state minimum tax imposed on resident and part-year resident individuals, trusts, and estates that are subject to the federal AMT. AMT computed at rate equal to the lesser of (a) 19% of adjusted federal tentative minimum tax or (b) 5.5% of adjusted federal alternative minimum taxable income. AMT in addition to regular tax is imposed on nonresident individuals, trusts, and estates with federal AMT liability and state source income. **Indiana:** Counties may impose an adjusted gross income tax on residents or on nonresidents, or a county option income tax. **Iowa:** An AMT of 6.7% of alternative minimum income is imposed if the minimum tax exceeds the taxpayer's regular income tax liability. **Maine:** Additional state minimum tax is imposed equal to the amount by which the tentative minimum tax exceeds regular income tax liability. **Massachusetts:** Part A income represents either interest and dividends or short-term capital gains. Part B income represents wages, salaries, tips, pensions, state bank interest, partnership income, business income, rents, alimony, winnings, and certain other items of income. Part C income represents gains from the sale of capital assets held for more than one year. **Michigan:** Business activity attributable to Michigan is also subject to the Michigan Business Tax. **Minnesota:** A 6.4% AMT is imposed. **Montana:** Minimum tax, $1. **Nebraska:** There is an additional tax on taxpayers with federal AGI of more than $167,100 ($83,550 for MFS). **New Mexico:** Qualified nonresident taxpayers may pay alternative tax of 0.75% of gross receipts from New Mexico sales. **New York:** A supplemental tax is imposed to recapture the tax table benefit. **North Carolina:** 2% surcharge imposed during 2010 tax year for the following taxpayers: joint filers or surviving spouses with taxable incomes greater than $100,000 and up to $250,000; heads of households with taxable incomes greater than $80,000, up to $200,000; single filers with taxable incomes greater than $60,000, up to $150,000; married filing separately with taxable incomes greater than $50,000, up to $125,000. 3% surcharge imposed during 2009 and 2010 tax years for the following taxpayers: joint filers and surviving spouses with taxable incomes greater than $250,000; heads of households with taxable incomes greater than $200,000; single filers with taxable incomes greater than $150,000; married filing separately filers with taxable incomes greater than $125,000. **Rhode Island:** Taxpayers may elect to compute income tax liability based on a flat rate equal to 6%. **Vermont:** The tax amount in the schedules is increased or decreased by 24% of a taxpayer's federal tax liability for certain items. **West Virginia:** The West Virginia minimum tax expired for tax years on or after Jan. 1, 2010. **Wisconsin:** A permanent recycling surcharge is imposed on individuals, estates, trusts, and partnerships with at least $4 million in gross receipts at the rate of the greater of $25 or 0.2% of net business income as allocated or apportioned to Wisconsin with a maximum of $9,800.

EDUCATION

U.S. Public Schools: Students, Staff, Spending, 1899-2008

Source: National Center for Education Statistics, U.S. Dept. of Education

	1899-1900	1919-20	1939-40	1959-60	1969-70	1979-80	1989-90	1999-2000	2007-08
Population statistics (thous.)									
Total U.S. population[1]	75,995	104,514	131,028	177,830	201,385	225,055	246,819	279,040	301,290
Population 5-17 years of age	21,573	27,571	30,151	43,881	52,386	48,043	44,947	52,811	53,129
Percentage 5-17 years of age	28.4%	26.4%	23.0%	24.7%	26.0%	21.3%	18.2%	18.9%	17.6%
Enrollment (thous.)									
Elementary and secondary[2]	15,503	21,578	25,434	36,087	45,550	41,651	40,543	46,857	49,293
Pre-kindergarten to grades 1-8	14,984	19,378	18,833	27,602	32,513	28,034	29,152	33,486	34,205
Grades 9-12	519	2,200	6,601	8,485	13,037	13,616	11,390	13,371	15,087
Percentage pop. 5-17 enrolled	71.9%	78.3%	84.4%	82.2%	87.0%	86.7%	90.2%	88.7%	92.8%
Percentage enrolled in high schools	3.3%	10.2%	26.0%	23.5%	28.6%	32.7%	28.1%	28.5%	30.6%
High school grads. (thous.)	62	231	1,143	1,627	2,589	2,748	2,320	2,554	3,011
Instructional staff									
Total instructional staff (thous.)	*	678	912	1,457	2,286	2,406	2,986	3,819	4,214
Teachers, librarians, and other non-supervisory instructional staff (thous.)	423	657	875	1,393	2,195	2,300	2,860	3,682	4,056
Revenue and expenditures (mil)									
Total revenue	$220	$970	$2,261	$14,747	$40,267	$96,881	$208,548	$372,944	$584,729
Total expenditures	215	1,036	2,344	15,613	40,683	95,962	212,770	381,838	596,610
Current expenditures[3,4]	180	861	1,942	12,329	34,218	86,984	188,229	323,889	506,827
Capital outlay	35	154	258	2,662	4,659	6,506	17,781	43,357	65,780
Interest on school debt	*	18	131	490	1,171	1,874	3,776	9,135	15,695
Others	*	3	13	133	636	598	2,983	5,457	8,308
Salaries and pupil cost									
Avg. annual salary of instruct. staff[5]	$325	$871	$1,441	$4,995	$8,626	$15,970	$31,367	$41,807	$52,308
Expenditure per capita total pop.	2.83	9.91	17.89	88	202	426	862	1,368	1,980
Current expenditure per pupil ADA[4,6]	16.67	53.32	88.09	375	816	2,272	4,980	7,394	10,297

* = Data not collected. **Note:** Because of rounding, details may not add upto totals. Prior to 1959-60, data do not include Alaska and Hawaii. (1) Population data for 1899-1900 are based on total population from the decennial census. From 1919-20 to 1959-60, population data are total population, including armed forces overseas, as of July 1 preceding the school year. Data for later years are for resident population excluding armed forces overseas. (2) Data for 1899-1960 are school year enrollment; data for later years are fall enrollment. (3) In 1899-1900, includes interest on school debt. (4) Because of changes in the definition of "current expenditures," data for 1959-60 and later years are not entirely comparable with prior years. (5) Data prior to 1959-60 include supervisors, principals, teachers, and nonsupervisory instructional staff. (6) ADA = average daily attendance.

U.S. Public High School Graduation Rates, 2006-07

Source: National Center for Education Statistics, U.S. Dept. of Education

State	Rate	Rank	State	Rate	Rank	State	Rate	Rank	State	Rate	Rank
Alabama	67.1%	43	Illinois	79.5%	17	Montana	81.5%	13	Rhode Island	78.4%	21
Alaska	69.0	40	Indiana	73.9	33	Nebraska	86.3	5	South Carolina	58.9	49
Arizona	69.6	39	Iowa	86.5	3	Nevada	52.0	51	South Dakota	82.5	9
Arkansas	74.4	32	Kansas	78.8	18	New Hampshire	81.7	12	Tennessee	72.6	35
California	70.7	38	Kentucky	76.4	27	New Jersey	84.4	6	Texas	71.9	36
Colorado	76.6	25	Louisiana	61.3	47	New Mexico	59.1	48	Utah	76.6	25
Connecticut	81.8	11	Maine	78.5	20	New York	68.9	41	Vermont	88.5	1
Delaware	71.9	36	Maryland	80.0	16	North Carolina	68.6	42	Virginia	75.5	29
Dist. of Columbia	54.8	50	Massachusetts	80.8	14	North Dakota	83.1	7	Washington	74.8	31
Florida	65.0	44	Michigan	77.0	24	Ohio	78.7	19	West Virginia	78.2	22
Georgia	64.1	45	Minnesota	86.5	3	Oklahoma	77.8	23	Wisconsin	88.5	1
Hawaii	75.4	30	Mississippi	63.5	46	Oregon	73.8	34	Wyoming	75.8	28
Idaho	80.4	15	Missouri	81.9	10	Pennsylvania	83.0	8	**Total U.S.**	**73.9**	

Note: The averaged freshman graduation rate provides an estimate of the percentage of students who receive a regular diploma within 4 years of entering ninth grade. The rate uses aggregate student enrollment data to estimate the size of an incoming freshman class and aggregate counts of the number of diplomas awarded 4 years later.

High School Dropouts by Sex, Race, and Ethnicity, 1960-2008

Source: Current Population Survey, Census Bureau, U.S. Dept. of Commerce

Data for Oct. of year shown unless otherwise noted.

	Total dropout rate				Male dropout rate				Female dropout rate			
Year	All races[1]	White	Black	Hispanic	All races[1]	White	Black	Hispanic	All races[1]	White	Black	Hispanic
1960[2]	27.2%	NA	NA	NA	27.8%	NA	NA	NA	26.7%	NA	NA	NA
1970[3]	15.0	13.2%	27.9%	NA	14.2	12.2%	29.4%	NA	15.7	14.1%	26.6%	NA
1975	13.9	11.4	22.9	29.2%	13.3	11.0	23.0	26.7%	14.5	11.8	22.9	31.6%
1980	14.1	11.4	19.1	35.2	15.1	12.3	20.8	37.2	13.1	10.5	17.7	33.2
1985	12.6	10.4	15.2	27.6	13.4	11.1	16.1	29.9	11.8	9.8	14.3	25.2
1990	12.1	9.0	13.2	32.4	12.3	9.3	11.9	34.3	11.8	8.7	14.4	30.3
1995[4]	12.0	8.6	12.1	30.0	12.2	9.0	11.1	30.0	11.7	8.2	12.9	30.0
2000[4]	10.9	6.9	13.1	27.8	12.0	7.0	15.3	31.8	9.9	6.9	11.1	23.5
2001[4]	10.7	7.3	10.9	27.0	12.2	7.9	13.0	31.6	9.3	6.7	9.0	22.1
2002[4]	10.5	6.5	11.3	25.7	11.8	6.7	12.8	29.6	9.2	6.3	9.9	21.2
2003[4,5]	9.9	6.3	10.9	23.5	11.3	7.1	12.5	26.7	8.4	5.6	9.5	20.1
2004[4,5]	10.3	6.8	11.8	23.8	11.6	7.1	13.5	28.5	9.0	6.4	10.2	18.5
2005[4,5]	9.4	6.0	10.4	22.4	10.8	6.6	12.0	26.4	8.0	5.3	9.0	18.1
2006[4,5]	9.3	5.8	10.7	22.1	10.3	6.4	9.7	25.7	8.3	5.3	11.7	18.1
2007[4,5]	8.7	5.3	8.4	21.4	9.8	6.0	8.0	24.7	7.7	4.5	8.8	18.0
2008[4,5]	8.0	4.8	9.9	18.3	8.5	5.4	8.7	19.9	7.5	4.2	11.1	16.7

NA = Not available. **Note:** Table shows "status" dropouts, defined as 16- to 24-year-old persons who are not enrolled in school and who have not completed a high school program, regardless of when they left school. People who have received GED credentials are not shown. Excludes persons in prisons or in the military, and other persons not living in households. Race categories exclude persons of Hispanic ethnicity unless otherwise noted. (1) Includes other racial/ethnic categories not separately shown. (2) Based on the Apr. 1960 decennial census. (3) White and black figures include persons of Hispanic ethnicity for 1970. (4) Because of changes in data collection procedures, data may not be comparable with figures for years prior to 1992. (5) White and black figures exclude persons identifying themselves as being of two or more races.

Overview of U.S. Public Schools, 2008-09

Source: National Center for Education Statistics, U.S. Dept. of Education; National Education Association (NEA)

State	Local school districts	Elementary schools[1,2]	Secondary schools[2,3]	Classroom teachers	Total enrollment	Pupils per teacher	Teacher's avg. pay	Expend. per pupil
Alabama	132	948	414	47,758	739,198	15.5	$46,879	$8,911
Alaska	54	185	84	8,691	130,684	15.0	58,395	10,904*
Arizona	603	1,320	667	54,627	1,077,872	19.7	46,358	5,932*
Arkansas	245*	717	393	35,353*	456,795*	12.9*	47,472*	10,345*
California	1,042	6,935	2,449	298,877	6,252,031	20.9	68,093*	8,322
Colorado	178	1,250	410	48,617	818,443	16.8	48,487	9,574*
Connecticut	195	822	261	43,483	575,287	13.2	63,152*	13,864
Delaware	37	142	46	8,349	125,430	15.0	56,667	13,039*
Dist. of Columbia	41*	166	38	5,723*	57,172*	10.0*	62,557*	17,638*
Florida	67*	2,605	668	169,010	2,631,631	15.6	46,921	8,761
Georgia	187	1,749	435	118,979	1,655,765	13.9	52,879	9,952*
Hawaii	1	208	53	11,597	179,071	15.4	55,733	12,520
Idaho	131	432	231	15,143	275,075	18.2	45,178	7,730*
Illinois	869	3,184	1,007	146,773	2,112,132	14.4	61,344	10,714
Indiana	342	1,422	439	62,197	1,045,551	16.8	49,569	9,780
Iowa	362	1,021	449	35,614	487,559	13.7	48,638	9,203
Kansas	295	966	392	35,436	474,987	13.4	46,401	9,979
Kentucky	174	982	465	41,331	650,008	15.7	47,875	9,259
Louisiana	111	972	310	49,002	684,873	14.0	48,627	10,160
Maine	229*	504	153	16,923*	194,460*	11.5*	44,731*	13,309*
Maryland	24	1,116	277	59,790	843,861	14.1	62,849	11,743
Massachusetts	391	1,463	370	70,295	958,187	13.6	66,712	13,901
Michigan	744*	2,544	1,082	96,010*	1,682,738*	17.5*	57,327*	11,197*
Minnesota	471*	1,433	894	52,632*	819,207*	15.6*	51,938*	10,996*
Mississippi	152*	614	321	34,754*	495,665*	14.3*	44,498*	7,484*
Missouri	523*	1,561	684	68,799*	892,283*	13.0*	44,249*	8,862*
Montana	422	479	352	10,405	141,969	13.6	44,426	9,339*
Nebraska	254	750	329	21,872	292,043	13.4	44,957	9,250
Nevada	17*	452	134	23,593*	437,433	18.5*	50,067*	7,615*
New Hampshire	163	382	106	15,735*	199,305*	12.7*	49,872*	12,344*
New Jersey	593	1,941	503	114,385	1,377,728	12.0	63,111*	16,253*
New Mexico	89	598	230	21,782	327,580	15.0	45,752	10,099*
New York	695	3,231	1,059	226,844	2,711,603*	12.0*	69,118	15,997*
North Carolina	115	1,835	516	99,098	1,426,729	14.4	48,648	8,743
North Dakota	183	308	186	7,708	93,396	12.1	41,654	8,222
Ohio	978	2,640	1,015	111,338	1,900,210	17.1	54,656	9,358
Oklahoma	533	1,229	564	42,063	644,754	15.3	43,846	8,006*
Oregon	196	920	302	29,890	564,064	18.9	54,085	10,129
Pennsylvania	500*	2,299	815	124,750*	1,806,969*	14.5*	57,237*	12,032*
Rhode Island	49	246	75	15,729	145,342	9.2	58,407*	17,289*
South Carolina	88	886	275	49,331	707,739	14.3	47,421	9,286
South Dakota	158	432	270	8,909*	122,997	13.8*	35,070	9,466
Tennessee	135*	1,284	345	63,766	913,500*	14.3*	45,549	8,261*
Texas	1,235	5,712	2,158	327,677	4,728,204	14.4	47,157	9,036
Utah	40*	605	305	22,890*	489,004*	21.4*	42,335*	5,912*
Vermont	286*	240	72	8,897*	92,908*	10.4*	47,884*	14,679*
Virginia	132*	1,503	385	106,242*	1,240,623*	11.7*	48,365*	11,114*
Washington	295	1,444	574	54,646	1,038,620	19.0	52,567	9,633*
West Virginia	55*	561	130	19,798	281,908	14.2	44,701	10,747*
Wisconsin	426*	1,553	631	59,455	873,586	14.7	51,121	11,021*
Wyoming	48	241	103	6,978	86,519	12.4	54,602	14,732
Total U.S.	**15,285***	**67,032**	**24,426**	**3,229,545***	**48,960,698***	**15.2***	**54,319***	**10,190***

* = NEA estimate. (1) Includes primary and middle schools (from kindergarten to no higher than grade 9). (2) 2007-08 estimates. (3) Includes schools with no grade lower than 7.

Programs for the Disabled, 1995-2009

Source: Office of Special Education and Rehabilitative Services, U.S. Dept. of Education

Number of children and young adults from 3-21 years old served annually in federally funded educational programs for the disabled; in thousands.

Type of disability	1995 -96	1998 -99	1999 -00	2000 -01	2001 -02	2002 -03	2003 -04	2004 -05	2005 -06	2006 -07	2007 -08	2008 -09
Learning disabilities	2,578	2,790	2,834	2,868	2,861	2,848	2,831	2,798	2,735	2,665	2,577	2,537
Speech impairments	1,022	1,068	1,080	1,409	1,391	1,412	1,441	1,463	1,468	1,475	1,458	1,451
Mental retardation	571	597	600	624	616	602	593	578	556	534	500	488
Emotional disturbance	437	462	469	481	483	485	489	489	477	464	442	421
Multiple disabilities	93	106	111	133	136	138	140	140	141	142	138	132
Hearing impairments	67	70	71	78	78	78	79	79	79	80	79	79
Orthopedic impairments	63	69	71	83	83	83	77	73	71	69	67	70
Other health impairments[1]	133	220	253	303	350	403	464	521	570	611	641	666
Visual impairments	25	26	26	29	28	29	28	29	29	29	29	29
Autism	28	53	65	94	114	137	163	191	223	258	296	338
Deaf-blindness	1	2	2	1	2	2	2	2	2	2	2	2
Traumatic brain injury	9	13	14	16	22	22	23	24	24	25	25	26
Developmental delay	—	12	19	178	242	283	305	332	339	333	358	354
All disabilities	**5,572**	**6,056**	**6,195**	**6,296**	**6,407**	**6,523**	**6,634**	**6,719**	**6,713**	**6,686**	**6,613**	**6,593**

— = Not available or not reliable data. **Note:** Counts based on reports from states and District of Columbia. Details may not add to totals because of rounding and/or incomplete enumeration. (1) Includes limited strength, vitality, or alertness due to chronic or acute health problems such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes.

Trends in International Mathematics and Science Study (TIMSS), 1995-2007

Source: National Center for Education Statistics, U.S. Dept. of Education

The TIMSS is an international assessment test that was administered to 4th and 8th graders in 1995, 1999 (5th graders only), 2003, and 2007, to measure the degree to which students have learned concepts of mathematics and science. Listed below are the average scaled scores for each country. Scores are reported on a scale of 0 to 1,000, with the scale average set at 500. Student achievement is considered "high" with a score of at least 550; a score of at least 475 is considered "intermediate."

	4th Grade			
	Mathematics		Science	
	2007	% change, 1995-2007	2007	% change, 1995-2007
Australia	516	22%	527	6%
Austria	505	–25	526	–12
Czech Republic	486	–54	515	–17
England	541	57	542	14
Hong Kong	607	50	554	46
Hungary	510	–12	536	28
Iran	402	15	436	55
Japan	568	1	548	–5
Latvia	537	38	542	56
Netherlands	535	–14	523	–7
New Zealand	492	23	504	–1
Norway	473	–3	477	–27
Scotland	494	1	500	–14
Singapore	599	9	587	63
Slovenia	502	40	518	54
United States	**529**	**11**	**539**	**–3**

	8th Grade			
	Mathematics		Science	
	2007	% change, 1995-2007	2007	% change, 1995-2007
Australia	496	–13%	NA	NA
Bulgaria	464	–63	515	1%
Colombia	380	47	417	52
Cyprus	465	–2	452	0
Czech Republic	504	–42	539	–16
England	513	16	542	8
Hong Kong	572	4	530	20
Hungary	517	–10	539	2
Iran	403	–15	459	–4
Japan	570	–11	554	–1
Korea, South	597	17	553	7
Lithuania	506	34	519	55
Norway	469	–29	487	–28
Romania	461	–12	462	–9
Russia	512	–12	530	7
Scotland	487	–6	496	–5
Singapore	593	–16	567	–13
Slovenia	501	7	538	24
Sweden	491	–48	511	–42
United States	**508**	**16**	**520**	**7**

Mathematics, Reading, and Science Achievement of U.S. Students, 1998-2009

Source: National Assessment of Educational Progress, National Center for Education Statistics, U.S. Dept. of Education

Percent of public school students who scored at or above basic levels in national tests. Basic level denotes a partial mastery of prerequisite knowledge and skills fundamental for proficient work at each grade.

	4th Grade				8th Grade					
	Math		Reading		Math		Reading		Science	
State	2000	2009	1998	2009	2000	2009	1998	2009	2000	2005
AL	55	70	56	62	52	58	67	66	53	48
AK	NA	78	NA	59	NA	75	NA	72	NA	NA
AZ	57	71	51	56	62	67	72	68	55	49
AR	55	80	54	63	52	67	68	69	53	56
CA	50	72	48	54	52	59	63	64	38	44
CO	NA	84	69	72	NA	76	77	78	NA	66
CT	76	86	76	76	72	78	81	81	64	63
DE	NA	84	53	73	NA	75	64	78	NA	63
DC	24	56	27	44	23	40	44	51	NA	NA
FL	NA	86	53	73	NA	70	67	76	NA	51
GA	57	78	54	63	55	67	68	72	52	53
HI	55	77	45	57	52	65	59	67	40	44
ID	68	85	NA	69	71	78	NA	77	71	71
IL	63	80	NA	65	68	73	NA	77	59	58
IN	77	87	NA	70	76	78	NA	79	66	62
IA	75	87	67	69	NA	76	NA	77	NA	NA
KS	76	89	70	72	77	79	81	80	NA	NA
KY	59	81	62	72	63	70	74	79	60	63
LA	57	72	44	51	48	62	63	64	44	47
ME	73	87	72	70	76	78	83	80	72	72
MD	60	85	58	70	65	75	70	77	57	54
MA	77	92	70	80	76	85	79	83	70	72
MI	71	78	62	64	70	68	NA	72	68	66
MN	76	89	69	70	80	83	78	82	72	71
MS	45	69	47	55	41	54	62	62	41	40
MO	71	83	61	70	67	77	75	79	66	66
MT	72	88	72	73	80	82	83	84	79	76
NE	65	82	NA	70	74	75	NA	80	52	48
NV	60	79	51	57	58	63	70	65	NA	NA
NH	NA	92	75	77	NA	82	NA	81	NA	76
NJ	NA	88	NA	76	NA	80	NA	83	NA	65
NM	50	72	51	52	50	59	71	66	48	46
NY	66	83	62	71	68	73	76	75	NA	NA
NC	73	87	58	65	70	74	74	70	54	53
ND	73	91	NA	76	77	86	NA	86	72	77
OH	73	85	NA	71	75	76	NA	80	72	67
OK	67	82	66	65	64	68	80	73	60	57
OR	65	80	58	65	71	75	78	76	68	66
PA	NA	84	NA	70	NA	78	NA	81	NA	NA
RI	65	81	64	69	64	68	76	72	58	58
SC	59	78	53	62	55	69	66	68	48	54
SD	NA	86	NA	70	NA	83	NA	84	NA	76
TN	59	74	57	63	53	65	71	73	55	55
TX	76	85	59	65	68	78	74	73	52	53
UT	69	81	62	67	68	75	77	78	67	65
VT	73	89	NA	75	75	81	NA	84	71	76
VA	71	85	62	74	67	76	78	78	61	66
WA	NA	84	64	68	NA	78	76	78	NA	66
WV	65	77	60	62	62	61	75	67	57	57
WI	NA	85	72	67	NA	79	78	78	NA	70
WY	71	87	64	72	70	78	76	82	69	74
U.S.	**64**	**81**	**58**	**66**	**65**	**71**	**71**	**74**	**57**	**57**

NA = Not administered.

Enrollment in U.S. Public and Private Schools, 1899-2019

Source: National Center for Education Statistics, U.S. Dept. of Education

School year[1]	Public school[2]	Private school[2]	% tot. private
1899-1900	15,503	1,352	8.0%
1909-10	17,814	1,558	8.0
1919-20	21,578	1,699	7.3
1929-30	25,678	2,651	9.4
1939-40	25,434	2,611	9.3
1949-50	25,111	3,380	11.9
1959-60	35,182	5,675	13.9
1969-70	45,550	5,500[3]	10.8
1979-80	41,651	5,000[3]	10.7
1989-90	40,543	5,599	12.1
1999-2000	46,857	6,018	11.4
2006-07	49,316	5,991[3]	10.8
2007-08	49,293	5,910	10.7
2008-09[4]	49,623	5,878	10.6
2009-10[4]	49,788	5,845	10.5
2018-19[4]	53,933	5,879	9.8

Note: Private includes all nonpublic schools. (1) Fall enrollment. (2) In thousands. Data from fall 1980 onward covers an expanded universe of private schools; comparisons with earlier years should be avoided. (3) Estimated. (4) Projected.

U.S. Religious and Nonsectarian Private Schools, 2007-08

Source: *Private School Universe Survey, 2007-08*, National Center for Education Statistics, U.S. Dept. of Education

Number and percentage distribution of private school students, by religious or nonsectarian orientation of school. Religious groups listed only if at least some data met reporting standards.

	Schools		Students		Teachers[1]	
	Number	Percent	Number	Percent	Number	Percent
Total U.S.	**33,740**	**100.0%**	**5,072,451**	**100.0%**	**456,266**	**100.0%**
Nonsectarian	**10,830**	**32.1**	**985,571**	**19.4**	**126,325**	**27.7**
Religious orientation	**22,910**	**67.9**	**4,086,880**	**80.6**	**329,941**	**72.3**
African Methodist Episcopal	16	(2)	1,483	(2)	176	(2)
Amish	1,049	3.1	31,954	0.6	1,871	0.4
Assembly of God	389	1.2	52,413	1.0	4,400	1.0
Baptist	2,281	6.8	277,961	5.5	25,301	5.5
Brethren	74	0.2	9,019	0.2	795	0.2
Calvinist	133	0.4	29,757	0.6	2,127	0.5
Christian (unspecified)	4,667	13.8	657,879	13.0	60,972	13.4
Church of Christ	223	0.7	38,472	0.8	3,803	0.8
Church of God	124	0.4	10,768	0.2	1,076	0.2
Church of God in Christ	25	0.1	1,909	(2)	166	(2)
Church of the Nazarene	79	0.2	8,839	0.2	819	0.2
Episcopal	401	1.2	104,698	2.1	12,055	2.6
Friends	88	0.3	21,917	0.4	2,776	0.6
Greek Orthodox	30	0.1	3,420	0.1	382	0.1
Islamic	235	0.7	33,272	0.7	3,870	0.8
Jewish	999	3.0	237,251	4.7	26,755	5.9
Lutheran Church, Missouri Synod	1,200	3.6	138,257	2.7	10,843	2.4
Lutheran Church in America, Evangelical	180	0.5	14,023	0.3	1,251	0.3
Lutheran Synod, Wisconsin Evangelical	344	1.0	30,876	0.6	2,290	0.5
Lutheran, other	81	0.2	6,750	0.1	536	0.1
Mennonite	442	1.3	24,497	0.5	2,158	0.5
Methodist	292	0.9	19,703	0.4	2,053	0.4
Pentecostal	383	1.1	19,783	0.4	2,382	0.5
Presbyterian	356	1.1	43,857	0.9	4,206	0.9
Roman Catholic	7,507	22.2	2,156,173	42.5	146,627	32.1
Seventh-Day Adventist	855	2.5	53,950	1.1	4,410	1.0
Other	435	1.3	56,504	1.1	5,707	1.3

Note: Details may not add up to totals because of rounding and/or missing data. (1) Full-time equivalent teachers. (2) Rounds to zero.

Homeschooled Students

Source: National Center for Education Statistics, U.S. Dept. of Education

A total of 1,508,000 U.S. students in grades K-12 were homeschooled in 2007, 84% of them full-time, according to the latest available statistics from the U.S. Dept. of Education.

In a 2007 U.S. Dept. of Education survey of parents who homeschool their children the reasons given as *most important* included concern over the school environment, including such factors as safety, drugs, or negative peer pressure (20.5%); desire to provide religious or moral instruction (35.8%); dissatisfaction with academic instruction in schools (17.1%); and a physical or mental health problem or other special need (5.7%). In all, 87.6% cited concern over school environment as one of their reasons, while 83.3% cited religious or moral instruction, and 72.7% cited dissatisfaction with academic instruction.

Below is a breakdown of homeschooled students by selected characteristics for 1999 and 2007.

	1999			2007		
Characteristic	No. of students	Percentage distribution	Home-schooling rate[1]	No. of students	Percentage distribution	Home-schooling rate[1]
Total U.S.	**850,000**	**100.0%**	**1.7%**	**1,508,000**	**100.0%**	**2.9%**
Homeschooled entirely	697,000	82.0	—	1,266,000	84.0	—
Homeschooled and enrolled in school part-time	153,000	18.0	—	242,000	16.0	—
Race/ethnicity[2]						
White	640,000	75.3	2.0	1,159,000	76.8	3.9
Black	84,000	9.9	1.0	61,000	4.0	0.8
Hispanic	77,000	9.1	1.1	147,000	9.8	1.5
Other	49,000	5.8	1.9	141,000	9.3	3.4
Number of children in household						
One child	120,000	14.1	1.5	187,000	12.4	2.2
Two children	207,000	24.4	1.0	412,000	27.3	2.0
Three or more children	523,000	61.6	2.4	909,000	60.3	4.1
Household income						
$25,000 or less	262,000	30.9	1.6	239,000	15.9	2.1
$25,001-50,000	278,000	32.7	1.8	364,000	24.1	3.4
$50,001-75,000	162,000	19.1	1.9	405,000	26.8	3.9
$75,001 or more	148,000	17.4	1.5	501,000	33.2	2.7
Parents' education						
High school diploma or less	160,000	18.9	0.9	206,000	13.7	1.4
Some college or vocational/technical	287,000	33.7	1.9	549,000	36.4	3.8
Bachelor's degree	213,000	25.1	2.6	444,000	29.4	3.9
Graduate/professional degree	190,000	22.3	2.3	309,000	20.5	2.9

(1) The homeschooling rate is the percentage of the total group or subgroup within the general population that is homeschooled. For example, in 1999, 1.1% of all Hispanic students K-12 in the U.S. were homeschooled. (2) Hispanic or Latino persons may be of any race. Race categories include non-Hispanic population only.

Revenues for Public Elementary and Secondary Schools, by State, 2007-08

Source: National Education Association (NEA); amounts in thousands

State	Total	Federal		State		Local and intermediate	
		Amount	% of tot. rev.	Amount	% of tot. rev.	Amount	% of tot. rev.
Alabama	$7,693,742	$744,382	9.7%	$4,658,854	60.6%	$2,290,506	29.8%
Alaska	2,289,219	306,063	13.4	1,517,297	66.3	465,859	20.4
Arizona	10,283,842	1,092,090	10.6	5,318,991	51.7	3,872,761	37.7
Arkansas	4,674,053	506,124	10.8	2,649,411	56.7	1,518,518	32.5
California	71,224,024	6,682,198	9.4	43,660,964	61.3	20,880,862	29.3
Colorado	8,113,611	559,710	6.9	3,423,454	42.2	4,130,447	50.9
Connecticut	9,459,433	420,348	4.4	3,743,350	39.6	5,295,735	56.0
Delaware	1,690,557	132,991	7.9	1,048,771	62.0	508,795	30.1
District of Columbia[1]	1,364,048	155,273	11.4	NA	NA	1,208,775	88.6
Florida	29,321,189	2,527,574	8.6	11,389,951	38.8	15,403,664	52.5
Georgia	18,671,345	1,495,453	8.0	8,476,711	45.4	8,699,180	46.6
Hawaii[1]	2,541,703	310,732	12.2	2,154,312	84.8	76,658	3.0
Idaho	2,167,455	213,522	9.9	1,454,112	67.1	499,820	23.1
Illinois	25,426,959	2,000,312	7.9	7,929,343	31.2	15,497,303	60.9
Indiana	12,295,901	876,615	7.1	6,578,455	53.5	4,840,831	39.4
Iowa	5,297,527	403,399	7.6	2,465,113	46.5	2,429,015	45.9
Kansas	5,528,071	435,710	7.9	3,176,570	57.5	1,915,792	34.7
Kentucky	6,561,268	710,865	10.8	3,759,235	57.3	2,091,168	31.9
Louisiana	7,861,130	1,316,912	16.8	3,523,670	44.8	3,020,548	38.4
Maine	2,601,563	233,419	9.0	1,168,949	44.9	1,199,195	46.1
Maryland	13,060,333	712,141	5.5	5,499,093	42.1	6,849,098	52.4
Massachusetts	14,632,845	752,906	5.1	6,127,024	41.9	7,752,915	53.0
Michigan	19,620,055	1,532,564	7.8	11,287,553	57.5	6,799,938	34.7
Minnesota	10,293,655	608,058	5.9	6,783,079	65.9	2,902,518	28.2
Mississippi	4,388,016	708,262	16.1	2,389,464	54.5	1,290,291	29.4
Missouri	9,876,930	799,986	8.1	3,292,456	33.3	5,784,488	58.6
Montana	1,559,091	189,229	12.1	774,708	49.7	595,154	38.2
Nebraska	3,286,862	298,660	9.1	1,089,026	33.1	1,899,176	57.8
Nevada	4,364,266	289,633	6.6	1,344,111	30.8	2,730,522	62.6
New Hampshire	2,613,798	136,516	5.2	1,009,291	38.6	1,467,992	56.2
New Jersey	24,892,358	990,198	4.0	10,472,031	42.1	13,430,129	54.0
New Mexico	3,655,607	496,889	13.6	2,587,683	70.8	571,035	15.6
New York	52,766,249	3,163,749	6.0	23,641,251	44.8	25,961,248	49.2
North Carolina	12,426,731	1,247,143	10.0	8,158,251	65.7	3,021,338	24.3
North Dakota	1,056,726	145,767	13.8	383,231	36.3	527,728	49.9
Ohio	22,796,037	1,658,314	7.3	10,392,395	45.6	10,745,329	47.1
Oklahoma	5,482,414	646,417	11.8	2,973,757	54.2	1,862,240	34.0
Oregon	6,118,492	554,444	9.1	3,200,001	52.3	2,364,047	38.6
Pennsylvania	24,973,392	1,795,633	7.2	9,122,496	36.5	14,055,263	56.3
Rhode Island	2,223,575	173,043	7.8	887,762	39.9	1,162,770	52.3
South Carolina	7,773,773	715,692	9.2	3,949,713	50.8	3,108,367	40.0
South Dakota	1,206,955	184,549	15.3	409,680	33.9	612,726	50.8
Tennessee	8,230,341	863,801	10.5	3,752,493	45.6	3,614,048	43.9
Texas	45,574,722	4,571,881	10.0	20,400,120	44.8	20,602,720	45.2
Utah	4,396,364	342,166	7.8	2,490,823	56.7	1,563,374	35.6
Vermont	1,504,572	94,624	6.3	1,291,690	85.9	118,258	7.9
Virginia	14,527,472	897,427	6.2	5,951,317	41.0	7,678,728	52.9
Washington	11,107,344	895,641	8.1	6,941,092	62.5	3,270,611	29.4
West Virginia	3,166,494	346,332	10.9	1,872,918	59.1	947,243	29.9
Wisconsin	10,485,161	669,635	6.4	5,244,730	50.0	4,570,797	43.6
Wyoming	1,601,628	102,270	6.4	846,053	52.8	653,305	40.8
Total U.S.	**$584,728,896**	**$47,707,260**	**8.2**	**$282,662,805**	**48.3**	**$254,358,830**	**43.5**

NA = Not applicable. **Note:** Included as revenue receipts are all appropriations from general funds of federal, state, county, and local governments; receipts from taxes levied for school purposes; income from permanent school funds and endowments; and income from leases of school lands and miscellaneous sources (interest on bank deposits, tuition, gifts, school lunch charges, etc.). (1) District of Columbia and Hawaii have only one school district each; neither is comparable to other states.

Population with Upper Secondary Education, Selected Countries, 2008

Source: Organization for Economic Cooperation and Development

Percentage of the population ages 25-64 that have received at least some upper secondary (senior high school) education.

Country	%	Country	%	Country	%	Country	%	Country	%
Czech Republic	91%	Switzerland	87%	Norway	81%	Australia	70%	Greece	61%
Slovak Republic	90	Germany	85	Hungary	80	United Kingdom	70	Italy	53
United States	89	Sweden	85	Korea, South	79	Belgium	70	Spain	51
Estonia	88	Slovenia	82	Denmark	75	Ireland	69	Brazil	39
Russian[1]	88	Israel	81	Netherlands	73	Chile	68	Mexico	34
Poland	87	Finland	81	New Zealand	72	Luxembourg	68	Turkey	30
Canada	87	Austria	81	France	70	Iceland	64	Portugal	28

(1) 2002.

Teachers' Salaries in Upper Secondary Education, Selected Countries, 2008

Source: Organization for Economic Cooperation and Development

Annual teachers' salaries in public institutions in upper secondary (senior high school) education, general programs, in equivalent U.S. dollars converted using PPPs[1]; ranked by starting salary.

Country	Starting salary	Salary with 15 years' experience	Salary at top of scale	Country	Starting salary	Salary with 15 years' experience	Salary at top of scale
Luxembourg	$71,508	$98,849	$124,231	Scotland	$30,475	$48,611	$48,611
Switzerland	58,781	76,207	89,655	Austria	30,353	42,177	62,045
Germany	51,722	63,634	72,876	Italy	28,098	35,290	44,041
Spain	42,440	48,945	59,234	Japan	27,545	48,655	63,184
Denmark	39,085	51,034	51,034	Slovenia	27,470	30,075	33,967
Netherlands	36,762	67,105	73,964	France	26,400	34,593	49,912
United States	36,398	47,317	53,913	Greece	25,974	31,946	38,658
Belgium (Fl.)[2]	36,360	52,667	63,391	New Zealand	25,964	38,412	38,412
Belgium (Fr.)[2]	34,885	50,541	60,838	Iceland	25,503	31,983	33,483
Australia	33,336	46,908	46,908	Portugal	21,677	35,486	55,654
Finland	32,731	44,919	57,925	Israel	18,199	22,410	27,680
Ireland	32,657	54,100	61,304	Czech Republic	16,587	23,540	25,846
Norway	31,652	39,016	39,016	Hungary	13,226	18,079	25,523
Korea, South	31,407	54,444	87,327	Estonia	11,981	12,687	17,510
England	30,534	44,630	44,630	Poland	9,173	18,548	19,334
Sweden	30,533	36,163	41,131	Indonesia	1,995	2,582	2,813

NA = Not available. (1) Purchasing power parities (PPPs) are the rates of currency conversion that equalize the purchasing power of different currencies by eliminating differences in price levels between countries. (2) Salaries in Belgium vary depending on whether French (Fr.) or Flemish (Fl.) community.

Charges at U.S. Institutions of Higher Education, 1969-70 to 2008-09

Source: National Center for Education Statistics, U.S. Dept. of Education

Figures for 1969-70 are average charges for full-time resident degree-credit students; figures for later years are average charges per full-time equivalent student. Room and board are based on full-time students. These figures are enrollment-weighted, according to the number of full-time-equivalent undergraduates, and thus may vary from averages given elsewhere.

	Tuition and fees			Board rates			Dormitory charges		
Public (in-state)	All institutions	2-yr	4-yr	All institutions	2-yr	4-yr	All institutions	2-yr	4-yr
1969-70	$323	$178	NA	$511	$465	NA	$369	$308	NA
1979-80	583	355	$738	867	893	$865	715	574	$725
1989-90	1,356	756	1,780	1,635	1,581	1,638	1,513	962	1,557
1990-91	1,454	824	1,888	1,691	1,594	1,698	1,612	1,050	1,657
1995-96	2,179	1,239	2,848	2,020	1,681	2,045	2,057	1,297	2,121
1996-97	2,271	1,276	2,987	2,111	1,789	2,133	2,148	1,339	2,214
1997-98	2,360	1,314	3,110	2,228	1,795	2,263	2,225	1,401	2,301
1998-99	2,430	1,327	3,229	2,347	1,828	2,389	2,330	1,450	2,409
1999-2000	2,506	1,338	3,349	2,364	1,834	2,406	2,440	1,549	2,519
2000-01	2,562	1,333	3,501	2,455	1,906	2,499	2,569	1,600	2,654
2001-02	2,700	1,380	3,735	2,598	2,036	2,645	2,723	1,722	2,816
2002-03	2,903	1,483	4,046	2,669	2,164	2,712	2,930	1,954	3,029
2003-04	3,319	1,702	4,587	2,823	2,233	2,875	3,107	2,086	3,212
2004-05	3,629	1,849	5,027	2,931	2,353	2,981	3,304	2,174	3,418
2005-06	3,874	1,935	5,351	3,035	2,306	3,093	3,545	2,251	3,664
2006-07	4,102	2,018	5,666	3,191	2,390	3,253	3,757	2,407	3,878
2007-08	4,291	2,061	5,943	3,331	2,409	3,404	3,952	2,506	4,082
2008-09[1]	4,544	2,137	6,319	3,554	2,777	3,616	4,185	2,654	4,322
Private									
1969-70	$1,533	$1,034	NA	$561	$546	NA	$436	$413	NA
1979-80	3,130	2,062	$3,225	955	923	$957	827	766	$831
1989-90	8,147	5,196	8,396	1,948	1,811	1,953	1,923	1,663	1,935
1990-91	8,772	5,570	9,083	2,074	1,989	2,077	2,063	1,744	2,077
1995-96	11,864	7,094	12,243	2,606	2,098	2,617	2,738	2,371	2,751
1996-97	12,498	7,236	12,881	2,663	2,181	2,672	2,878	2,537	2,889
1997-98	12,801	7,464	13,344	2,762	2,785	2,761	2,954	2,672	2,964
1998-99	13,428	7,854	13,973	2,865	2,884	2,865	3,075	2,581	3,091
1999-2000	14,081	8,235	14,588	2,882	2,922	2,881	3,224	2,808	3,237
2000-01	15,000	9,067	15,470	2,993	3,000	2,993	3,374	2,722	3,392
2001-02	15,742	10,076	16,211	3,104	2,633	3,109	3,567	3,116	3,576
2002-03	16,383	10,651	16,826	3,206	3,870	3,197	3,752	3,232	3,764
2003-04	17,327	11,546	17,777	3,364	4,432	3,354	3,945	3,581	3,952
2004-05	18,154	12,122	18,604	3,485	3,728	3,483	4,171	4,243	4,170
2005-06	18,862	12,450	19,292	3,647	4,726	3,639	4,380	3,994	4,386
2006-07	20,048	12,708	20,517	3,785	3,429	3,788	4,606	4,147	4,613
2007-08	21,462	13,126	21,979	3,992	4,074	3,991	4,804	4,484	4,808
2008-09[1]	21,982	13,632	22,449	4,216	4,591	4,214	5,034	4,519	5,041

NA = Not available. (1) Preliminary data based on fall 2007 enrollment weights.

Top 20 Colleges and Universities in Endowment Assets, 2009

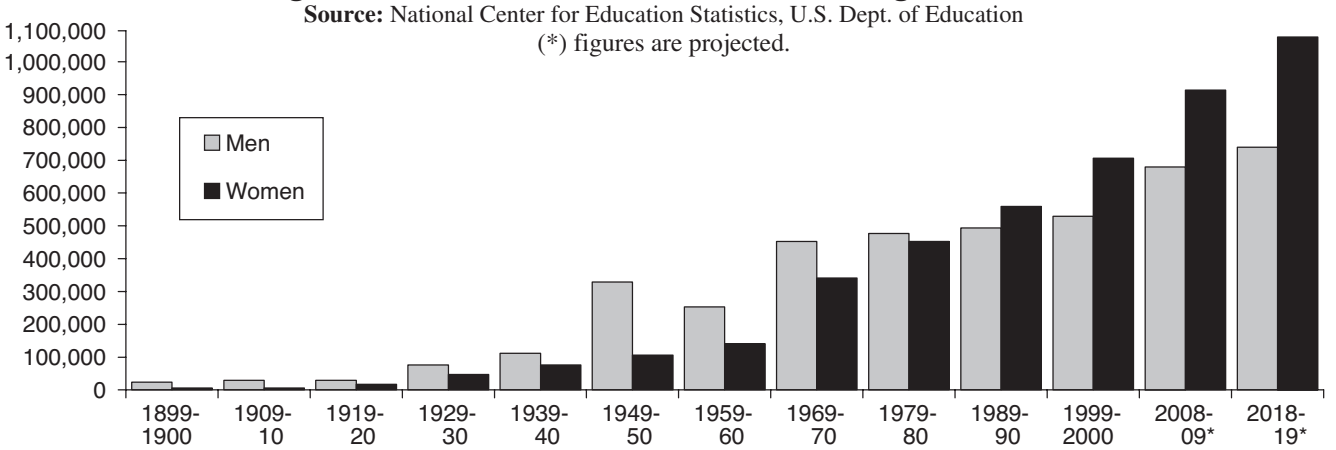
Source: *2008 NACUBO Endowment Study*, National Association of College and University Business Officers (NACUBO)

College/university	Endowment assets[1]	% change, 2008-09	College/university	Endowment assets[1]	% change, 2008-09
1. Harvard University	$25,662,055	–29.8%	11. University of Chicago	$5,094,087	–23.2%
2. Yale University	16,327,000	–28.6	12. The Texas A&M University System and Foundations	5,083,754	–23.7
3. Stanford University	12,619,094	–26.7	13. University of California	4,937,483	–20.6
4. Princeton University	12,614,313	–22.8	14. University of Notre Dame	4,795,303	–23.0
5. University of Texas System	12,163,049	–24.8	15. Duke University	4,440,745	–27.5
6. Massachusetts Institute of Technology	7,982,021	–20.7	16. Emory University	4,328,436	–20.9
7. University of Michigan	6,000,827	–20.7	17. Washington University (St. Louis)	4,080,554	–23.7
8. Columbia University	5,892,798	–19.8	18. Cornell University	3,966,041	–26.4
9. Northwestern University	5,445,260	–24.8	19. Rice University	3,612,884	–21.6
10. University of Pennsylvania	5,170,538	–16.8	20. University of Virginia	3,577,266	–21.0

Note: Market value of endowment assets, excluding pledges and working capital, in the fiscal year. (1) In thousands.

U.S. Higher Education Trends: Bachelor's Degrees Conferred

Source: National Center for Education Statistics, U.S. Dept. of Education
(*) figures are projected.



Financial Aid for College and Other Postsecondary Education

As of July 2010. Reviewed by National Assoc. of Student Financial Aid Administrators.

The cost of postsecondary education in the U.S. continues to increase, but financial aid—in the form of **grants** (no repayment needed), **loans**, and/or **work-study** programs—is widely available to help families meet these expenses. Most federal aid is limited to families that demonstrate financial need as determined by standard formulas. Student aid is designed to help students attend the college of their choice regardless of their ability to pay. Financial aid personnel at each school can provide information about all aid programs (federal, state, institutional, and private) available to students, steps to apply for them, and deadlines, all of which may vary.

All applicants for federal aid must file a Free Application for Federal Student Aid (**FAFSA**), generally as soon as possible after Jan. 1 for the academic year starting the following Sept. Figures provided should match federal income tax forms filed for the previous year. Applicants may also import certain information from their tax forms when they file their taxes online. Many other sources of aid—state governments, employers and unions, civic organizations, and the institutions themselves—also use the FAFSA to determine eligibility for aid. There are also special federal programs that pay for postsecondary education in return for service: AmeriCorps (phone: 1-800-942-2677), ROTC (1-800-USA-ROTC), and the G.I. Bill (1-888-442-4551). Additional forms and applications may be required if a student is to be considered for non-federal aid. Aid must be reapplied for annually.

A **federal formula**, based on information provided on the FAFSA, takes into account such factors as family income in the preceding calendar year, parental and student assets (excluding the parents' home, farm, or small business), length of time to parents' retirement, and unusual expenses (such as very high medical expenses). Outside scholarships (even non-need-based) are also taken into account in determining aid eligibility for federal, institutional, and state financial aid programs.

The formula determines a family's **expected family contribution** (EFC), which is divided among the number of family members—excluding parents—in college. The EFC is subtracted from the total cost of attending college for each person (including tuition and fee charges, room and board or allowance for living costs, books and supplies, transportation to and from school, and other miscellaneous costs). The difference determines financial need and the maximum federal aid for which the family may be eligible. (Some institutions use a separate formula for need-based institutional aid.) Some schools guarantee to meet the full financial need of each admitted student; most do their best to cover a student's financial need using various forms of financial aid but may not be able to because of a lack of funds.

The **aid package** offered by each school may include one or more of the following resources: Federal Pell Grants, for those who demonstrate sufficient financial need; Federal Supplemental Educational Opportunity Grants, for those who still have need after receiving Pell Grants; grants from the school; Federal Work-Study or other work programs; low-interest Perkins loans; and subsidized and unsubsidized Stafford loans. Parents of undergraduates may also apply for a Federal PLUS loan. Unsubsidized Stafford loans and all PLUS loans to parents are available to all students regardless of their financial need, but students and parents must still complete the FAFSA to get these loans.

Loans have varying interest rates and other requirements. Repayment of Perkins and Stafford loans does not begin until after graduation; deferments, income-based repayment plans, and loan forgiveness are available on federal loans for students who meet certain requirements. For PLUS loans, parents must pass a credit check and begin repayment of both principal and interest while the student is still in school.

Certain federal income **tax credits and refunds** are also available to families who meet income and other requirements; see the chapter on taxes.

Rules for financial aid are complex and changeable. *Funding Education Beyond High School: The Guide to Federal Student Aid*, a comprehensive resource on financial aid from the U.S. Dept. of Education, is available in English and Spanish on the Department's website: studentaid.ed.gov/students/publications/student_guide/index.html

Further information and FAFSA forms are available from schools or from the Federal Student Aid Information Center, P.O. Box 84, Washington, DC 20044; phone: 1-800-4-FED-AID, Mon.-Fri., 8 AM-12 midnight EST. The Information Center also has a free booklet called *The EFC Formula Book*. FAFSA forms can be obtained online at www.fafsa.ed.gov

Average Salaries of U.S. College Professors, 2009-10

Source: American Association of University Professors. NA = Not available.

Teaching level		Men — Type of institution: Public	Men: Private/ independent	Men: Church-related	Women — Type of institution: Public	Women: Private/ independent	Women: Church-related
Doctoral level	Professor	$119,255	$155,952	$135,113	$107,918	$143,630	$123,678
	Associate	82,675	99,676	91,435	76,958	91,147	84,972
	Assistant	71,217	86,904	78,812	65,820	79,132	72,329
Master's level	Professor	90,766	102,311	91,343	87,281	94,772	84,778
	Associate	72,182	77,293	71,409	69,643	73,291	68,108
	Assistant	60,986	64,656	60,072	58,968	61,537	57,574
Baccalaureate level	Professor	85,681	100,008	75,362	82,345	94,362	72,340
	Associate	69,559	72,769	61,467	66,792	71,368	59,811
	Assistant	58,123	59,622	51,459	55,819	57,969	50,657
2-year	Professor	75,433	NA	NA	72,694	NA	NA
	Associate	61,382	NA	NA	59,794	NA	NA
	Assistant	54,199	NA	NA	53,387	NA	NA

ACT Mean Scores and Characteristics of College-Bound Students, 1990-2010

Source: ACT, Inc. (formerly American College Testing)

(for graduating class ending in year shown)

SCORES[1]	Unit	1990	1995	2000	2003	2004	2005	2006	2007	2008	2009	2010
Composite scores	**Points**	**20.6**	**20.8**	**21.0**	**20.8**	**20.9**	**20.9**	**21.1**	**21.2**	**21.1**	**21.1**	**21.0**
Male	Points	21.0	21.0	21.2	21.0	21.0	21.1	21.2	21.2	21.2	21.3	21.2
Female	Points	20.3	20.7	20.9	20.8	20.9	20.9	21.0	21.0	21.0	20.9	20.9
English score	**Points**	**20.5**	**20.2**	**20.5**	**20.3**	**20.4**	**20.4**	**20.6**	**20.7**	**20.6**	**20.6**	**20.5**
Male	Points	20.1	19.8	20.0	19.8	19.9	20.0	20.1	20.2	20.1	20.2	20.1
Female	Points	20.9	20.6	20.9	20.7	20.8	20.8	21.0	21.0	21.0	20.9	20.8
Math score	**Points**	**19.9**	**20.2**	**20.7**	**20.6**	**20.7**	**20.7**	**20.8**	**21.0**	**21.0**	**21.0**	**21.0**
Male	Points	20.7	20.9	21.4	21.2	21.3	21.3	21.5	21.6	21.6	21.6	21.6
Female	Points	19.3	19.7	20.2	20.1	20.2	20.2	20.3	20.4	20.4	20.4	20.5
PARTICIPANTS												
Total number	**(Thous.)**	**817**	**945**	**1,065**	**1,175**	**1,171**	**1,186**	**1,206**	**1,301**	**1,422**	**1,480**	**1,569**
Male	Percent	46	44	43	44	43	44	44	42	44	45	45
White	Percent	79	80	72	68	67	66	63	60	63	64	62
Black	Percent	9	9	10	11	11	12	12	12	13	13	14
Hispanic[3]	Percent	4	5	5	6	7	7	7	7	8	9	10
Composite scores												
27 or above	Percent	12	13	14	14	14	14	14	15	9[2]	12	16
18 or below	Percent	35	34	32	35	34	34	33	32	33	34	35

(1) Minimum point score, 1; maximum score, 36. Test scores and characteristics of college-bound students are based on the performance of all ACT-tested students who graduated in the spring of a given school year and took the ACT assessment during junior or senior year of high school. (2) Composite scores of 28 or above. (3) Persons of Hispanic origin may be of any race.

ACT Average Composite Scores by State, 2009-10

Source: ACT, Inc. (formerly American College Testing)

State	Avg. comp. score	% grads taking ACT[1]	State	Avg. comp. score	% grads taking ACT[1]	State	Avg. comp. score	% grads taking ACT[1]
Alabama	20.3	78%	Kentucky	19.4	100%	Ohio	21.8	66%
Alaska	21.1	28	Louisiana	20.1	98	Oklahoma	20.7	73
Arizona	20.0	28	Maine	23.2	10	Oregon	21.5	34
Arkansas	20.3	81	Maryland	22.3	18	Pennsylvania	21.9	17
California	22.2	22	Massachusetts	24.0	21	Rhode Island	22.8	11
Colorado	20.6	100	Michigan	19.7	100	South Carolina	20.0	52
Connecticut	23.7	24	Minnesota	22.9	70	South Dakota	21.8	79
Delaware	23.0	13	Mississippi	18.8	96	Tennessee	19.6	100
District of Columbia	19.8	29	Missouri	21.6	69	Texas	20.8	33
Florida	19.5	65	Montana	22.0	58	Utah	21.8	71
Georgia	20.7	44	Nebraska	22.1	73	Vermont	23.2	26
Hawaii	21.6	22	Nevada	21.5	30	Virginia	22.3	22
Idaho	21.8	60	New Hampshire	23.7	17	Washington	23.0	19
Illinois	20.7	100	New Jersey	23.2	17	West Virginia	20.7	64
Indiana	22.3	26	New Mexico	20.1	66	Wisconsin	22.1	69
Iowa	22.2	60	New York	23.3	27	Wyoming	20.0	100
Kansas	22.0	75	North Carolina	21.9	16			
			North Dakota	21.5	81	**U.S. average**	**21.0**	**47**

(1) Based on number of high school graduates in 2009, as projected by the Western Interstate Commission for Higher Education, and number of students in the class of 2009 who took the ACT.

The SAT

The College Board first administered a new version of the SAT in Mar. 2005 to the graduating class of 2006. The first revision to the test since 1995 added a section in which test takers were asked to write an essay in 25 minutes, among other changes: the critical reading section (formerly the verbal section) now places more emphasis on reading comprehension, and the math section includes more advanced algebra and geometry. Each section is scored on an 800-point scale, making a perfect score 2,400. The test has a time limit of 3 hours and 45 minutes, up from 3 hours.

Results for the graduating high school class of 2006 showed the sharpest drop in SAT scores in 31 years: composite reading and math scores fell by about 7 points. At the same time, the ACT, a competitor to the SAT, reported its largest composite score increase in 20 years. Some critics charged that the drop in SAT scores might be attributed to the increased length. However, a College Board study of some 700,000 tests found no evidence to support this claim. College Board officials suggest that the drop may be due to a decrease in repeat test taking.

SAT Mean Verbal and Math Scores of College-Bound Seniors, 1975-2010

Source: The College Board

(recentered scale; for school year ending in year shown)

	1975	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Critical reading scores[1]	**512**	**502**	**509**	**500**	**504**	**505**	**506**	**504**	**507**	**508**	**508**	**503**	**502**	**502**	**501**	**501**
Male	515	506	514	505	505	507	509	507	512	512	513	505	504	504	503	503
Female	509	498	503	496	502	504	502	502	503	504	505	502	502	500	498	498
Math scores	**498**	**492**	**500**	**501**	**506**	**514**	**514**	**516**	**519**	**518**	**520**	**518**	**515**	**515**	**515**	**516**
Male	518	515	522	521	525	533	533	534	537	537	538	536	533	533	534	534
Female	479	473	480	483	490	498	498	500	503	501	504	502	499	500	499	500
Writing scores	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**497**	**494**	**494**	**493**	**492**
Male	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	491	489	488	486	486
Female	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	502	500	501	499	498

NA = Not applicable. **Note:** In 1995, the College Board recentered the scoring scale for the SAT by reestablishing the original mean score of 500 on the 200-800 scale. Earlier scores have been adjusted to account for this recentering. The writing test was first given in Mar. 2005; however, only the scores of the first graduating class to take the revised test are given. (1) Pre-2006 scores are for the Verbal section.

SAT Mean Scores by State, 1990-2010

Source: The College Board

(recentered scale; for school year ending in year shown; V = Verbal, M = Math, CR = Critical reading, W = Writing)

	1990		2000		2005		2009[1]			2010			% grads
State	**V**	**M**	**V**	**M**	**V**	**M**	**CR**	**M**	**W**	**CR**	**M**	**W**	**taking SAT[2]**
Alabama	545	534	559	555	567	559	557	552	549	556	550	544	7%
Alaska	514	501	519	515	523	519	520	516	492	518	515	491	48
Arizona	521	520	521	523	526	530	516	521	497	519	525	500	25
Arkansas	545	532	563	554	563	552	572	572	556	566	566	552	4
California	494	508	497	518	504	522	500	513	498	501	516	500	50
Colorado	533	534	534	537	560	560	568	575	555	568	572	555	18
Connecticut	506	496	508	509	517	517	509	513	512	509	514	513	84
Delaware	510	496	502	496	503	502	466	451	461	493	495	481	71
District of Columbia	483	467	494	486	490	478	495	498	484	474	464	466	76
Florida	495	493	498	500	498	498	497	498	480	496	498	479	59
Georgia	478	473	488	486	497	496	490	491	479	488	490	475	74
Hawaii	480	505	488	519	490	516	479	502	469	483	505	470	58
Idaho	542	524	540	541	544	542	541	540	520	543	541	517	19
Illinois	542	547	568	586	594	606	588	604	583	585	600	577	6
Indiana	486	486	498	501	504	508	496	507	480	494	505	477	64
Iowa	584	588	589	600	596	608	610	615	588	603	613	582	3
Kansas	566	563	574	580	585	588	581	589	564	590	595	567	6
Kentucky	548	541	548	550	561	559	573	573	561	575	575	563	6
Louisiana	551	537	562	558	565	562	563	558	555	555	550	547	7
Maine	501	490	504	500	509	505	468	467	455	468	467	454	92
Maryland	506	502	507	509	511	515	500	502	495	501	506	495	70
Massachusetts	503	498	511	513	520	527	514	526	510	512	526	509	86
Michigan	529	534	557	569	568	579	584	603	575	585	605	576	5
Minnesota	552	558	581	594	592	597	595	609	578	594	607	580	7
Mississippi	552	538	562	549	564	554	567	554	559	566	548	552	3
Missouri	548	541	572	577	588	588	595	600	584	593	595	580	4
Montana	540	542	543	546	540	540	541	542	519	538	538	517	24
Nebraska	559	562	560	571	574	579	587	594	572	585	593	568	4
Nevada	511	511	510	517	508	513	501	505	479	496	501	473	43
New Hampshire	518	510	520	519	525	525	523	523	510	520	524	510	77
New Jersey	495	498	498	513	503	517	496	513	496	495	514	497	76
New Mexico	554	546	549	543	558	547	553	546	534	553	549	534	11
New York	489	496	494	506	497	511	485	502	478	484	499	478	85
North Carolina	478	470	492	496	499	511	495	511	480	497	511	477	63
North Dakota	579	578	588	609	590	605	590	593	566	580	594	559	4
Ohio	526	522	533	539	539	543	537	546	523	538	548	522	21
Oklahoma	553	542	563	560	570	563	575	571	557	569	568	547	5
Oregon	515	509	527	527	526	528	523	525	499	523	524	499	54
Pennsylvania	497	490	498	497	501	503	493	501	483	492	501	480	71
Rhode Island	498	488	505	500	503	505	498	496	494	494	495	488	67
South Carolina	475	467	484	482	494	499	486	496	470	484	495	468	66
South Dakota	580	570	587	588	589	589	589	600	569	592	603	571	3
Tennessee	558	544	563	553	572	563	571	565	565	576	571	565	10
Texas	490	489	493	500	493	502	486	506	475	484	505	473	53
Utah	566	555	570	569	566	557	559	558	540	568	559	547	6
Vermont	507	493	513	508	521	517	518	518	506	519	521	506	66
Virginia	501	496	509	500	516	514	511	512	498	512	512	497	67
Washington	513	511	526	528	532	534	524	531	507	524	532	508	54

State	1990 V	1990 M	2000 V	2000 M	2005 V	2005 M	2009[1] CR	2009[1] M	2009[1] W	2010 CR	2010 M	2010 W	% grads taking SAT[2]
West Virginia	520	514	526	511	523	511	511	501	499	515	507	500	16%
Wisconsin	552	559	584	597	592	599	594	608	582	595	604	579	4
Wyoming	534	538	545	545	544	543	567	568	550	570	567	546	5
National average	**500**	**501**	**505**	**514**	**508**	**520**	**501**	**515**	**493**	**501**	**516**	**492**	**47**

Note: In 1995, the College Board recentered the scoring scale for the SAT by reestablishing the original mean score of 500 on the 200-800 scale. The College Board states that comparing states or ranking them on the basis of SAT scores alone is invalid, and the College Board discourages doing so. (1) In 2005, the SAT was changed. The verbal portion became critical reading, and a new writing test was added. The 2006 graduating class was the first to take the new test. (2) Based on number of high school graduates in 2009, as projected by the Western Interstate Commission for Higher Education, and number of students in the class of 2009 who took the SAT.

Top 100 Libraries in U.S. by Volumes Held, 2008

Source: American Library Association, *ALA Library Fact Sheet Number 22*

Institution	Volumes held	Institution	Volumes held
1. Library of Congress	32,818,014	51. Louisiana State University	4,082,803
2. Harvard University	16,250,117	52. Brigham Young University	4,080,079
3. Boston Public Library	16,141,095	53. Brooklyn Public Library (NY)	4,019,226
4. Yale University	12,519,514	54. North Carolina State University	3,981,278
5. University of Illinois—Urbana-Champaign	11,686,060	55. Houston Public Library	3,951,035
6. University of California—Berkeley	11,087,687	56. Texas A&M University	3,933,535
7. Columbia University	10,296,816	57. University of Colorado	3,928,431
8. University of Texas—Austin	9,447,434	58. University of Connecticut	3,919,423
9. Public Library of Cincinnati & Hamilton County	9,261,259	59. Brown University	3,825,413
10. University of Michigan	9,175,102	60. Johns Hopkins University	3,740,029
11. Indiana University	8,723,253	61. State University of New York—Buffalo	3,720,113
12. University of Chicago	8,597,159	62. University of Kentucky	3,719,548
13. Stanford University	8,500,000	63. King County Library System (WA)	3,717,571
14. University of California—Los Angeles	8,393,910	64. University of Maryland	3,716,860
15. Cornell University	8,141,781	65. University of Rochester	3,701,241
16. University of Wisconsin—Madison	8,059,335	66. University of California—Davis	3,683,867
17. County of Los Angeles Public Library	7,488,196	67. Hawaii State Public Library System	3,664,347
18. University of Washington	7,409,221	68. Wayne State University	3,660,642
19. Detroit Public Library	7,366,782	69. San Diego Public Library	3,645,389
20. Princeton University	6,941,254	70. University of Cincinnati	3,631,658
21. University of Minnesota	6,877,699	71. University of South Carolina	3,629,954
22. Queens Borough Public Library (NY)	6,609,444	72. University of Massachusetts	3,578,753
23. University of North Carolina—Chapel Hill	6,526,824	73. University of Hawaii	3,533,671
24. Ohio State University	6,285,446	74. University of Missouri—Columbia	3,494,470
25. New York Public Library, The Branch Libraries	6,222,488	75. Vanderbilt University	3,440,317
26. Los Angeles Public Library	6,219,060	76. Mid-Continent Public Library (MO)	3,415,944
27. University of Pennsylvania	6,096,592	77. Broward County Libraries Division (FL)	3,414,251
28. Duke University	5,950,442	78. University of Notre Dame	3,393,290
29. University of Arizona	5,722,280	79. St. Louis Public Library	3,381,858
30. Chicago Public Library	5,721,334	80. Emory University	3,377,140
31. University of Pittsburgh	5,657,403	81. University of Utah	3,373,141
32. University of Virginia	5,532,266	82. University of California—San Diego	3,372,785
33. Dallas Public Library	5,462,742	83. Cuyahoga County Public Library (OH)	3,337,662
34. Pennsylvania State University	5,354,645	84. Montgomery Co. Dept. of Public Libraries (MD)	3,315,183
35. University of Oklahoma	5,299,924	85. University of Tennessee—Knoxville	3,289,447
36. New York University	5,073,286	86. University of Miami	3,265,503
37. Michigan State University	4,994,033	87. Tulane University	3,257,609
38. University of Iowa	4,949,636	88. Buffalo and Erie County Public Library (NY)	3,227,867
39. Hennepin County Library (MN)	4,927,693	89. Temple University	3,205,539
40. Northwestern University	4,842,949	90. University of Nebraska—Lincoln	3,204,060
41. Free Library of Philadelphia	4,642,094	91. Allen County Public Library (IN)	3,203,217
42. University of Georgia	4,637,291	92. Syracuse University	3,174,700
43. Cleveland Public Library	4,635,819	93. Southern Illinois University—Carbondale	3,099,151
44. Rutgers University	4,529,396	94. Jacksonville Public Library	3,071,780
45. Arizona State University	4,422,239	95. Auburn University	3,053,468
46. University of Florida	4,288,118	96. University of California—Irvine	3,049,706
47. University of Kansas	4,235,542	97. Georgetown University	3,041,624
48. Washington University—St. Louis	4,224,113	98. University of Oregon	2,959,739
49. Miami-Dade Public Library System	4,199,940	99. University of California—Santa Barbara	2,948,999
50. University of Southern California	4,084,284	100. Massachsetts Institute of Technology	2,914,052

Note: Figures for public libraries include holdings by branches and include circulating books only.

Number of Public Libraries and Operating Income, by State, 2008

Source: Public Libraries Survey, Institute of Museum and Library Services

State	No.[1]	Income[2] (thous.)	State	No.[1]	Income[2] (thous.)	State	No.[1]	Income[2] (thous.)	State	No.[1]	Income[2] (thous.)
AL	210	$98,557	IL	634	$714,485	MT	80	$22,416	RI	48	$47,599
AK	86	31,847	IN	238	288,458	NE	270	48,035	SC	42	114,403
AZ	86	199,710	IA	539	99,122	NV	22	101,658	SD	114	21,664
AR	51	62,599	KS	327	108,371	NH	231	51,722	TN	187	103,860
CA	181	1,326,125	KY	116	151,674	NJ	303	495,335	TX	561	449,846
CO	115	258,686	LA	68	185,157	NM	91	47,396	UT	69	85,348
CT	195	178,261	ME	272	39,734	NY	755	1,135,733	VT	183	20,637
DE	21	25,985	MD	24	269,984	NC	77	209,891	VA	91	277,224
DC	1	45,836	MA	370	262,334	ND	81	12,832	WA	64	336,147
FL	80	661,524	MI	384	444,180	OH	251	730,592	WV	97	33,406
GA	59	208,289	MN	138	198,576	OK	115	92,084	WI	381	212,951
HI	1	35,414	MS	50	48,273	OR	126	169,587	WY	23	27,975
ID	104	42,948	MO	152	211,365	PA	457	345,622	**Total U.S.**	**9,221**	**11,391,455**

(1) Includes central libraries only. (2) Some totals may be underestimated because of nonresponse.

Four-Year Colleges and Universities

General Information for the 2009-10 Academic Year

Source: Peterson's College Database © 2010 Peterson's Nelnet, LLC. All rights reserved.

Note: These listings **include only accredited degree-granting institutions** in the U.S. and the U.S. territories with a total enrollment of 1,000 or more. Only four-year colleges and universities (which award a bachelor's degree as their highest undergraduate degree) are included. Data reported **only for institutions that provided updated information** on Peterson's Annual Survey of Undergraduate Institutions for the 2009-10 academic year.

All institutions are coeducational except those where the ZIP code is followed directly by a number in parentheses. (1) = men only, (2) = primarily men, (3) = women only, (4) = primarily women.

The **Tuition & Fees** column shows the annual tuition and required fees for full-time students, or, where indicated, the tuition and standard fees per unit for part-time students. Where tuition varies according to residence, the figure is given for the most local resident and is coded as follows: (A) = area residents, (S) = state residents; all other figures apply to all students regardless of residence. Where annual expenses are expressed as a lump sum (including full-time tuition, mandatory fees, and room and board), the figure is entered under Tuition & Fees and coded (C) = comprehensive fee. **Room & Board** is the average cost for one academic year. * indicates fee only.

Control: 1 = independent (nonprofit), 2 = independent-religious, 3 = proprietary (profit-making), 4 = federal, 5 = state, 6 = commonwealth (Puerto Rico), 7 = territory (U.S. territories), 8 = county, 9 = district, 10 = city, 11 = state and local, 12 = state-related, 13 = private (unspecified). **Degree** means the highest degree offered: B = bachelor's, M = master's, D = doctorate.

Enrollment is the total number of matriculated undergraduate and (if applicable) graduate students.

Faculty is the total number of faculty members teaching undergraduate courses and (if available) graduate courses.

NA or a dash indicates category is inapplicable or data not available from a consistent source.

Name, Address	Year Founded	Tuition & Fees	Room & Board	Control, Degree	Enrollment	Faculty
Abilene Christian Univ., Abilene, TX 79699-9100	1906	$20,290	$7,510	2-D	4,813	371
Abraham Baldwin Agr. Coll., Tifton, GA 31793	1933	$2,285(S)	$6,758	5-B	3,327	162
Academy of Art Univ., San Francisco, CA 94105-3410	1929	$22,490	$13,400	3-M	15,791	1,301
Adams State Coll., Alamosa, CO 81102	1921	$4,454(S)	$7,020	5-M	3,124	166
Adelphi Univ., Garden City, NY 11530-0701	1896	$780/cr. hr.	NA	1-D	7,951	893
Adrian Coll., Adrian, MI 49221-2575	1859	$24,440	$7,460	2-B	1,469	177
Alabama Agr. & Mech. Univ., Huntsville, AL 35811	1875	$3,432(S)	$4,770	5-D	5,327	385
Alabama State Univ., Montgomery, AL 36101-0271	1867	$6,468(S)	$4,600	5-D	5,564	408
Albany Coll. of Pharm. & Health Sci., Albany, NY 12208	1881	$23,860	$8,300	1-D	1,566	122
Albany State Univ., Albany, GA 31705-2717	1903	$4,836(S)	$5,240	5-M	4,323	284
Albertus Magnus Coll., New Haven, CT 06511-1189	1925	$23,126	$9,914	2-M	2,023	69
Albion Coll., Albion, MI 49224-1831	1835	$30,002	$8,510	2-B	1,860	171
Albright Coll., Reading, PA 19612-5234	1856	$32,740	$8,858	2-M	2,358	161
Alcorn State Univ., Alcorn State, MS 39096-7500	1871	$4,488(S)	$5,384	5-M	3,334	220
Alfred Univ., Alfred, NY 14802-1205	1836	$25,976	$11,364	1-D	2,319	199
Allegheny Coll., Meadville, PA 16335	1815	$34,810	$8,790	1-B	2,132	185
Alliant Intl. Univ., San Diego, CA 92131-1799	1952	$15,220	NA	1-D	4,343	670
Alma Coll., Alma, MI 48801-1599	1886	$26,068	$8,518	2-B	1,444	134
Alvernia Univ., Reading, PA 19607-1799	1958	$24,350	$9,212	2-D	2,856	297
Alverno Coll., Milwaukee, WI 53234-3922	1887	$18,162	$6,336	2-M	2,815	255
Amberton Univ., Garland, TX 75041-5595	1971	$5,400	NA	2-M	1,533	40
Amer. InterContinental Univ. Online, Hoffman Estates, IL 60192	1970	NA	NA	3-M	22,424	396
Amer. Intl. Coll., Springfield, MA 01109-3189	1885	$24,100	$10,150	1-D	3,401	323
Amer. Publ Univ. System, Charles Town, WV 25414	1991	$6,000	NA	3-M	31,331	1,001
Amer. Univ., Washington, DC 20016-8001	1893	$36,697	$13,468	2-D	12,241	1,175
Amer. Univ. of Puerto Rico, Bayamón, PR 00960-2037	1963	$4,435	NA	1-M	1,747	221
Amherst Coll., Amherst, MA 01002-5000	1821	$38,928	$10,150	1-B	1,744	233
Anderson Univ., Anderson, IN 46012-3495	1917	$23,970	$8,350	2-D	2,691	304
Anderson Univ., Anderson, SC 29621-4035	1911	$19,212	$7,250	2-M	2,064	168
Andrews Univ., Berrien Springs, MI 49104	1874	$21,170	$6,860	2-D	3,589	277
Angelo State Univ., San Angelo, TX 76909	1928	$6,138(S)	$6,612	5-D	6,387	332
Anna Maria Coll., Paxton, MA 01612	1946	$25,632	$10,202	2-M	1,590	199
Antioch Univ. Seattle, Seattle, WA 98121-1814	1975	$12,030	NA	1-D	1,080	NA
Appalachian State Univ., Boone, NC 28608	1899	$4,425(S)	$6,400	5-D	16,968	1,144
Aquinas Coll., Grand Rapids, MI 49506-1799	1886	$22,314	$7,014	2-M	2,145	244
Arcadia Univ., Glenside, PA 19038-3295	1853	$31,260	$10,680	2-D	4,021	415
Argosy Univ., Sarasota, Sarasota, FL 34235	1974	NA	NA	3-D	NA	NA
Argosy Univ., Schaumburg, Schaumburg, IL 60173-5403	1979	NA	NA	3-D	NA	NA
Arizona State Univ., Tempe, AZ 85287	1885	$8,132(S)	$9,706	5-D	68,064	2,729
Arkansas State Univ., Jonesboro, State University, AR 72467	1909	$6,370(S)	$5,856	5-D	12,156	654
Arkansas Tech Univ., Russellville, AR 72801	1909	$5,610(S)	$5,156	5-M	8,814	456
Armstrong Atlantic State Univ., Savannah, GA 31419-1997	1935	$4,048(S)	$5,398	5-D	7,507	434
Art Ctr. Coll. of Design, Pasadena, CA 91103	1930	$31,326	NA	1-M	1,638	454
The Art Institute of Boston at Lesley Univ., Boston, MA 02215-2598	1912	$27,600	$12,800	1-D	5,564	258
Asbury Univ., Wilmore, KY 40390-1198	1890	$23,303	$5,566	2-M	1,608	167
Ashford Univ., Clinton, IA 52733-2967	1918	$16,106	$5,800	3-M	10,568	748
Ashland Univ., Ashland, OH 44805-3702	1878	$25,640	$9,352	2-D	6,475	581
Assumption Coll., Worcester, MA 01609-1296	1904	$30,171	$6,340	2-M	2,601	224
Athens State Univ., Athens, AL 35611	1822	$4,350(S)	NA	5-B	3,114	177
Atlantic Coll., Guaynabo, PR 00970	NA	$5,495	NA	1-M	1,186	NA
Auburn Univ., Auburn University, AL 36849	1856	$6,972(S)	$8,972	5-D	24,602	1,343
Auburn Univ. Montgomery, Montgomery, AL 36124-4023	1967	$6,300(S)	$3,720	5-D	5,547	308
Augsburg Coll., Minneapolis, MN 55454-1351	1869	$28,864	$7,760	2-M	3,993	409
Augustana Coll., Rock Island, IL 61201-2296	1860	$31,326	$7,950	2-B	2,472	287
Augustana Coll., Sioux Falls, SD 57197	1860	$23,550	$6,188	2-M	1,793	181
Augusta State Univ., Augusta, GA 30904-2200	1925	$3,730(S)	$5,250	5-M	7,061	435
Aurora Univ., Aurora, IL 60506-4892	1893	$18,700	$8,800	1-D	4,355	418
Austin Coll., Sherman, TX 75090-4400	1849	$29,235	$9,549	2-M	1,364	119
Austin Peay State Univ., Clarksville, TN 37044	1927	$5,808(S)	$6,120	5-M	10,188	550
Avila Univ., Kansas City, MO 64145-1698	1916	$21,800	$6,350	2-M	1,893	214
Azusa Pacific Univ., Azusa, CA 91702-7000	1899	$27,750	$8,314	2-D	8,539	990
Babson Coll., Babson Park, MA 02457-0310	1919	$37,824	$13,500	1-M	3,445	268
Baker Coll. of Allen Park, Allen Park, MI 48101 (4)	2003	$7,380	NA	1-B	3,384	88
Baker Coll. of Auburn Hills, Auburn Hills, MI 48326-1586	1911	$7,380	NA	1-B	4,285	155
Baker Coll. of Cadillac, Cadillac, MI 49601	1986	$7,380	NA	1-B	2,070	105
Baker Coll. of Clinton Township, Clinton Township, MI 48035-4701	1990	$7,380	NA	1-B	6,455	208
Baker Coll. of Flint, Flint, MI 48507-5508	1911	$7,380	$3,000	1-B	7,305	315
Baker Coll. of Jackson, Jackson, MI 49202	1994	$7,400	NA	1-B	2,432	85
Baker Coll. of Muskegon, Muskegon, MI 49442-3497	1888	$7,400	$3,000	1-B	6,133	177

Name, Address	Year Founded	Tuition & Fees	Room & Board	Control, Degree	Enroll-ment	Faculty
Baker Coll. of Owosso, Owosso, MI 48867-4400	1984	$7,400	$2,700	1-B	3,637	144
Baker Coll. of Port Huron, Port Huron, MI 48060-2597	1990	$7,380	NA	1-B	1,984	126
Baldwin-Wallace Coll., Berea, OH 44017-2088	1845	$24,230	$7,960	2-M	4,397	418
Ball State Univ., Muncie, IN 47306-1099	1918	$7,830(S)	$7,932	5-D	21,401	1,180
Baptist Coll. of Health Sci., Memphis, TN 38104 (4)	1994	$9,730	NA	2-B	1,021	106
Bard Coll., Annandale-on-Hudson, NY 12504	1860	$39,880	$11,300	1-D	2,234	237
Barnard Coll., New York, NY 10027-6598 (3)	1889	$38,650	$12,319	1-B	2,417	349
Barry Univ., Miami Shores, FL 33161-6695	1940	$25,500	$8,486	2-D	8,846	880
Barton Coll., Wilson, NC 27893-7000	1902	$20,648	$7,012	2-B	1,150	117
Bates Coll., Lewiston, ME 04240-6028	1855	$51,300(C)	NA	1-B	1,738	194
Bayamón Central Univ., Bayamón, PR 00960-1725	1970	$4,340	NA	2-M	2,382	NA
Baylor Univ., Waco, TX 76798	1845	$29,754	$8,331	2-D	14,614	1,146
Bay Path Coll., Longmeadow, MA 01106-2292	1897	$24,530	$10,035	1-M	2,034	197
Becker Coll., Worcester, MA 01609	1784	$27,748	$9,760	1-B	1,752	184
Belhaven Univ., Jackson, MS 39202-1789	1883	$17,700	$6,500	2-M	2,883	147
Bellarmine Univ., Louisville, KY 40205-0671	1950	$30,310	$8,550	2-D	3,090	300
Bellevue Univ., Bellevue, NE 68005-3098	1965	$6,690	NA	1-M	6,808	370
Belmont Abbey Coll., Belmont, NC 28012-1802	1876	$21,506	$9,948	2-B	1,638	132
Belmont Univ., Nashville, TN 37212-3757	1951	$22,360	$10,000	2-D	5,424	605
Beloit Coll., Beloit, WI 53511-5596	1846	$33,368	$6,830	1-B	1,407	135
Bemidji State Univ., Bemidji, MN 56601-2699	1919	$7,510(S)	$6,425	5-M	5,175	269
Benedict Coll., Columbia, SC 29204	1870	$14,570	$6,702	2-B	2,641	NA
Benedictine Coll., Atchison, KS 66002-1499	1859	$19,500	$6,575	2-M	1,874	131
Benedictine Univ., Lisle, IL 60532-0900	1887	$22,310	$7,360	2-D	5,836	562
Bentley Univ., Waltham, MA 02452-4705	1917	$35,828	$11,740	1-D	5,616	457
Berea Coll., Berea, KY 40404	1855	$876	$5,768	1-B	1,548	176
Berklee Coll. of Music, Boston, MA 02215-3693	1945	$30,650	$15,080	1-B	4,145	530
Bernard M. Baruch Coll. of the City Univ. of New York, New York, NY 10010-5585	1919	$4,600(S)	NA	11-M	16,195	1,166
Berry Coll., Mount Berry, GA 30149-0159	1902	$23,360	$8,340	2-M	1,922	204
Bethel Coll., Mishawaka, IN 46545-5591	1947	$20,978	$6,250	2-M	2,163	205
Bethel Univ., St. Paul, MN 55112-6999	1871	$28,080	$8,220	2-D	5,438	293
Bethel Univ., McKenzie, TN 38201	1842	$12,242	$6,926	2-M	3,141	291
Beth Medrash Govoha, Lakewood, NJ 08701-2797 (1)	1943	NA	NA	2-M	5,639	NA
Bethune-Cookman Univ., Daytona Beach, FL 32114-3099	1904	$12,936	$7,672	2-D	3,614	230
Biola Univ., La Mirada, CA 90639-0001	1908	$28,044	$8,367	2-D	5,948	445
Birmingham-Southern Coll., Birmingham, AL 35254	1856	$25,586	$9,105	2-M	1,549	143
Black Hills State Univ., Spearfish, SD 57799	1883	$6,227(S)	$5,523	5-M	4,076	241
Bloomfield Coll., Bloomfield, NJ 07003-9981	1868	$21,000	$10,300	2-B	2,142	238
Bloomsburg Univ. of Pennsylvania, Bloomsburg, PA 17815-1301	1839	$7,110(S)	$6,488	5-D	9,512	491
Bluefield State Coll., Bluefield, WV 24701-2198	1895	$4,596(S)	NA	5-B	1,989	149
Bluffton Univ., Bluffton, OH 45817	1899	$24,930	$8,348	2-M	1,127	109
Bob Jones Univ., Greenville, SC 29614	1927	$11,920	$5,100	2-D	3,956	295
Boise State Univ., Boise, ID 83725-0399	1932	$4,864(S)	$5,602	5-D	18,933	1,003
Boricua Coll., New York, NY 10032-1560	1974	$9,000	NA	1-M	1,058	133
Boston Arch Coll., Boston, MA 02115-2795	1889	$11,468	NA	1-M	1,146	229
Boston Coll., Chestnut Hill, MA 02467-3800	1863	$39,130	$12,909	2-D	14,131	1,323
Boston Univ., Boston, MA 02215	1839	$39,864	$12,260	1-D	31,960	2,628
Bowdoin Coll., Brunswick, ME 04011	1794	$40,020	$10,880	1-B	1,777	217
Bowie State Univ., Bowie, MD 20715-9465	1865	$6,040(S)	$7,536	5-D	5,617	517
Bowling Green State Univ., Bowling Green, OH 43403	1910	$9,060(S)	$7,670	5-D	17,309	952
Bradley Univ., Peoria, IL 61625-0002	1897	$24,224	$7,650	1-D	5,800	549
Brandeis Univ., Waltham, MA 02454-9110	1948	$38,762	$10,792	1-D	5,598	486
Brewton-Parker Coll., Mt. Vernon, GA 30445	1904	$15,290	$6,253	2-B	1,017	199
Briarcliffe Coll., Bethpage, NY 11714	1966	NA	NA	3-B	2,343	247
Briar Cliff Univ., Sioux City, IA 51104-0100	1930	$22,536	$6,978	2-M	1,158	108
Bridgewater Coll., Bridgewater, VA 22812-1599	1880	$25,500	$10,350	2-B	1,590	136
Bridgewater State Coll., Bridgewater, MA 02325-0001	1840	$6,604(S)	$9,670	5-M	10,774	564
Brigham Young Univ., Provo, UT 84602-1001	1875	$4,420	$7,120	2-D	34,130	1,686
Brigham Young Univ.–Hawaii, Laie, HI 96762-1294	1955	$4,330	$4,756	2-B	2,555	228
Brookline Coll., Phoenix, AZ 85021	1979	$14,000	NA	1-B	1,186	69
Brooklyn Coll. of the City Univ. of New York, Brooklyn, NY 11210-2889	1930	$5,051(S)	NA	11-D	17,094	1,401
Brooks Institute, Santa Barbara, CA 93101	1945	$26,760	NA	3-M	1,240	NA
Brown Univ., Providence, RI 02912	1764	$37,718	$10,022	1-D	8,574	976
Bryan Coll., Dayton, TN 37321-7000	1930	$18,740	$5,454	2-M	1,160	66
Bryant & Stratton Coll.–Wauwatosa Campus, Wauwatosa, WI 53226	NA	NA	NA	3-B	1,264	NA
Bryant Univ., Smithfield, RI 02917	1863	$32,106	$11,757	1-M	3,632	256
Bryn Mawr Coll., Bryn Mawr, PA 19010-2899	1885	$39,360	$12,420	1-D	1,771	211
Bucknell Univ., Lewisburg, PA 17837	1846	$42,342	$9,938	1-M	3,673	367
Buena Vista Univ., Storm Lake, IA 50588	1891	$25,540	$7,292	2-M	1,014	106
Buffalo State Coll., State Univ. of New York, Buffalo, NY 14222-1095	1867	$6,007(S)	$9,748	5-M	11,714	878
Butler Univ., Indianapolis, IN 46208-3485	1855	$29,246	$9,740	1-D	4,505	466
Cabrini Coll., Radnor, PA 19087-3698	1957	$31,030	$11,400	2-M	3,514	324
Caldwell Coll., Caldwell, NJ 07006-6195	1939	$23,600	$8,846	2-M	2,291	184
California Baptist Univ., Riverside, CA 92504-3206	1950	$23,266	$8,170	2-M	4,103	339
California Coll. of the Arts, San Francisco, CA 94107	1907	$33,264	$6,600	1-M	1,831	503
California Institute of Integral Stds., San Francisco, CA 94103	1968	NA	NA	1-M	1,005	61
California Institute of Tech, Pasadena, CA 91125-0001	1891	$34,437	$10,146	1-D	2,130	346
California Institute of the Arts, Valencia, CA 91355-2340	1961	$36,742	$9,293	1-D	1,392	303
California Lutheran Univ., Thousand Oaks, CA 91360-2787	1959	$31,000	$10,580	2-D	3,714	324
California Polytechnic State Univ., San Luis Obispo, San Luis Obispo, CA 93407	1901	$6,198(S)	$9,623	5-D	19,325	1,235
California State Polytechnic Univ., Pomona, Pomona, CA 91768-2557	1938	$4,551(S)	$9,570	5-M	22,273	1,020
California State Univ., Bakersfield, Bakersfield, CA 93311	1970	$4,383(S)	$7,137	5-M	8,003	441
California State Univ., Channel Islands, Camarillo, CA 93012	2002	$3,482(S)	$10,200	5-D	3,599	294
California State Univ., Chico, Chico, CA 95929-0722	1887	$5,336(S)	$9,404	5-M	17,095	888
California State Univ., Dominguez Hills, Carson, CA 90747-0001	1960	$4,645(S)	$10,085	5-M	14,477	710
California State Univ., East Bay, Hayward, CA 94542-3000	1957	$4,872(S)	$10,029	5-D	14,749	820
California State Univ., Fresno, Fresno, CA 93740-8027	1911	$3,687(S)	$8,590	5-D	21,500	1,138
California State Univ., Fullerton, Fullerton, CA 92834-9480	1957	$4,662(S)	$9,242	5-D	36,262	1,615
California State Univ., Long Beach, Long Beach, CA 90840	1949	$4,606(S)	$11,038	5-M	35,557	1,984
California State Univ., Los Angeles, Los Angeles, CA 90032-8530	1947	$4,640(S)	$9,105	5-D	20,619	1,038
California State Univ., Monterey Bay, Seaside, CA 93955-8001	1994	$4,517(S)	$8,290	5-M	4,688	277
California State Univ., Northridge, Northridge, CA 91330	1958	$3,702(S)	$10,152	5-M	35,198	1,807
California State Univ., Sacramento, Sacramento, CA 95819	1947	$3,048(S)	$9,428	5-D	29,241	1,506
California State Univ., San Bernardino, San Bernardino, CA 92407-2397	1965	$5,373(S)	NA	5-D	17,842	895
California State Univ., San Marcos, San Marcos, CA 92096-0001	1990	$4,650(S)	$6,250	5-M	9,745	513
California State Univ., Stanislaus, Turlock, CA 95382	1957	$4,840(S)	$8,880	5-D	8,586	390
California Univ. of Pennsylvania, California, PA 15419-1394	1852	$7,679(S)	$8,804	5-M	7,720	402

Name, Address	Year Founded	Tuition & Fees	Room & Board	Control, Degree	Enrollment	Faculty
Calumet Coll. of St Joseph, Whiting, IN 46394-2195	1951	$13,220	NA	2-M	1,292	126
Calvin Coll., Grand Rapids, MI 49546-4388	1876	$24,035	$8,275	2-M	4,092	395
Cambridge Coll., Cambridge, MA 02138-5304	1971	$10,950	NA	1-D	4,961	571
Cameron Univ., Lawton, OK 73505-6377	1908	$5,415(S)	$3,589	5-M	6,131	329
Campbellsville Univ., Campbellsville, KY 42718-2799	1906	$19,710	$6,740	2-M	3,178	294
Campbell Univ., Buies Creek, NC 27506	1887	$20,050	$6,830	2-D	4,743	305
Canisius Coll., Buffalo, NY 14208-1098	1870	$29,512	$10,556	2-M	4,774	463
Capella Univ., Minneapolis, MN 55402	1993	$10,620	NA	3-D	31,998	NA
Capital Univ., Columbus, OH 43209-2394	1830	$28,480	$7,510	2-D	3,540	392
Cardinal Stritch Univ., Milwaukee, WI 53217-3985	1937	$20,510	$6,020	2-M	6,255	458
Caribbean Univ., Bayamón, PR 00960-0493	1969	$4,100	NA	1-M	2,009	NA
Carleton Coll., Northfield, MN 55057-4001	1866	$41,304	$10,806	1-B	2,009	238
Carlos Albizu Univ., Miami Campus, Miami, FL 33172-2209 (4)	1980	$11,724	NA	1-D	1,081	63
Carlow Univ., Pittsburgh, PA 15213-3165 (4)	1929	$21,720	$8,552	2-D	2,533	278
Carnegie Mellon Univ., Pittsburgh, PA 15213-3891	1900	$40,728	$10,840	1-D	11,443	963
Carroll Coll., Helena, MT 59625-0002	1909	$22,592	$7,118	2-B	1,409	157
Carroll Univ., Waukesha, WI 53186-5593	1846	$22,937	$7,668	2-D	3,403	321
Carson-Newman Coll., Jefferson City, TN 37760	1851	$20,562	$5,918	2-M	2,148	182
Carthage Coll., Kenosha, WI 53140	1847	$28,250	$7,750	2-M	2,778	NA
Case Western Reserve Univ., Cleveland, OH 44106	1826	$36,238	$10,890	1-D	9,738	917
Castleton State Coll., Castleton, VT 05735	1787	$9,096(S)	$8,120	5-M	2,191	222
Catawba Coll., Salisbury, NC 28144-2488	1851	$23,740	$8,200	2-M	1,358	106
The Catholic Univ. of America, Washington, DC 20064	1887	$31,890	$12,134	2-D	6,768	703
Cazenovia Coll., Cazenovia, NY 13035-1084	1824	$24,152	$10,222	1-B	1,119	146
Cedar Crest Coll., Allentown, PA 18104-6196 (3)	1867	$28,135	$9,321	2-M	1,887	173
Cedarville Univ., Cedarville, OH 45314-0601	1887	$23,500	$5,086	2-M	3,094	292
Centenary Coll., Hackettstown, NJ 07840-2100	1867	$490/credit	NA	2-M	2,939	339
Central Coll., Pella, IA 50219	1853	$25,010	$8,368	2-B	1,636	164
Central Connecticut State Univ., New Britain, CT 06050-4010	1849	$7,414(S)	$9,122	5-D	12,461	924
Central Methodist Univ., Fayette, MO 65248-1198	1854	$18,670	$6,240	2-M	1,031	88
Central Michigan Univ., Mount Pleasant, MI 48859	1892	$10,170(S)	$7,896	5-D	27,246	1,190
Central Pennsylvania Coll., Summerdale, PA 17093-0309	1881	$13,845	$6,285	3-B	1,216	122
Central State Univ., Wilberforce, OH 45384	1887	$5,294(S)	$7,920	5-M	2,436	194
Central Washington Univ., Ellensburg, WA 98926	1891	$6,399(S)	$8,460	5-M	10,662	601
Centre Coll., Danville, KY 40422-1394	1819	$37,000(C)	NA	2-B	1,216	120
Chadron State Coll., Chadron, NE 69337	1911	$4,557(S)	$4,654	5-M	2,636	110
Chamberlain Coll. of Nursing, St. Louis, MO 63139-3215	1889	NA	NA	3-B	1,452	NA
Chaminade Univ. of Honolulu, Honolulu, HI 96816-1578	1955	$17,740	$10,420	2-M	1,755	120
Champlain Coll., Burlington, VT 05402-0670	1878	$25,950	$11,670	1-M	2,268	334
Chapman Univ., Orange, CA 92866	1861	$38,524	$12,957	2-D	6,398	653
Charleston Southern Univ., Charleston, SC 29423-8087	1964	$19,268	$7,394	2-M	3,286	210
Charter Oak State Coll., New Britain, CT 06053-2142	1973	$195/cr. hr.(S)	NA	5-B	2,079	107
Chatham Univ., Pittsburgh, PA 15232-2826	1869	$662/cr. hr.	NA	1-D	2,219	268
Chestnut Hill Coll., Philadelphia, PA 19118-2693	1924	$27,100	$8,800	2-M	2,085	299
Cheyney Univ. of Pennsylvania, Cheyney, PA 19319	1837	$7,360(S)	$7,746	5-M	1,488	99
Chicago State Univ., Chicago, IL 60628	1867	$8,878(S)	$7,250	5-M	6,810	433
Chowan Univ., Murfreesboro, NC 27855	1848	$18,850	$7,310	2-B	1,080	60
Christian Brothers Univ., Memphis, TN 38104-5581	1871	$23,730	$6,140	2-M	1,926	159
Christopher Newport Univ., Newport News, VA 23606-2998	1960	$11,720(S)	$9,240	5-M	4,952	329
Cincinnati Christian Univ., Cincinnati, OH 45204-3200	1924	$12,580	$6,470	2-D	1,020	78
The Citadel, The Military Coll. of South Carolina, Charleston, SC 29409	1842	$9,824(S)	$5,965	5-M	3,339	238
City Coll. of the City Univ. of New York, New York, NY 10031-9198	1847	$4,929(S)	NA	11-D	16,308	1,129
City Univ. of Seattle, Bellevue, WA 98005	1973	$15,615	NA	1-M	2,885	1,045
Claflin Univ., Orangeburg, SC 29115	1869	$12,666	$6,806	2-M	1,860	135
Claremont McKenna Coll., Claremont, CA 91711	1946	$38,745	$12,525	1-M	1,237	149
Clarion Univ. of Pennsylvania, Clarion, PA 16214	1867	$7,381(S)	$6,884	5-M	7,346	376
Clark Atlanta Univ., Atlanta, GA 30314	1865	$17,038	$7,620	2-D	3,873	276
Clarke Coll., Dubuque, IA 52001-3198	1843	$23,520	$6,840	2-D	1,202	135
Clarkson Univ., Potsdam, NY 13699	1896	$34,760	$11,564	1-D	3,187	226
Clark Univ., Worcester, MA 01610-1477	1887	$36,420	$6,950	1-D	3,416	292
Clayton State Univ., Morrow, GA 30260-0285	1969	$3,852(S)	$3,900	5-M	6,586	368
Clemson Univ., Clemson, SC 29634	1889	$11,609(S)	$6,774	5-D	18,317	1,277
Cleveland State Univ., Cleveland, OH 44115	1964	$8,196(S)	$10,250	5-D	16,131	1,024
Coastal Carolina Univ., Conway, SC 29528-6054	1954	$8,950(S)	$7,200	5-M	8,360	557
Coe Coll., Cedar Rapids, IA 52402-5092	1851	$29,270	$7,150	2-M	1,326	NA
Colby Coll., Waterville, ME 04901-8840	1813	$50,320(C)	NA	1-B	1,838	202
Colgate Univ., Hamilton, NY 13346-1386	1819	$40,970	$9,970	1-M	2,837	315
The Coll. at Brockport, State Univ. of New York, Brockport, NY 14420-2997	1867	$6,108(S)	$9,200	5-M	8,490	597
Coll. for Creative Studies, Detroit, MI 48202-4034	1926	$31,275	$8,500	1-M	1,400	248
Coll. of Charleston, Charleston, SC 29424-0001	1770	$8,988(S)	$9,411	5-M	11,772	893
Coll. of Coastal Georgia, Brunswick, GA 31520	1961	$2,154(S)	NA	5-B	2,942	144
The Coll. of Idaho, Caldwell, ID 83605	1891	$21,050	$7,700	1-M	1,013	100
Coll. of Mount St. Joseph, Cincinnati, OH 45233-1670	1920	$22,800	$7,000	2-D	2,324	236
Coll. of Mount St. Vincent, Riverdale, NY 10471-1093	1911	$26,910	$10,380	1-M	1,896	196
The Coll. of New Jersey, Ewing, NJ 08628	1855	$12,722(S)	$9,996	5-M	6,980	750
The Coll. of New Rochelle, New Rochelle, NY 10805-2308 (4)	1904	$26,426	$9,600	1-M	1,820	217
Coll. of Notre Dame of Maryland, Baltimore, MD 21210-2476 (4)	1873	$28,350	$9,500	2-D	2,971	238
Coll. of St. Benedict, Saint Joseph, MN 56374 (4)	1887	$30,186	$8,358	2-B	2,106	193
Coll. of St. Elizabeth, Morristown, NJ 07960-6989	1899	$25,058	$10,904	2-D	2,157	210
Coll. of St. Mary, Omaha, NE 68106 (3)	1923	$23,130	$6,400	2-D	1,120	188
The Coll. of St. Rose, Albany, NY 12203-1419	1920	$24,135	$9,880	1-M	5,158	441
The Coll. of St. Scholastica, Duluth, MN 55811-4199	1912	$28,370	$7,498	2-D	3,746	333
Coll. of Staten Island of the City Univ. of New York, Staten Island, NY 10314-6600	1955	$4,978(S)	NA	11-D	13,858	1,022
Coll. of the Holy Cross, Worcester, MA 01610-2395	1843	$39,892	$10,940	2-B	2,933	306
Coll. of the Ozarks, Point Lookout, MO 65726	1906	$410	$5,300	2-B	1,356	130
The Coll. of William & Mary, Williamsburg, VA 23187-8795	1693	$10,800(S)	$8,382	5-D	7,874	801
The Coll. of Wooster, Wooster, OH 44691-2363	1866	$36,598	$9,070	2-B	1,854	160
Collins Coll.: A School of Design & Tech, Tempe, AZ 85281-5206	1978	NA	NA	3-B	1,287	102
Colorado Christian Univ., Lakewood, CO 80226	1914	$20,280	$8,050	2-M	2,221	46
The Colorado Coll., Colorado Springs, CO 80903-3294	1874	$37,478	$9,624	1-M	2,032	197
Colorado School of Mines, Golden, CO 80401-1887	1874	$12,244(S)	$8,120	5-D	4,849	331
Colorado State Univ.–Fort Collins, CO 80523-0015	1870	$6,318(S)	$8,378	5-D	28,547	989
Colorado State Univ.–Pueblo, Pueblo, CO 81001-4901	1933	$5,210(S)	$6,750	5-M	7,210	418
Colorado Tech Univ. Colorado Springs, Colorado Springs, CO 80907-3896	1965	NA	NA	3-D	2,359	343
Colorado Tech Univ. Online, Colorado Springs, CO 80907	NA	NA	NA	3-M	25,797	613
Columbia Coll., Columbia, MO 65216-0002	1851	$15,596	$6,074	2-M	1,342	111
Columbia Coll., Caguas, PR 00726	1966	$9,100	NA	3-M	1,344	93

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Columbia Coll., Columbia, SC 29203-5998	1854	$23,480	$6,450	2-D	1,445	143
Columbia Coll. Chicago, Chicago, IL 60605-1996	1890	$19,850	$10,780	1-M	12,127	1,735
Columbia Intl. Univ., Columbia, SC 29230-3122	1923	$17,395	$6,410	2-D	1,139	53
Columbia Southern Univ., Orange Beach, AL 36561	1993	$5,895	NA	3-D	22,557	246
Columbia Univ., New York, NY 10027	1754	$39,296	$10,228	1-D	5,766	1,796
Columbia Univ., School of General Studies, New York, NY 10027-6939	1754	$39,910	$12,020	1-B	1,351	1,024
Columbus Coll. of Art & Design, Columbus, OH 43215-1758	1879	$24,648	$8,630	1-B	1,493	184
Columbus State Univ., Columbus, GA 31907-5645	1958	$5,024(S)	$7,090	5-M	8,179	468
Concord Univ., Athens, WV 24712-1000	1872	$4,974(S)	$6,766	5-M	2,947	199
Concordia Coll., Moorhead, MN 56562	1891	$27,160	$6,510	2-M	2,811	248
Concordia Univ., Irvine, CA 92612-3299	1972	$26,000	$8,380	2-M	2,564	238
Concordia Univ., Chicago, River Forest, IL 60305-1499	1864	$24,581	$8,000	2-D	5,049	322
Concordia Univ., Ann Arbor, MI 48105-2797	1963	$20,390	$7,606	2-M	1,075	95
Concordia Univ., St. Paul, St. Paul, MN 55104-5494	1893	$27,400	$7,500	2-M	2,816	312
Concordia Univ., Nebraska, Seward, NE 68434-1599	1894	$22,115	$5,820	2-M	1,717	143
Concordia Univ., Portland, OR 97211-6099	1905	$23,400	$6,800	2-M	1,709	172
Concordia Univ., Texas, Austin, TX 78726	1926	$21,200	$8,000	2-M	2,185	281
Concordia Univ., Wisconsin, Mequon, WI 53097-2402	1881	$20,996	$7,990	2-D	7,178	260
Connecticut Coll., New London, CT 06320-4196	1911	$51,115(C)	NA	1-M	1,911	242
Converse Coll., Spartanburg, SC 29302-0006	1889	$26,138	$8,032	1-M	1,720	88
Coppin State Univ., Baltimore, MD 21216-3698	1900	$5,276(S)	$7,496	5-M	3,801	332
Corban Univ., Salem, OR 97301-9392	1935	$24,230	$7,642	2-M	1,100	107
Cornell Coll., Mount Vernon, IA 52314-1098	1853	$29,400	$7,500	2-B	1,141	92
Cornell Univ., Ithaca, NY 14853-0001	1865	$37,954	$12,160	1-D	20,633	1,848
Cornerstone Univ., Grand Rapids, MI 49525-5897	1941	$20,520	$6,510	2-D	2,606	128
Covenant Coll., Lookout Mountain, GA 30750	1955	$25,270	$7,170	2-M	1,061	87
Creighton Univ., Omaha, NE 68178-0001	1878	$22,118	$8,814	2-D	7,385	735
Crown Coll., St. Bonifacius, MN 55375-9001	1916	$20,870	$7,580	2-M	1,221	118
The Culinary Institute of America, Hyde Park, NY 12538-1499	1946	$24,550	$8,110	1-B	2,914	198
Cumberland Univ., Lebanon, TN 37087	1842	$18,256	$6,760	1-M	1,355	110
Curry Coll., Milton, MA 02186-9984	1879	$933/cr. hr.	NA	1-M	3,125	421
Daemen Coll., Amherst, NY 14226-3592	1947	$20,720	$9,450	1-D	2,921	258
Dakota State Univ., Madison, SD 57042-1799	1881	$6,872(S)	$4,818	5-D	2,827	122
Dallas Baptist Univ., Dallas, TX 75211-9299	1965	$17,490	$5,636	2-D	5,400	532
Dalton State Coll., Dalton, GA 30720	1963	$2,292(S)	NA	5-B	5,722	234
Daniel Webster Coll., Nashua, NH 03063-1300	1965	$28,864	$9,698	1-M	1,007	62
Dartmouth Coll., Hanover, NH 03755	1769	$38,679	$11,295	1-D	5,987	647
Davenport Univ., Grand Rapids, MI 49503	1866	$11,241	$9,500	1-M	11,506	954
Davidson Coll., Davidson, NC 28035	1837	$35,124	$9,906	2-B	1,743	169
Defiance Coll., Defiance, OH 43512-1610	1850	$24,330	$8,120	2-M	1,070	95
Delaware State Univ., Dover, DE 19901-2277	1891	$7,261(S)	$8,752	5-D	3,609	256
Delaware Valley Coll., Doylestown, PA 18901-2697	1896	$29,284	$10,326	1-M	2,266	200
Delta State Univ., Cleveland, MS 38733-0001	1924	$4,450(S)	$5,714	5-D	4,031	259
Denison Univ., Granville, OH 43023	1831	$36,560	$8,930	1-B	2,267	217
DePaul Univ., Chicago, IL 60604-2287	1898	$27,342	$10,617	2-D	25,072	1,825
DePauw Univ., Greencastle, IN 46135	1837	$33,250	$8,740	2-B	2,396	279
DeSales Univ., Center Valley, PA 18034-9568	1964	$27,200	$9,750	2-M	3,150	288
DeVry Coll. of New York, Long Island City, NY 11101	1998	$14,720	NA	3-M	1,390	110
DeVry Univ., Phoenix, AZ 85021-2995	1967	$14,080	NA	3-M	1,555	119
DeVry Univ., Fremont, CA 94555	1998	$14,720	NA	3-M	1,553	231
DeVry Univ., Long Beach, CA 90806	1984	$14,080	NA	3-M	1,172	101
DeVry Univ., Pomona, CA 91768-2642	1983	$14,080	NA	3-M	2,323	163
DeVry Univ., Miramar, FL 33027-4150	2002	$14,080	NA	3-M	1,261	91
DeVry Univ., Orlando, FL 32839	2000	$14,080	NA	3-M	1,929	208
DeVry Univ., Decatur, GA 30030-2556	1969	$14,080	NA	3-M	3,157	197
DeVry Univ., Addison, IL 60101-6106	1982	$14,080	NA	3-B	1,508	154
DeVry Univ., Chicago, IL 60618-5994	1931	$14,080	NA	3-B	2,075	203
DeVry Univ., Naperville, IL 60563-2361	NA	NA	NA	3-M	8,828	2,248
DeVry Univ., Tinley Park, IL 60477	2000	$14,080	NA	3-M	1,471	79
DeVry Univ., Kansas City, MO 64131	1931	$14,080	NA	3-M	1,269	81
DeVry Univ., North Brunswick, NJ 08902-3362	1969	$14,720	NA	3-M	1,440	155
DeVry Univ., Columbus, OH 43209-2705	1952	$14,080	NA	3-M	3,011	242
DeVry Univ., Fort Washington, PA 19034	2002	$14,720	NA	3-M	1,049	155
DeVry Univ., Houston, TX 77041	NA	$14,080	NA	3-M	1,694	175
DeVry Univ., Irving, TX 75063-2439	1969	$14,080	NA	3-M	2,019	133
DeVry Univ. Online, Addison, IL 60101-6106	2000	$14,560	NA	3-M	21,830	3,066
Dickinson Coll., Carlisle, PA 17013-2896	1773	$40,114	$10,080	1-B	2,376	237
Dickinson State Univ., Dickinson, ND 58601-4896	1918	$5,249(S)	$4,262	5-B	2,767	361
Dillard Univ., New Orleans, LA 70122-3097	1869	$13,880	$8,386	2-B	1,011	117
Dixie State Coll. of Utah, St. George, UT 84770-3876	1911	$3,146(S)	$3,948	5-B	7,708	500
Dominican Coll., Orangeburg, NY 10962-1210	1952	$21,120	$10,150	1-D	2,005	235
Dominican Univ., River Forest, IL 60305-1099	1901	$24,700	$7,620	2-D	3,909	440
Dominican Univ. of California, San Rafael, CA 94901-2298	1890	$35,587	$13,560	2-M	2,094	355
Dordt Coll., Sioux Center, IA 51250-1697	1955	$22,080	$6,010	2-M	1,331	106
Dowling Coll., Oakdale, NY 11769-1999	1955	$22,850	$10,200	1-D	5,532	458
Drake Univ., Des Moines, IA 50311-4516	1881	$25,622	$7,800	1-D	5,653	420
Drew Univ., Madison, NJ 07940-1493	1867	$38,017	$10,368	2-D	2,667	258
Drexel Univ., Philadelphia, PA 19104-2875	1891	$33,005	$13,125	1-D	22,493	1,499
Drury Univ., Springfield, MO 65802	1873	$19,854	$6,971	1-M	2,076	179
Duke Univ., Durham, NC 27708-0586	1838	$40,243	$11,622	2-D	14,350	1,155
Duquesne Univ., Pittsburgh, PA 15282-0001	1878	$26,468	$9,200	2-D	10,270	983
D'Youville Coll., Buffalo, NY 14201-1084	1908	$20,030	$9,800	1-D	2,971	322
Earlham Coll., Richmond, IN 47374-4095	1847	$36,494	$7,400	2-D	1,308	104
East Carolina Univ., Greenville, NC 27858-4353	1907	$4,477(S)	$7,480	5-D	27,654	1,474
East Central Univ., Ada, OK 74820-6899	1909	$3,436(S)	$4,100	5-M	4,612	278
Eastern Connecticut State Univ., Willimantic, CT 06226-2295	1889	$7,643(S)	$10,048	5-M	5,574	446
Eastern Illinois Univ., Charleston, IL 61920-3099	1895	$9,540(S)	$8,078	5-M	11,966	792
Eastern Kentucky Univ., Richmond, KY 40475-3102	1906	$6,312(S)	$6,020	5-M	15,839	1,039
Eastern Mennonite Univ., Harrisonburg, VA 22802-2462	1917	$24,120	$7,650	2-D	1,525	188
Eastern Michigan Univ., Ypsilanti, MI 48197	1849	$8,378(S)	$7,785	5-D	22,859	1,315
Eastern Nazarene Coll., Quincy, MA 02170	1918	$23,772	$8,000	2-M	1,075	103
Eastern New Mexico Univ., Portales, NM 88130	1934	$3,552(S)	$5,374	5-M	4,679	321
Eastern Oregon Univ., La Grande, OR 97850-2899	1929	$6,456(S)	$7,870	5-M	3,957	127
Eastern Univ., St. Davids, PA 19087-3696	1952	$23,770	$8,870	2-D	3,918	343
Eastern Washington Univ., Cheney, WA 99004-2431	1882	$5,872(S)	$7,080	5-D	11,302	619

Name, Address	Year Founded	Tuition & Fees	Room & Board	Control, Degree	Enroll-ment	Faculty
East Stroudsburg Univ. of Pennsylvania, East Stroudsburg, PA 18301-2999	1893	$7,394(S)	$6,418	5-M	7,576	366
East Tennessee State Univ., Johnson City, TN 37614	1911	$5,533(S)	$5,500	5-D	14,421	841
East Texas Baptist Univ., Marshall, TX 75670-1498	1912	$19,550	$5,436	2-B	1,179	100
East-West Univ., Chicago, IL 60605-2103	1978	$15,750	NA	1-B	1,170	67
Eckerd Coll., St. Petersburg, FL 33711	1958	$33,228	$9,326	2-B	1,863	162
ECPI Coll. of Tech, Virginia Beach, VA 23462	1966	NA	NA	3-B	12,669	791
Edgewood Coll., Madison, WI 53711-1997 (4)	1927	$21,042	$7,234	2-D	2,549	305
Edinboro Univ. of Pennsylvania, Edinboro, PA 16444	1857	$7,316(S)	$7,430	5-M	7,433	409
EDP Coll. of Puerto Rico, Inc., Hato Rey, PR 00918	1968	$6,120	NA	3-M	1,016	84
Elizabeth City State Univ., Elizabeth City, NC 27909-7806	1891	$1,681(S)	$5,495	5-M	3,264	242
Elizabethtown Coll., Elizabethtown, PA 17022-2298	1899	$33,250	$8,500	2-M	2,367	274
Elmhurst Coll., Elmhurst, IL 60126-3296	1871	$28,660	$8,216	2-M	3,363	340
Elmira Coll., Elmira, NY 14901	1855	$34,800	$10,800	1-M	1,657	201
Elms Coll., Chicopee, MA 01013-2839 (4)	1928	$25,152	$9,260	2-M	1,234	146
Elon Univ., Elon, NC 27244-2010	1889	$25,489	$8,236	2-D	5,666	486
Embry-Riddle Aeron Univ., Prescott, AZ 86301-3720	1978	$29,380	$8,530	1-M	1,672	118
Embry-Riddle Aeron Univ., Daytona Beach, FL 32114-3900	1926	$29,724	$8,840	1-M	4,935	324
Embry-Riddle Aeron Univ. Worldwide, Daytona Beach, FL 32114-3900	1970	$5,520	NA	1-M	16,175	2,884
Emerson Coll., Boston, MA 02116-4624	1880	$29,918	$12,280	1-D	4,546	431
Emmanuel Coll., Boston, MA 02115	1919	$29,365	$11,950	2-M	2,286	191
Emory & Henry Coll., Emory, VA 24327-0947	1836	$24,880	$8,300	2-M	1,002	131
Emory Univ., Atlanta, GA 30322-1100	1836	$38,600	$12,300	2-D	12,930	1,561
Emporia State Univ., Emporia, KS 66801-5087	1863	$4,374(S)	$6,146	5-D	6,314	278
Endicott Coll., Beverly, MA 01915-2096	1939	$25,376	$11,836	1-M	4,144	NA
Eugene Lang Coll., The New School for Liberal Arts, New York, NY 10011-8601	1978	$34,550	$15,260	1-B	1,439	143
Evangel Univ., Springfield, MO 65802	1955	$15,950	$6,000	2-M	1,955	125
Everest Univ., Pompano Beach, FL 33062	1940	NA	NA	3-M	1,377	61
Everest Univ., Tampa, FL 33614-5899	1890	NA	NA	3-M	1,320	61
Everest Univ., Tampa, FL 33619	1890	$17,040	NA	3-M	5,984	66
The Evergreen State Coll., Olympia, WA 98505	1967	$5,959(S)	$8,052	5-M	4,891	243
Excelsior Coll., Albany, NY 12203-5159	1970	$315/cr. hr.	NA	1-M	31,924	404
Fairfield Univ., Fairfield, CT 06824-5195	1942	$37,490	$11,270	2-M	5,074	474
Fairleigh Dickinson Univ., Coll. at Florham, Madison, NJ 07940-1099	1942	$31,264	$11,058	1-M	3,509	NA
Fairleigh Dickinson Univ., Metropolitan Campus, Teaneck, NJ 07666-1914	1942	$29,066	$11,368	1-D	8,804	NA
Fairmont State Univ., Fairmont, WV 26554	1865	$5,372(S)	$6,900	5-M	4,572	334
Farmingdale State Coll., Farmingdale, NY 11735	1912	$6,000(S)	$11,618	5-B	6,988	555
Fashion Institute of Tech, New York, NY 10001-5992 (4)	1944	$5,618(S)	$11,248	11-M	10,413	1,007
Faulkner Univ., Montgomery, AL 36109-3398	1942	$14,810	$6,570	2-D	3,349	331
Fayetteville State Univ., Fayetteville, NC 28301-4298	1867	$3,301(S)	$5,010	5-D	6,283	321
Felician Coll., Lodi, NJ 07644-2117	1942	$25,050	$9,700	2-M	2,088	191
Ferris State Univ., Big Rapids, MI 49307	1884	$9,162(S)	$7,944	5-D	13,865	903
Ferrum Coll., Ferrum, VA 24088	1913	$23,565	$7,630	2-B	1,426	109
Fisher Coll., Boston, MA 02116-1500	1903	$24,575	$12,600	1-B	1,310	103
Fitchburg State Coll., Fitchburg, MA 01420-2697	1894	$6,900(S)	$7,632	5-M	7,043	265
Five Towns Coll., Dix Hills, NY 11746-6055	1972	$17,750	$12,300	1-D	1,447	129
Flagler Coll., St. Augustine, FL 32085-1027	1968	$13,330	$7,190	1-B	2,716	197
Florida Agr. & Mech. Univ., Tallahassee, FL 32307-3200	1887	$4,407(S)	$6,706	5-D	12,274	730
Florida Atlantic Univ., Boca Raton, FL 33431-0991	1961	$4,187(S)	$9,582	5-D	27,700	1,283
Florida Gulf Coast Univ., Fort Myers, FL 33965-6565	1991	$5,724(S)	$7,642	5-M	11,104	556
Florida Hosp. Coll. of Health Sci., Orlando, FL 32803	1913	$8,540	NA	1-M	2,207	84
Florida Institute of Tech, Melbourne, FL 32901-6975	1958	$31,520	$10,630	1-D	8,227	578
Florida Intl. Univ., Miami, FL 33199	1965	$4,580(S)	$11,946	5-D	39,718	1,554
Florida Memorial Univ., Miami-Dade, FL 33054	1879	$12,254	$5,340	2-M	1,750	173
Florida National Coll., Hialeah, FL 33012	1982	$13,170	NA	3-B	2,811	96
Florida Southern Coll., Lakeland, FL 33801-5698	1885	$24,662	$8,310	2-M	2,059	216
Florida State Univ., Tallahassee, FL 32306	1851	$4,566(S)	$8,000	5-D	39,785	1,622
Fontbonne Univ., St. Louis, MO 63105-3098 (4)	1917	$20,380	$7,800	2-M	3,002	331
Fordham Univ., New York, NY 10458	1841	$35,257	$12,980	2-D	14,544	1,386
Fort Hays State Univ., Hays, KS 67601-4099	1902	$3,762(S)	$6,370	5-M	11,537	NA
Fort Lewis Coll., Durango, CO 81301-3999	1911	$7,632(S)	$8,304	5-B	3,685	260
Fort Valley State Univ., Fort Valley, GA 31030	1895	$4,478(S)	$7,540	5-D	3,571	202
Framingham State Coll., Framingham, MA 01701-9101	1839	$6,540(S)	$8,148	5-M	5,989	250
Franciscan Univ. of Steubenville, Steubenville, OH 43952-1763	1946	$20,320	$6,900	2-M	2,725	223
Francis Marion Univ., Florence, SC 29502-0547	1970	$8,480(S)	$6,380	5-M	3,957	254
Franklin & Marshall Coll., Lancaster, PA 17604-3003	1787	$39,990	$10,430	1-B	2,179	250
Franklin Coll., Franklin, IN 46131	1834	$23,275	$6,885	2-B	1,153	105
Franklin Pierce Univ., Rindge, NH 03461-0060	1962	$28,700	$9,800	1-D	2,437	251
Franklin Univ., Columbus, OH 43215-5399	1902	$10,728	NA	1-M	7,942	687
Freed-Hardeman Univ., Henderson, TN 38340-2399	1869	$14,998	$7,090	2-D	2,061	151
Fresno Pacific Univ., Fresno, CA 93702-4709	1944	$23,202	$6,800	2-M	2,353	355
Friends Univ., Wichita, KS 67213	1898	$20,040	$5,790	1-M	2,853	342
Frostburg State Univ., Frostburg, MD 21532-1099	1898	$6,684(S)	$7,304	5-M	5,385	360
Full Sail Univ., Winter Park, FL 32792-7437 (2)	1979	NA	NA	3-M	8,921	702
Furman Univ., Greenville, SC 29613	1826	$36,656	$9,170	1-M	2,964	270
Gallaudet Univ., Washington, DC 20002-3625	1864	$11,226	$9,660	1-D	1,488	NA
Gannon Univ., Erie, PA 16541-0001	1925	$23,574	$9,330	2-D	4,238	355
Gardner-Webb Univ., Boiling Springs, NC 28017	1905	$22,440	$6,810	2-D	3,855	NA
Geneva Coll., Beaver Falls, PA 15010-3599	1848	$22,236	$8,000	2-M	1,580	171
George Fox Univ., Newberg, OR 97132-2697	1891	$26,180	$8,320	2-D	3,388	364
George Mason Univ., Fairfax, VA 22030	1957	$8,024(S)	$7,700	5-D	32,067	2,200
Georgetown Coll., Georgetown, KY 40324-1696	1829	$26,080	$7,030	2-M	1,882	163
Georgetown Univ., Washington, DC 20057	1789	$38,122	$12,153	2-D	16,437	1,777
The George Washington Univ., Washington, DC 20052	1821	$41,655	$10,120	1-D	25,061	2,319
Georgia Coll. & State Univ., Milledgeville, GA 31061	1889	$6,902(S)	$8,228	5-M	6,506	412
Georgia Institute of Tech, Atlanta, GA 30332-0001 (2)	1885	$7,506(S)	$8,384	5-D	20,291	1,064
Georgian Court Univ., Lakewood, NJ 08701-2697 (4)	1908	$24,490	$9,386	2-M	3,023	289
Georgia Southern Univ., Statesboro, GA 30460	1906	$5,440(S)	$7,900	5-D	19,086	837
Georgia Southwestern State Univ., Americus, GA 31709-4693	1906	$3,816(S)	$5,694	5-M	2,405	155
Georgia State Univ., Atlanta, GA 30302-3083	1913	$7,498(S)	$10,140	5-D	30,431	1,503
Gettysburg Coll., Gettysburg, PA 17325-1483	1832	$37,600	$9,100	2-B	2,516	286
Glenville State Coll., Glenville, WV 26351-1200	1872	$4,888(S)	$6,460	5-B	1,721	102
Global Univ., Springfield, MO 65804	1948	$3,168	NA	2-D	4,551	633
Golden Gate Univ., San Francisco, CA 94105-2968	1901	$15,120	NA	1-D	3,528	489
Goldey-Beacom Coll., Wilmington, DE 19808-1999	1886	$18,660	$5,021	1-M	1,266	48
Gonzaga Univ., Spokane, WA 99258	1887	$28,262	$7,860	2-D	7,637	727
Gordon Coll., Wenham, MA 01984-1899	1889	$29,458	$8,100	2-M	1,681	149
Goshen Coll., Goshen, IN 46526-4794	1894	$23,400	$7,900	2-M	1,017	122
Goucher Coll., Baltimore, MD 21204-2794	1885	$35,142	$10,756	1-M	2,279	213
Governors State Univ., University Park, IL 60466-0975	1969	$4,896(S)	NA	5-D	5,674	398

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Grace Coll., Winona Lake, IN 46590-1294	1948	$21,100	$6,880	2-D	1,641	128
Graceland Univ., Lamoni, IA 50140	1895	$20,980	$7,040	2-M	2,355	119
Grambling State Univ., Grambling, LA 71245	1901	$4,016(S)	$7,168	5-D	4,992	259
Grand Canyon Univ., Phoenix, AZ 85017-1097	1949	$16,030	$7,896	2-D	13,415	514
Grand Valley State Univ., Allendale, MI 49401-9403	1960	$8,630(S)	$7,478	5-D	24,408	1,587
Grand View Univ., Des Moines, IA 50316-1599	1896	$19,324	$6,442	2-M	2,039	203
Granite State Coll., Concord, NH 03301 (4)	1972	$6,195(S)	NA	11-B	1,734	166
Grantham Univ., Kansas City, MO 64153	1951	$7,950	NA	3-M	6,214	183
Greensboro Coll., Greensboro, NC 27401-1875	1838	$23,616	$8,721	2-M	1,264	96
Greenville Coll., Greenville, IL 62246-0159	1892	$20,924	$7,034	2-M	1,576	178
Grinnell Coll., Grinnell, IA 50112-1690	1846	$36,476	$8,536	1-B	1,688	203
Grove City Coll., Grove City, PA 16127-2104	1876	$12,590	$6,824	2-B	2,530	214
Guilford Coll., Greensboro, NC 27410-4173	1837	$27,450	$7,560	2-B	2,833	244
Gustavus Adolphus Coll., St. Peter, MN 56082-1498	1862	$33,400	$8,400	2-B	2,475	243
Gwynedd-Mercy Coll., Gwynedd Valley, PA 19437-0901	1948	$25,610	$9,760	2-M	2,636	281
Hamilton Coll., Clinton, NY 13323-1296	1812	$39,760	$10,100	1-B	1,882	219
Hamline Univ., St. Paul, MN 55104-1284	1854	$30,503	$8,396	2-D	5,166	531
Hampden-Sydney Coll., Hampden-Sydney, VA 23943 (1)	1776	$32,364	$10,126	2-B	1,068	119
Hampshire Coll., Amherst, MA 01002	1965	$39,912	$10,433	1-B	1,463	159
Hampton Univ., Hampton, VA 23668	1868	$17,212	$7,664	1-D	5,401	428
Harding Univ., Searcy, AR 72149-0001	1924	$13,580	$5,814	2-D	6,484	447
Hardin-Simmons Univ., Abilene, TX 79698-0001	1891	$20,990	$6,282	2-D	2,305	208
Harrington Coll. of Design, Chicago, IL 60605-1496 (4)	1931	$18,600	NA	3-M	1,116	109
Harris-Stowe State Univ., St. Louis, MO 63103-2136	1857	$5,320(S)	$7,861	5-B	1,886	190
Hartwick Coll., Oneonta, NY 13820-4020	1797	$33,330	$9,075	1-B	1,473	195
Harvard Univ., Cambridge, MA 02138	1636	$36,828	$11,856	1-D	10,393	2,122
Hastings Coll., Hastings, NE 68901-7696	1882	$20,782	$5,702	2-M	1,138	123
Haverford Coll., Haverford, PA 19041-1392	1833	$39,085	$11,890	1-B	1,190	138
Hawai`i Pacific Univ., Honolulu, HI 96813	1965	$14,960	$11,094	1-M	8,113	599
Heidelberg Univ., Tiffin, OH 44883-2462	1850	$22,962	$8,635	2-M	1,656	163
Henderson State Univ., Arkadelphia, AR 71999-0001	1890	$6,204(S)	$5,034	5-M	3,578	234
Hendrix Coll., Conway, AR 72032-3080	1876	$30,270	$8,664	2-M	1,463	135
Heritage Univ., Toppenish, WA 98948-9599	1982	$12,205	NA	1-M	1,311	187
High Point Univ., High Point, NC 27262-3598	1924	$35,900(C)	NA	2-M	3,603	292
Hilbert Coll., Hamburg, NY 14075-1597	1957	$18,490	$7,990	1-B	1,046	115
Hillsdale Coll., Hillsdale, MI 49242-1298	1844	$20,500	$7,990	1-B	1,316	154
Hiram Coll., Hiram, OH 44234-0067	1850	$27,135	$9,010	2-M	1,395	139
Hobart & William Smith Colls., Geneva, NY 14456-3397	1822	$38,860	$9,686	1-M	2,009	212
Hodges Univ., Naples, FL 34119	1990	$16,940	NA	1-M	2,292	115
Hofstra Univ., Hempstead, NY 11549	1935	$30,130	$11,330	1-D	12,068	1,180
Hollins Univ., Roanoke, VA 24020-1603	1842	$28,115	$10,040	1-M	1,057	98
Holy Family Univ., Philadelphia, PA 19114 (4)	1954	$23,520	$10,400	2-M	3,345	354
Holy Names Univ., Oakland, CA 94619-1699 (4)	1868	$27,340	$9,320	2-M	1,135	163
Hood Coll., Frederick, MD 21701-8575	1893	$29,860	$9,901	1-M	2,493	257
Hope Coll., Holland, MI 49422-9000	1866	$26,510	$8,110	2-B	3,230	303
Hope Intl. Univ., Fullerton, CA 92831-3138	1928	$23,565	$7,400	2-M	1,059	120
Houghton Coll., Houghton, NY 14744	1883	$24,440	$7,000	2-M	1,336	144
Houston Baptist Univ., Houston, TX 77074-3298	1960	$23,180	$6,975	2-M	2,710	246
Howard Payne Univ., Brownwood, TX 76801-2715	1889	$19,950	$5,694	2-M	1,232	144
Howard Univ., Washington, DC 20059-0002	1867	$16,075	$7,966	1-D	10,288	1,520
Humboldt State Univ., Arcata, CA 95521-8299	1913	$5,166(S)	$9,510	5-M	7,954	508
Hunter Coll. of the City Univ. of New York, New York, NY 10021-5085	1870	$4,999(S)	$5,500	11-M	15,884	1,780
Huntingdon Coll., Montgomery, AL 36106-2148	1854	$20,990	$8,000	2-B	1,075	120
Huntington Univ., Huntington, IN 46750-1299	1897	$22,330	$7,430	2-M	1,297	103
Husson Univ., Bangor, ME 04401-2999	1898	$13,450	$7,239	1-D	2,976	109
Idaho State Univ., Pocatello, ID 83209	1901	$4,968(S)	$5,050	5-D	13,493	838
Illinois Institute of Tech, Chicago, IL 60616-3793	1890	$32,443	$10,094	1-D	7,707	655
Illinois State Univ., Normal, IL 61790-2200	1857	$10,471(S)	$8,093	5-D	21,184	1,180
Illinois Wesleyan Univ., Bloomington, IL 61702-2900	1850	$33,982	$7,776	1-B	2,066	229
Immaculata Univ., Immaculata, PA 19345 (4)	1920	$27,870	$11,460	2-D	4,302	411
Indiana State Univ., Terre Haute, IN 47809	1865	$7,426(S)	$7,463	5-D	10,534	643
Indiana Tech, Fort Wayne, IN 46803-1297	1930	$21,400	$8,040	1-D	4,022	211
Indiana Univ. Bloomington, Bloomington, IN 47405-7000	1820	$8,613(S)	$7,546	5-D	42,347	2,285
Indiana Univ. East, Richmond, IN 47374-1289	1971	$5,801(S)	NA	5-M	2,924	205
Indiana Univ. Kokomo, Kokomo, IN 46904-9003	1945	$5,838(S)	NA	5-M	2,992	175
Indiana Univ. Northwest, Gary, IN 46408-1197	1959	$5,919(S)	NA	5-M	5,560	359
Indiana Univ. of Pennsylvania, Indiana, PA 15705-1087	1875	$7,209(S)	$8,558	5-D	14,638	673
Indiana Univ.–Purdue Univ. Fort Wayne, Fort Wayne, IN 46805-1499	1917	$6,233(S)	$5,620	5-M	13,675	812
Indiana Univ.–Purdue Univ. Indianapolis, Indianapolis, IN 46202-2896	1969	$7,523(S)	$3,370	5-D	30,383	3,096
Indiana Univ. South Bend, South Bend, IN 46634-7111	1922	$6,015(S)	NA	5-M	8,394	546
Indiana Univ. Southeast, New Albany, IN 47150-6405	1941	$5,890(S)	$5,630	5-M	6,840	465
Indiana Wesleyan Univ., Marion, IN 46953-4974	1920	$21,213	$7,008	2-D	3,245	314
Inter Amer. Univ. of Puerto Rico, Aguadilla Campus, Aguadilla, PR 00605	1957	$5,495	NA	1-M	4,502	231
Inter Amer. Univ. of Puerto Rico, Arecibo Campus, Arecibo, PR 00614-4050	1957	$4,212	NA	1-M	4,878	298
Inter Amer. Univ. of Puerto Rico, Barranquitas Campus, Barranquitas, PR 00794	1957	NA	NA	1-M	2,329	135
Inter Amer. Univ. of Puerto Rico, Bayamón Campus, Bayamón, PR 00957	1912	$5,136	NA	1-M	5,162	349
Inter Amer. Univ. of Puerto Rico, Fajardo Campus, Fajardo, PR 00738-7003	1965	$163/credit	NA	1-M	2,239	146
Inter Amer. Univ. of Puerto Rico, Guayama Campus, Guayama, PR 00785	1958	$5,368	NA	1-M	2,356	192
Inter Amer. Univ. of Puerto Rico, Metropolitan Campus, San Juan, PR 00919-1293	1960	$4,212	NA	1-M	10,613	NA
Inter Amer. Univ. of Puerto Rico, Ponce Campus, Mercedita, PR 00715-1602	1962	$4,428	NA	1-M	5,997	257
Inter Amer. Univ. of Puerto Rico, San Germán Campus, San Germán, PR 00683-5008	1912	$5,616	NA	1-D	5,716	307
Intl. Academy of Design & Tech, Chicago, IL 60602-9736	1977	$15,030	NA	3-B	1,832	113
Iona Coll., New Rochelle, NY 10801-1890	1940	$28,850	$11,800	2-M	4,248	390
Iowa State Univ. of Sci. & Tech, Ames, IA 50011	1858	$6,997(S)	NA	5-D	27,945	1,663
Ithaca Coll., Ithaca, NY 14850	1892	$32,060	$11,780	1-D	6,894	702
Jackson State Univ., Jackson, MS 39217	1877	$4,634(S)	$5,810	5-D	8,783	525
Jacksonville State Univ., Jacksonville, AL 36265-1602	1883	$6,240(S)	$5,254	5-M	9,351	322
Jacksonville Univ., Jacksonville, FL 32211	1934	$25,300	$9,060	1-D	3,554	271
James Madison Univ., Harrisonburg, VA 22807	1908	$7,860(S)	$8,020	5-D	18,971	1,340
Jamestown Coll., Jamestown, ND 58405	1883	$16,780	$5,536	2-B	1,004	79
Jefferson Coll. of Health Sci., Roanoke, VA 24031-3186	1982	$17,740	$7,010	1-M	1,041	116
John Brown Univ., Siloam Springs, AR 72761-2121	1919	$18,880	$6,876	2-M	2,073	130
John Carroll Univ., University Heights, OH 44118-4581	1886	$30,250	$8,750	2-M	3,714	365
John F. Kennedy Univ., Pleasant Hill, CA 94523-4817 (4)	1964	$13,161	NA	1-D	1,580	237

Name, Address	Year Founded	Tuition & Fees	Room & Board	Control, Degree	Enrollment	Faculty
John Jay Coll. of Criminal Justice, City Univ. of New York, New York, NY 10019	1964	$4,600(S)	NA	11-M	15,330	1,101
The Johns Hopkins Univ., Baltimore, MD 21218-2699	1876	$39,150	$12,040	1-D	6,782	592
Johnson & Wales Univ., Denver, CO 80220	1993	$24,141	$8,904	1-B	1,461	81
Johnson & Wales Univ., North Miami, FL 33181	1992	$24,429	$8,904	1-B	2,033	92
Johnson & Wales Univ., Charlotte Campus, Charlotte, NC 28202	2004	$24,429	$9,918	1-B	2,452	102
Johnson & Wales Univ., Providence, RI 02903-3703	1914	$24,141	NA	1-D	10,709	474
Johnson C. Smith Univ., Charlotte, NC 28216-5398	1867	$15,754	$6,132	1-B	1,571	131
Johnson State Coll., Johnson, VT 05656	1828	$8,913(S)	$7,808	5-M	1,989	141
Jones Intl. Univ., Centennial, CO 80112	1995	$11,400	NA	3-D	3,861	137
Judson Univ., Elgin, IL 60123-1498	1963	$23,500	$8,200	2-M	1,231	NA
Juniata Coll., Huntingdon, PA 16652-2119	1876	$32,820	$8,980	2-B	1,468	140
Kalamazoo Coll., Kalamazoo, MI 49006-3295	1833	$32,643	$7,776	2-B	1,384	111
Kansas State Univ., Manhattan, KS 66506	1863	$6,870(S)	$6,752	5-D	23,581	1,111
Kean Univ., Union, NJ 07083	1855	$9,446(S)	$12,264	5-D	15,051	1,329
Keene State Coll., Keene, NH 03435	1909	$9,334(S)	$8,444	5-M	5,356	459
Kendall Coll., Chicago, IL 60201-2899	1934	NA	$13,200	2-B	2,389	197
Kennesaw State Univ., Kennesaw, GA 30144-5591	1963	$5,144(S)	$6,593	5-D	22,389	1,234
Kent State Univ., Kent, OH 44242-0001	1910	$8,726(S)	$7,940	5-D	24,930	1,540
Kent State Univ. at Stark, Canton, OH 44720-7599	1967	$4,938(S)	NA	5-M	4,363	206
Kentucky State Univ., Frankfort, KY 40601	1886	$5,920(S)	$6,480	12-M	2,834	180
Kenyon Coll., Gambier, OH 43022-9623	1824	$40,900	$9,500	1-B	1,633	202
Kettering Univ., Flint, MI 48504 (2)	1919	$29,120	$6,390	1-M	2,410	151
Keuka Coll., Keuka Park, NY 14478-0098	1890	$22,680	$9,160	2-M	1,676	175
Keystone Coll., La Plume, PA 18440	1868	$19,120	$9,250	1-B	1,691	277
King Coll., Bristol, TN 37620-2699	1867	$21,880	$7,418	2-M	1,804	152
King's Coll., Wilkes-Barre, PA 18711-0801	1946	$25,644	$9,838	2-M	2,645	211
Knox Coll., Galesburg, IL 61401	1837	$31,911	$7,164	1-B	1,407	137
Kutztown Univ. of Pennsylvania, Kutztown, PA 19530-0730	1866	$7,397(S)	$7,698	5-M	10,634	504
Lafayette Coll., Easton, PA 18042-1798	1826	$37,815	$11,799	2-B	2,406	234
LaGrange Coll., LaGrange, GA 30240-2999	1831	$21,169	$8,576	2-M	1,027	147
Lake Erie Coll., Painesville, OH 44077-3389	1856	$25,674	$8,192	1-M	1,131	108
Lake Forest Coll., Lake Forest, IL 60045	1857	$34,206	$8,006	1-M	1,415	171
Lakeland Coll., Sheboygan, WI 53082-0359	1862	$19,640	$7,016	2-M	3,932	71
Lake Superior State Univ., Sault Sainte Marie, MI 49783	1946	$8,384(S)	$7,994	5-M	2,588	184
Lamar Univ., Beaumont, TX 77710	1923	$6,944(S)	$6,900	5-D	13,992	583
Lander Univ., Greenwood, SC 29649-2099	1872	$9,540(S)	$6,400	5-M	2,614	222
Lane Coll., Jackson, TN 38301-4598	1882	$8,000	$5,520	2-B	2,146	102
Langston Univ., Langston, OK 73050	1897	NA	NA	5-M	2,526	NA
La Roche Coll., Pittsburgh, PA 15237-5898	1963	$21,638	$8,756	2-M	1,356	173
La Salle Univ., Philadelphia, PA 19141-1199	1863	$33,700	$11,230	2-D	6,470	396
Lasell Coll., Newton, MA 02466-2709	1851	$25,300	$10,500	1-M	1,672	179
La Sierra Univ., Riverside, CA 92515	1922	$24,573	$6,990	2-D	1,899	187
Lawrence Tech Univ., Southfield, MI 48075-1058	1932	$23,008	$9,353	1-D	4,518	430
Lawrence Univ., Appleton, WI 54911	1847	$34,596	$7,053	1-B	1,495	189
Lebanon Valley Coll., Annville, PA 17003-1400	1866	$30,490	$8,080	2-D	2,045	198
Lee Univ., Cleveland, TN 37320-3450	1918	$11,610	$5,650	2-M	4,262	328
Lehigh Univ., Bethlehem, PA 18015-3094	1865	$38,630	$10,200	1-D	6,996	672
Lehman Coll. of the City Univ. of New York, Bronx, NY 10468-1589	1931	$4,940(S)	$12,569	11-M	12,188	772
Le Moyne Coll., Syracuse, NY 13214	1946	$25,830	$9,990	2-M	3,524	325
Lenoir-Rhyne Univ., Hickory, NC 28601	1891	$23,070	$8,150	2-M	1,562	175
Lesley Univ., Cambridge, MA 02138-2790	1909	$29,400	$12,800	1-D	5,564	258
LeTourneau Univ., Longview, TX 75607-7001	1946	$21,980	$8,390	2-M	3,386	254
Lewis & Clark Coll., Portland, OR 97219-7899	1867	$35,233	$9,006	1-D	3,523	380
Lewis-Clark State Coll., Lewiston, ID 83501-2698	1893	$4,296(S)	$5,400	5-B	4,200	269
Lewis Univ., Romeoville, IL 60446	1932	$22,990	$8,350	2-D	5,847	571
Liberty Univ., Lynchburg, VA 24502	1971	$17,202	$5,996	2-D	46,126	1,419
Life Univ., Marietta, GA 30060-2903	1974	$8,352	$12,480	1-D	2,301	166
LIM Coll., New York, NY 10022-5268 (4)	1939	$21,450	$19,875	3-M	1,388	170
Lincoln Memorial Univ., Harrogate, TN 37752-1901	1897	$15,700	$5,680	1-D	3,948	226
Lincoln Univ., Jefferson City, MO 65102	1866	$5,685(S)	NA	5-M	3,314	248
Lincoln Univ., Lincoln University, PA 19352	1854	$8,222(S)	$7,770	12-M	2,649	194
Lindenwood Univ., St. Charles, MO 63301-1695	1827	$13,600	$7,210	2-D	10,413	520
Lindsey Wilson Coll., Columbia, KY 42728	1903	$18,950	$7,645	2-M	2,349	178
Linfield Coll., McMinnville, OR 97128-6894	1849	$29,034	$8,280	2-B	1,677	182
Lipscomb Univ., Nashville, TN 37204-3951	1891	$20,390	$7,850	2-D	3,418	335
Lock Haven Univ. of Pennsylvania, Lock Haven, PA 17745-2390	1870	$7,201(S)	$6,736	5-M	5,329	243
Logan Univ.–Coll. of Chiropractic, Chesterfield, MO 63006-1065	1935	$5,730	NA	1-D	1,054	104
Loma Linda Univ., Loma Linda, CA 92350	1905	$24,879	$2,490	2-D	4,270	840
Long Island Univ., Brooklyn Campus, Brooklyn, NY 11201-8423	1926	$27,358	$10,140	1-D	8,051	718
Long Island Univ., C.W. Post Campus, Brookville, NY 11548-1300	1954	$27,400	$10,140	1-D	11,749	889
Longwood Univ., Farmville, VA 23909	1839	$8,925(S)	$7,596	5-M	4,832	279
Loras Coll., Dubuque, IA 52004-0178	1839	$26,234	$7,271	2-M	1,568	159
Louisiana Coll., Pineville, LA 71359-0001	1906	$12,480	$4,316	2-M	1,461	63
Louisiana State Univ. & Agr. & Mech. Coll., Baton Rouge, LA 70803	1860	$5,233(S)	$7,738	5-D	28,643	1,455
Louisiana State Univ. Health Sci. Ctr., New Orleans, LA 70112-2223	1931	$4,196(S)	$6,396	5-D	2,644	893
Louisiana State Univ. in Shreveport, Shreveport, LA 71115-2399	1965	$3,925(S)	NA	5-M	4,667	NA
Louisiana Tech Univ., Ruston, LA 71272	1894	$5,220(S)	$5,055	5-D	11,264	476
Lourdes Coll., Sylvania, OH 43560-2898	1958	$15,300	NA	2-M	2,220	233
Loyola Marymount Univ., Los Angeles, CA 90045-2659	1911	$35,419	$12,025	2-D	9,010	1,009
Loyola Univ. Chicago, Chicago, IL 60660	1870	$32,114	$11,220	2-D	15,879	1,352
Loyola Univ. Maryland, Baltimore, MD 21210-2699	1852	$37,610	$11,280	2-D	6,067	561
Loyola Univ. New Orleans, New Orleans, LA 70118-6195	1912	$31,504	$10,388	2-D	4,714	441
Lubbock Christian Univ., Lubbock, TX 79407-2099	1957	$15,120	$6,182	2-M	1,906	171
Luther Coll., Decorah, IA 52101	1861	$33,480	$5,800	2-B	2,519	251
Luther Rice Univ., Lithonia, GA 30038-2454	1962	$199/sem. hr.	NA	2-M	1,047	NA
Lycoming Coll., Williamsport, PA 17701-5192	1812	$29,894	$8,134	2-B	1,373	126
Lynchburg Coll., Lynchburg, VA 24501-3199	1903	$28,925	$6,970	2-M	2,589	259
Lyndon State Coll., Lyndonville, VT 05851-0919	1911	$7,684(S)	$7,509	5-M	1,385	167
Lynn Univ., Boca Raton, FL 33431-5598	1962	$30,100	$10,900	1-D	2,224	160
Macalester Coll., St. Paul, MN 55105-1899	1874	$40,046	$9,078	2-B	1,996	236
Macon State Coll., Macon, GA 31206	1968	$2,392(S)	NA	5-B	6,244	293
Madonna Univ., Livonia, MI 48150-1173	1947	$13,150	$6,808	2-D	4,467	330
Maharishi Univ. of Mgmt., Fairfield, IA 52557	1971	$24,000	$6,000	1-D	1,207	49
Malone Univ., Canton, OH 44709	1892	$22,444	$7,548	2-M	2,620	218

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Manchester Coll., North Manchester, IN 46962-1225	1889	$23,790	$8,550	2-B	1,223	93
Manhattan Coll., Riverdale, NY 10471	1853	$27,455	$10,670	2-M	3,461	380
Manhattanville Coll., Purchase, NY 10577-2132	1841	$34,350	$13,920	1-M	2,890	332
Mansfield Univ. of Pennsylvania, Mansfield, PA 16933	1857	$7,358(S)	$6,672	5-M	3,569	223
Marian Univ., Indianapolis, IN 46222-1997	1851	$24,960	$7,810	2-M	2,287	202
Marian Univ., Fond du Lac, WI 54935-4699	1936	$20,900	$5,640	2-D	2,841	286
Marietta Coll., Marietta, OH 45750-4000	1835	$27,066	$8,046	1-M	1,588	146
Marist Coll., Poughkeepsie, NY 12601-1387	1929	$26,604	$11,225	1-M	6,179	597
Marquette Univ., Milwaukee, WI 53201-1881	1881	$30,462	NA	2-D	11,689	1,110
Marshall Univ., Huntington, WV 25755	1837	$5,236(S)	$7,556	5-D	13,776	747
Mars Hill Coll., Mars Hill, NC 28754	1856	$20,849	$7,285	2-B	1,237	156
Martin Univ., Indianapolis, IN 46218-3867	1977	$13,520	NA	1-M	1,236	43
Mary Baldwin Coll., Staunton, VA 24401-3610 (4)	1842	$24,585	$7,070	1-M	1,783	136
Marygrove Coll., Detroit, MI 48221-2599 (4)	1905	$15,520	$6,800	2-M	2,953	64
Maryland Institute Coll. of Art, Baltimore, MD 21217	1826	$34,090	$9,450	1-M	1,919	297
Marylhurst Univ., Marylhurst, OR 97036-0261 (4)	1893	$16,920	NA	2-M	1,902	253
Marymount Manhattan Coll., New York, NY 10021-4597	1936	$22,656	$12,874	1-B	2,040	310
Marymount Univ., Arlington, VA 22207-4299	1950	$22,620	$9,745	2-D	3,480	319
Maryville Coll., Maryville, TN 37804-5907	1819	$29,473	$9,032	2-B	1,103	121
Maryville Univ. of St. Louis, St. Louis, MO 63141-7299	1872	$20,994	$8,210	1-D	3,534	393
Marywood Univ., Scranton, PA 18509-1598	1915	$26,270	$11,498	2-D	3,471	382
Massachusetts Coll. of Art & Design, Boston, MA 02115-5882	1873	$8,400(S)	$11,288	5-M	2,405	244
Massachusetts Coll. of Liberal Arts, North Adams, MA 01247-4100	1894	$6,875(S)	$7,868	5-M	1,962	163
Massachusetts Coll. of Pharm. & Health Sci., Boston, MA 02115-5896	1823	$24,550	$11,900	1-D	4,278	210
Massachusetts Institute of Tech, Cambridge, MA 02139-4307	1861	$37,782	$11,360	1-D	10,384	1,778
Massachusetts Maritime Academy, Buzzards Bay, MA 02532-1803 (2)	1891	$6,509(S)	$8,917	5-M	1,288	94
The Master's Coll. & Sem., Santa Clarita, CA 91321-1200	1927	$24,650	$8,000	2-D	1,348	197
McDaniel Coll., Westminster, MD 21157-4390	1867	$32,000	$6,820	1-M	3,623	369
McKendree Univ., Lebanon, IL 62254-1299	1828	$22,070	$7,850	2-M	3,207	394
McMurry Univ., Abilene, TX 79697	1923	$19,205	$6,757	2-B	1,509	145
McNeese State Univ., Lake Charles, LA 70609	1939	$3,422(S)	$4,050	5-M	8,645	409
Medaille Coll., Buffalo, NY 14214-2695	1875	$19,590	$9,288	1-M	2,923	322
Medgar Evers Coll. of the City Univ. of New York, Brooklyn, NY 11225-2298	1969	$4,902(S)	NA	11-B	7,081	497
Med. Coll. of Georgia, Augusta, GA 30912	1828	$6,782(S)	NA	5-D	2,515	831
Med. Univ. of South Carolina, Charleston, SC 29425	1824	$13,768(S)	NA	5-D	2,514	200
Mercer Univ., Macon, GA 31207-0003	1833	$29,540	$8,788	2-D	5,849	634
Mercy Coll., Dobbs Ferry, NY 10522-1189	1951	$17,010	NA	1-D	9,673	828
Mercy Coll. of Northwest Ohio, Toledo, OH 43604 (4)	1993	$10,090	NA	2-B	1,048	123
Mercyhurst Coll., Erie, PA 16546	1926	$26,346	$9,195	2-M	3,217	207
Meredith Coll., Raleigh, NC 27607-5298	1891	$23,550	$6,740	1-M	2,262	280
Merrimack Coll., North Andover, MA 01845-5800	1947	$29,810	$10,190	2-M	2,090	242
Mesa State Coll., Grand Junction, CO 81501-3122	1925	$4,735(S)	$7,355	5-M	6,261	402
Messiah Coll., Grantham, PA 17027	1909	$27,480	$8,160	2-M	2,801	279
Methodist Univ., Fayetteville, NC 28311-1498	1956	$24,220	$8,400	2-M	2,183	213
Metropolitan Coll. of New York, New York, NY 10013 (4)	1964	$16,750	NA	1-M	1,084	183
Metropolitan State Coll. of Denver, Denver, CO 80217-3362	1963	$3,639(S)	NA	5-B	22,837	1,317
Metropolitan State Univ., St. Paul, MN 55106-5000	1971	$5,627(S)	NA	5-M	8,237	711
Miami Univ., Oxford, OH 45056	1809	$13,512(S)	$9,458	12-D	16,884	1,188
Miami Univ. Hamilton, Hamilton, OH 45011-3399	1968	$4,350(S)	NA	5-M	4,194	224
Michigan State Univ., East Lansing, MI 48824	1855	$10,880(S)	$7,394	5-D	47,278	2,972
Michigan Tech Univ., Houghton, MI 49931	1885	$11,348(S)	$8,121	5-D	7,148	445
MidAmerica Nazarene Univ., Olathe, KS 66062-1899	1966	$20,250	$6,750	2-M	1,778	275
Mid-Continent Univ., Mayfield, KY 42066-9007	1949	$13,700	$6,500	2-M	1,823	146
Middlebury Coll., Middlebury, VT 05753-6002	1800	$50,780(C)	NA	1-D	2,482	311
Middle Tennessee State Univ., Murfreesboro, TN 37132	1911	$5,988(S)	$6,514	5-D	25,188	NA
Midland Coll., Midland, TX 79705-6399	1969	$2,192(A)	$3,900	11-B	5,739	269
Midwestern State Univ., Wichita Falls, TX 76308	1922	$6,226(S)	$5,560	5-M	6,341	335
Miles Coll., Fairfield, AL 35064	1905	$7,968	$5,516	2-B	1,738	147
Millersville Univ. of Pennsylvania, Millersville, PA 17551-0302	1855	$7,147(S)	$7,766	5-M	8,427	437
Milligan Coll., Milligan College, TN 37682	1866	$23,460	$5,650	2-M	1,100	117
Millikin Univ., Decatur, IL 62522-2084	1901	$26,345	$7,866	2-M	2,314	277
Millsaps Coll., Jackson, MS 39210-0001	1890	$26,240	$9,252	2-M	1,117	116
Mills Coll., Oakland, CA 94613-1000	1852	$37,605	$11,644	1-D	1,501	181
Milwaukee School of Engr., Milwaukee, WI 53202-3109 (2)	1903	$29,520	$7,431	1-M	2,648	251
Minnesota State Univ. Mankato, Mankato, MN 56001	1868	$6,429(S)	$6,019	5-D	14,621	761
Minnesota State Univ. Moorhead, Moorhead, MN 56563-0002	1885	$6,918(S)	$6,468	5-D	7,510	484
Minot State Univ., Minot, ND 58707-0002	1913	$5,389(S)	$4,602	5-M	3,765	291
Misericordia Univ., Dallas, PA 18612-1098 (4)	1924	$24,050	$10,050	2-D	2,736	275
Mississippi Coll., Clinton, MS 39058	1826	$13,550	$6,150	2-D	4,772	424
Mississippi State Univ., Mississippi State, MS 39762	1878	$5,151(S)	$7,520	5-D	18,601	968
Mississippi Univ. for Women, Columbus, MS 39701-9998 (4)	1884	$4,423(S)	$5,164	5-M	2,476	185
Mississippi Valley State Univ., Itta Bena, MS 38941-1400	1946	$191/cr. hr.(S)	NA	5-M	2,850	179
Missouri Baptist Univ., St. Louis, MO 63141-8660	1964	$17,860	$7,090	2-D	4,836	246
Missouri Southern State Univ., Joplin, MO 64801-1595	1937	$4,290(S)	$5,500	5-M	5,701	295
Missouri State Univ., Springfield, MO 65897	1905	$6,972(S)	$5,925	5-D	20,371	1,027
Missouri Univ. of Sci. & Tech, Rolla, MO 65409 (2)	1870	$8,488(S)	$7,595	5-D	6,815	456
Missouri Valley Coll., Marshall, MO 65340-3197	1889	$15,950	$6,050	2-B	1,639	90
Missouri Western State Univ., St. Joseph, MO 64507-2294	1915	$5,560(S)	$6,600	5-M	5,703	348
Molloy Coll., Rockville Centre, NY 11571-5002	1955	$20,960	NA	1-M	3,791	519
Monmouth Coll., Monmouth, IL 61462-1998	1853	$24,950	$7,300	2-B	1,379	126
Monmouth Univ., West Long Branch, NJ 07764-1898	1933	$25,013	$9,554	1-M	6,499	574
Monroe Coll., Bronx, NY 10468-5407	1933	$12,544	$7,940	3-M	5,068	251
Monroe Coll., New Rochelle, NY 10801	1983	$11,744	$7,940	3-M	2,222	93
Montana State Univ., Bozeman, MT 59717	1893	$5,988(S)	NA	5-D	12,764	808
Montana State Univ.–Billings, Billings, MT 59101-0298	1927	$5,207(S)	$5,460	5-M	4,912	290
Montana State Univ.–Northern, Havre, MT 59501-7751	1929	$5,573(S)	$5,928	5-M	1,215	NA
Montana Tech of The Univ. of Montana, Butte, MT 59701-8997	1895	$6,007(S)	$6,602	5-M	2,694	201
Montclair State Univ., Montclair, NJ 07043-1624	1908	$7,042(S)	NA	5-D	18,171	1,489
Montreat Coll., Montreat, NC 28757-1267	1916	$19,080	$6,000	2-M	1,039	86
Moody Bible Institute, Chicago, IL 60610-3284	1886	$1,275	$8,240	2-D	3,031	183
Moravian Coll., Bethlehem, PA 18018-6650	1742	$32,177	$9,164	2-M	2,057	199
Morehead State Univ., Morehead, KY 40351	1922	$6,036(S)	$6,192	5-M	9,046	467
Morehouse Coll., Atlanta, GA 30314 (1)	1867	$21,376	$10,946	1-B	2,689	213
Morgan State Univ., Baltimore, MD 21251	1867	$6,438(S)	$8,030	5-D	7,005	558
Morningside Coll., Sioux City, IA 51106	1894	$22,980	$7,040	2-M	2,036	173

Name, Address	Year Founded	Tuition & Fees	Room & Board	Control, Degree	Enrollment	Faculty
Mountain State Univ., Beckley, WV 25802-9003	1933	$8,700	$6,116	1-D	5,951	432
Mount Aloysius Coll., Cresson, PA 16630-1999	1939	$17,280	$7,300	2-M	1,604	191
Mount Holyoke Coll., South Hadley, MA 01075 (3)	1837	$39,126	$11,450	1-M	2,304	287
Mount Ida Coll., Newton, MA 02459-3310	1899	$24,500	$12,000	1-M	1,501	200
Mount Marty Coll., Yankton, SD 57078-3724	1936	$18,908	$5,366	2-M	1,214	100
Mount Mary Coll., Milwaukee, WI 53222-4597	1913	$22,118	$7,498	2-M	1,925	208
Mount Mercy Coll., Cedar Rapids, IA 52402-4797	1928	$22,100	$6,984	2-M	1,666	152
Mount Olive Coll., Mount Olive, NC 28365	1951	$13,776	$5,540	2-B	3,569	191
Mount St. Mary Coll., Newburgh, NY 12550-3494	1960	$23,300	$11,900	1-M	2,717	219
Mount St. Mary's Coll., Los Angeles, CA 90049-1599	1925	$30,132	$9,830	2-D	2,482	352
Mount St. Mary's Univ., Emmitsburg, MD 21727-7799	1808	$30,350	$10,308	2-D	2,080	187
Mount Vernon Nazarene Univ., Mount Vernon, OH 43050-9500	1964	$21,330	$6,180	2-M	2,622	267
Muhlenberg Coll., Allentown, PA 18104-5586	1848	$36,990	$8,440	2-B	2,517	260
Murray State Univ., Murray, KY 42071	1922	$5,976(S)	$6,562	5-M	10,071	567
Musicians Institute, Hollywood, CA 90028	1976	NA	NA	3-B	1,252	NA
Muskingum Univ., New Concord, OH 43762	1837	$18,910	$7,350	2-M	2,099	NA
Naropa Univ., Boulder, CO 80302-6697	1974	$23,520	$8,478	1-D	1,081	199
National-Louis Univ., Chicago, IL 60603	1886	$19,155	NA	1-D	7,056	726
National Univ., La Jolla, CA 92037-1011	1971	$10,788	NA	1-M	17,041	2,949
National Univ. Coll., Bayamón, PR 00960	NA	$5,655	NA	13-B	2,443	NA
Nazareth Coll. of Rochester, Rochester, NY 14618-3790	1924	$26,140	$10,716	1-D	3,307	414
Nebraska Wesleyan Univ., Lincoln, NE 68504-2796	1887	$22,432	$6,230	2-M	2,093	168
Neumann Univ., Aston, PA 19014-1298	1965	$21,360	$9,718	2-D	3,099	286
Nevada State Coll. at Henderson, Henderson, NV 89015	2002	$3,563(S)	NA	5-B	2,516	143
Newberry Coll., Newberry, SC 29108-2197	1856	$22,470	$7,750	2-B	1,103	88
New England Coll., Henniker, NH 03242-3293	1946	$27,450	$9,626	1-M	1,916	180
New Jersey City Univ., Jersey City, NJ 07305-1597	1927	$8,988(S)	$9,043	5-M	8,399	715
New Jersey Institute of Tech, Newark, NJ 07102	1881	$12,856(S)	$9,806	5-D	8,840	640
Newman Univ., Wichita, KS 67213-2097	1933	$20,712	$6,938	2-M	2,557	183
New Mexico Highlands Univ., Las Vegas, NM 87701	1893	$2,741(S)	$5,967	5-M	3,784	146
New Mexico Institute of Mining & Tech, Socorro, NM 87801	1889	$4,607(S)	$5,702	5-D	1,897	153
New Mexico State Univ., Las Cruces, NM 88003-8001	1888	$4,998(S)	$6,338	5-D	18,497	1,023
New Orleans Baptist Theol. Sem., New Orleans, LA 70126-4858 (2)	1917	NA	NA	2-D	2,036	NA
The New School for General Studies, New York, NY 10011-8603	1919	$24,288	$15,260	1-M	1,871	360
New York City Coll. of Tech of the City Univ. of New York, Brooklyn, NY 11201-2983	1946	$4,939(S)	NA	11-B	15,404	1,201
New York Institute of Tech, Old Westbury, NY 11568-8000	1955	$24,140	$10,520	1-D	11,695	1,217
New York Univ., New York, NY 10012-1019	1831	$38,765	$13,228	1-D	43,404	5,160
Niagara Univ., Niagara University, NY 14109	1856	$24,700	$10,250	2-M	4,255	375
Nicholls State Univ., Thibodaux, LA 70310	1948	$3,965(S)	$7,310	5-M	7,181	271
Nichols Coll., Dudley, MA 01571-5000	1815	$28,870	$9,330	1-M	1,547	80
Norfolk State Univ., Norfolk, VA 23504	1935	$5,138(S)	NA	5-D	6,993	NA
North Carolina Agr. & Tech State Univ., Greensboro, NC 27411	1891	$3,899(S)	$5,839	5-D	10,614	NA
North Carolina Central Univ., Durham, NC 27707-3129	1910	$3,670(S)	$6,015	5-D	8,587	608
North Carolina State Univ., Raleigh, NC 27695	1887	$5,474(S)	$7,966	5-D	33,819	1,945
North Carolina Wesleyan Coll., Rocky Mount, NC 27804-8677	1956	$20,790	$7,380	2-B	1,510	169
North Central Coll., Naperville, IL 60566-7063	1861	$26,916	$8,565	2-M	2,798	252
Northcentral Univ., Prescott Valley, AZ 86314	NA	$8,340	NA	3-D	8,384	470
North Central Univ., Minneapolis, MN 55404-1322	1930	$15,701	$5,500	2-B	1,125	102
North Dakota State Univ., Fargo, ND 58108	1890	$6,410(S)	$6,568	5-D	14,189	781
Northeastern Illinois Univ., Chicago, IL 60625-4699	1961	$8,508(S)	NA	5-M	11,631	699
Northeastern State Univ., Tahlequah, OK 74464-2399	1846	$4,155(S)	$4,826	5-D	9,318	470
Northeastern Univ., Boston, MA 02115-5096	1898	$35,362	$12,350	1-D	22,091	1,423
Northern Arizona Univ., Flagstaff, AZ 86011	1899	$6,632(S)	$7,872	5-D	23,600	1,414
Northern Illinois Univ., De Kalb, IL 60115-2854	1895	$9,079(S)	$9,588	5-D	25,254	1,180
Northern Kentucky Univ., Highland Heights, KY 41099	1968	$6,792(S)	NA	5-D	15,372	1,151
Northern Michigan Univ., Marquette, MI 49855-5301	1899	$7,454(S)	$7,846	5-M	9,258	462
Northern State Univ., Aberdeen, SD 57401-7198	1901	$6,063(S)	$4,874	5-M	2,625	96
North Georgia Coll. & State Univ., Dahlonega, GA 30597	1873	$5,036(S)	$5,248	5-D	5,652	339
North Greenville Univ., Tigerville, SC 29688-1892	1892	$12,264	$7,056	2-M	2,260	167
North Park Univ., Chicago, IL 60625-4895	1891	$18,800	$7,580	2-D	2,181	NA
Northwestern Coll., Orange City, IA 51041-1996	1882	$22,240	$6,756	2-B	1,206	135
Northwestern Coll., St. Paul, MN 55113-1598	1902	$24,570	$7,720	2-M	1,947	182
Northwestern Oklahoma State Univ., Alva, OK 73717-2799	1897	$4,111(S)	$3,430	5-M	2,232	167
Northwestern State Univ. of Louisiana, Natchitoches, LA 71497	1884	$3,786(S)	$6,682	5-M	9,247	531
Northwestern Univ., Evanston, IL 60208	1851	$38,461	$11,703	1-D	18,431	1,153
Northwest Missouri State Univ., Maryville, MO 64468-6001	1905	$7,032(S)	$7,408	5-M	7,076	334
Northwest Nazarene Univ., Nampa, ID 83686-5897	1913	$23,090	$6,020	2-M	1,934	104
Northwest Univ., Kirkland, WA 98033	1934	$22,650	$6,724	2-D	1,383	108
Northwood Univ., Midland, MI 48640-2398	1959	$18,408	NA	1-M	2,269	129
Norwich Univ., Northfield, VT 05663 (2)	1819	$26,064	$9,032	1-M	3,104	311
Notre Dame Coll., South Euclid, OH 44121-4293	1922	$22,742	$7,592	2-M	1,393	118
Notre Dame de Namur Univ., Belmont, CA 94002-1908	1851	$28,500	$11,600	2-M	1,613	169
Nova Southeastern Univ., Fort Lauderdale, FL 33314-7796	1964	$21,100	$8,360	1-D	29,154	1,713
Nyack Coll., Nyack, NY 10960-3698	1882	$20,500	$8,200	2-D	3,151	338
Oakland City Univ., Oakland City, IN 47660-1099	1885	$16,000	$6,700	2-D	2,550	178
Oakland Univ., Rochester, MI 48309-4401	1957	$8,783(S)	$7,350	5-D	18,920	976
Oakwood Univ., Huntsville, AL 35896	1896	$13,174	$7,458	2-M	1,824	171
Oberlin Coll., Oberlin, OH 44074	1833	$40,004	$10,480	1-M	2,919	285
Occidental Coll., Los Angeles, CA 90041-3314	1887	$40,903	$11,360	1-M	1,989	253
Oglala Lakota Coll., Kyle, SD 57752-0490	1970	NA	NA	11-M	1,000	NA
Oglethorpe Univ., Atlanta, GA 30319-2797	1835	$26,700	$9,990	1-M	1,099	99
Ohio Dominican Univ., Columbus, OH 43219-2099	1911	$24,616	$8,100	2-M	3,052	170
Ohio Northern Univ., Ada, OH 45810-1599	1871	$31,866	$8,280	2-D	3,651	314
The Ohio State Univ., Columbus, OH 43210	1870	$8,706(S)	$8,409	5-D	55,014	4,468
The Ohio State Univ. at Lima, Lima, OH 45804	1960	$5,661(S)	NA	5-M	1,508	87
The Ohio State Univ. at Marion, Marion, OH 43302-5695	1958	$5,661(S)	NA	5-M	1,828	117
The Ohio State Univ.–Mansfield Campus, Mansfield, OH 44906-1599	1958	$5,661(S)	$5,205	5-M	1,647	93
The Ohio State Univ.–Newark Campus, Newark, OH 43055-1797	1957	$5,661(S)	NA	5-M	2,515	136
Ohio Univ., Athens, OH 45701-2979	1804	$8,973(S)	$9,408	5-D	22,647	1,201
Ohio Univ.–Chillicothe, Chillicothe, OH 45601	1946	$4,581(S)	NA	5-M	1,836	NA
Ohio Univ.–Lancaster, Lancaster, OH 43130-1097	1968	$4,581(S)	NA	5-M	1,728	NA
Ohio Univ.–Southern Campus, Ironton, OH 45638-2214	1956	$4,395(S)	NA	5-M	1,836	NA
Ohio Univ.–Zanesville, Zanesville, OH 43701-2695	1946	$4,662(S)	NA	5-M	1,985	130
Ohio Wesleyan Univ., Delaware, OH 43015	1842	$35,030	$9,224	2-B	1,893	214

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Oklahoma Baptist Univ., Shawnee, OK 74804	1910	$18,670	$5,630	2-M	1,764	163
Oklahoma Christian Univ., Oklahoma City, OK 73136-1100	1950	$17,456	$5,850	2-M	2,172	174
Oklahoma City Univ., Oklahoma City, OK 73106-1402	1904	$22,250	$8,350	2-D	3,810	339
Oklahoma Panhandle State Univ., Goodwell, OK 73939-0430	1909	$4,242(S)	$3,320	5-B	1,268	102
Oklahoma State Univ., Stillwater, OK 74078	1890	$6,202(S)	$6,402	5-D	22,845	1,273
Oklahoma Wesleyan Univ., Bartlesville, OK 74006-6299	1909	$17,970	$6,288	2-M	1,100	68
Old Dominion Univ., Norfolk, VA 23529	1930	$7,318(S)	$7,868	5-D	24,013	1,157
Olivet Coll., Olivet, MI 49076-9701	1844	$19,928	$6,872	2-M	1,049	NA
Olivet Nazarene Univ., Bourbonnais, IL 60914	1907	$21,590	$6,400	2-M	4,636	NA
Oral Roberts Univ., Tulsa, OK 74171	1963	$18,916	$7,916	2-D	2,923	291
Oregon Health & Sci. Univ., Portland, OR 97239-3098	1974	$16,051(S)	NA	12-D	2,583	NA
Oregon Institute of Tech, Klamath Falls, OR 97601-8801	1947	$6,765(S)	$8,615	5-M	3,915	247
Oregon State Univ., Corvallis, OR 97331	1868	$6,727(S)	$8,352	5-D	21,969	1,195
Otis Coll. of Art & Design, Los Angeles, CA 90045-9785	1918	$31,360	NA	1-M	1,221	278
Otterbein Univ., Westerville, OH 43081	1847	$26,319	$7,461	2-M	3,131	280
Ouachita Baptist Univ., Arkadelphia, AR 71998-0001	1886	$19,820	$5,840	2-B	1,447	149
Our Lady of Holy Cross Coll., New Orleans, LA 70131-7399	1916	$4,035	NA	2-M	1,298	NA
Our Lady of the Lake Coll., Baton Rouge, LA 70808 (4)	1990	$6,920	NA	2-M	1,872	145
Our Lady of the Lake Univ. of San Antonio, San Antonio, TX 78207-4689	1895	$21,900	$6,838	2-D	2,660	228
Pace Univ., New York, NY 10038	1906	$33,542	$12,240	1-D	12,706	1,118
Pacific Lutheran Univ., Tacoma, WA 98447	1890	$28,100	$8,600	2-M	3,581	276
Pacific Oaks Coll., Pasadena, CA 91103 (4)	1945	$21,540	NA	1-M	1,028	125
Pacific Union Coll., Angwin, CA 94508-9707	1882	$23,979	$6,750	2-M	1,528	95
Pacific Univ., Forest Grove, OR 97116-1797	1849	$29,966	$8,118	1-D	3,167	353
Palm Beach Atlantic Univ., West Palm Beach, FL 33416-4708	1968	$22,700	$8,220	2-D	3,260	330
Palmer Coll. of Chiropractic, Davenport, IA 52803-5287	1897	$6,975	NA	1-D	2,116	NA
Park Univ., Parkville, MO 64152-3795	1875	$8,898	$7,580	1-M	12,775	1,003
Parsons The New School for Design, New York, NY 10011-8878	1896	$36,010	$15,260	1-M	4,598	1,065
Patten Univ., Oakland, CA 94601-2699	1944	$13,440	$7,090	2-M	1,050	125
Peirce Coll., Philadelphia, PA 19102-4699	1865	$14,850	NA	1-B	2,083	159
Penn State Abington, Abington, PA 19001	1950	$12,250(S)	NA	12-B	3,424	237
Penn State Altoona, Altoona, PA 16601-3760	1939	$12,750(S)	$8,170	12-B	4,182	325
Penn State Berks, Reading, PA 19610-6009	1924	$12,750(S)	$8,940	12-B	2,759	200
Penn State Erie, The Behrend Coll., Erie, PA 16563-0001	1948	$12,750(S)	$8,170	12-M	4,400	288
Penn State Harrisburg, Middletown, PA 17057-4898	1966	$12,750(S)	$9,350	12-D	4,012	297
Penn State Univ. Park, University Park, PA 16802-1503	1855	$14,416(S)	$8,170	12-D	45,185	2,797
Pennsylvania Coll. of Tech, Williamsport, PA 17701-5778	1965	$12,480(S)	$8,350	12-B	6,409	484
Pepperdine Univ., Malibu, CA 90263	1937	$37,850	$10,900	2-D	7,733	679
Peru State Coll., Peru, NE 68421	1867	$4,763(S)	$4,962	5-M	2,510	115
Pfeiffer Univ., Misenheimer, NC 28109-0960	1885	$19,040	$7,798	2-M	2,019	150
Philadelphia Biblical Univ., Langhorne, PA 19047-2990	1913	$19,997	$8,050	2-D	1,373	129
Philadelphia Univ., Philadelphia, PA 19144	1884	$27,498	$9,182	1-D	3,497	438
Piedmont Coll., Demorest, GA 30535-0010	1897	$18,000	NA	2-D	2,811	247
Pikeville Coll., Pikeville, KY 41501	1889	$14,535	$6,000	2-D	1,005	70
Pittsburg State Univ., Pittsburg, KS 66762	1903	$4,592(S)	$5,744	5-M	7,277	404
Pitzer Coll., Claremont, CA 91711-6101	1963	$39,330	$11,440	1-B	1,043	97
Plymouth State Univ., Plymouth, NH 03264-1595	1871	$8,944(S)	$8,594	5-D	6,245	416
Point Loma Nazarene Univ., San Diego, CA 92106-2899	1902	$27,100	$9,000	2-M	3,377	NA
Point Park Univ., Pittsburgh, PA 15222-1984	1960	$21,334	$9,020	1-M	3,986	432
Polytechnic Institute of NYU, Brooklyn, NY 11201-2990	1854	$34,420	$9,000	1-D	4,514	341
Polytechnic Univ. of Puerto Rico, Hato Rey, PR 00919 (2)	1966	$6,837	$11,704	1-M	5,520	279
Pomona Coll., Claremont, CA 91711	1887	$38,394	$12,936	1-B	1,550	225
Pontifical Catholic Univ. of Puerto Rico, Ponce, PR 00717-0777	1948	$5,478	$2,990	2-D	7,682	385
Portland State Univ., Portland, OR 97207-0751	1946	$6,764(S)	$9,774	5-D	26,382	1,465
Post Univ., Waterbury, CT 06723-2540	1890	$25,050	$9,700	1-M	2,590	218
Prairie View A&M Univ., Prairie View, TX 77446-0519	1878	$6,664(S)	$6,738	5-D	8,608	456
Pratt Institute, Brooklyn, NY 11205-3899	1887	$36,790	$10,020	1-M	4,707	997
Presbyterian Coll., Clinton, SC 29325	1880	$28,880	$8,345	2-B	1,221	148
Prescott Coll., Prescott, AZ 86301	1966	$23,643	$3,630	1-D	1,121	121
Princeton Univ., Princeton, NJ 08544-1019	1746	$36,640	$11,940	1-D	7,592	1,058
Providence Coll., Providence, RI 02918	1917	$39,435	$11,690	2-M	4,500	400
Purchase Coll., State Univ. of New York, Purchase, NY 10577-1400	1967	$6,431(S)	$9,908	5-M	4,204	384
Purdue Univ., West Lafayette, IN 47907	1869	$8,638(S)	$8,710	5-D	39,697	2,720
Purdue Univ. Calumet, Hammond, IN 46323-2094	1951	$6,337(S)	$6,653	5-M	10,133	518
Purdue Univ. North Central, Westville, IN 46391-9542	1967	$6,704(S)	NA	5-M	4,463	314
Queens Coll. of the City Univ. of New York, Flushing, NY 11367-1597	1937	$5,047(S)	$11,125	11-M	20,711	1,402
Queens Univ. of Charlotte, Charlotte, NC 28274-0002	1857	$22,730	$8,236	2-M	2,568	216
Quincy Univ., Quincy, IL 62301-2699	1860	$22,030	$8,380	2-M	1,845	169
Quinnipiac Univ., Hamden, CT 06518-1940	1929	$34,250	$12,730	1-D	7,758	845
Radford Univ., Radford, VA 24142	1910	$6,904(S)	$6,970	5-D	8,878	527
Ramapo Coll. of New Jersey, Mahwah, NJ 07430-1680	1969	$11,416(S)	$11,290	5-M	6,026	408
Randolph-Macon Coll., Ashland, VA 23005-5505	1830	$29,182	$8,891	2-B	1,246	143
Reed Coll., Portland, OR 97202-8199	1908	$39,700	$10,250	1-M	1,481	133
Regent Univ., Virginia Beach, VA 23464-9800	1977	$14,200	$5,175	1-D	4,886	556
Regis Coll., Weston, MA 02493	1927	$28,900	$12,190	2-D	1,586	138
Regis Univ., Denver, CO 80221-1099	1877	$28,700	$8,982	2-D	11,038	967
Reinhardt Univ., Waleska, GA 30183-2981	1883	$16,670	$6,272	2-M	1,123	160
Rensselaer Polytechnic Institute, Troy, NY 12180-3590	1824	$39,165	$11,145	1-D	7,656	475
Rhode Island Coll., Providence, RI 02908-1991	1854	$6,976(S)	$9,270	5-D	9,260	761
Rhode Island School of Design, Providence, RI 02903-2784	1877	$36,659	$10,846	1-D	2,259	503
Rhodes Coll., Memphis, TN 38112-1690	1848	$33,710	$8,314	2-M	1,685	193
Rice Univ., Houston, TX 77251-1892	1912	$32,105	$11,230	1-D	5,663	755
The Richard Stockton Coll. of New Jersey, Pomona, NJ 08240-0195	1969	$11,041(S)	$10,189	5-D	7,559	519
Rider Univ., Lawrenceville, NJ 08648-3001	1865	$29,060	$10,720	1-M	6,073	626
Ringling Coll. of Art & Design, Sarasota, FL 34234-5895	1931	$28,470	$10,470	1-B	1,318	148
Ripon Coll., Ripon, WI 54971	1851	$25,445	$7,270	1-B	1,065	92
Rivier Coll., Nashua, NH 03060	1933	$25,050	$9,428	2-M	2,256	193
Roanoke Coll., Salem, VA 24153-3794	1842	$31,214	$10,308	2-B	2,044	208
Robert Morris Univ., Moon Township, PA 15108-1189	1921	$20,560	$10,370	1-D	4,783	379
Robert Morris Univ. Illinois, Chicago, IL 60605	1913	$20,100	$9,945	1-M	4,619	292
Roberts Wesleyan Coll., Rochester, NY 14624-1997	1866	$23,780	$8,520	2-M	1,928	248
Rochester Institute of Tech, Rochester, NY 14623-5603	1829	$29,283	$9,642	1-D	16,773	1,426
Rockford Coll., Rockford, IL 61108-2393	1847	$24,750	$6,950	1-M	1,340	156
Rockhurst Univ., Kansas City, MO 64110-2561	1910	$25,890	$7,080	2-D	3,029	228

Name, Address	Year Founded	Tuition & Fees	Room & Board	Control, Degree	Enrollment	Faculty
Rogers State Univ., Claremore, OK 74017-3252	1909	$4,277(S)	$4,505	5-B	4,154	245
Roger Williams Univ., Bristol, RI 02809	1956	$27,718	$11,880	1-D	5,159	584
Rollins Coll., Winter Park, FL 32789-4499	1885	$36,220	$11,320	1-M	2,486	236
Roosevelt Univ., Chicago, IL 60605	1945	$23,000	$11,200	1-D	7,306	NA
Rose-Hulman Institute of Tech, Terre Haute, IN 47803-3999 (2)	1874	$34,560	$9,441	1-M	1,964	168
Rowan Univ., Glassboro, NJ 08028-1701	1923	$11,234(S)	$9,958	5-D	11,006	1,016
Rush Univ., Chicago, IL 60612-3832	1969	$20,352	$9,960	1-D	1,566	796
Rutgers, The State Univ. of New Jersey, Camden, Camden, NJ 08102-1401	1927	$11,698(S)	$9,788	5-D	5,781	434
Rutgers, The State Univ. of New Jersey, Newark, Newark, NJ 07102	1892	$11,414(S)	$11,155	5-D	11,500	704
Rutgers, The State Univ. of New Jersey, New Brunswick, Piscataway, NJ 08854-8097	1766	$11,886(S)	$10,676	5-D	37,364	2,545
Sacred Heart Univ., Fairfield, CT 06825-1000	1963	$30,298	$11,684	2-D	6,023	567
Saginaw Valley State Univ., University Center, MI 48710	1963	$6,890(S)	$7,270	5-M	10,498	597
St. Ambrose Univ., Davenport, IA 52803-2898	1882	$23,910	$8,585	2-D	3,729	406
St. Anselm Coll., Manchester, NH 03102-1310	1889	$30,515	$11,550	2-B	1,915	208
St. Augustine Coll., Chicago, IL 60640-3501	1980	$8,400	NA	1-B	1,430	154
St. Augustine's Coll., Raleigh, NC 27610-2298	1867	$17,160	$7,126	2-B	1,529	134
St. Bonaventure Univ., St. Bonaventure, NY 14778-2284	1858	$26,895	$9,071	2-M	2,472	237
St. Catherine Univ., St. Paul, MN 55105	1905	$28,758	$7,330	2-D	5,277	447
St. Cloud State Univ., St. Cloud, MN 56301-4498	1869	$6,300(S)	$5,984	5-D	17,785	939
St. Edward's Univ., Austin, TX 78704	1885	$26,484	$9,036	2-M	5,293	479
St. Francis Coll., Brooklyn Heights, NY 11201-4398	1884	$17,000	$14,350	2-M	2,511	243
St. Francis Univ., Loretto, PA 15940-0600	1847	$25,554	$8,716	2-D	2,300	225
St. John Fisher Coll., Rochester, NY 14618-3597	1948	$24,320	$10,090	2-D	3,913	375
St. John's Univ., Collegeville, MN 56321 (2)	1857	$29,936	$7,714	2-D	2,020	177
St. John's Univ., Queens, NY 11439	1870	$30,040	$13,140	2-D	20,352	1,440
St. Joseph Coll., West Hartford, CT 06117-2700	1932	$27,202	$12,437	2-M	1,935	218
St. Joseph's Coll., Rensselaer, IN 47978	1889	$24,530	$7,420	2-M	1,076	107
St. Joseph's Coll., Long Island Campus, Patchogue, NY 11772-2399	1916	$16,765	NA	1-M	4,358	406
St. Joseph's Coll., New York, Brooklyn, NY 11205-3688	1916	$16,765	NA	1-M	1,358	139
St. Joseph's Coll. of Maine, Standish, ME 04084	1912	$26,050	$10,350	2-M	1,050	126
St. Joseph's Univ., Philadelphia, PA 19131-1395	1851	$34,090	$11,575	2-D	8,337	656
St. Lawrence Univ., Canton, NY 13617-1455	1856	$39,765	$10,160	1-M	4,696	199
St. Leo Univ., Saint Leo, FL 33574-6665	1889	$17,646	$8,724	2-M	4,127	157
St. Louis Coll. of Pharm., St. Louis, MO 63110-1088	1864	$23,010	$8,560	1-D	1,233	113
St. Louis Univ., St. Louis, MO 63103-2097	1818	$31,342	$8,900	2-D	13,313	1,076
St. Martin's Univ., Lacey, WA 98503	1895	$26,402	$8,660	2-M	1,687	192
St. Mary-of-the-Woods Coll., Saint Mary-of-the-Woods, IN 47876 (4)	1840	$23,060	$8,450	2-M	1,677	174
St. Mary's Coll., Notre Dame, IN 46556 (3)	1844	$29,616	$9,206	2-B	1,664	191
St. Mary's Coll. of California, Moraga, CA 94556	1863	$33,910	$11,940	2-D	3,636	403
St. Mary's Coll. of Maryland, St. Mary's City, MD 20686-3001	1840	$13,630(S)	$10,245	5-M	2,060	225
St. Mary's Univ., San Antonio, TX 78228-8507	1852	$22,556	$7,550	2-D	3,893	340
St. Mary's Univ. of Minnesota, Winona, MN 55987-1399	1912	$26,090	$6,940	2-D	5,565	585
St. Michael's Coll., Colchester, VT 05439	1904	$34,845	$8,685	2-M	2,466	214
St. Norbert Coll., De Pere, WI 54115-2099	1898	$26,972	$7,052	2-M	2,175	183
St. Olaf Coll., Northfield, MN 55057-1098	1874	$35,500	$8,200	2-B	3,099	327
St. Petersburg Coll., St. Petersburg, FL 33733-3489	1927	NA	NA	11-B	29,282	1,734
St. Peter's Coll., Jersey City, NJ 07306-5997	1872	$25,666	$10,336	2-M	3,081	NA
St. Thomas Aquinas Coll., Sparkill, NY 10976	1952	$22,410	$10,300	1-M	2,132	140
St. Thomas Univ., Miami Gardens, FL 33054-6459	1961	$21,690	$6,516	2-D	2,476	231
St. Vincent Coll., Latrobe, PA 15650-2690	1846	$27,190	$9,048	2-M	1,984	187
St. Xavier Univ., Chicago, IL 60655-3105	1847	$24,340	$8,408	2-M	5,048	506
Salem Intl. Univ., Salem, WV 26426-0500	1888	$12,750	NA	1-M	NA	16
Salem State Coll., Salem, MA 01970-5353	1854	$6,790(S)	$6,625	5-M	10,125	759
Salisbury Univ., Salisbury, MD 21801-6837	1925	$6,618(S)	$8,070	5-M	8,204	571
Salve Regina Univ., Newport, RI 02840-4192	1934	$30,000	$10,950	2-D	2,578	248
Samford Univ., Birmingham, AL 35229	1841	$20,420	$6,624	2-D	4,658	419
Sam Houston State Univ., Huntsville, TX 77341	1879	$7,000(S)	$7,022	5-D	16,772	548
Samuel Merritt Univ., Oakland, CA 94609-3108 (4)	1909	$34,148	NA	1-D	1,400	240
San Diego State Univ., San Diego, CA 92182	1897	$4,902(S)	$11,485	5-D	33,790	1,530
San Francisco State Univ., San Francisco, CA 94132-1722	1899	$4,740(S)	$10,904	5-D	30,469	1,566
San Jose State Univ., San Jose, CA 95192-0001	1857	$3,992(S)	$8,663	5-M	31,280	1,685
Santa Clara Univ., Santa Clara, CA 95053	1851	$36,000	$11,400	2-D	8,846	798
Santa Fe Coll., Gainesville, FL 32606	1966	$2,031(S)	NA	11-B	14,796	821
Sarah Lawrence Coll., Bronxville, NY 10708-5999	1926	$40,350	$13,104	1-M	1,701	310
Savannah Coll. of Art & Design, Savannah, GA 31402-3146	1978	$29,570	$11,750	1-M	9,906	658
Savannah State Univ., Savannah, GA 31404	1890	$3,726(S)	$5,644	5-M	3,820	180
School of the Art Institute of Chicago, Chicago, IL 60603-3103	1866	$35,950	$9,800	1-M	3,170	597
School of Visual Arts, New York, NY 10010-3994	1947	NA	NA	3-M	4,051	949
Schreiner Univ., Kerrville, TX 78028-5697	1923	$18,731	$8,726	2-M	1,049	92
Seattle Pacific Univ., Seattle, WA 98119-1997	1891	$27,810	$8,544	2-D	4,000	351
Seattle Univ., Seattle, WA 98122-1090	1891	$29,340	$8,805	2-D	7,751	678
Seton Hall Univ., South Orange, NJ 07079-2697	1856	$31,890	$12,050	2-D	9,616	879
Seton Hill Univ., Greensburg, PA 15601	1883	$26,622	$8,810	2-M	2,145	185
Sewanee: The Univ. of the South, Sewanee, TN 37383-1000	1857	$35,862	$10,250	2-D	1,543	172
Shawnee State Univ., Portsmouth, OH 45662-4344	1986	$6,132(S)	$7,944	5-M	4,300	322
Shaw Univ., Raleigh, NC 27601-2399	1865	$11,696	$7,200	2-D	2,538	236
Shenandoah Univ., Winchester, VA 22601-5195	1875	$25,080	$8,870	2-D	3,619	391
Shepherd Univ., Shepherdstown, WV 25443	1871	$5,234(S)	$7,228	5-M	4,256	334
Shippensburg Univ. of Pennsylvania, Shippensburg, PA 17257-2299	1871	$7,444(S)	$7,086	5-M	8,253	402
Shorter Univ., Rome, GA 30165	1873	$440/cr. hr.	NA	2-M	1,205	149
Siena Coll., Loudonville, NY 12211-1462	1937	$25,285	$9,930	2-M	3,305	330
Siena Heights Univ., Adrian, MI 49221-1796	1919	$19,210	$7,070	2-M	2,351	216
Silicon Valley Univ., San Jose, CA 95131	NA	$250/unit	NA	3-M	1,090	31
Simmons Coll., Boston, MA 02115	1899	$31,450	$12,050	1-D	5,003	548
Simpson Coll., Indianola, IA 50125-1297	1860	$25,733	$7,261	2-M	2,023	195
Simpson Univ., Redding, CA 96003-8606	1921	$21,000	$7,000	2-M	1,143	121
Skidmore Coll., Saratoga Springs, NY 12866	1903	$40,420	$10,776	1-M	2,720	337
Slippery Rock Univ. of Pennsylvania, Slippery Rock, PA 16057-1383	1889	$7,235(S)	$8,454	5-D	8,648	409
Smith Coll., Northampton, MA 01063 (3)	1871	$37,758	$12,622	1-D	3,121	306
Sojourner-Douglass Coll., Baltimore, MD 21205-1814 (4)	1980	$7,478	NA	1-M	1,151	NA
Sonoma State Univ., Rohnert Park, CA 94928-3609	1960	$5,290(S)	$10,086	5-M	8,921	541
South Carolina State Univ., Orangeburg, SC 29117-0001	1896	$8,462(S)	$8,862	5-D	4,538	289
South Dakota School of Mines & Tech, Rapid City, SD 57701-3995	1885	$6,830(S)	$5,080	5-D	2,177	135
South Dakota State Univ., Brookings, SD 57007	1881	$6,155(S)	$5,668	5-D	12,376	679
Southeastern Louisiana Univ., Hammond, LA 70402	1925	$3,932(S)	$6,450	5-D	15,160	644
Southeastern Oklahoma State Univ., Durant, OK 74701-0609	1909	$4,316(S)	$4,290	5-M	4,228	247
Southeastern Univ., Lakeland, FL 33801-6099	1935	$15,000	$7,566	2-M	2,950	154
Southeast Missouri State Univ., Cape Girardeau, MO 63701-4799	1873	$6,255(S)	$6,358	5-M	10,859	591

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Southern Adventist Univ., Collegedale, TN 37315-0370	1892	$17,712	$5,174	2-M	2,891	257
Southern Arkansas Univ.–Magnolia, Magnolia, AR 71753	1909	$6,066(S)	$4,400	5-M	3,226	214
Southern Baptist Theol. Sem., Louisville, KY 40280-0004	1858	NA	NA	2-D	3,190	NA
Southern Connecticut State Univ., New Haven, CT 06515-1355	1893	$8,050(S)	$9,983	5-D	11,815	1,081
Southern Illinois Univ. Carbondale, Carbondale, IL 62901-4701	1869	$10,411(S)	$7,673	5-D	20,350	1,094
Southern Illinois Univ. Edwardsville, Edwardsville, IL 62026-0001	1957	$8,336(S)	$7,461	5-D	13,940	870
Southern Methodist Univ., Dallas, TX 75275	1911	$35,160	$12,445	2-D	10,891	1,034
Southern Nazarene Univ., Bethany, OK 73008	1899	$17,664	$6,490	2-M	2,069	198
Southern New Hampshire Univ., Manchester, NH 03106-1045	1932	$26,442	$10,176	1-D	4,211	388
Southern Oregon Univ., Ashland, OR 97520	1926	$5,718(S)	$8,250	5-M	5,103	290
Southern Polytechnic State Univ., Marietta, GA 30060-2896	1948	$4,498(S)	$6,350	5-M	5,186	278
Southern Univ. & Agr. & Mech. Coll., Baton Rouge, LA 70813	1880	$4,100(S)	$5,666	5-D	7,699	546
Southern Univ. at New Orleans, New Orleans, LA 70126-1009 (4)	1959	$3,072(S)	NA	5-M	3,141	102
Southern Utah Univ., Cedar City, UT 84720-2498	1897	$4,269(S)	$1,950	5-M	8,066	326
Southern Wesleyan Univ., Central, SC 29630-1020	1906	$19,500	$7,200	2-M	2,382	219
Southwest Baptist Univ., Bolivar, MO 65613-2597	1878	$17,280	$5,720	2-D	3,716	260
Southwestern Assemblies of God Univ., Waxahachie, TX 75165-5735	1927	$13,780	$5,112	2-M	2,018	142
Southwestern Coll., Winfield, KS 67156-2499	1885	$19,630	$5,750	2-M	1,810	102
Southwestern Oklahoma State Univ., Weatherford, OK 73096-3098	1901	$4,110(S)	$3,900	5-D	5,046	230
Southwestern Univ., Georgetown, TX 78626	1840	$30,220	$9,130	2-B	1,301	166
Southwest Florida Coll., Fort Myers, FL 33907	1940	NA	NA	1-B	1,263	NA
Southwest Minnesota State Univ., Marshall, MN 56258	1963	$7,229(S)	$6,846	5-M	6,740	185
Spalding Univ., Louisville, KY 40203-2188	1814	$17,550	$4,560	2-D	2,069	310
Spelman Coll., Atlanta, GA 30314-4399 (3)	1881	$22,010	$10,062	1-B	2,229	248
Spring Arbor Univ., Spring Arbor, MI 49283-9799	1873	$19,790	$6,950	2-M	4,120	140
Springfield Coll., Springfield, MA 01109-3797	1885	$26,480	$9,510	1-M	3,155	342
Spring Hill Coll., Mobile, AL 36608-1791	1830	$25,450	$9,730	2-M	1,521	133
Stanford Univ., Stanford, CA 94305-9991	1891	$37,881	$11,463	1-D	18,498	1,023
State Univ. of New York at Binghamton, Binghamton, NY 13902-6000	1946	$6,761(S)	$10,614	5-D	14,711	871
State Univ. of New York at Fredonia, Fredonia, NY 14063-1136	1826	$6,308(S)	$9,330	5-M	5,776	444
State Univ. of New York at New Paltz, New Paltz, NY 12561	1828	$6,081(S)	$9,202	5-M	7,957	668
State Univ. of New York at Oswego, Oswego, NY 13126	1861	$6,256(S)	$10,870	5-M	8,119	513
State Univ. of New York at Plattsburgh, Plattsburgh, NY 12901-2681	1889	$6,100(S)	$8,600	5-M	6,453	507
State Univ. of New York Coll. at Cortland, Cortland, NY 13045	1868	$6,145(S)	$9,790	5-M	7,322	597
State Univ. of New York Coll. at Geneseo, Geneseo, NY 14454-1401	1871	$6,326(S)	$9,550	5-M	5,660	353
State Univ. of New York Coll. at Old Westbury, Old Westbury, NY 11568-0210	1965	$5,797(S)	$9,390	5-M	3,897	251
State Univ. of New York Coll. at Oneonta, Oneonta, NY 13820-4015	1889	$6,185(S)	$8,900	5-M	5,893	499
State Univ. of New York Coll. at Potsdam, Potsdam, NY 13676	1816	$6,124(S)	$9,270	5-M	4,298	362
State Univ. of New York Coll. of Agr. & Tech at Cobleskill, Cobleskill, NY 12043	1916	$6,311(S)	$9,460	5-B	2,619	175
State Univ. of New York Coll. of Agr. & Tech at Morrisville, Morrisville, NY 13408-0901	1908	$223/credit(S)	NA	5-B	3,432	261
State Univ. of New York Coll. of Envir. Sci., & Forestry, Syracuse, NY 13210-2779	1911	$5,891(S)	$12,460	5-D	2,199	173
State Univ. of New York Coll. of Tech at Canton, Canton, NY 13617	1906	$6,279(S)	$9,320	5-B	3,320	200
State Univ. of New York Coll. of Tech at Delhi, Delhi, NY 13753	1913	$6,360(S)	$9,300	5-B	2,971	187
State Univ. of New York Downstate Med. Ctr., Brooklyn, NY 11203-2098	1858	$7,453(S)	$11,898	5-D	1,660	981
State Univ. of New York Empire State Coll., Saratoga Springs, NY 12866-4391	1971	$5,195(S)	NA	5-M	14,325	1,447
State Univ. of New York Institute of Tech, Utica, NY 13504-3050	1966	$5,413(S)	$8,320	5-M	2,828	183
State Univ. of New York Maritime Coll., Throggs Neck, NY 10465-4198 (2)	1874	$6,090(S)	$9,930	5-M	1,757	129
State Univ. of New York Upstate Med. Univ., Syracuse, NY 13210-2334	1950	$5,550(S)	$10,422	5-D	1,443	81
Stephen F. Austin State Univ., Nacogdoches, TX 75962	1923	$6,732(S)	$7,377	5-D	12,845	657
Stephens Coll., Columbia, MO 65215-0002 (4)	1833	$25,400	$7,170	1-M	1,238	113
Stetson Univ., DeLand, FL 32723	1883	$33,424	$9,805	1-D	3,790	353
Stevens Institute of Tech, Hoboken, NJ 07030	1870	$37,980	$12,150	1-D	5,862	438
Stevenson Univ., Stevenson, MD 21153	1952	$20,644	$10,296	1-M	3,432	349
Stillman Coll., Tuscaloosa, AL 35403-9990	1876	$13,462	$6,336	2-B	1,048	63
Stonehill Coll., Easton, MA 02357	1948	$31,210	$12,240	2-B	2,468	254
Stony Brook Univ., State Univ. of New York, Stony Brook, NY 11794	1957	$6,489(S)	$9,590	5-D	24,692	1,482
Suffolk Univ., Boston, MA 02108-2770	1906	$27,208	$14,544	1-D	9,457	989
Sullivan Univ., Louisville, KY 40205	1864	$14,940	$4,320	3-M	4,538	269
Sul Ross State Univ., Alpine, TX 79832	1920	$2,928(S)	$6,370	5-M	2,778	159
Susquehanna Univ., Selinsgrove, PA 17870	1858	$32,850	$8,800	2-B	2,231	237
Swarthmore Coll., Swarthmore, PA 19081-1397	1864	$37,860	$11,740	1-B	1,525	211
Syracuse Univ., Syracuse, NY 13244	1870	$34,926	$12,374	1-D	19,638	1,507
Tarleton State Univ., Stephenville, TX 76402	1899	$7,150(S)	$6,591	5-D	10,424	607
Taylor Univ., Upland, IN 46989-1001	1846	$25,396	$6,708	2-M	2,560	246
Temple Univ., Philadelphia, PA 19122-6096	1884	$11,764(S)	$9,198	12-D	36,505	2,890
Tennessee State Univ., Nashville, TN 37209-1561	1912	$5,132(S)	$5,462	5-M	8,254	603
Tennessee Tech Univ., Cookeville, TN 38505	1915	$5,498(S)	$7,124	5-D	10,847	633
Tennessee Wesleyan Coll., Athens, TN 37371-0040	1857	$18,600	$6,100	2-B	1,070	87
Texas A&M Intl. Univ., Laredo, TX 78041-1900	1969	$5,717(S)	$6,918	5-D	6,419	303
Texas A&M Univ., College Station, TX 77843	1876	$8,176(S)	$8,039	5-D	48,703	2,818
Texas A&M Univ. at Galveston, Galveston, TX 77553-1675	1962	$6,818(S)	$5,676	5-M	1,774	170
Texas A&M Univ.–Commerce, Commerce, TX 75429-3011	1889	$5,500(S)	$7,090	5-D	9,170	843
Texas A&M Univ.–Corpus Christi, Corpus Christi, TX 78412-5503	1947	$6,221(S)	$9,528	5-D	9,468	528
Texas A&M Univ.–Kingsville, Kingsville, TX 78363	1925	$5,882(S)	$5,020	5-D	7,133	559
Texas A&M Univ.–Texarkana, Texarkana, TX 75505-5518	1971	$3,392(S)	NA	5-M	1,670	108
Texas Christian Univ., Fort Worth, TX 76129-0002	1873	$30,048	$10,112	2-D	8,853	799
Texas Lutheran Univ., Seguin, TX 78155-5999	1891	$21,910	$6,400	2-B	1,387	134
Texas Southern Univ., Houston, TX 77004-4584	1947	$7,080(S)	$11,620	5-D	9,394	609
Texas State Univ.–San Marcos, San Marcos, TX 78666	1899	$7,482(S)	$6,392	5-D	30,803	1,371
Texas Tech Univ., Lubbock, TX 79409	1923	$7,485(S)	$7,527	5-D	30,049	1,316
Texas Wesleyan Univ., Fort Worth, TX 76105-1536	1890	$17,760	$6,656	2-D	3,333	259
Texas Woman's Univ., Denton, TX 76201 (4)	1901	$6,660(S)	$5,967	5-D	13,237	749
Thomas Edison State Coll., Trenton, NJ 08608-1176	1972	$4,695(S)	NA	5-M	18,206	NA
Thomas Jefferson Univ., Philadelphia, PA 19107	1824	NA	NA	1-D	2,867	266
Thomas More Coll., Crestview Hills, KY 41017-3495	1921	$24,720	$6,530	2-M	1,858	133
Tiffin Univ., Tiffin, OH 44883-2161	1888	$18,390	$8,340	1-M	3,429	292
Touro Coll., New York, NY 10010	1971	$15,300	$6,600	1-D	17,129	NA
Towson Univ., Towson, MD 21252-0001	1866	$7,418(S)	$8,670	5-D	21,177	1,545
Transylvania Univ., Lexington, KY 40508-1797	1780	$25,280	$7,770	2-B	1,092	96
Trevecca Nazarene Univ., Nashville, TN 37210-2877	1901	$18,318	$7,734	2-D	2,476	222
Trine Univ., Angola, IN 46703-1764	1884	$25,400	$8,500	1-M	1,616	102
Trinity Christian Coll., Palos Heights, IL 60463-0929	1959	$21,335	$8,125	2-B	1,450	151
Trinity Coll., Hartford, CT 06106-3100	1823	$42,370	$10,960	1-M	2,514	267
Trinity Intl. Univ., Deerfield, IL 60015-1284	1897	$21,980	$7,430	2-D	2,671	82
Trinity Univ., San Antonio, TX 78212-7200	1869	$29,317	$8,895	2-M	2,693	326

Name, Address	Year Founded	Tuition & Fees	Room & Board	Control, Degree	Enroll-ment	Faculty
Trinity (Washington) Univ., Washington, DC 20017-1094	1897	$19,357	$8,450	2-M	1,630	NA
Troy Univ., Troy, AL 36082	1887	$7,016(S)	$6,042	5-D	29,327	1,513
Truman State Univ., Kirksville, MO 63501-4221	1867	$6,692(S)	$6,854	5-M	5,747	372
Tufts Univ., Medford, MA 02155	1852	$40,342	$10,746	1-D	10,030	1,097
TUI Univ., Cypress, CA 90630	NA	$9,440	NA	1-D	8,046	269
Tulane Univ., New Orleans, LA 70118-5669	1834	$40,584	$9,606	1-D	11,911	1,184
Tusculum Coll., Greeneville, TN 37743-9997	1794	$19,530	$7,735	2-M	2,203	224
Tuskegee Univ., Tuskegee, AL 36088	1881	$16,750	$7,570	1-D	2,931	278
Union Coll., Barbourville, KY 40906-1499	1879	$18,860	$5,950	2-M	1,421	104
Union Coll., Schenectady, NY 12308-2311	1795	$50,439(C)	NA	1-B	2,194	228
Union Institute & Univ., Cincinnati, OH 45206-1925	1969	$10,528	NA	1-D	1,523	315
Union Univ., Jackson, TN 38305-3697	1823	$20,940	$6,930	2-D	3,922	215
United States Air Force Academy, USAF Academy, CO 80840-5025 (2)	1954	$0(C)	NA	4-B	4,620	527
United States Merchant Marine Academy, Kings Point, NY 11024-1699	1943	$0(C)	NA	4-M	1,003	NA
United States Military Academy, West Point, NY 10996	1802	$0(C)	NA	4-B	4,621	625
United States Naval Academy, Annapolis, MD 21402-5000 (2)	1845	$0(C)	NA	4-B	4,552	NA
United Talmudical Sem., Brooklyn, NY 11211 (1)	1949	NA	NA	2-M	1,500	NA
Universidad Adventista de las Antillas, Mayagüez, PR 00681-0118	1957	$6,170	$2,900	2-M	1,019	85
Universidad del Este, Carolina, PR 00984	1949	$4,584	NA	1-M	12,291	NA
Universidad del Turabo, Gurabo, PR 00778-3030	1972	$4,584	NA	1-D	16,296	NA
Universidad Metropolitana, San Juan, PR 00928-1150	1980	NA	NA	1-M	12,389	903
Univ. at Albany, State Univ. of New York, Albany, NY 12222-0001	1844	$6,748(S)	$10,238	5-D	18,020	1,268
Univ. at Buffalo, the State Univ. of New York, Buffalo, NY 14260	1846	$7,013(S)	$9,648	5-D	28,881	1,737
Univ. of Advancing Tech, Tempe, AZ 85283-1042 (2)	1983	$18,900	$11,034	3-M	1,147	103
The Univ. of Akron, Akron, OH 44325	1870	$8,752(S)	$8,697	5-D	24,675	1,692
The Univ. of Alabama, Tuscaloosa, AL 35487	1831	$7,000(S)	$7,796	5-D	28,699	1,437
The Univ. of Alabama at Birmingham, Birmingham, AL 35294	1969	$5,096(S)	$8,142	5-D	16,874	916
The Univ. of Alabama in Huntsville, Huntsville, AL 35899	1950	$6,510(S)	$7,208	5-D	7,681	457
Univ. of Alaska Anchorage, Anchorage, AK 99508	1954	$4,580(S)	$7,962	5-M	17,825	1,278
Univ. of Alaska Fairbanks, Fairbanks, AK 99775-7520	1917	$5,668(S)	$6,800	5-D	9,137	1,049
Univ. of Alaska Southeast, Juneau, AK 99801	1972	$4,903(S)	$6,260	5-M	3,260	NA
The Univ. of Arizona, Tucson, AZ 85721	1885	$5,542(S)	$7,812	5-D	38,767	1,953
Univ. of Arkansas, Fayetteville, AR 72701-1201	1871	$6,400(S)	$7,422	5-D	19,849	983
Univ. of Arkansas at Fort Smith, Fort Smith, AR 72913-3649	1928	$4,600(S)	$4,789	11-B	7,335	399
Univ. of Arkansas at Little Rock, Little Rock, AR 72204-1099	1927	$6,083(S)	$3,100	5-D	13,132	749
Univ. of Arkansas at Monticello, Monticello, AR 71656	1909	$4,740(S)	$3,900	5-M	3,479	274
Univ. of Arkansas at Pine Bluff, Pine Bluff, AR 71601-2799	1873	$4,796(S)	$6,168	5-M	3,792	258
Univ. of Arkansas for Med. Sci., Little Rock, AR 72205-7199	1879	$17,362(S)	NA	5-D	2,549	NA
Univ. of Atlanta, Atlanta, GA 30360	NA	$3,300	NA	1-D	1,410	299
Univ. of Baltimore, Baltimore, MD 21201-5779	1925	$7,330(S)	NA	5-D	6,265	373
Univ. of Bridgeport, Bridgeport, CT 06604	1927	$25,465	$11,080	1-D	5,103	493
Univ. of California, Berkeley, Berkeley, CA 94720-1500	1868	$9,817(S)	$15,308	5-D	35,843	NA
Univ. of California, Davis, Davis, CA 95616	1905	$9,364(S)	$12,361	5-D	31,247	1,879
Univ. of California, Irvine, Irvine, CA 92697	1965	$11,913(S)	$10,655	5-D	27,142	1,892
Univ. of California, Los Angeles, Los Angeles, CA 90095	1919	$9,151(S)	$13,314	5-D	39,984	2,711
Univ. of California, Merced, Merced, CA 95343	NA	$4,476(S)	$10,550	5-D	3,414	217
Univ. of California, Riverside, Riverside, CA 92521-0102	1954	$8,507(S)	$10,900	5-D	19,439	919
Univ. of California, San Diego, La Jolla, CA 92093	1959	$9,698(S)	$11,057	5-D	26,723	1,144
Univ. of California, Santa Barbara, Santa Barbara, CA 93106-2014	1909	$9,055(S)	$12,765	5-D	22,850	1,086
Univ. of California, Santa Cruz, Santa Cruz, CA 95064	1965	$10,095(S)	$13,641	5-D	16,775	803
Univ. of Central Arkansas, Conway, AR 72035-0001	1907	$6,699(S)	$4,880	5-D	12,974	709
Univ. of Central Florida, Orlando, FL 32816	1963	$4,526(S)	$8,540	5-D	53,537	1,707
Univ. of Central Missouri, Warrensburg, MO 64093	1871	$7,311(S)	$6,320	5-M	11,191	559
Univ. of Central Oklahoma, Edmond, OK 73034-5209	1890	$4,223(S)	$7,776	5-M	16,092	860
Univ. of Charleston, Charleston, WV 25304-1099	1888	$24,000	$8,700	1-D	1,396	120
Univ. of Chicago, Chicago, IL 60637-1513	1891	$39,432	$11,697	1-D	12,332	1,662
Univ. of Cincinnati, Cincinnati, OH 45221	1819	$9,399(S)	$9,702	5-D	31,134	1,225
Univ. of Colorado at Boulder, Boulder, CO 80309	1876	$7,932(S)	$10,378	5-D	32,751	2,091
Univ. of Colorado at Colorado Springs, Colorado Springs, CO 80933-7150	1965	$5,693(S)	$7,490	5-D	10,088	421
Univ. of Colorado Denver, Denver, CO 80217-3364	1912	$6,657(S)	$11,374	5-D	24,119	2,936
Univ. of Connecticut, Storrs, CT 06269	1881	$10,416(S)	$10,782	5-D	25,029	1,333
Univ. of Dallas, Irving, TX 75062-4736	1955	$27,815	$8,650	2-D	2,883	233
Univ. of Dayton, Dayton, OH 45469-1300	1850	$29,930	$9,400	2-D	10,908	937
Univ. of Delaware, Newark, DE 19716	1743	$9,486(S)	$9,066	12-D	19,391	1,440
Univ. of Denver, Denver, CO 80208	1864	$36,501	$10,224	1-D	11,644	1,259
Univ. of Detroit Mercy, Detroit, MI 48221	1877	$28,920	$8,590	2-D	5,725	NA
Univ. of Dubuque, Dubuque, IA 52001-5099	1852	$21,590	$7,370	2-D	1,718	164
Univ. of Evansville, Evansville, IN 47722	1854	$26,756	$8,670	2-D	2,884	221
The Univ. of Findlay, Findlay, OH 45840-3653	1882	$25,774	$8,554	2-D	4,278	320
Univ. of Florida, Gainesville, FL 32611	1853	$4,373(S)	$7,500	5-D	50,691	3,596
Univ. of Georgia, Athens, GA 30602	1785	$7,530(S)	$8,046	5-D	34,885	2,213
Univ. of Guam, Mangilao, GU 96923	1952	$5,770(S)	$9,102	7-M	3,550	258
Univ. of Hartford, West Hartford, CT 06117-1599	1877	$29,852	$11,572	1-D	7,212	921
Univ. of Hawaii at Hilo, Hilo, HI 96720-4091	1970	$4,360(S)	$11,403	5-D	3,974	347
Univ. of Hawaii at Manoa, Honolulu, HI 96822	1907	$7,983(S)	$8,493	5-D	20,435	1,270
Univ. of Hawaii–West Oahu, Pearl City, HI 96782-3366	1976	$4,666(S)	NA	5-B	1,293	74
Univ. of Houston, Houston, TX 77204	1927	$8,496(S)	$7,164	5-D	37,000	1,780
Univ. of Houston–Clear Lake, Houston, TX 77058-1098	1971	$5,708(S)	$7,896	5-D	7,662	525
Univ. of Houston–Downtown, Houston, TX 77002	1974	$5,232(S)	NA	5-M	12,742	594
Univ. of Houston–Victoria, Victoria, TX 77901-4450	1973	$5,400(S)	NA	5-M	3,655	176
Univ. of Idaho, Moscow, ID 83844-2282	1889	$4,932(S)	$7,242	5-D	11,957	667
Univ. of Illinois at Chicago, Chicago, IL 60607-7128	1946	$12,034(S)	$9,435	5-D	26,840	1,540
Univ. of Illinois at Springfield, Springfield, IL 62703-5407	1969	$9,532(S)	$9,200	5-D	4,961	358
Univ. of Illinois at Urbana-Champaign, Champaign, IL 61820	1867	$12,660(S)	$9,284	5-D	43,881	1,937
Univ. of Indianapolis, Indianapolis, IN 46227-3697	1902	$21,170	$8,040	2-D	4,989	437
The Univ. of Iowa, Iowa City, IA 52242-1316	1847	$7,417(S)	$8,331	5-D	28,987	1,679
The Univ. of Kansas, Lawrence, KS 66045	1866	$8,206(S)	$6,802	5-D	29,242	1,315
Univ. of Kentucky, Lexington, KY 40506-0032	1865	$8,123(S)	$9,125	5-D	26,295	1,683
Univ. of La Verne, La Verne, CA 91750-4443	1891	$29,800	$10,440	1-D	4,060	394
Univ. of Louisiana at Lafayette, Lafayette, LA 70504	1898	$3,574(S)	$4,200	5-D	16,345	743
Univ. of Louisiana at Monroe, Monroe, LA 71209-0001	1931	$3,791(S)	$3,370	5-D	9,004	385
Univ. of Louisville, Louisville, KY 40292-0001	1798	$7,944(S)	$5,437	5-D	21,016	1,356
Univ. of Maine, Orono, ME 04469	1865	$9,626(S)	$8,008	5-D	11,867	798
Univ. of Maine at Augusta, Augusta, ME 04330-9410	1965	$6,855(S)	NA	5-B	5,054	296
Univ. of Maine at Farmington, Farmington, ME 04938-1990	1863	$8,710(S)	$7,552	5-M	2,238	169
Univ. of Maine at Fort Kent, Fort Kent, ME 04743-1292	1878	$6,803(S)	$7,080	5-B	1,126	72

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Univ. of Maine at Presque Isle, Presque Isle, ME 04769-2888	1903	$6,875(S)	$7,300	5-B	1,412	119
Univ. of Mary, Bismarck, ND 58504-9652	1959	$13,126	$5,150	2-D	2,849	273
Univ. of Mary Hardin-Baylor, Belton, TX 76513	1845	$20,650	$5,350	2-D	2,768	238
Univ. of Maryland, Baltimore Cty, Baltimore, MD 21250	1963	$8,872(S)	$9,303	5-D	12,870	730
Univ. of Maryland, College Park, College Park, MD 20742	1856	$8,053(S)	$9,377	5-D	37,146	2,273
Univ. of Maryland Eastern Shore, Princess Anne, MD 21853-1299	1886	$6,082(S)	$7,230	5-D	3,762	283
Univ. of Maryland Univ. Coll., Adelphi, MD 20783	1947	$5,760(S)	NA	5-D	37,347	1,958
Univ. of Mary Washington, Fredericksburg, VA 22401-5358	1908	$3,900(S)	$8,200	5-M	5,084	377
Univ. of Massachusetts Amherst, Amherst, MA 01003	1863	$11,917(S)	$8,276	5-D	27,016	1,315
Univ. of Massachusetts Boston, Boston, MA 02125-3393	1964	$10,611(S)	NA	5-D	14,912	964
Univ. of Massachusetts Dartmouth, North Dartmouth, MA 02747-2300	1895	$10,358(S)	$8,950	5-D	9,302	588
Univ. of Massachusetts Lowell, Lowell, MA 01854-2881	1894	$10,681(S)	$8,635	5-D	13,602	714
Univ. of Memphis, Memphis, TN 38152	1912	$6,458(S)	$5,950	5-D	21,424	1,335
Univ. of Miami, Coral Gables, FL 33124	1925	$37,836	$11,062	1-D	15,629	1,296
Univ. of Michigan, Ann Arbor, MI 48109	1817	$12,589(S)	$8,924	5-D	41,674	3,074
Univ. of Michigan–Dearborn, Dearborn, MI 48128-1491	1959	$9,100(S)	NA	5-D	8,343	507
Univ. of Michigan–Flint, Flint, MI 48502-1950	1956	$8,279(S)	$6,874	5-D	7,773	494
Univ. of Minnesota, Crookston, Crookston, MN 56716-5001	1966	$10,647(S)	$6,563	5-B	2,279	101
Univ. of Minnesota, Duluth, Duluth, MN 55812-2496	1947	$11,004(S)	$6,176	5-D	11,664	551
Univ. of Minnesota, Morris, Morris, MN 56267-2134	1959	$10,716(S)	$7,050	5-B	1,607	153
Univ. of Minnesota, Twin Cities, Minneapolis, MN 55455-0213	1851	$11,017(S)	$7,534	5-D	51,659	2,771
Univ. of Mississippi, University, MS 38677	1844	$5,106(S)	$7,778	5-D	15,932	877
Univ. of Mississippi Med. Ctr., Jackson, MS 39216-4505	1955	NA	NA	5-D	2,092	836
Univ. of Missouri, Columbia, MO 65211	1839	$8,501(S)	$8,100	5-D	31,314	1,341
Univ. of Missouri–Kansas City, Kansas City, MO 64110-2499	1929	$8,273(S)	$10,467	5-D	14,818	1,137
Univ. of Missouri–St. Louis, St. Louis, MO 63121	1963	$8,595(S)	$8,164	5-D	16,548	858
Univ. of Mobile, Mobile, AL 36613	1961	$14,850	$7,570	2-M	1,572	162
The Univ. of Montana, Missoula, MT 59812-0002	1893	$5,533(S)	$6,611	5-D	14,207	800
The Univ. of Montana Western, Dillon, MT 59725-3598	1893	$4,279(S)	$6,420	5-B	1,255	89
Univ. of Montevallo, Montevallo, AL 35115	1896	$7,750(S)	$4,924	5-M	3,048	205
Univ. of Mount Union, Alliance, OH 44601-3993	1846	$23,880	$7,420	2-M	2,212	225
Univ. of Nebraska at Kearney, Kearney, NE 68849-0001	1903	$5,634(S)	$6,830	5-M	6,650	406
Univ. of Nebraska at Omaha, Omaha, NE 68182	1908	$6,229(S)	$7,230	5-D	14,620	875
Univ. of Nebraska–Lincoln, Lincoln, NE 68588	1869	$6,857(S)	$7,260	5-D	24,100	1,111
Univ. of Nebraska Med. Ctr., Omaha, NE 68198	1869	$5,800(S)	NA	5-D	3,237	1,190
Univ. of Nevada, Las Vegas, Las Vegas, NV 89154	1957	$5,525(S)	$10,454	5-D	29,086	1,387
Univ. of Nevada, Reno, Reno, NV 89557	1874	$5,051(S)	$10,595	5-D	16,862	604
Univ. of New England, Biddeford, ME 04005-9526	1831	$27,920	$10,870	1-D	4,493	370
Univ. of New Hampshire, Durham, NH 03824	1866	$12,743(S)	$8,874	5-D	15,311	976
Univ. of New Haven, West Haven, CT 06516-1916	1920	$29,470	$12,204	1-M	5,770	562
Univ. of New Mexico, Albuquerque, NM 87131-2039	1889	$5,101(S)	$7,778	5-D	27,241	1,481
Univ. of New Orleans, New Orleans, LA 70148	1958	$4,372(S)	$6,700	5-D	11,724	630
Univ. of North Alabama, Florence, AL 35632-0001	1830	$6,042(S)	$4,784	5-M	7,260	356
The Univ. of North Carolina at Asheville, Asheville, NC 28804-3299	1927	$4,411(S)	$6,890	5-M	3,897	300
The Univ. of North Carolina at Chapel Hill, Chapel Hill, NC 27599	1789	$5,626(S)	$8,670	5-D	28,916	1,764
The Univ. of North Carolina at Charlotte, Charlotte, NC 28223-0001	1946	$4,427(S)	$6,796	5-D	24,701	1,325
The Univ. of North Carolina at Greensboro, Greensboro, NC 27412-5001	1891	$4,234(S)	$6,506	5-D	18,433	1,255
The Univ. of North Carolina at Pembroke, Pembroke, NC 28372-1510	1887	$3,890(S)	$5,990	5-M	6,661	434
The Univ. of North Carolina Wilmington, Wilmington, NC 28403-3297	1947	$4,873(S)	$7,798	5-D	12,413	874
Univ. of North Dakota, Grand Forks, ND 58202	1883	$6,727(S)	$5,702	5-D	13,172	664
Univ. of Northern Colorado, Greeley, CO 80639	1890	$5,116(S)	$8,370	5-D	12,148	705
Univ. of Northern Iowa, Cedar Falls, IA 50614	1876	$7,008(S)	$7,189	5-D	13,303	810
Univ. of North Florida, Jacksonville, FL 32224	1965	$4,193(S)	$9,982	5-D	16,477	741
Univ. of North Texas, Denton, TX 76203	1890	$7,301(S)	$6,534	5-D	36,123	1,505
Univ. of Notre Dame, Notre Dame, IN 46556	1842	$38,477	$10,368	2-D	11,816	1,055
Univ. of Oklahoma, Norman, OK 73019-0390	1890	$5,245(S)	$7,598	5-D	26,638	1,375
Univ. of Oklahoma Health Sci. Ctr., Oklahoma City, OK 73190	1890	$5,557(S)	NA	5-D	3,964	463
Univ. of Oregon, Eugene, OR 97403	1872	$7,428(S)	$8,620	5-D	22,335	1,274
Univ. of Pennsylvania, Philadelphia, PA 19104	1740	$40,514	$11,430	1-D	19,311	2,200
Univ. of Phoenix, Phoenix, AZ 85034-7209	1989	$12,550	NA	3-D	292,797	11,477
Univ. of Phoenix–Atlanta Campus, Sandy Springs, GA 30350-4153	NA	$12,090	NA	3-M	1,573	220
Univ. of Phoenix–Bay Area Campus, Pleasanton, CA 94588-3677	NA	$13,380	NA	3-M	2,240	318
Univ. of Phoenix–Central Florida Campus, Maitland, FL 32751-7057	1996	$11,500	NA	3-M	1,537	215
Univ. of Phoenix–Central Valley Campus, Fresno, CA 93720-1562	2004	$13,380	NA	3-M	2,235	272
Univ. of Phoenix–Charlotte Campus, Charlotte, NC 28273-3409	2003	$11,300	NA	3-M	1,149	141
Univ. of Phoenix–Chicago Campus, Schaumburg, IL 60173-4399	2002	$12,225	NA	3-M	1,178	191
Univ. of Phoenix–Dallas Campus, Dallas, TX 75251-2009	2001	$12,525	NA	3-M	1,371	181
Univ. of Phoenix–Denver Campus, Lone Tree, CO 80124-5453	NA	$11,000	NA	3-M	2,264	302
Univ. of Phoenix–Houston Campus, Houston, TX 77079-2004	2001	$12,525	NA	3-M	2,748	325
Univ. of Phoenix–Las Vegas Campus, Las Vegas, NV 89128	1994	$11,438	NA	3-M	3,162	279
Univ. of Phoenix–Louisiana Campus, Metairie, LA 70001-2082	1976	$11,025	NA	3-M	1,919	246
Univ. of Phoenix–Metro Detroit Campus, Troy, MI 48098-2623	NA	$13,200	NA	3-M	2,547	329
Univ. of Phoenix–New Mexico Campus, Albuquerque, NM 87113-1570	NA	$10,950	NA	3-M	4,170	427
Univ. of Phoenix–North Florida Campus, Jacksonville, FL 32216-0959	1976	$11,500	NA	3-M	1,276	210
Univ. of Phoenix–Oregon Campus, Tigard, OR 97223	1976	$12,225	NA	3-M	1,265	253
Univ. of Phoenix–Phoenix Campus, Phoenix, AZ 85040-1958	1976	$11,450	NA	3-M	5,379	985
Univ. of Phoenix–Puerto Rico Campus, Guaynabo, PR 00968	1995	$6,750	NA	3-M	2,815	228
Univ. of Phoenix–Sacramento Valley Campus, Sacramento, CA 95833-3632	1993	$13,380	NA	3-M	3,842	518
Univ. of Phoenix–San Diego Campus, San Diego, CA 92123	1988	$13,200	NA	3-M	3,212	399
Univ. of Phoenix–Southern Arizona Campus, Tucson, AZ 85711	1979	$11,425	NA	3-M	2,229	284
Univ. of Phoenix–Southern California Campus, Costa Mesa, CA 92626	1980	$14,100	NA	3-M	11,780	1,340
Univ. of Phoenix–South Florida Campus, Fort Lauderdale, FL 33309	NA	$11,600	NA	3-M	2,439	233
Univ. of Phoenix–Utah Campus, Salt Lake City, UT 84123-4617	1984	$11,500	NA	3-M	3,169	406
Univ. of Pittsburgh, Pittsburgh, PA 15260	1787	$14,154(S)	$8,900	12-D	28,328	2,265
Univ. of Pittsburgh at Bradford, Bradford, PA 16701-2812	1963	$11,722(S)	$7,480	12-B	1,652	148
Univ. of Pittsburgh at Greensburg, Greensburg, PA 15601-5860	1963	$11,852(S)	$7,840	12-B	1,808	133
Univ. of Pittsburgh at Johnstown, Johnstown, PA 15904-2990	1927	$11,754(S)	$7,290	12-B	3,057	NA
Univ. of Portland, Portland, OR 97203-5798	1901	$31,996	$9,135	2-D	3,706	315
Univ. of Puerto Rico, Aguadilla Univ. Coll., Aguadilla, PR 00604	1972	$1,747(S)	NA	6-B	3,036	NA
Univ. of Puerto Rico, Cayey Univ. Coll., Cayey, PR 00736	1967	$1,973(S)	$8,180	6-B	3,830	164
Univ. of Puerto Rico, Mayagüez Campus, Mayagüez, PR 00681-9000	1911	$1,940(S)	NA	6-D	13,324	766
Univ. of Puerto Rico, Med. Sci., Campus, San Juan, PR 00936-5067 (4)	1950	NA	NA	6-D	2,319	NA
Univ. of Puerto Rico, Río Piedras, San Juan, PR 00931-3300	1903	$1,320(S)	$8,280	6-D	18,966	1,084
Univ. of Puerto Rico at Arecibo, Arecibo, PR 00613	1967	$1,872(S)	NA	6-B	4,094	NA

Name, Address	Year Founded	Tuition & Fees	Room & Board	Control, Degree	Enrollment	Faculty
Univ. of Puerto Rico at Bayamón, Bayamón, PR 00959	1971	$2,076(S)	NA	6-B	5,184	324
Univ. of Puerto Rico at Humacao, Humacao, PR 00791	1962	$2,013(S)	NA	6-B	4,676	320
Univ. of Puerto Rico at Ponce, Ponce, PR 00732-7186	1970	$1,747(S)	NA	6-B	3,232	197
Univ. of Puerto Rico at Utuado, Utuado, PR 00641-2500	1979	$1,940(S)	NA	6-B	1,623	107
Univ. of Puget Sound, Tacoma, WA 98416	1888	$37,225	$9,650	1-D	2,901	277
Univ. of Redlands, Redlands, CA 92373-0999	1907	$33,894	$10,472	1-D	4,457	507
Univ. of Rhode Island, Kingston, RI 02881	1892	$9,528(S)	$9,892	5-D	16,392	1,262
Univ. of Richmond, University of Richmond, VA 23173	1830	$41,610	$8,810	1-D	3,513	423
Univ. of Rio Grande, Rio Grande, OH 45674	1876	$18,760	$7,600	1-M	2,142	184
Univ. of Rochester, Rochester, NY 14627	1850	$38,690	$11,200	1-D	9,976	804
Univ. of St. Francis, Joliet, IL 60435-6169	1920	$22,698	$7,938	2-D	2,157	235
Univ. of St. Francis, Fort Wayne, IN 46808-3994	1890	$21,760	$6,750	2-M	2,112	222
Univ. of St. Mary, Leavenworth, KS 66048-5082	1923	$19,960	$6,350	2-M	1,072	110
Univ. of St. Thomas, St. Paul, MN 55105-1096	1885	$29,467	$8,042	2-D	10,851	NA
Univ. of St. Thomas, Houston, TX 77006-4696	1947	$21,830	$7,400	2-D	3,234	262
Univ. of San Diego, San Diego, CA 92110-2492	1949	$36,292	$12,602	2-D	7,868	808
Univ. of San Francisco, San Francisco, CA 94117-1080	1855	$36,380	$11,990	2-D	9,012	939
Univ. of Sci. & Arts of Oklahoma, Chickasha, OK 73018	1908	$4,440(S)	$4,850	5-B	1,087	88
The Univ. of Scranton, Scranton, PA 18510	1888	$34,536	$11,862	2-D	5,811	502
Univ. of Sioux Falls, Sioux Falls, SD 57105-1699	1883	$20,270	$5,920	2-M	1,564	140
Univ. of South Alabama, Mobile, AL 36688-0002	1963	$5,962(S)	$5,344	5-D	14,522	1,084
Univ. of South Carolina, Columbia, SC 29208	1801	$9,156(S)	$7,328	5-D	28,481	1,660
Univ. of South Carolina Aiken, Aiken, SC 29801-6309	1961	$7,582(S)	$6,620	5-M	3,269	233
Univ. of South Carolina Beaufort, Bluffton, SC 29909	1959	$7,330(S)	$6,100	5-B	1,684	153
Univ. of South Carolina Upstate, Spartanburg, SC 29303-4999	1967	$8,862(S)	$6,300	5-M	5,403	382
The Univ. of South Dakota, Vermillion, SD 57069-2390	1862	$6,468(S)	$5,787	5-D	9,617	541
Univ. of Southern California, Los Angeles, CA 90089	1880	$39,184	$11,458	1-D	34,824	2,771
Univ. of Southern Indiana, Evansville, IN 47712-3590	1965	$5,474(S)	$6,700	5-D	10,516	668
Univ. of Southern Maine, Portland, ME 04104-9300	1878	$7,467(S)	$8,344	5-D	9,655	627
Univ. of Southern Mississippi, Hattiesburg, MS 39406-0001	1910	$5,096(S)	$6,200	5-D	15,293	943
Univ. of South Florida, Tampa, FL 33620-9951	1956	$4,577(S)	$8,080	5-D	47,024	1,427
The Univ. of Tampa, Tampa, FL 33606-1490	1931	$22,482	$8,296	1-M	6,306	531
The Univ. of Tennessee, Knoxville, TN 37996	1794	$6,850(S)	$7,254	5-D	29,934	1,620
The Univ. of Tennessee at Chattanooga, Chattanooga, TN 37403-2598	1886	$5,656(S)	$8,056	5-D	10,526	696
The Univ. of Tennessee at Martin, Martin, TN 38238-1000	1900	$5,769(S)	$4,914	5-M	8,101	533
The Univ. of Texas at Arlington, Arlington, TX 76019	1895	$8,186(S)	$6,658	5-D	28,085	1,151
The Univ. of Texas at Austin, Austin, TX 78712-1111	1883	$8,930(S)	$9,602	5-D	50,995	3,039
The Univ. of Texas at Brownsville, Brownsville, TX 78520-4991	1973	$4,547(S)	$5,742	5-D	17,189	701
The Univ. of Texas at Dallas, Richardson, TX 75080	1969	$10,340(S)	$7,733	5-D	15,783	794
The Univ. of Texas at El Paso, El Paso, TX 79968-0001	1913	$5,925(S)	NA	5-D	21,011	1,158
The Univ. of Texas at San Antonio, San Antonio, TX 78249-0617	1969	$7,527(S)	$8,937	5-D	28,955	1,221
The Univ. of Texas at Tyler, Tyler, TX 75799-0001	1971	$6,042(S)	$8,016	5-D	6,163	387
The Univ. of Texas Health Sci. Ctr. at Houston, Houston, TX 77225-0036	1972	$306/cr. hr.(S)	NA	5-D	3,969	44
The Univ. of Texas Health Sci. Ctr. at San Antonio, San Antonio, TX 78229-3900	1976	$5,050(S)	NA	5-D	3,093	NA
The Univ. of Texas Med. Branch, Galveston, TX 77555	1891	$5,502(S)	$4,620	5-D	2,430	NA
The Univ. of Texas of the Permian Basin, Odessa, TX 79762-0001	1969	$5,378(S)	$6,445	5-M	3,546	220
The Univ. of Texas–Pan American, Edinburg, TX 78539	1927	$4,304(S)	$5,294	5-D	18,337	806
The Univ. of Texas Southwestern Med. Ctr. at Dallas, Dallas, TX 75390	1943	$4,878(S)	$11,353	5-D	2,445	2,038
The Univ. of the Arts, Philadelphia, PA 19102-4944	1870	$31,000	$7,200	1-M	2,401	494
Univ. of the Cumberlands, Williamsburg, KY 40769-1372	1889	$17,000	$6,826	2-D	2,955	154
Univ. of the District of Columbia, Washington, DC 20008-1175	1976	$5,370(S)	NA	9-M	4,960	440
Univ. of the Incarnate Word, San Antonio, TX 78209-6397	1881	$21,890	$9,220	2-D	6,756	568
Univ. of the Pacific, Stockton, CA 95211-0197	1851	$32,230	$10,616	1-D	6,401	775
Univ. of the Sacred Heart, San Juan, PR 00914-0383	1935	$5,870	$2,500	2-M	5,666	367
Univ. of the Sci. in Philadelphia, Philadelphia, PA 19104-4495	1821	$29,630	$11,582	1-D	2,984	276
Univ. of the Virgin Islands, Saint Thomas, VI 00802-9990	1962	$4,150(S)	$8,570	7-M	2,602	232
The Univ. of Toledo, Toledo, OH 43606-3390	1872	$8,066(S)	$9,478	5-D	23,064	1,270
Univ. of Tulsa, Tulsa, OK 74104-3189	1894	$25,144	$8,544	2-D	4,192	397
Univ. of Utah, Salt Lake City, UT 84112-1107	1850	$5,746(S)	$6,240	5-D	29,284	1,889
Univ. of Vermont, Burlington, VT 05405	1791	$13,524(S)	$9,026	5-D	13,391	752
Univ. of Virginia, Charlottesville, VA 22903	1819	$9,672(S)	$8,290	5-D	24,262	1,324
The Univ. of Virginia's Coll. at Wise, Wise, VA 24293	1954	$6,748(S)	$7,323	5-B	2,015	164
Univ. of Washington, Bothell, Bothell, WA 98011-8246	1990	$7,575(S)	NA	5-M	2,820	145
Univ. of Washington, Seattle, WA 98195	1861	$7,692(S)	$7,800	5-D	45,943	3,752
Univ. of Washington, Tacoma, Tacoma, WA 98402-3100	1990	$7,653(S)	$8,949	5-M	3,111	191
The Univ. of West Alabama, Livingston, AL 35470	1835	$5,420(S)	$3,748	5-M	5,157	247
Univ. of West Florida, Pensacola, FL 32514-5750	1963	$4,210(S)	$6,900	5-D	11,143	509
Univ. of West Georgia, Carrollton, GA 30118	1933	$4,582(S)	$6,254	5-D	11,500	565
Univ. of Wisconsin–Eau Claire, Eau Claire, WI 54702-4004	1916	$6,633(S)	$5,730	5-M	11,046	505
Univ. of Wisconsin–Green Bay, Green Bay, WI 54311-7001	1968	$6,909(S)	$6,500	5-M	6,664	322
Univ. of Wisconsin–La Crosse, La Crosse, WI 54601-3742	1909	$7,509(S)	$5,630	5-D	9,890	531
Univ. of Wisconsin–Madison, Madison, WI 53706-1380	1848	$8,314(S)	$7,157	5-D	42,099	2,838
Univ. of Wisconsin–Milwaukee, Milwaukee, WI 53201-0413	1956	$8,522(S)	$4,290	5-D	30,418	1,607
Univ. of Wisconsin–Oshkosh, Oshkosh, WI 54901	1871	$6,038(S)	$5,898	5-M	12,669	608
Univ. of Wisconsin–Parkside, Kenosha, WI 53141-2000	1968	$7,196(S)	$6,252	5-M	5,303	281
Univ. of Wisconsin–Platteville, Platteville, WI 53818-3099	1866	$6,820(S)	$5,800	5-M	7,648	NA
Univ. of Wisconsin–River Falls, River Falls, WI 54022	1874	$6,460(S)	$5,372	5-M	6,728	343
Univ. of Wisconsin–Stevens Point, Stevens Point, WI 54481-3897	1894	$6,530(S)	$5,612	5-D	8,940	483
Univ. of Wisconsin–Stout, Menomonie, WI 54751	1891	$7,821(S)	$5,336	5-M	9,015	414
Univ. of Wisconsin–Superior, Superior, WI 54880-4500	1893	$6,736(S)	$5,485	5-M	2,793	168
Univ. of Wisconsin–Whitewater, Whitewater, WI 53190-1790	1868	$7,439(S)	$5,028	5-M	11,139	NA
Univ. of Wyoming, Laramie, WY 82070	1886	$3,927(S)	$8,360	5-D	12,427	783
Upper Iowa Univ., Fayette, IA 52142-1857	1857	$22,350	$6,870	1-M	6,605	462
Urbana Univ., Urbana, OH 43078-2091	1850	$19,490	$7,860	1-M	1,551	120
Ursinus Coll., Collegeville, PA 19426-1000	1869	$40,120	$9,750	1-B	1,742	194
Ursuline Coll., Pepper Pike, OH 44124-4398 (4)	1871	$23,000	$7,664	2-M	1,515	188
Utah State Univ., Logan, UT 84322	1888	$4,828(S)	$4,900	5-D	15,612	877
Utah Valley Univ., Orem, UT 84058-5999	1941	$4,258(S)	NA	5-M	28,765	1,540
Utica Coll., Utica, NY 13502-4892	1946	$27,284	$10,850	1-D	3,273	343
Valdosta State Univ., Valdosta, GA 31698	1906	$4,488(S)	$6,480	5-D	12,391	576
Valley City State Univ., Valley City, ND 58072	1890	$6,075(S)	$4,528	5-M	1,083	95
Valley Forge Christian Coll., Phoenixville, PA 19460	1938	$16,250	$7,556	2-M	1,204	77
Valparaiso Univ., Valparaiso, IN 46383	1859	$28,320	$7,960	2-D	4,065	356
Vanderbilt Univ., Nashville, TN 37240-1001	1873	$38,578	$12,650	1-D	12,506	NA
Vanguard Univ. of Southern California, Costa Mesa, CA 92626-9601	1920	$26,342	$8,274	2-M	1,923	150
Vassar Coll., Poughkeepsie, NY 12604	1861	$41,930	$9,370	1-M	2,453	328
Vaughn Coll. of Aeronautics & Tech, Flushing, NY 11369 (2)	1932	$16,700	$11,280	1-M	1,310	160

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Vermont Tech Coll., Randolph Center, VT 05061-0500	1866	$10,892(S)	$7,808	5-B	1,663	196
Villanova Univ., Villanova, PA 19085-1699	1842	$38,305	$10,320	2-D	10,375	909
Virginia Coll. at Birmingham, Birmingham, AL 35209	1989	NA	NA	3-M	3,826	NA
Virginia Commonwealth Univ., Richmond, VA 23284-9005	1838	$7,117(S)	$8,335	5-D	32,436	3,047
Virginia Military Institute, Lexington, VA 24450 (2)	1839	$11,190(S)	$6,792	5-B	1,500	172
Virginia Polytechnic Institute & State Univ., Blacksburg, VA 24061	1872	$8,198(S)	$5,476	5-D	30,870	1,588
Virginia State Univ., Petersburg, VA 23806-0001	1882	$6,174(S)	$8,050	5-D	5,366	350
Virginia Union Univ., Richmond, VA 23220-1170	1865	$14,630	$6,830	2-D	1,700	140
Virginia Wesleyan Coll., Norfolk, VA 23502-5599	1961	$27,476	$7,384	2-B	1,336	131
Viterbo Univ., La Crosse, WI 54601-4797 (4)	1890	$20,850	$6,970	2-M	3,282	283
Wagner Coll., Staten Island, NY 10301-4495	1883	$32,580	$9,700	1-M	2,265	238
Wake Forest Univ., Winston-Salem, NC 27109	1834	$39,970	$11,010	1-D	7,079	625
Walden Univ., Minneapolis, MN 55401	1970	$9,105	NA	3-D	40,714	1,854
Walla Walla Univ., College Place, WA 99324-1198	1892	$21,936	$4,320	2-M	1,800	205
Walsh Coll. of Accountancy & Bus. Admin., Troy, MI 48007-7006	1922	$10,959	NA	1-M	3,106	178
Walsh Univ., North Canton, OH 44720-3396	1958	$22,280	$8,360	2-D	2,760	266
Warner Pacific Coll., Portland, OR 97215-4099	1937	$17,110	$6,646	2-M	1,333	116
Warren Wilson Coll., Asheville, NC 28815-9000	1894	$24,196	$7,770	2-M	1,002	84
Wartburg Coll., Waverly, IA 50677-0903	1852	$29,020	$7,975	2-B	1,800	181
Washburn Univ., Topeka, KS 66621	1865	$6,116(S)	$5,792	10-D	6,652	499
Washington Adventist Univ., Takoma Park, MD 20912	1904	$19,480	$7,200	2-M	1,183	109
Washington & Jefferson Coll., Washington, PA 15301	1781	$32,895	$8,925	1-B	1,514	159
Washington & Lee Univ., Lexington, VA 24450-0303	1749	$38,877	$8,410	1-D	2,153	281
Washington Coll., Chestertown, MD 21620-1197	1782	$35,350	$7,460	1-M	1,372	153
Washington State Univ., Pullman, WA 99164	1890	$8,489(S)	$8,886	5-D	26,101	1,626
Washington Univ. in St. Louis, St. Louis, MO 63130-4899	1853	$40,374	$12,941	1-D	13,575	1,092
Wayland Baptist Univ., Plainview, TX 79072-6998	1908	$12,470	$3,864	2-M	1,260	125
Waynesburg Univ., Waynesburg, PA 15370-1222	1849	$17,760	$7,370	2-D	2,515	226
Wayne State Coll., Wayne, NE 68787	1910	$4,805(S)	$5,280	5-M	3,631	220
Wayne State Univ., Detroit, MI 48202	1868	$8,643(S)	$7,210	5-D	31,786	2,043
Weber State Univ., Ogden, UT 84408-1001	1889	$3,133/term(S)	NA	5-M	23,001	866
Webster Univ., St. Louis, MO 63119-3194	1915	$21,056	$9,070	1-D	8,241	905
Wellesley Coll., Wellesley, MA 02481 (3)	1870	$38,062	$11,732	1-B	2,324	314
Wentworth Institute of Tech, Boston, MA 02115-5998	1904	$21,800	$10,500	1-M	3,892	307
Wesleyan Univ., Middletown, CT 06459	1831	$40,092	$11,040	1-D	3,148	361
Wesley Coll., Dover, DE 19901-3875	1873	$18,530	$8,400	2-M	1,871	157
West Chester Univ. of Pennsylvania, West Chester, PA 19383	1871	$7,211(S)	$7,032	5-M	14,211	825
West Coast Univ., North Hollywood, CA 91606	1909	NA	NA	3-B	NA	NA
Western Carolina Univ., Cullowhee, NC 28723	1889	$4,330(S)	$5,912	5-D	9,429	639
Western Connecticut State Univ., Danbury, CT 06810-6885	1903	$7,909(S)	$5,858	5-D	6,617	582
Western Governors Univ., Salt Lake City, UT 84107	1998	NA	NA	1-M	9,022	NA
Western Illinois Univ., Macomb, IL 61455-1390	1899	$8,958(S)	$7,642	5-D	12,679	754
Western Intl. Univ., Phoenix, AZ 85021-2718	1978	$11,250	NA	3-M	3,021	275
Western Kentucky Univ., Bowling Green, KY 42101	1906	$7,200(S)	$6,351	5-D	20,712	1,150
Western Michigan Univ., Kalamazoo, MI 49008	1903	$8,382(S)	$7,784	5-D	24,576	1,435
Western New England Coll., Springfield, MA 01119	1919	$28,816	$10,980	1-D	3,710	301
Western New Mexico Univ., Silver City, NM 88062-0680	1893	$3,589(S)	$5,200	5-M	2,697	259
Western Oregon Univ., Monmouth, OR 97361-1394	1856	$7,458(S)	$8,208	5-M	5,654	359
Western State Coll. of Colorado, Gunnison, CO 81231	1901	$4,064(S)	$8,324	5-M	2,193	150
Western Washington Univ., Bellingham, WA 98225-5996	1893	$6,159(S)	$8,393	5-M	14,575	730
Westfield State Coll., Westfield, MA 01086	1838	$7,016(S)	$7,728	5-M	5,675	448
West Liberty Univ., West Liberty, WV 26074	1837	$4,880(S)	$6,870	5-M	2,645	202
Westminster Coll., Fulton, MO 65251-1299	1851	$17,990	$7,120	2-B	1,087	91
Westminster Coll., New Wilmington, PA 16172-0001	1852	$29,150	$8,840	2-M	1,593	149
Westminster Coll., Salt Lake City, UT 84105-3697	1875	$24,996	$7,006	1-M	3,037	327
Westmont Coll., Santa Barbara, CA 93108-1099	1937	$34,460	$10,960	2-B	1,308	133
West Texas A&M Univ., Canyon, TX 79016-0001	1909	$5,382(S)	$5,627	5-M	7,535	342
West Virginia State Univ., Institute, WV 25112-1000	1891	$4,346(S)	$6,020	5-M	4,003	196
West Virginia Univ., Morgantown, WV 26506	1867	$5,304(S)	$7,770	5-D	28,898	1,235
West Virginia Univ. Institute of Tech, Montgomery, WV 25136	1895	$4,812(S)	$8,028	5-M	1,244	111
West Virginia Wesleyan Coll., Buckhannon, WV 26201	1890	$23,980	$7,140	2-M	1,416	156
Westwood Coll.–Anaheim, Anaheim, CA 92806	NA	NA	NA	3-B	1,206	82
Westwood Coll.–Inland Empire, Upland, CA 91786	NA	NA	NA	3-B	1,140	94
Westwood Coll.–Online Campus, Broomfield, CO 80021	NA	NA	NA	3-M	7,584	281
Wheaton Coll., Wheaton, IL 60187-5593	1860	$27,580	$8,050	2-D	2,920	306
Wheaton Coll., Norton, MA 02766	1834	$41,084	$10,180	1-B	1,632	169
Wheeling Jesuit Univ., Wheeling, WV 26003-6295	1954	$24,390	NA	2-D	1,361	145
Wheelock Coll., Boston, MA 02215-4176 (4)	1888	$28,160	$11,200	1-M	1,055	143
Whitman Coll., Walla Walla, WA 99362-2083	1859	$38,770	$9,720	1-B	1,515	186
Whittier Coll., Whittier, CA 90608-0634	1887	$34,388	$9,758	1-D	2,009	130
Whitworth Univ., Spokane, WA 99251-0001	1890	$27,420	$7,700	2-M	2,607	294
Wichita State Univ., Wichita, KS 67260	1895	$5,450(S)	$6,700	5-D	14,823	488
Widener Univ., Chester, PA 19013-5792	1821	$31,840	$11,270	1-D	6,549	666
Wilkes Univ., Wilkes-Barre, PA 18766-0002	1933	$26,010	$11,100	1-D	6,239	454
Willamette Univ., Salem, OR 97301-3931	1842	$35,610	$8,350	2-D	2,886	296
William Carey Univ., Hattiesburg, MS 39401-5499	1906	$9,750	$4,815	2-M	2,493	210
William Jewell Coll., Liberty, MO 64068-1843	1849	$28,750	$7,200	2-B	1,083	147
William Paterson Univ. of New Jersey, Wayne, NJ 07470-8420	1855	$10,838(S)	$10,280	5-M	10,819	942
William Penn Univ., Oskaloosa, IA 52577-1799	1873	$20,234	$5,392	2-M	1,861	52
Williams Coll., Williamstown, MA 01267	1793	$39,490	$10,390	1-M	2,123	305
William Woods Univ., Fulton, MO 65251-1098	1870	$17,310	$6,950	2-M	2,185	249
Wilmington Coll., Wilmington, OH 45177	1870	$24,286	$8,272	2-M	1,603	113
Wilmington Univ., New Castle, DE 19720-6491	1967	$7,274	NA	1-D	9,658	1,086
Wingate Univ., Wingate, NC 28174-0159	1896	$21,140	$8,350	2-D	2,159	192
Winona State Univ., Winona, MN 55987-5838	1858	$7,916(S)	$6,556	5-D	8,606	480
Winston-Salem State Univ., Winston-Salem, NC 27110-0003	1892	$3,522(S)	$6,954	5-M	6,427	336
Winthrop Univ., Rock Hill, SC 29733	1886	$11,606(S)	$6,530	5-M	6,241	552
Wittenberg Univ., Springfield, OH 45501-0720	1845	$34,190	$8,772	2-M	1,934	197
Wofford Coll., Spartanburg, SC 29303-3663	1854	$30,280	$8,480	2-B	1,439	147
Woodbury Univ., Burbank, CA 91504-1099	1884	$28,855	$9,293	1-M	1,614	280
Worcester Polytechnic Institute, Worcester, MA 01609-2280	1865	$38,920	$11,610	1-D	4,978	365
Worcester State Coll., Worcester, MA 01602-2597	1874	$6,605(S)	$9,067	5-M	5,473	378
Wright State Univ., Dayton, OH 45435	1964	$7,797(S)	NA	5-D	17,558	880
Xavier Univ., Cincinnati, OH 45207	1831	$28,570	$9,530	2-D	6,966	625
Xavier Univ. of Louisiana, New Orleans, LA 70125-1098	1925	$15,300	$7,000	2-D	3,338	258
Yale Univ., New Haven, CT 06520	1701	$36,500	$11,000	1-D	11,593	1,653
Yeshiva Univ., New York, NY 10033-3201	1886	$32,094	$10,380	1-D	6,246	NA
York Coll. of the City Univ. of New York, Jamaica, NY 11451-0001	1967	$4,912(S)	NA	11-M	7,780	524
York Coll. of Pennsylvania, York, PA 17405-7199	1787	$15,140	$8,530	1-M	5,564	556
Youngstown State Univ., Youngstown, OH 44555-0001	1908	$6,956(S)	$7,400	5-D	14,672	1,011

DIRECTORY

Associations and Organizations

Source: World Almanac research

Selected list, generally by **category** and first distinctive **key word** in each title. Listed by acronym when that is the official name. Year established is in parentheses. Entries for religious organizations include addresses and leadership information for 2010.

Academic and Educational

Academies, Natl. (1863): (202) 334-2000; www.nationalacademies.org
African-American Life and History, Assn. for the Study of (1915): (202) 865-0053; www.asalh.org
Alpha Delta Kappa (1947): (816) 363-5525; www.alphadeltakappa.org
AMIDEAST (formerly American Mideast Educational and Training Services) (1951): (202) 776-9616; www.amideast.org
Anthropological Assn., American (1902): (703) 528-1902; www.aaanet.org
Archaeological Institute of America (1879): (617) 353-9361; www.archaeological.org
Arts, Americans for the (1996): (202) 371-2830; www.artsusa.org
Arts and Sciences, American Academy of (1780): (617) 576-5000; www.amacad.org
Beta Gamma Sigma Honor Society (1913): (314) 432-5650; www.betagammasigma.org
Beta Sigma Phi (1931): (816) 444-6800; www.betasigmaphi.org
Biological Sciences, American Institute of (1947): (202) 628-1500; www.aibs.org
College Board (1900): (212) 713-8000; www.collegeboard.org
Colleges and Universities, Assn. of American (1915): (202) 387-3760; www.aacu.org
Community Colleges, American Assn. of (1920): (202) 728-0200; www.aacc.nche.edu
Consumer Interests, American Council on (1953): (812) 470-1985; www.consumerinterests.org
Delta Kappa Gamma Society Intl. (1929): (512) 478-5748; www.deltakappagamma.net
Education, American Council on (1918): (202) 939-9300; www.acenet.edu
Education, Council for Advancement and Support of (1974): (202) 328-2273; www.case.org
Education of Young Children, Natl. Assn. for the (1926): (202) 232-8777; www.naeyc.org
Educators for World Peace, Intl. Assn. of (1973): (256) 534-5501; www.iaewp.org
English-Speaking Union of the U.S. (1920): (212) 818-1200; www.esuus.org
Entomological Society of America (1889): (301) 731-4535; www.entsoc.org
Esperanto League for North America Inc. (1953): (510) 653-0998; www.esperanto-usa.org
Family Relations, Natl. Council on (1938): (888) 781-9331; www.ncfr.org
Foreign Study, American Institute for (1964): (866) 906-2437; www.aifs.com
Freedom of Information Center (1958): (573) 882-5736; foi.missouri.edu
French Institute/Alliance Française (1971): (212) 355-6100; www.fiaf.org
Genealogical Society, Natl. (1903): (703) 525-0050; www.ngsgenealogy.org
Genetic Association, American (1903): (541) 867-0334; www.theaga.org
Geological Society of America (1888): (303) 357-1000; www.geosociety.org
Hemispheric Affairs, Council on (1975): (202) 223-4975; www.coha.org
Industrial and Applied Mathematics, Society for (1952): (215) 382-9800; www.siam.org
Intl. Education, Institute of (1919): (212) 883-8200; www.iie.org
Intl. Educational Exchange, Council on (1947): (207) 553-4000; www.ciee.org
Intl. Law, American Society of (1906): (202) 939-6000; www.asil.org
Irish American Cultural Inst. (1962): (973) 605-1991; www.irishaci.org
Law Libraries, American Assn. of (1906): (312) 939-4764; www.aallnet.org
Learned Societies, American Council of (1919): (212) 697-1505; www.acls.org
Libraries Assn., Special (1909): (703) 647-4900; www.sla.org
Linguistic Society of America (1924): (202) 835-1714; www.lsadc.org
Mathematical Society, American (1888): (401) 455-4000; www.ams.org
MENC: The Natl. Assn. for Music Education (formerly Music Educators Natl. Conference) (1907): (703) 860-4000; www.menc.org
Mensa, Ltd., American (1960): (817) 607-0060; www.us.mensa.org
Meteorological Society, American (1919): (617) 227-2425; www.ametsoc.org
Metric Assn., Inc., U.S. (1916): (818) 363-5606; www.metric.org
Microbiology, American Society for (1899): (202) 737-3600; www.asm.org
Modern Language Assn. of America (1883): (646) 576-5000; www.mla.org
Museums, American Assn. of (1906): (202) 289-9127; www.aam-us.org
Musicological Society, American (1934): (207) 798-4243; www.ams-net.org
Negro College Fund, United (1944): (800) 331-2244; www.uncf.org
Oriental Society, American (1842): (734) 647-4760; www.umich.edu/~aos
ORT Inc., American (Org. for Rehabilitation Through Training) (1922): (212) 505-7700; www.ortamerica.org
PEN American Center, Inc. (1922): (212) 334-1660; www.pen.org
Phi Beta Kappa Society (1776): (202) 265-3808; www.pbk.org
Phi Theta Kappa Intl. Honor Society (1918): (601) 984-3504; www.ptk.org
Philological Association, American (1869): (215) 898-4975; www.apaclassics.org
Philosophical Assn., American (1900): (302) 831-1112; www.apaonline.org
Physics, American Inst. of (1931): (301) 209-3100; www.aip.org
Physiological Society, American (1887): (301) 634-7164; www.the-aps.org
Poetry Society of America (1910): (212) 254-9628; www.poetrysociety.org
Poets, Academy of American (1934): (212) 274-0343; www.poets.org
Political Science, Academy of (1880): (212) 870-2500; www.psqonline.org
Population Connection (1968): (202) 332-2200; www.populationconnection.org
Radio and Television Society Foundation, Intl. (1939): (212) 867-6650; www.irts.org
Reading Assn., Intl. (1956): (302) 731-1600; www.reading.org
Religion, American Academy of (1909): (404) 727-3049; www.aarweb.org
Science Fiction Society, World (1939): www.wsfs.org
Sciences, Natl. Academy of (1863): (202) 334-2000; www.nas.edu
Sigma Beta Delta (1994): (314) 516-4723; www.sigmabetadelta.org
Sociological Assn., American (1905): (202) 383-9005; www.asanet.org
Tau Beta Pi Association (1885): (865) 546-4578; www.tbp.org
Teach For America (1990): (212) 279-2080; www.teachforamerica.org
Theological Schools in the U.S. and Canada, Assn. of (1918): (412) 788-6505; www.ats.edu
Theosophical Society in America (1875): (630) 668-1571, ext. 300; www.theosophical.org
Universities, Assn. of American (1900): (202) 408-7500; www.aau.edu
World Learning (1954): (802) 257-7751; www.worldlearning.org

Animal Welfare and Environment

Animals, American Society for the Prevention of Cruelty to (ASPCA) (1866): (212) 876-7700; www.aspca.org
Animals, People for the Ethical Treatment of (PETA) (1980): (757) 622-7382; www.peta.org
Animal Welfare Institute (1951): (703) 836-4300; www.awionline.org
Appalachian Trail Conservancy (1925): (304) 535-6331; www.appalachiantrail.org
Audubon Society, Natl. (1905): (212) 979-3000; www.audubon.org
Bat Conservation International (1982): (512) 327-9721; www.batcon.org
Cat Fanciers' Assn., Inc., The (1906): (732) 528-9797; www.cfa.org
Conservation International (1987): (703) 341-2400; www.conservation.org
Defenders of Wildlife (1947): (800) 385-9712; www.defenders.org
Ducks Unlimited (1937): (901) 758-3825; www.ducks.org
Foresters, Society of American (1900): (301) 897-8720; www.safnet.org
Forest History Society (1946): (919) 682-9319; www.foresthistory.org
Friends of the Earth (1969): (202) 783-7400; www.foe.org
Garden Club of America (1913): (212) 753-8287; www.gcamerica.org
Garden Clubs, Inc., National Council of State (1929): (314) 776-7574; www.gardenclub.org
Geographic Society, Natl. (1888): (813) 979-6845; www.nationalgeographic.com
Green Mountain Club (1910): (802) 244-7037; www.greenmountainclub.org
Greenpeace, Inc. (1971): (202) 462-1177; www.greenpeaceusa.org
Hiking Society, American (1976): (301) 565-6714; www.americanhiking.org
Horse Council, American (1969): (202) 296-4031; www.horsecouncil.org
Humane Society of the U.S., The (1954): (202) 452-1100; www.humanesociety.org
Natural Resources Defense Council (1970): (212) 727-2700; www.nrdc.org
Nature Conservancy, The (1951): (703) 841-5300; www.nature.org
Ocean Conservancy (1972): (202) 429-5609; www.oceanconservancy.org
Ornithologists' Union, American (1883): (505) 326-1579; www.aou.org
Recreation and Park Assn., Natl. (1965): (703) 858-0784; www.nrpa.org
Recycling Coalition, Natl. (1978): (202) 789-1430; www.nrc-recycle.org
Rose Society, American (1892): (318) 938-5402; www.ars.org
Save-the-Redwoods League (1918): (415) 362-2352; www.savetheredwoods.org
Sierra Club (1892): (415) 977-5500; www.sierraclub.org
Water Environment Federation (1928): (800) 666-0206; www.wef.org
Wildflower Center, Lady Bird Johnson (1982): (512) 232-0100; www.wildflower.org
Wildlife Federation, Natl. (1936): (800) 822-9919; www.nwf.org
World Wildlife Fund (1961): (202) 293-4800; www.worldwildlife.org

Children and Social Services

Big Brothers/Big Sisters of America (1904): (215) 567-7000; www.bbbs.org
Boy Scouts of America (1910): (972) 580-2000; www.scouting.org
Boys & Girls Clubs of America (1906): (404) 487-5700; www.bgca.org
Camp Fire USA (formerly Camp Fire Boys & Girls) (1910): (816) 285-2010; www.campfireusa.org
Children's Aid Society (1912): (205) 251-7148; www.childrensaid.org
Children's Book Council, The (1945): (212) 966-1990; www.cbcbooks.org
Child Welfare League of America (1920): (703) 412-2400; www.cwla.org
Feeding America (formerly America's Second Harvest) (1979): (800) 771-2303; feedingamerica.org
4-H Council, Natl. (1914): (301) 961-2800; www.4-h.org
Future Business Leaders of America/Phi Beta Lambda, Inc. (1942): (800) 325-2946; www.fbla-pbl.org
Future Farmers of America Org., Natl. (1928): (317) 802-6060; www.ffa.org
Gifted Children, Natl. Assn. for (1954): (202) 785-4268; www.nagc.org
Girl Scouts of the U.S.A. (1912): (212) 852-8000; www.girlscouts.org
Honor Society, Natl. (1921): (703) 860-0200; www.nhs.us
Junior Achievement, Inc. (1919): (719) 540-8000; www.ja.org
Junior Auxiliaries, Natl. Assn. of (1941): (662) 332-3000; www.najanet.org
Junior Chamber of Commerce, U.S. (1920): (800) 529-2337; www.usjaycees.org
Junior Honor Society, Natl. (1929): (703) 860-0200; www.njhs.us
Missing and Exploited Children, Natl. Center for (1984): 703-274-3900; www.missingkids.com
Pilot Intl. Foundation (1921): (478) 477-1208; www.pilotinternational.org
Student Councils, Natl. Assn. of (1931): (703) 860-0200; www.nasc.us

Fraternal

Eagles, Fraternal Order of (1898): (614) 883-2200; www.foe.com
Eastern Star, General Grand Chapter, Order of the (1876): (202) 667-4737; www.easternstar.org
Elks of the U.S.A., Benevolent and Protective Order of (1868): (773) 755-4700; www.elks.org
Freemasonry, Supreme Council Ancient and Accepted Scottish Rite of, Northern Masonic Jurisdiction (1813): (781) 862-4410; www.supremecouncil.org
Freemasonry, Supreme Council Ancient and Accepted Scottish Rite of, Southern Jurisdiction (1802): (202) 232-3579; www.srmason-sj.org
Free Men, Natl. Coalition of (1977): (888) 223-1280; www.ncfm.org
Kiwanis International (1915): (317) 875-8755; www.kiwanis.org
Knights of Columbus (1882): (203) 752-4000; www.kofc.org
Knights of Pythias, Order of (1864): (617) 472-8800; www.pythias.org
Lions Clubs, Intl., Assn. of (1917): (630) 571-5466; www.lionsclubs.org
Moose Intl., Inc. (1888): (630) 859-2000; www.mooseintl.org
Odd Fellows, Independent Order of (1819): (336) 725-5955; www.ioof.org
Rotary Intl. (1905): (847) 866-3000; www.rotary.org
Shriners International (1872): (813) 281-0300; www.shrinershq.org
Sons of Italy in America, Order (1905): (202) 547-2900; www.osia.org
Sons of Norway (1895): (612) 827-3611; www.sofn.com
Woodmen of America, Modern (1883): (309) 558-3100; www.modern-woodmen.org

Historical

Civil War Preservation Trust (1987): (202) 367-1861; www.civilwar.org
Colonial Dames XVII Century, Natl. Soc. (1915): (202) 293-1700; www.colonialdames17c.net
Daughters of the American Revolution (1890): (202) 628-1776; www.dar.org
Daughters of the Confederacy, United (1894): (804) 355-1636; www.hqudc.org
Historical Assn., American (1884): (202) 544-2422; www.historians.org
Historical Society, United States (1971): (800) 788-4478; www.ushs.org
Historic Preservation, Natl. Trust for (1949): (202) 588-6000; www.preservationnation.org
Lewis and Clark Trail Heritage Foundation (1969): (406) 454-1234; www.lewisandclark.org
Mayflower Descendants, General Soc. of (1897): (508) 746-3188; www.themayflowersociety.com
Pilgrims, Natl. Soc. Sons and Daughters of the (1908): www.nssdp.com
Railway Historical Society, Natl. (1935): (215) 557-6606; www.nrhs.com
Sons of the American Revolution, Natl. Society of (1889): (502) 589-1776; www.sar.org
Sons of Confederate Veterans (1896): (800) 380-1896; www.scv.org
State and Local History, American Assn. for (1940): (615) 320-3203; www.aaslh.org
Supreme Court Historical Society (1974): (202) 543-0400; www.supremecourthistory.org
Theodore Roosevelt Assn. (1920): (516) 921-6319; www.theodoreroosevelt.org
Thoreau Society (1941): (978) 369-5310; www.thoreausociety.org
Titanic Historical Society, Inc. (1963): (413) 543-4770; www.titanichistoricalsociety.org
Victorian Society in America (1966): (215) 636-9872; www.victoriansociety.org

Industrial and Trade

Aerospace Industries Assn. of America Inc. (1919): (703) 358-1000; www.aia-aerospace.org
Better Business Bureaus, Council of (1912): (703) 276-0100; www.bbb.org
Chamber of Commerce of the U.S.A. (1912): (202) 659-6000; www.uschamber.com
Chemistry Council, American (1872): (703) 741-5000; www.americanchemistry.com
Construction Specifications Institute (1948): (703) 684-0300; www.csinet.org
Croplife America (1933): (202) 296-1585; www.croplifeamerica.org
Cryogenic Soc. of America, Inc. (1964): (708) 383-6220; www.cryogenicsociety.org
Electrical Manufacturers Assn., Natl. (1926): (703) 841-3200; www.nema.org
Fire Protection Assn., Natl. (NFPA) (1896): (617) 770-3000; www.nfpa.org
Fisheries Soc., American (1870): (301) 897-8616; www.fisheries.org
Foreign Trade Council, Inc., Natl. (1914): (202) 887-0278; www.nftc.org
Funeral Consumers Alliance (1963): (800) 765-0107; www.funerals.org
Hotel & Lodging Assn., American (1910): (202) 289-3100; www.ahla.com
Insurance Assn., American (1866): (202) 828-7100; www.aiadc.org
Magazine Publishers of America (1919): (212) 872-3700; www.magazine.org
Manufacturers, Natl. Assn. of (1895): (202) 637-3000; www.nam.org
Newspaper Assn. of America (1992): (571) 366-1000; www.naa.org
Nuclear Society, American (1954): (708) 352-6611; www.ans.org
Petroleum Institute, American (1919): (202) 682-8000; www.api.org
Printing Industries of America, Inc. (1887): (412) 741-6860; www.gain.net
Publishers, Assn. of American (1970): (202) 347-3375; www.publishers.org
Retail Federation, Natl. (1908): (800) 673-4692; www.nrf.com
Safety Council, Natl. (1913): (630) 285-1121; www.nsc.org
Shipbuilders Council of America (1920): (202) 347-5462; www.shipbuilders.org
Small Business Assn, Natl. (1937): (800) 345-6728; www.nsba.biz
Software and Information Industry Assn. (1999): (202) 289-7442; www.siia.net
Symphony Orchestra League, American (1942): (212) 262-5161; www.symphony.org
Tall Buildings and Urban Habitat, Council on (1969): (312) 567-3307; www.ctbuh.org
Toy Industry Assn., Inc. (1916): (212) 675-1141; www.toyassociation.org
Water Works Assn., American (1881): (303) 794-7711; www.awwa.org
Zoo and Aquarium Assn., American (1924): (301) 562-0777; www.aza.org

Lifestyle and Travel

AAA (American Automobile Assn.) (1902): (407) 444-7000; www.aaa.com
AARP (formerly American Assn. of Retired Persons) (1958): (888) 687-2277; www.aarp.org
AFS Intercultural Programs USA (1947): (212) 299-9000; www.afs.org/usa
Aircraft Owners and Pilots Assn. (1939): (800) 872-2672; www.aopa.org
Appalachian Mountain Club (1876): (617) 523-0655; www.outdoors.org
Boat Owners Assn. of the U.S. (1966): (703) 461-4666; www.boatus.com
Camping Assn., American (1910): (765) 342-8456; www.acacamps.org
Consumer Federation of America (1968): (202) 387-6121; www.consumerfed.org
Consumers Union of the U.S. (1936): (914) 378-2000; www.consumersunion.org
Green America (formerly Co-op America) (1982): (800) 584-7336; www.greenamericatoday.org
Helicopter Society, American (1944): (703) 684-6777; www.vtol.org
Hostelling Intl. USA (1934): (301) 495-1240; www.hiayh.org
Jewish Community Centers Assn. of North America (1917): (212) 532-4949; www.jcca.org
Motorcyclist Assn., American (1924): (800) 262-5646; www.amadirectlink.com
Nude Recreation, American Assn. for (1931): (407) 933-2064; www.aanr.com
Parents Without Partners, Inc. (1957): (561) 391-8833; www.parentswithoutpartners.org
Planetary Society (1980): (626) 793-5100; www.planetary.org
Retired Persons, American Assn. of (1958): (888) 687-2277; www.aarp.org
Scrabble® Assn., Natl. (1978): (631) 477-0033; www.scrabble-assoc.com
Sports Car Club of America (1944): (785) 357-7222; www.scca.org
Toastmasters Intl. (1924): (949) 858-8255; www.toastmasters.org
YMCA (Young Men's Christian Assn.) of the USA (1851): (800) 872-9622; www.ymca.net
YWCA (Young Women's Christian Assn.) USA (1858): (202) 467-0801; www.ywca.org

Military and Veterans'

Air Force Assn. (1946): (703) 247-5800; www.afa.org
American Legion (1919): (317) 630-1200; www.legion.org
American Legion Auxiliary (1919): (317) 569-4500; www.legion-aux.org
AMVETS (American Veterans) (1944): (301) 459-9600; www.amvets.org
Army, Assn. of the United States (1950): (703) 841-4300; www.ausa.org
Blinded Veterans Assn. (1958): (202) 371-8880; www.bva.org
Civil Air Patrol (1941): (877) 227-9142; www.cap.gov
Coast Guard Combat Veterans Assn. (1985): (330) 887-5539; www.coastguardcombatvets.com
Disabled American Veterans (1932): (859) 441-7300; www.dav.org
88th Infantry Division Assn. (1946): (508) 584-4169; www.88infdiv.org
82nd Airborne Division Assn., Inc. (1946): (910) 822-4534; www.82ndassociation.org
Ex-Prisoners of War, American (1942): (817) 649-2979; www.axpow.org
Fleet Reserve Association (1924): (703) 683-1400; www.fra.org
Jewish War Veterans of the U.S.A. (1896): (202) 265-6280; jwv.org
Legion of Valor Museum (1991): (559) 498-0510; www.legionofvalormuseum.org
Marine Corps League (1937): (703) 207-9588; www.mcleague.org
Military Officers Assn. (1929): (703) 549-2311; www.moaa.org
Military Order of the World Wars (1919): (877) 320-3774; www.militaryorder.net
National Guard Assn. of the U.S. (1878): (202) 789-0031; www.ngaus.org
Naval Institute, U.S. (1873): (410) 268-6110; www.usni.org
Naval Reserve Assn. (1954): (866) 672-4968; www.navy-reserve.org
Navy League of the United States (1902): (703) 528-1775; www.navyleague.org
Ninety-Nines (Intl. Org. of Women Pilots) (1929): (405) 685-7969; www.ninety-nines.org
Non-Commissioned Officers Assn. (1960): (800) 662-2620; www.ncoausa.org
Paralyzed Veterans of America (1946): (800) 424-8200; www.pva.org
Purple Heart, Military Order of the (1932): (703) 354-2140; www.purpleheart.org
Reserve Officers Assn. of the U.S. (1922): (202) 479-2200; www.roa.org
Sons of the American Legion (1932): (317) 630-1200; www.sal.legion.org
Tin Can Sailors (1976): (508) 677-0515; www.destroyers.org
Uniformed Services, Natl. Assn. for (1968): (703) 750-1342; www.naus.org
USO World Headquarters (1941): (703) 908-6400; www.uso.org
USS Forrestal CVA/CV/AVT-59 Assn., Inc. (1990): (888) 434-5955; www.lancehatfield.com/cv59.htm
USS Missouri Memorial Assn., Inc. (1994): (808) 455-1600; www.ussmissouri.org
Veterans of Foreign Wars of the U.S. (1899): (816) 756-3390; www.vfw.org
Veterans of Foreign Wars of the U.S., Ladies Auxiliary to the (1914): (816) 756-3390; www.ladiesauxvfw.org
Veterans of the Vietnam War, Inc. (1978): (570) 603-9740; www.vvnw.org
War Mothers, American (1917): (202) 362-0090; www.americanwarmoms.org
Women's Army Corps Veterans Assn. (1946): www.armywomen.org
USS Idaho BB-42 Assn. (1957): P.O. Box 711247, San Diego, CA 92171; (858) 271-6106
USS Los Angeles CA-135 Assn. (1977): c/o Jim Osborne, 1314 N. Alden Rd., Muncie, IN 47304; www.uss-la-ca135.org

Political

Abortion Federation, National (1977): (202) 667-5881; www.prochoice.org
Advancement and Support of Education, Council for (1974): (202) 328-2273; www.case.org
American Indians, Natl. Congress of (1944): (202) 466-7767; www.ncai.org

American-Islamic Relations, Council on (1994): (202) 488-8787; www.cair.com
Center for Responsive Politics (1983): (202) 857-0044; www.opensecrets.org
Cities, Natl. League of (1924): (202) 626-3000; www.nlc.org
Civil Liberties Union, American (ACLU) (1920): (888) 567-2258; www.aclu.org
Coffee Party USA (2010): www.coffeepartyusa.com
Common Cause (1970): (202) 833-1200; www.commoncause.org
Concerned Women for America (1979): (202) 488-7000; www.cwfa.org
Congress of Racial Equality (CORE) (1942): (212) 598-4000; www.core-online.org
Conscientious Objectors, Central Committee for (1948): (510) 465-1617; www.objector.org
Crime and Delinquency, Natl. Council on (1907): (510) 208-0500; www.nccd-crc.org
Democratic Natl. Committee (1848): (202) 863-8000; www.democrats.org
Feminists for Life of America (1972): (703) 836-3354; www.feministsforlife.org
Gay & Lesbian Alliance Against Defamation (GLAAD) (1985): (212) 629-3322; www.glaad.org
Gay and Lesbian Task Force, Natl. (1973): (202) 393-5177; www.thetaskforce.org
Governors' Assn., Natl. (1908): (202) 624-5300; www.nga.org
Grange Patrons of Husbandry, Natl. (1867): (202) 628-3507; www.nationalgrange.org
Gray Panthers (1970): (202) 737-6637; www.graypanthers.org
Green Party (1984): (866) 473-3672; www.greenparty.org
Homeless, Natl. Coalition for the (1984): (202) 462-4822; www.nationalhomeless.org
Japanese-American Citizens League (1929): (415) 921-5225; www.jacl.org
Jewish Committee, American (1906): (212) 751-4000; www.ajc.org
John Birch Society (1958): (920) 749-3780; www.jbs.org
Libertarian Party (1971): (202) 333-0008; www.lp.org
Mayors, U.S. Conference of (1932): (202) 293-7330; www.usmayors.org
NAACP (Natl. Assn. for the Advancement of Colored People) (1909): (410) 580-5777; www.naacp.org
National Tea Party Federation (2010): www.thenationalteapartyfederation.com
NRA (National Rifle Assn.) (1871): (800) 672-3888; www.nra.org
Parliamentarians, Natl. Assn. of (1930): (816) 833-3892; www.parliamentarians.org
Reform Party of the U.S.A. (1995): (877) GO-REFORM; www.reformpartyusa.org
Republican National Committee (1856): (202) 863-8500; www.rnc.org
Science, American Assn. for the Advancement of (1848): (202) 326-6400; www.aaas.org
Southern Christian Leadership Conference (1957): (404) 522-1420; sclcnational.org
Southern Poverty Law Center (1971): (334) 956-8200; www.splcenter.org
State Governments, Council of (1933): (859) 244-8000; www.csg.org
Tax Foundation (1937): (202) 464-6200; www.taxfoundation.org
Taxpayers Union, Natl. (1969): (703) 683-5700; www.ntu.org
Term Limits, U.S. (1992): (703) 383-0907; www.termlimits.org
Urban League, Natl. (1910): (212) 558-5300; www.nul.org
Women, Natl. Organization for (NOW) (1966): (202) 628-8669; www.now.org
Women and Families, Natl. Partnership for (1971): (202) 986-2600; www.nationalpartnership.org
Women's Christian Temperance Union, Natl. (1874): (847) 864-1397; www.wctu.org
Women Voters of the U.S., League of (1920): (202) 429-1965; www.lwv.org
Zionist Organization of America (1897): (212) 481-1500; www.zoa.org

Religious

African Methodist Episcopal Church (1787): 3801 Market St., Ste. 300, Philadelphia, PA 29204; (215) 662-0506; www.ame-church.com; Senior Bishop, Bishop John R. Bryant
African Methodist Episcopal Zion Church (1796): 3225 West Sugar Creek Rd., Charlotte, NC 28269; (704) 688-2549; www.amez.org; Senior Bishop, George W. C. Walker Sr.
American Baptist Churches in the U.S.A. (1907): P.O. Box 851, Valley Forge, PA 19482; www.abc-usa.org; Pres., Frank Christine.
Antiochian Orthodox Christian Archdiocese of North America (1895): 358 Mountain Rd., Englewood, NJ 07631; (201) 871-7954; www.antiochian.org; Primate, Archbishop, Metropolitan Philip Saliba
Armenian Apostolic Church of America (1887): www.armprelacy.org; *Eastern* Prelacy: 138 E. 39th St., New York, NY 10016; (212) 689-7810; Prelate, Archbishop Oshagan Choloyan; *Western Prelacy*: 6252 Honolulu Ave., La Crescenta, CA 91214; (818) 248-7737; Prelate, Archbishop Moushegh Mardirossian
Assemblies of God (1914): 1445 N. Boonville Ave., Springfield, MO 65802; (417) 862-2781; www.ag.org/top; Gen. Supt., George O. Wood
Atheists, American (1963): P.O. Box 5733, Parsippany, NJ 07054; (908) 276-7300; www.atheists.org
Bahá'í Faith, National Spiritual Assembly of the Bahá'í's of the U.S. (1907): 1233 Central St., Evanston, IL 60201; (847) 733-3400; www.bahai.us; Sec. Gen., Dr. Robert C. Henderson
Baptist Bible Fellowship Intl. (1950): Baptist Bible Fellowship Missions Bldg., 720 E. Kearney St., Springfield, MO 65803; (417) 862-5001; www.bbfi.org; Pres., Rev. Bill Monroe
Baptist Convention, Southern (1845): 901 Commerce St., Nashville, TN 37203; (615) 244-2355; www.sbc.net; Pres. Frank Page
Baptist Convention, U.S.A., Inc., National (1895): 1700 Baptist World Center Dr., Nashville, TN 37207; (615) 228-6292; www.nationalbaptist.com; Pres., Dr. Julius R. Scruggs
Baptist Convention of America, National (1880): 777 S.R.L. Thornton Freeway, Ste. 205, Dallas, TX 75203; (214) 946-8913; www.nbcamerica.net; Pres., Rev. Stephen J. Thurston
Baptist Convention of America, National Missionary (1988): 4269 S. Figueroa St., Los Angeles, CA 90037; (323) 846-1950; www.nmbca.com; Pres., Dr. C. C. Robertson
Baptist General Conference (1852): 2002 S. Arlington Heights Rd., Arlington Heights, IL 60005; (847) 228-0200; www.bgcworld.org; Pres. and CEO, Dr. Gerald Sheveland
Bible Society, American (1816): 1865 Broadway, New York, NY 10023; (800) 322-4253; www.bibles.com
Biblical Literature, Society of (1880): 825 Houston Mill Rd., Atlanta, GA 30329; (404) 727-3100; www.sbl-site.org
B'nai B'rith Intl. (1843): 2020 K St. NW, 7th Fl., Washington, DC 20006; (202) 857-6600; www.bnaibrith.org
Brethren in Christ Church (1778): General Church Office, P.O. Box A, Grantham, PA 17027; (717) 697-2634; www.bic-church.org; Moderator, Dr. Warren L. Hoffman
Buddhist Churches of America (1899): 1710 Octavia St., San Francisco, CA 94109; (415) 776-5600; www.buddhistchurchesofamerica.com; Presiding Bishop, Socho Koshin Ogui
Christian Church (Disciples of Christ) (1832): Disciples Center, 130 E. Washington St., Indianapolis, IN 46206; (317) 635-3100; www.disciples.org; Pres., Rev. Dr. Sharon E. Watkins
Christian Churches and Churches of Christ, 4210 Bridgetown Rd., Box 11326, Cincinnati, OH 45211; (513) 598-6222; www.cctoday.com
Christian Methodist Episcopal Church (1870): First Memphis Plaza, 4466 Elvis Presley Blvd., Memphis, TN 38116; (216) 382-3559; www.c-m-e.org; Exec. Sec., Atty. Juanita Bryant
Church of the Brethren (1708): General Offices, 1451 Dundee Ave., Elgin, IL 60120; (847) 742-5100, ext. 206; www.brethren.org; Moderator, James M. Beckwith
Church of Christ (1830): Temple Lot, 200 S. River St., P.O. Box 472, Independence, MO 64051; (816) 833-3995; www.church-of-christ.com; Council of Apostles, Sec., Apostle Smith N. Brickhouse
Church of God (Anderson, IN) (1881): Box 2420, Anderson, IN 46018; (765) 642-0256; www.chog.org; Gen. Dir., Pres. Dr. Ronald V. Duncan
Church of God (Cleveland, TN) (1886): 2490 Keith St. NW, Cleveland, TN 37320; (423) 472-3361; www.churchofgod.org; Gen. Overseer, G. Dennis McGuire
Church of God in Christ (1897): Mason Temple, 938 Mason St., Memphis, TN 38126; (901) 947-9300; www.cogic.org; Presiding Bishop, Bishop C. E. Blake
Church of Jesus Christ (Bickertonites) (1862): 6th and Lincoln Sts., Monongahela, PA 15063; (412) 258-3066; Pres., Dominic Thomas
Church of Jesus Christ of Latter-day Saints, The (Mormons) (1830): 47 E. South Temple St., Salt Lake City, UT 84150; (801) 240-1000; www.lds.org; Pres., Gordon B. Hinckley
Church of the Nazarene (1907): 6401 The Paseo, Kansas City, MO 64131; (816) 333-7000; www.nazarene.org; Gen. Secy., David P. Wilson
Community of Christ (reorganized Church of Jesus Christ of Latter-Day Saints) (1830): Intl. Headquarters, 1001 W. Walnut, Independence, MO 64050; www.cofchrist.org; Pres., Stephen M. Veazey
Community Churches, International Council of (1950): 21116 Washington Pkwy., Frankfort, IL 60423; (815) 464-5690; www.icccusa.com; Exec. Dir., Michael Livingston
Conservative Judaism, United Synagogue of (1913): 820 Second Ave., New York, NY 10017; (212) 533-7800; www.uscj.org; Pres., Dr. Raymond B. Goldstein
Cumberland Presbyterian Church (1810): 1978 Union Ave., Memphis, TN 38104; (901) 276-4572; www.cumberland.org; Moderator, Rev. Frank Ward
Episcopal Church (1789): 815 Second Ave., New York, NY 10017; (212) 716-6240; www.ecusa.anglican.org; Presiding Bishop and Primate, Most Rev. Katharine Jefferts-Schori
Evangelical Lutheran Church in America (1987): 8765 W. Higgins Rd., Chicago, IL 60631; (773) 380-2700; www.elca.org; Presiding Bishop, Rev. Mark S. Hanson
First Church of Christ, Scientist, The (1879): 210 Massachusetts Ave., Boston, MA 02115; (617) 450-2000; www.tfccs.com; Pres., Barbara Vining
Free Methodist Church of North America (1860): World Ministries Center, 770 N. High School Rd., Indianapolis, IN 46214; (317) 244-1247; www.freemethodistchurch.org; The Board of Bishops
Freedom From Religion Foundation (1978): P.O. Box 750, Madison, WI 53701; (608) 256-8900; www.ffrf.org
Friends General Conference (1900): 1216 Arch St. 2B, Philadelphia, PA 19107; (215) 561-1700; www.fgcquaker.org; Gen. Sec., Bruce Birchard
Gideons Intl. (1899): P.O. Box 140800, Nashville, TN 37214; (615) 564-5000; www.gideons.org
Greek Orthodox Archdiocese of America (1922): 8-10 E. 79th St., New York, NY 10021; (212) 570-3500; www.goarch.org; Primate, Archbishop Demetrios
Hadassah, the Women's Zionist Organization of America (1912): 50 W. 58th St., New York, NY 10019; (888) 303-3640; www.hadassah.org
Interfaith Alliance, The (1994): 1212 New York Ave. NW, 7th Fl., Washington, DC 20005; (202) 238-3300; www.interfaithalliance.org
Islamic Society of North America: 6555 S. 750 East, Plainfield, IN 46168; (317) 839-8157; www.isna.net; Exec. Dir., Louay Safi
Jehovah's Witnesses (1884): 25 Columbia Heights, Brooklyn, NY 11201; (718) 560-5000; www.watchtower.org; Pres., Don Adams
Jewish Congress, American (1918): 825 Third Ave., New York, NY 10022; (212) 879-4500; www.ajcongress.org
Jewish Reconstructionist Federation (1955): Beit Devora, 101 Greenwood Ave., Ste. 430, Jenkintown, PA 19046; (215) 885-5601; www.jrf.org; Pres., Robert Barkin
Jewish Women, Natl. Council of (1893): 475 Riverside Dr., Ste. 520, New York, NY 10115; (212) 645-4048; www.ncjw.org

Lutheran Church—Missouri Synod (1847): 1333 S. Kirkwood Rd., St. Louis, MO 63122; (314) 996-1236; www.lcms.org; Pres., Dr. Gerald B. Kieschnick

Mennonite Church USA (2001): 722 N. Main St., Newton, KS 67114; (316) 283-5100; www.mennonitechurch.org; Moderator, Edward D. Diller

Moravian Church in North America (1735): www.moravian.org; *Northern Prov.*: 1021 Center St., P.O. Box 1245, Bethlehem, PA 18016; (610) 867-7566; Pres., David L. Wickmann; *Southern Prov.*: 459 S. Church St., Winston-Salem, NC 27101; (336) 725-5811; Pres., Rt. Rev. Wayne Burkette

North American Shi'a Muslim Communities Organization (1986) P.O. Box 29691, Minneapolis, MN 55429; (905) 763-7512; www.nasimco.org; Pres., Hussein Walji

Orthodox Jewish Congregations in America, Union of (1898): 11 Broadway, New York, NY 10004; (212) 563-4000; www.ou.org; Pres., Stephen J. Stavitsky

Pentecostal Assemblies of the World, Inc. (1925): 3939 Meadows Dr., Indianapolis, IN 46205; (317) 547-9541; www.pawinc.org; Presiding Bishop, Horace E. Smith

Presbyterian Church (U.S.A.) (1983): 100 Witherspoon St., Louisville, KY 40202; (888) 728-7228; www.pcusa.org; Exec. Dir., Linda Valentine

Progressive National Baptist Convention, Inc. (1961): 601 50th St. NE, Washington, DC 20019; (202) 396-0558; www.pnbc.org; Pres., Dr. T. DeWitt Smith Jr.

Rabbis, Central Conference of American (1889): 355 Lexington Ave., New York, NY 10017; (212) 972-3636; www.ccarnet.org

Reform Judaism, Union for (1873): 633 3rd Ave., New York, NY 10017; www.urj.org; (212) 650-4000; Pres., Rabbi Eric Yoffie

Roman Catholic Church (1634): U.S. Conference of Catholic Bishops, 3211 4th St. NE, Washington, DC 20017; (202) 541-3000; www.usccb.org; Gen. Sec., Msgr. David J. Malloy

Secular Humanism, Council for (1980): P.O. Box 664, Amherst, NY 14226; (716) 636-7571; www.secularhumanism.org

Separation of Church and State, Americans United for (1947): 518 C St. NE, Washington, DC 20002; (202) 466-3234; www.au.org

Seventh-day Adventist Church (1863): 12501 Old Columbia Pike, Silver Spring, MD 20904; (301) 680-6000; www.adventist.org; Pres., Jan Paulsen

Unitarian Universalist Association of Congregations (1961): 25 Beacon St., Boston, MA 02108; (617) 742-2100; www.uua.org; Pres., The Rev. William Sinkford

United Church of Christ (1957): 700 Prospect Ave., Cleveland, OH 44115; (216) 736-2100; www.ucc.org; Pres., Rev. John H. Thomas

United Methodist Church (1968): Council of Bishops, 100 Maryland Ave. NE, Washington, DC 20002; (615) 742-5406; www.umc.org; Pres. Bishop Peter D. Weaver

United Pentecostal Church Intl. (1945): 8855 Dunn Rd., Hazelwood, MO 63042; (314) 837-7300; www.upci.org; Gen. Supt. Rev. Kenneth F. Haney

Wesleyan Church (1968): P.O. Box 50434, Indianapolis, IN 46250; (317) 774-7900; www.wesleyan.org; Gen. Sec., Dr. Ronald D. Kelly

World Council of Churches, U.S. Office (1948): 475 Riverside Dr., Ste. 1370, New York, NY 10115; (212) 870-2533; www.wcc-usa.org

Businesses and Corporations

Source: World Almanac research

Listed below are major corporations offering products and services to U.S. consumers. Information as of Oct. 2010. Alphabetization is by first key word or founder last name. Listings generally include examples of products offered.

Company name (NYSE/Nasdaq symbol, if traded on those markets): Address; Telephone number; Website; Top executive; Business, products, or services.

A&P: see Great Atlantic & Pacific Tea Co., Inc.

Abbott Laboratories (ABT): 100 Abbott Park Rd., Abbott Park, IL 60064; (847) 937-6100; www.abbott.com; Miles D. White; development, mfr. of pharmaceutical, nutritional, diagnostic prods.

Advance Publications, Inc.: 950 Fingerboard Rd., Staten Island, NY, 10305; (718) 981-1234; www.advance.net; Samuel I. Newhouse Jr.; communications, newspaper and magazine publisher (Parade; Condé Nast subsids.: New Yorker, Vanity Fair, Vogue).

Aetna, Inc. (AET): 151 Farmington Ave., Hartford, CT 06156; (860) 273-0123; www.aetna.com; Ronald A. Williams; health care, employee benefits.

Aflac, Inc. (AFL): 1932 Wynnton Rd., Columbus, GA 31999; (706) 323-3431; www.aflac.com; Daniel P. Amos; supplemental health and life insurance.

Alaska Air Group, Inc. (ALK): 19300 International Blvd., Seattle, WA 98188; (206) 392-5040; www.alaskaair.com; William S. Ayer; airline carriers (Alaska Airlines, Horizon Air).

Alberto Culver Co. (ACV): 2525 Armitage Ave., Melrose Park, IL 60160; (708) 450-3000; www.alberto.com; Carol Lavin Bernick; personal care prods. (Alberto VO5, Nexxus, Noxzema), food and household prods. (Mrs. Dash).

Alcatel-Lucent (ALU): 54 rue La Boétie, Paris 75008, France; +33 (1) 4076-1010; www.alcatel-lucent.com; Ben Verwaayen; telecommunications equip., broadband networks.

Alcoa Inc. (AA): 201 Isabella St., Pittsburgh, PA 15212; (412) 553-4545; www.alcoa.com; Klaus Kleinfeld; prod., mgt. of aluminum, aluminum products (aerospace, automotive, industrial materials and components).

Allegheny Technologies Inc. (ATI): 1000 Six PPG Pl., Pittsburgh, PA 15222; (412) 394-2800; www.alleghenytechnologies.com; L. Patrick Hassey; specialty metals mfr. (titanium, alloys).

Allstate Corp. (ALL): 2775 Sanders Rd., Northbrook, IL 60062; (847) 402-5000; www.allstate.com; Thomas J. Wilson; personal property and casualty insurance; financial services.

Altria Group, Inc. (MO): 6601 West Broad St., Richmond, VA 23230; (807) 274-2200; www.altria.com; Michael E. Szymanczyk; largest U.S. tobacco company (Philip Morris USA brands: Marlboro, Merit, Parliament, Virginia Slims). Acquired UST Inc. smokeless tobacco mfr., 1/6/2009.

Amazon.com, Inc. (AMZN): 1200 12th Ave. S., Ste. 1200, Seattle, WA 98144; (206) 266-1000; www.amazon.com; Jeffrey P. Bezos; online retailer of books, music, other consumer and household prods.

American Electric Power Co., Inc. (AEP): 1 Riverside Plz., Columbus, OH 43215; (614) 716-1000; www.aep.com; Michael G. Morris; public utilities.

American Express Co. (AXP): World Financial Ctr., 200 Vesey St., NY, NY 10285; (212) 640-2000; www.americanexpress.com; Kenneth I. Chenault; charge and credit cards, travel-related services.

American Greetings Corp. (AM): 1 American Rd., Cleveland, OH 44144; (216) 252-7300; www.americangreetings.com; Morry Weiss; greeting cards, stationery, party goods, gift items.

American Intl. Group, Inc. (AIG): 70 Pine St., NY, NY 10270; (212) 770-7000; www.aigcorporate.com; Robert H. Benmosche; insurance, financial services. AIG received $85 bil govt. bailout, 9/16/2008. As of end of June 2010, it still owed the fed. govt. $101.2 bil.

American Standard Brands (AS America, Inc.): 1 Centennial Plz., Piscataway, NJ 08855; (732) 980-6000; www.americanstandard-us.com; Donald C. Devine; kitchen and bath prods. Formed from merger of American Standard America, Crane Plumbing, and Eljer, 3/6/2008.

AMR Corp. (AMR): 4333 Amon Carter Blvd., Ft. Worth, TX 76155; (817) 963-1234; www.aa.com; Gerard J. Arpey; one of the world's largest air carriers (American Airlines, American Eagle).

Anheuser-Busch InBev (BUD): Brouwerijplein 1, 3000 Leuven, Belgium; +32 (16) 247111; www.ab-inbev.com; Carlos Brito; world's largest brewer (Budweiser, Bud Light, Michelob, Busch), aluminum can mfr. and recycling. Anheuser-Busch became wholly owned subsid. of InBev, 11/18/2008. Anheuser-Busch InBev agreed to sell subsid. Busch Entertainment Corp., 2nd largest theme park operator in U.S., 10/7/2009.

Apple Inc. (AAPL): 1 Infinite Loop, Cupertino, CA 95014; (408) 996-1010; www.apple.com; Steve Jobs; mfr. of computers (Mac), digital media devices (iPod, iPhone) and distrib. (iTunes store).

ARAMARK Corp.: ARAMARK Tower, 1101 Market St., Philadelphia, PA 19107; (215) 238-3000; www.aramark.com; Joseph Neubauer; food/support services to institutions and facilities, uniforms and career apparel.

ArcelorMittal USA, Inc.: 1 South Dearborn, Chicago, IL 60603; (312) 899-3440; www.arcelormittal.com; Michael G. Rippey; U.S. subsidiary of Arcelor Mittal, world's largest steel co., based in Luxembourg.

Archer Daniels Midland Co. (ADM): 4666 Faries Pkwy., Decatur, IL 62526; (217) 424-5200; www.adm.com; Patricia A. Woertz; agricultural commodities and prods.

Armstrong World Industries, Inc. (AWI): 2500 Columbia Ave., P.O. Box 3001, Lancaster, PA 17604; (717) 397-0611; www.armstrong.com; Matthew J. Espe; mfr. of flooring, ceiling prods., cabinets.

ArvinMeritor, Inc. (ARM): 2135 W. Maple Rd., Troy, MI 48084; (248) 435-1000; www.arvinmeritor.com; Charles G. McClure; commercial vehicles systems and components.

Ashland Inc. (ASH): 50 E. RiverCenter Blvd., Covington, KY 41012; (859) 815-3333; www.ashland.com; James J. O'Brien; petroleum producer and refiner (Valvoline, plastics), chemicals, road construction. Acquired Hercules, Inc., 11/13/2008.

AT&T Inc. (T): 208 S. Akard St., Dallas, TX 75202; (210) 821-4105; www.att.com; Randall L. Stephenson; telecommunications, global information management.

AutoNation, Inc. (AN): 110 SE 6th St., Ft. Lauderdale, FL 33301; (954) 769-6000; www.autonation.com; Mike Jackson; new and used vehicles; auto parts, maintenance, and repair; auto finance and insurance.

Avon Products, Inc. (AVP): 1345 Ave. of the Americas, NY, NY 10105; (212) 282-5000; www.avon.com; Andrea Jung; cosmetics, fragrances, skin and personal care items; fashion apparel, accessories; housewares.

Bank of America Corp. (BAC): Bank of America Corporate Center, 100 N. Tryon St., 18th Fl., Charlotte, NC 28255; (704) 386-5681; www.bankofamerica.com; Brian T. Moynihan; banking and nonbanking financial services. Acquired Merrill Lynch, 1/1/2009.

Barnes & Noble, Inc. (BKS): 122 Fifth Ave., NY, NY 10011; (212) 633-3300; www.barnesandnobleinc.com; Leonard S. Riggio; leading U.S. bookseller (retail and college), publisher (Sterling Pub. Co.).

Bausch & Lomb Inc.: One Bausch & Lomb Pl., Rochester, NY 14604; (585) 338-6000; www.bausch.com; Brent L. Saunders; vision care prods., pharmaceuticals, surgical equip. Acquired by Warburg Pincus, 10/26/2007.

Baxter International Inc. (BAX): 1 Baxter Pkwy., Deerfield, IL 60015; (847) 948-2000; www.baxter.com; Robert L. Parkinson Jr.; mfr. of health care prods.

Bear Stearns Cos. Inc.: see JPMorgan Chase & Co.

Becton, Dickinson & Co. (BDX): 1 Becton Dr., Franklin Lakes, NJ 07417; (201) 847-6800; www.bd.com; Edward J. Ludwig; medical, laboratory, diagnostic prods.

BellSouth Corp.: see AT&T Inc.

Berkshire Hathaway Inc. (BRK.A): 3555 Farnam St., Ste. 1440, Omaha, NE 68131; (402) 346-1400; www.berkshirehathaway.com; Warren E. Buffett; insurance (GEICO), building materials (Benjamin Moore & Co., Shaw), apparel (Fruit of the Loom), food (Dairy Queen). Merged Burlington Northern Santa Fe Corp. rail transportation co. into Berkshire subsidiary, 2/12/2010.

Bertelsmann AG: Carl-Bertelsmann-Str. 270, D-33311 Gütersloh, Germany; +49-5241-80-0; www.bertelsmann.de; Hartmut Ostrowski; world's largest trade book publisher (Random House: Knopf, Doubleday). Sold stake in Sony BMG to Sony Corp., 10/1/2008.

Best Buy Co., Inc. (BBY): 7601 Penn Ave. S., Richfield, MN 55423; (612) 291-1000; www.bestbuy.com; Brian J. Dunn; retailer of software, appliances, consumer electronics.

Blackstone Group LP, The (BX): 345 Park Ave., NY, NY 10154; (212) 583-5000; www.blackstone.com; Stephen A. Schwarzman; asset mgmt., financial services.

Blockbuster Inc. (BBI): 1201 Elm St., Dallas, TX 75270; (214) 854-3000; www.blockbuster.com; James W. Keyes; in-home movie and video game rental, purchases.

Boeing Co. (BA): 100 N. Riverside Plz., Chicago, IL 60606; (312) 544-2000; www.boeing.com; W. James McNerney Jr.; world's leading aerospace co., largest mfr. of commercial jet and military aircraft; one of the largest U.S. defense contractors.

The Brink's Co. (BCO): 1801 Bayberry Ct., Richmond, VA 23226; (804) 289-9600; www.brinkscompany.com; Michael T. Dan; security (armored transport, alarm systems, guarding services). Completed spin-off of Home Security Holdings, 10/31/2008.

Bristol-Myers Squibb Co. (BMY): 345 Park Ave., NY, NY 10154; (212) 546-4000; www.bms.com; James M. Cornelius; development, mfr., and sale of pharmaceuticals (Plavix, Abilify, Atripla).

Brown-Forman Corp. (BFB): 850 Dixie Hwy., Louisville, KY 40210; (502) 585-1100; www.brown-forman.com; Paul C. Varga; distilled spirits (Jack Daniel's, Southern Comfort), wine and champagne (Fetzer, Korbel).

Brown Shoe Co., Inc. (BWS): 8300 Maryland Ave., St. Louis, MO 63105; (314) 854-4000; www.brownshoe.com; Ronald A. Fromm; shoe mfr. (Buster Brown, Naturalizer, Dr. Scholl's) and retailer (Famous Footwear).

Brunswick Corp. (BC): 1 N. Field Ct., Lake Forest, IL 60045; (847) 735-4700; www.brunswick.com; Dustan E. McCoy; largest U.S. maker of leisure and recreation prods., incl. marine engines and boats; billiards, bowling, and fitness equipment.

Burger King Holdings, Inc. (BKC): 5505 Blue Lagoon Dr., Miami, FL 33126; (305) 378-3000; www.bk.com; John W. Chidsey; fast food hamburger restaurant chain.

Cablevision Systems Corp. (CVC): 1111 Stewart Ave., Bethpage, NY 11714; (516) 803-2300; www.cablevision.com; James L. Dolan; cable and Internet services provider (Optimum); cable networks (AMC, IFC, WE); movie theaters (Clearview). Approved spin off of Madison Square Garden, 1/12/2010.

Campbell Soup Co. (CPB): One Campbell Pl., Camden, NJ 08103; (856) 342-4800; www.campbellsoupcompany.com; Douglas R. Conant; world's largest soup mfr.; sauces (Pace, Prego), V8 juice, Pepperidge Farm prods.

Caterpillar Inc. (CAT): 100 NE Adams St., Peoria, IL 61629; (309) 675-1000; www.cat.com; Douglas R. Oberhelman; world's largest mfr. of construction and mining equip.

CBS Corp. (CBS): 51 W. 52nd St., NY, NY 10019; (212) 975-4321; www.cbscorporation.com; Leslie Moonves; TV networks (CBS, Showtime); TV distribution; book publishing (Simon & Schuster); advertising.

Chevron Corp. (CVX): 6001 Bollinger Canyon Rd., San Ramon, CA 94583; (925) 842-1000; www.chevron.com; John S. Watson; one of the world's largest integrated-energy co..

Chiquita Brands International, Inc. (CQB): 250 E. 5th St., Cincinnati, OH 45202; (513) 784-8000; www.chiquitabrands.com; Fernando Aguirre; bananas and other fruits and vegetables.

Church & Dwight Co., Inc. (CHD): 469 N. Harrison St., Princeton, NJ 08543; (609) 683-5900; www.churchdwight.com; James R. Craigie; world's largest producer of sodium bicarbonate (ARM & HAMMER baking soda); household (OxiClean) and personal care prods. (Arrid, Trojan, First Response).

CIGNA Corp. (CI): 2 Liberty Pl., 1601 Chestnut St., Philadelphia, PA 19192; (215) 761-1000; www.cigna.com; David M. Cordani; healthcare, life and accident insurance provider.

Cintas Corp. (CTAS): 6800 Cintas Blvd., Cincinnati, OH 45262; (513) 459-1200; www.cintas.com; Scott D. Farmer; largest uniform supplier in North America.

Circuit City Stores, Inc.: see Systemax Inc.

Cisco Systems, Inc. (CSCO): 170 West Tasman Dr., Bldg. 10, San Jose, CA 95134; (408) 526-4000; www.cisco.com; John T. Chambers; networking and communication products.

Citigroup, Inc. (C): 399 Park Ave., NY, NY 10043; (212) 559-1000; www.citigroup.com; Vikram Pandit; diversified financial services. Announced plans to realign into two business segments (Citicorp and Citi Holdings), 1/16/2009.

Clear Channel Communications, Inc. (CCMO): 200 E. Basse Rd., San Antonio, TX 78209; (210) 822-2828; www.clearchannel.com; Mark P. Mays; largest radio station owner in U.S. (850+ stations); outdoor advertising (billboards, mass transit ads). Acquired by CC Media Holdings, 7/30/2008.

Clorox Co. (CLX): 1221 Broadway, Oakland, CA 94612; (510) 271-7000; www.clorox.com; Donald R. Knauss; retail consumer prods. (Clorox, Formula 409, Pine-Sol, S.O.S., Tilex; ArmorAll, STP automotive prods.; Scoop Away, Fresh Step cat litters; Kingsford charcoal; Hidden Valley dressing; Glad plastic bags; Brita water systems; Burt's Bees personal care prods.).

Coca-Cola Co. (KO): 1 Coca-Cola Plz., Atlanta, GA 30313; (404) 676-2121; www.coca-cola.com; Muhtar Kent; world's largest soft drink co. (Coca-Cola, Sprite, Dasani water, POWERade), world's largest dist. of juice prods. (Minute Maid).

Colgate-Palmolive Co. (CL): 300 Park Ave., NY, NY 10022; (212) 310-2000; www.colgate.com; Ian M. Cook; soap (Irish Spring), detergent (Palmolive), household cleansers (Ajax), toothpaste (Colgate, Tom's of Maine), pet food (Hill's Science Diet).

Collective Brands, Inc. (PSS): 3231 SE 6th Ave., Topeka, KS 66607; (785) 233-5171; www.collectivebrandsinc.com; Matthew E. Rubel; shoe mfr./retailer. Formed by acquisition of StrideRite by Payless ShoeSource, 8/17/2007.

Comcast Corp. (CMCSA): 1 Comcast Ctr., Philadelphia, PA 19103; (215) 286-1700; www.comcast.com; Brian L. Roberts; largest U.S. cable company; broadband cable, internet, and voice services. Some programming (E!, Golf Channel).

Compaq Computer Corp.: see Hewlett-Packard Co.

CompUSA Inc.: see Systemax Inc.

Computer Sciences Corp. (CSC): 3170 Fairview Park Dr., Falls Church, VA 22042; (703) 876-1000; www.csc.com; Michael W. Laphen; technology services.

ConAgra Foods, Inc. (CAG): 1 ConAgra Dr., Omaha, NE 68102; (402) 595-4000; www.conagrafoods.com; Gary M. Rodkin; food processor (Chef Boyardee, Healthy Choice frozen dinners, Egg Beaters, Reddi-wip); food service supplier.

ConocoPhillips Co. (COP): 600 N. Dairy Ashford Rd., P.O. Box 2197, Houston, TX 77079; (281) 293-1000; www.conocophillips.com; James J. Mulva; 2nd-largest U.S. oil and gas company.

Consolidated Edison, Inc. (ED): 4 Irving Pl., NY, NY 10003; (212) 460-4600; www.conedison.com; Kevin Burke; electric, natural gas utilities.

Continental Airlines, Inc. (CAL): 1600 Smith St., Dept. HQSEO, Houston, TX 77002; (713) 324-2950; www.continental.com; Jeffery A. Smisek; air transportation; merger with United Airlines closed 10/1/2010.

Corning Inc. (GLW): 1 Riverfront Plz., Corning, NY 14831; (607) 974-9000; www.corning.com; Wendell P. Weeks; mfr. of telecommunications, specialty equipment, fiber optics.

Costco Wholesale Corp. (COST): 999 Lake Dr., Issaquah, WA 98027; (425) 313-8100; www.costco.com; James D. Sinegal; wholesale warehouse stores.

Countrywide Financial: see Bank of America Corp.

Crane Co. (CR): 100 First Stamford Pl., Stamford, CT 06902; (203) 363-7300; www.craneco.com; Eric C. Fast; mfr. of fluid control devices, vending machines, aircraft components.

A. T. Cross Co. (ATX): 1 Albion Rd., Lincoln, RI 02865; (401) 333-1200; www.cross.com; David G. Whalen; writing instruments, timepieces, personal accessories.

Crown Holdings, Inc. (CCK): 1 Crown Way, Philadelphia, PA 19154; (215) 698-5100; www.crowncork.com; John W. Conway; leading producer of packaging prods.

CSX Corp. (CSX): 500 Water St., 15th Fl., Jacksonville, FL 32202; (904) 359-3200; www.csx.com; Michael J. Ward; rail and road freight transport.

CVS Caremark Corp. (CVS): 1 CVS Dr., Woonsocket, RI 02895; (401) 765-1500; www.cvs.com; Thomas M. Ryan. Acquired Eckerd Corp. in Aug. 2004, to become nation's largest drugstore chain; announced acquisition of Long Drug Stores Corp., 8/12/2008.

Dana Holding Corp. (DAN): 4500 Dorr St., Toledo, OH 43615; (419) 535-4500; www.dana.com; James E. Sweetnam; truck and auto parts, supplies; emerged from Chap. 11 reorganization, 2/1/2008.

Darden Restaurants, Inc. (DRI): 5900 Lake Ellenor Dr., Orlando, FL 32809; (407) 245-4000; www.dardenrestaurants.com; Clarence Otis Jr.; casual-dining restaurants (Red Lobster, Olive Garden).

Dean Foods Co. (DF): 2515 McKinney Ave., Ste. 1200, Dallas, TX 75201; (214) 303-3400; www.deanfoods.com; Gregg L. Engles; milk and specialty dairy products (Land O Lakes, Horizon Organic, Silk soy milk), yogurt (Mountain High).

Deere & Co. (DE): One John Deere Pl., Moline, IL 61265; (309) 765-8000; www.deere.com; Samuel R. Allen; one of the world's largest mfrs. of farm equip.; mfr. industrial equip., lawn and garden tractors.

Dell Inc. (DELL): 1 Dell Way, Round Rock, TX 78682; (512) 338-4400; www.dell.com; Michael S. Dell; laptop and desktop computers, network accessories, peripherals.

Del Monte Foods Co. (DLM): One Market @ The Landmark, San Francisco, CA 94105; (415) 247-3000; www.delmonte.com; Richard G. Wolford; canned food (College Inn, Del Monte, Contadina); pet food (9Lives, Gravy Train, Milk-Bone, Meow Mix).

Delphi Corp. (DPHI): 5725 Delphi Dr., Troy, MI 48098; (248) 813-2000; www.delphi.com; Rodney O'Neal; automotive systems, audio systems, mobile electronics; emerged from Chap. 11 bankruptcy protection, 10/6/2009.

Delta Air Lines, Inc. (DAL): 1030 Delta Blvd., Atlanta, GA 30320; (404) 715-2600; www.delta.com; Edward H. Bastian; world's largest airline; emerged from Chap. 11, 4/30/2007; merged with Northwest Airlines, 10/29/2008.

Dial Corp.: 15501 N. Dial Blvd., Scottsdale, AZ 85260; (480) 754-3425; www.henkelna.com; Bradley A. Casper; consumer prods. (Dial soap, Purex detergent, Right Guard antiperspirant, Renuzit air fresheners); U.S. subsidiary of Germany's Henkel company.

Diebold, Inc. (DBD): 5995 Mayfair Rd., North Canton, OH 44720; (330) 490-4000; www.diebold.com; Thomas W. Swidarski; mfr. ATMs, security systems and prods.

Dillard's, Inc. (DDS): 1600 Cantrell Rd., Little Rock, AR 72201; (501) 376-5200; www.dillards.com; William Dillard II; dept. store chain.

Walt Disney Co., The (DIS): 500 S. Buena Vista St., Burbank, CA 91521; (818) 560-1000; disney.go.com; Robert A. Iger; one of the world's largest media conglomerates; motion pictures (Touchstone, Pixar, Miramax); TV (ABC, ESPN) and radio; publishing; theme parks (Walt Disney World, Disneyland) and resorts. Acquired Marvel Entertainment, 12/31/2009. Announced sale of Miramax Films, 7/29/2010.

Doctor's Associates Inc.: 325 Bic Dr., Milford, CT 06461; (203) 877-4281; www.subway.com; Frederick A. DeLuca; restaurants (Subway).

Dole Food Co., Inc.: One Dole Dr., Westlake Village, CA 91362; (818) 879-6600; www.dole.com; David A. DeLorenzo; food prods., fresh fruits and vegetables. Announced plans to go public through an IPO, 8/14/2009.

R. R. Donnelley & Sons Co. (RRD): 111 S. Wacker Dr., Chicago, IL 60606; (312) 326-8000; www.rrdonnelley.com; Thomas J. Quinlan III; commercial printing; photos/graphics, translation; printer of *The World Almanac*.

Dow Chemical Co. (DOW): 2030 Dow Ctr., Midland, MI 48674; (989) 636-1000; www.dow.com; Andrew N. Liveris; chemicals, plastics (world's 2nd-largest chemical co.). Acquired Rohm and Haas, 4/1/2009.

Dow Jones & Co., Inc.: see News Corp.

Dr Pepper Snapple Group, Inc. (DPS): 5301 Legacy Dr., Plano, TX 75024; (972) 673-7000; www.drpeppersnapplegroup.com; Larry D. Young; bottler and distributor of non-alcoholic beverages (Dr Pepper, Hawaiian Punch, 7UP, Snapple, Mott's). Created from separation of Cadbury Schweppes into Cadbury and Dr Pepper Snapple Group, 5/7/2008.

Duke Energy Corp. (DUK): 526 S. Church St., Charlotte, NC 28202; (704) 594-6200; www.duke-energy.com; James E. Rogers; utilities, fiber optics networks.

Dun & Bradstreet Corp. (DNB): 103 JFK Pkwy., Short Hills, NJ 07078; (973) 921-5500; www.dnb.com; Sara Mathew; business information, research.

E. I. du Pont de Nemours & Co. (Dupont) (DD): 1007 Market St., Wilmington, DE 19898; (302) 774-1000; www.dupont.com; Ellen J. Kullman; 3rd-largest U.S. chemical co.; petroleum, consumer prods.

Eastman Kodak Co. (EK): 343 State St., Rochester, NY 14650; (585) 724-4000; www.kodak.com; Antonio M. Perez; film; digital cameras; printers.

Eaton Corp. (ETN): Eaton Ctr., 1111 Superior Ave., Cleveland, OH 44114; (216) 523-5000; www.eaton.com; Alexander M. Cutler; mfr. vehicle components, controls.

eBay Inc. (EBAY): 2145 Hamilton Ave., San Jose, CA 95125; (408) 376-7400; www.ebay.com; John Donahoe; online auctions. Acquired StubHub.com, 2/13/2007.

Edison Intl. (EIX): 2244 Walnut Grove Ave., Rosemead, CA 91770; (626) 302-2222; www.edison.com; Theodore F. Craver Jr.; electric utilities.

Electronic Arts Inc. (ERTS): 209 Redwood Shores Pkwy., Redwood City, CA 94065; (650) 628-1500; www.ea.com; John Riccitiello; leading U.S. video game publisher (Madden NFL, Battlefield, The Sims).

Electronic Data Systems: see Hewlett-Packard CO.

Eli Lilly and Co. (LLY): Lilly Corporate Center, 893 S. Delaware, Indianapolis, IN 46285; (317) 276-2000; www.lilly.com; John C. Lechleiter; pharmaceutical research, development, and manufacturing (Prozac, Strattera, Cialis).

El Paso Corp. (EP): 1001 Louisiana St., Houston, TX 77002; (713) 420-2600; www.elpaso.com; Douglas L. Foshee; natural gas/oil transportation, storage, exploration, production.

EMC Corp. (EMC): 176 South St., Hopkinton, MA 01748; (508) 435-1000; www.emc.com; Joseph M. Tucci; data storage/protection.

Emerson Electric Co. (EMR): 8000 W. Florissant Ave., St. Louis, MO 63136; (314) 553-2000; www.emerson.com; David N. Farr; electrical, electronics prods. & systems.

Energizer Holdings, Inc. (ENR): 533 Maryville Univ. Dr., St. Louis, MO 63141; (314) 985-2000; www.energizer.com; Ward M. Klein; batteries, flashlights.

Estée Lauder Cos. Inc. (EL): 767 Fifth Ave., NY, NY 10153; (212) 572-4200; www.elcompanies.com; William P. Lauder; cosmetics (Clinique, Bobbi Brown), fragrance, skin care prods.

Exelon Corp. (EXC): 10 S. Dearborn St., 37th Fl., Chicago, IL 60680; (312) 394-7398; www.exeloncorp.com; John W. Rowe; electricity generation/distribution; natural gas.

Exxon Mobil Corp. (XOM): 5959 Las Colinas Blvd., Irving, TX 75039; (972) 444-1000; www.exxonmobil.com; Rex W. Tillerson; world's largest integrated oil co.

Federal Home Loan Mortgage Corp. (Freddie Mac) (FRE): 8200 Jones Branch Dr., McLean, VA 22102; (703) 903-2000; www.freddiemac.com; Charles E. Haldeman Jr.; residential mortgage provider. Taken over by U.S. government, 9/7/2008.

Federal National Mortgage Association (Fannie Mae) (FNM): 3900 Wisconsin Ave. NW, Washington, DC 20016; (202) 752-7000; www.fanniemae.com; Michael J. Williams; largest U.S. provider of residential mortgage funds. Taken over by U.S. government, 9/7/2008.

FedEx Corp. (FDX): 942 S. Shady Grove Rd., Memphis, TN 38120; (901) 818-7500; www.fedex.com; Frederick W. Smith; world's largest express delivery service.

First Data Corp.: 5565 Glenridge Connector NE, Ste. 2000, Atlanta, GA 30342; (303) 967-8000; www.firstdata.com; Jonathan J. Judge; financial transaction processing. Acquired by Kohlberg Kravis Roberts & Co., 9/24/2007.

FirstEnergy Corp. (FE): 76 S. Main St., Akron, OH 44308; (800) 633-4766; www.firstenergycorp.com; Anthony J. Alexander; public electricity supplier.

Fleetwood Enterprises, Inc. (FLE): 3125 Myers St., Riverside, CA 92503; (951) 351-3500; www.fleetwood.com; Elden L. Smith; manufactured homes. Filed for Chap. 11 reorganization, 3/10/2009.

Fluor Corp. (FLR): 6700 Las Colinas Blvd., Irving, TX 75039; (469) 398-7000; www.fluor.com; Alan L. Boeckmann; international engineering and construction co.

Foot Locker, Inc. (FL): 112 W. 34th St., NY, NY 10120; (212) 720-3700; www.footlocker-inc.com; Ken C. Hicks; retail athletic stores (Footaction, Foot Locker, Champs Sports).

Ford Motor Co. (F): 1 American Rd., Dearborn, MI 48126; (313) 322-3000; www.ford.com; William C. Ford Jr.; auto mfr.; motor vehicle sales (Ford, Lincoln, Mercury, Volvo); largest U.S. auto. finance co. (Ford Motor Credit).

Fortune Brands, Inc. (FO): 520 Lake Cook Rd., Deerfield, IL 60015; (847) 484-4400; www.fortunebrands.com; Bruce A. Carbonari; spirits and wine (Jim Beam, Courvoisier, Sauza); home and hardware prods. (Moen, Master Lock); golf and leisure prods. (Titleist, Cobra, FootJoy).

Gannett Co., Inc. (GCI): 7950 Jones Branch Dr., McLean, VA 22107; (703) 854-6000; www.gannett.com; Craig A. Dubow; largest U.S. newspaper publisher (*USA Today*); network and cable TV.

Gap Inc. (GPS): 2 Folsom St., San Francisco, CA 94105; (650) 952-4400; www.gap.com; Glenn K. Murphy; casual apparel retailer (Gap, Banana Republic, Old Navy).

Gateway, Inc.: 7565 Irvine Center Dr., Irvine, CA 92618; (949) 471-7000; www.gateway.com; personal computers, network servers, peripherals; acquired by Taiwan-based Acer Inc., 10/16/2007.

General Dynamics Corp. (GD): 2941 Fairview Park Dr., Ste. 100, Falls Church, VA 22042; (703) 876-3000; www.generaldynamics.com; Jay L. Johnson; defense contractor: aerospace, combat systems, marine systems, computing devices.

General Electric Co. (GE): 3135 Easton Tpke., Fairfield, CT 06828; (203) 373-2211; www.ge.com; Jeffrey Immelt; electrical, electronic equip., financial services, radio and TV broadcasting (NBC, Bravo, USA, Telemundo), aircraft engines, power generation, appliances.

General Mills, Inc. (GIS): One General Mills Blvd., Minneapolis, MN 55426; (763) 764-7600; www.generalmills.com; Kendall J. Powell; food mfr. (Betty Crocker, Bisquick, Cheerios, Chex, Colombo, Green Giant, Haagen-Dazs, Pillsbury, Progresso, Total, Wheaties).

General Motors Co. (GM): 300 Renaissance Ctr., Detroit, MI 48265; (313) 556-5000; www.gm.com; Daniel F. Akerson; world's largest auto mfr. (Chevrolet, Cadillac, Buick, GMC); auto financing (GMAC). General Motors Corp. filed for Chap. 11 reorganization, 6/1/2009; sold its profitable components to a new, smaller company called General Motors Co., 7/10/2009.

Genuine Parts Co. (GPC): 2999 Circle 75 Pkwy., Atlanta, GA 30339; (770) 953-1700; www.genpt.com; Thomas C. Gallagher; auto replacement parts distributor (NAPA).

Goldman Sachs Group, Inc. (GS): 85 Broad St., NY, NY 10004; (212) 902-1000; www.goldmansachs.com; Lloyd C. Blankfein; investment banking, asset management, securities services.

Goodyear Tire & Rubber Co. (GT): 1144 E. Market St., Akron, OH 44316; (330) 796-2121; www.goodyear.com; Richard J. Kramer; tires and other auto prods.

Google, Inc. (GOOG): 1600 Amphitheatre Pkwy., Mountain View, CA 94043; (650) 253-0000; www.google.com; Eric E. Schmidt; leading internet search engine. Acquired YouTube, 10/9/2006, DoubleClick, 3/11/2008.

W. R. Grace & Co. (GRA): 7500 Grace Dr., Columbia, MD 21044; (410) 531-4000; www.grace.com; Fred E. Festa; chemicals, construction prods.

Great Atlantic & Pacific Tea Co., Inc. (GAP): 2 Paragon Dr., Montvale, NJ 07645; (201) 573-9700; www.aptea.com; Christian Haub; supermarkets (A&P, The Food Emporium, Super Fresh, Waldbaum's, Pathmark). Acquired Pathmark, 12/3/2007.

Halliburton Co. (HAL): 5 Houston Center, 1401 McKinney St., Ste. 2400, Houston, TX 77010; (713) 759-2600; www.halliburton.com; David J. Lesar; oil field mgmt., energy services. Split off subsidiary KBR, Inc., 4/5/2007.

Hanesbrands Inc. (HBI): 1000 E. Hanes Mill Rd., Winston-Salem, NC 27105; (336) 519-4400; www.hanesbrands.com; Richard A. Knoll; apparel mfr. (Hanes, L'eggs, Just My Size, Playtex, Wonderbra). Spun off from parent co. Sara Lee Corp., 9/5/2006.

Harley-Davidson, Inc. (HOG): 3700 W. Juneau Ave., Milwaukee, WI 53208; (414) 342-4680; www.harley-davidson.com; Keith E. Wandell; mfr. motorcycles, parts, and accessories.

Harrah's Entertainment, Inc.: One Caesars Palace Dr., Las Vegas, NV 89109; (702) 407-6000; www.harrahs.com; Gary W. Loveman; world's largest provider of branded casino entertainment (Caesars, Horseshoe, World Series of Poker). Acquired by Apollo Global Mgmt. and Texas Pacific Group Capital, 1/28/2008.

Hartford Financial Services Group, Inc. (HIG): One Hartford Plz., Hartford, CT 06155; (860) 547-5000; www.thehartford.com; Liam E. McGee; insurance, financial services.

Hasbro, Inc. (HAS): 1027 Newport Ave., Pawtucket, RI 02862; (401) 431-8697; www.hasbro.com; Brian Goldner; toy and game mfr. (Milton Bradley, Playskool, G.I. Joe, Parker Bros., Nerf, Play-Doh).

HCA Inc.: 1 Park Plz., Nashville, TN 37203; (615) 344-9551; www.hcahealthcare.com; Richard M. Bracken; owns and operates hospitals; other diagnostic, surgical, health treatment centers.

H. J. Heinz Co. (HNZ): 1 PPG Pl., Ste. 3100, Pittsburgh, PA 15222; (412) 456-5700; www.heinz.com; William R. Johnson; food mfr. (Ore-Ida, 57 Varieties ketchup, Weight Watchers foods).

Hershey Co. (HSY): 100 Crystal A Dr., Hershey, PA 17033; (717) 534-4200; www.hersheys.com; David J. West; largest North American producer of chocolate prods. (Reese's, Kit Kat, Mounds, Almond Joy, Jolly Rancher, Twizzlers, Milk Duds, Good & Plenty).

Hertz Global Holdings, Inc. (HTZ): 225 Brae Blvd., Park Ridge, NJ 07656; (201) 307-2000; www.hertz.com; Mark P. Frissora; car rentals.

Hess Corp. (HES): 1185 Ave. of the Americas, NY, NY 10036; (212) 997-8500; www.hess.com; John B. Hess; integrated oil and gas co.

Hewlett-Packard Co. (HPQ): 3000 Hanover St., Palo Alto, CA 94304; (650) 857-1501; www.hp.com; Léo Apotheker; computers, electronic prods. and systems. Merged with Compaq, 5/3/2002. Acquired Electronic Data Systems, 8/26/2008.

Hillenbrand, Inc. (HI): One Batesville Blvd., Batesville, IN 47006; (812) 934-7000; www.hillenbrandinc.com; Kenneth A. Camp; holder of Batesville Caskets, coffin mfr. Spun off from Hill-Rom Holdings, 4/1/2008.

Hill-Rom Holdings, Inc. (HRC): 1069 State Rte. 46 E., Batesville, IN 47006; (812) 934-7777; www.hillenbrand.com; John J. Greisch; mfr. hospital beds, other hospital equip. Hill-Rom separated its funeral casket mfr., 4/1/2008.

Hilton Worldwide: 7930 Jones Branch Dr., McLean, VA 22102; (703) 883-1000; www.hiltonworldwide.com; Christopher J. Nassetta; hotels and resorts (Doubletree, Embassy, Hampton). Merged with The Blackstone Group, 10/24/2007.

Home Depot, Inc. (HD): 2455 Paces Ferry Rd. NW, Atlanta, GA 30339; (770) 433-8211; www.homedepot.com; Francis S. Blake; world's largest home improvement retailer; 2nd-largest U.S. retailer; home improvement warehouse stores. Sold construction business, HD Supply, 8/30/2007.

Honeywell Intl. Inc. (HON): 101 Columbia Rd., Morristown, NJ 07962; (973) 455-2000; www.honeywell.com; David Cote; industrial and home control systems, aerospace guidance systems.

Hormel Foods Corp. (HRL): 1 Hormel Pl., Austin, MN 55912; (507) 437-5611; www.hormel.com; Jeffrey M. Ettinger; meat processor; pork, turkey, and beef prods. (SPAM, Dinty Moore, Jennie-O).

Houghton Mifflin Harcourt Publishing Co.: 222 Berkeley St., Boston, MA 02116; (617) 351-5000; www.hmhco.com; Barry O'Callaghan; publisher of textbooks and other educational prods. (McDougal Littell), trade and reference books.

H&R Block, Inc. (HRB): 1 H&R Block Way, Kansas City, MO 64105; (816) 854-3000; www.hrblock.com; Alan Bennett; tax return preparation; business and consulting services.

Humana Inc. (HUM): 500 W. Main St., Louisville, KY 40202; (502) 580-1000; www.humana.com; Michael B. McCallister; managed health care service provider, related specialty products.

IAC/InterActive Corp (IACI): 555 W. 18th St., NY, NY 10011; (212) 314-7300; www.iac.com; Barry Diller; internet conglomerate (Ask.com, Match.com, Citysearch). Split off television, leisure, and financial holdings into 5 separate cos., 8/21/2008.

Illinois Tool Works Inc. (ITW): 3600 W. Lake Ave., Glenview, IL 60026; (847) 724-7500; www.itw.com; David B. Speer; consumer & industrial tools; food equip. (Hobart), packaging (Zip-Pak).

Ingersoll-Rand plc (IR): 170/175 Lakeview Dr., Airside Business Park, Swords, Dublin, Ireland; 353-1-870-7400; www.irco.com; Herbert L. Henkel; locks and security systems (Schlage, Kryptonite); refrigeration equip. (Thermo King, Hussmann); industrial equip.; air conditioning systems (Trane). Sold Bobcat, Utility Equip., & Attachments, 11/30/2007. Acquired Trane, 6/5/2008.

Intel Corp. (INTC): 2200 Mission College Blvd., Santa Clara, CA 95054; (408) 765-8080; www.intel.com; Paul S. Otellini; mfr. semiconductors, microprocessors (Core, Centrino).

International Business Machines Corp. (IBM): One New Orchard Rd., Armonk, NY 10504; (914) 499-1900; www.ibm.com; Samuel Palmisano; world's largest supplier of advanced information processing technology equip., services.

International Paper Co. (IP): 6400 Poplar Ave., Memphis, TN 38197; (901) 419-7000; www.ipaper.com; John V. Faraci Jr.; world's largest paper/forest prods. co.

International Textile Group, Inc. (ITXN): 804 Green Valley Rd., Ste. 300, Greensboro, NC 29605; (336) 379-2865; www.itg-global.com; Joseph L. Gorga; apparel and home textiles/fabrics.

Interstate Bakeries Corp.: 6031 Connection Dr., Irving, TX 75039; (800) 483-7253; www.hostessbrands.com; Brian J. Driscoll; baked goods wholesaler, distributor (Wonder, Hostess, Dolly Madison, Drake's, Home Pride). Emerged from Chap. 11 reorganization, 2/3/2009.

J.C. Penney Co., Inc. (JCP): 6501 Legacy Dr., Plano, TX 75024; (972) 431-1000; www.jcpenney.net; Myron E. Ullman III; dept. store retailer, general merchandise catalog sales.

J. Crew Group, Inc. (JCG): 770 Broadway, NY, NY 10003; (212) 209-2500; www.jcrew.com; Millard S. Drexler; retail and mail order apparel and accessories.

JetBlue Airways Corp. (JBLU): 118-29 Queens Blvd., Forest Hills, NY 11375; (718) 286-7900; www.jetblue.com; David Barger; air transportation.

Jo-Ann Stores, Inc. (JAS): 5555 Darrow Rd., Hudson, OH 44236; (330) 656-2600; www.joann.com; Darrell D. Webb; nation's largest specialty fabric and craft stores.

Johnson Controls, Inc. (JCI): 5757 N. Green Bay Ave., Milwaukee, WI 53209; (414) 524-1200; www.johnsoncontrols.com; Stephen A. Roell; fire protection services, auto interiors, batteries.

Johnson & Johnson (JNJ): 1 Johnson & Johnson Plz., New Brunswick, NJ 08933; (732) 524-0400; www.jnj.com; William Weldon; health care prods. (Band-Aid), pharmaceuticals (Tylenol, Motrin, Risperdal), toiletries (Neutrogena, Aveeno); acquired Pfizer's consumer prods. division (Neosporin, Listerine, Sudafed), 12/20/2006.

S. C. Johnson & Son, Inc.: 1525 Howe St., Racine, WI 53403; (262) 260-2000; www.scjohnson.com; H. Fisk Johnson; cleaning and other household prods. (Johnson's Wax, Windex, Pledge, Fantastik, Raid, OFF!, Shout, Glade, Scrubbing Bubbles, Ziploc bags).

Jones Apparel Group, Inc. (JNY): 1411 Broadway, NY, NY 10018; (212) 642-3860; www.jny.com; Wesley R. Card; apparel (Jones New York, Gloria Vanderbilt), shoes (Nine West, Anne Klein); retail and outlet stores. Sold Barneys New York, 9/7/2007.

JPMorgan Chase & Co. (JPM): 270 Park Ave., NY, NY 10017; (212) 270-6000; www.jpmorganchase.com; James Dimon; financial service. Merged with Bank One Corp., 7/1/2004; acquired Bear Stearns, 6/2/2008; acquired Washington Mutual, 9/25/2008.

KBR, Inc. (KBR): 601 Jefferson St., Ste. 3400, Houston, TX 77002; (713) 753-3011; www.kbr.com; William P. Utt; engineering; construction mgmt. services. Separated from parent company Halliburton, 4/5/2007.

Kellogg Co. (K): One Kellogg Sq., Battle Creek, MI 49016; (269) 961-2000; www.kelloggcompany.com; A.D. David Mackay; world's largest mfr. of ready-to-eat cereals, other food prods. (Frosted Flakes, Rice Krispies, Froot Loops, Pop-Tarts, Nutri-Grain, Keebler, Eggo).

Kelly Services, Inc. (KELYA): 999 W. Big Beaver Rd., Troy, MI 48084; (248) 362-4444; www.kellyservices.com; Carl T. Camden; temporary staffing services.

Kimberly-Clark Corp. (KMB): 351 Phelps Dr., Irving, TX 75038; (972) 281-1200; www.kimberly-clark.com; Thomas J. Falk; personal care prods. (Kleenex, Scott, Cottonelle, Huggies, Kotex).

Kmart Corp.: see Sears Holdings Corp.

Koch Industries, Inc.: 4111 E. 37th St. N., Wichita, KS 67220; (316) 828-5500; www.kochind.com; Charles G. Koch; forest prod. mfr.; oil refineries/pipeline; ranching. Acquired Georgia-Pacific, 12/23/2005.

Kraft Foods Inc. (KFT): 3 Lakes Dr., Northfield, IL 60093; (847) 646-2000; www.kraftfoodscompany.com; Irene B. Rosenfeld; world's second largest food company, including Nabisco (Oreo), Jell-O, Oscar Mayer, Maxwell House, Trident. Spun off Post cereals into Ralcorp Holdings, 8/4/2008. Announced acquisition of Cadbury plc, 2/2/2010.

Kroger Co. (KR): 1014 Vine St., Cincinnati, OH 45202; (513) 762-4000; www.kroger.com; David B. Dillon; largest U.S. retail grocery chain, convenience stores, mall jewelry stores.

La-Z-Boy Inc. (LZB): 1284 N. Telegraph Rd., Monroe, MI 48162; (734) 242-1444; www.lazboy.com; Kurt L. Darrow; reclining chairs, other furniture.

Leggett & Platt, Inc. (LEG): No. 1 Leggett Rd., Carthage, MO 64836; (417) 358-8131; www.leggett.com; David S. Haffner; furniture and its components, industrial materials, automotive seating suspension, control and power train cable systems.

Lehman Bros. Holdings Inc.: 745 7th Ave., NY, NY 10019; (212) 526-7000; www.lehman.com; Bryan P. Marsal; investment bank. Filed for Chapter 11 bankruptcy, 9/15/2008.

Levi Strauss & Co.: 1155 Battery St., San Francisco, CA 94111; (415) 501-6000; www.levistrauss.com; R. John Anderson; blue jeans, casual sportswear (Dockers).

Lexmark Intl., Inc. (LXK): 740 W. New Circle Rd., Lexington, KY 40550; (859) 232-2000; www.lexmark.com; Paul J. Curlander; computer printers and peripherals.

Liberty Mutual Holding Co. Inc.: 175 Berkeley St., Boston, MA 02116; (617) 357-9500; www.libertymutual.com; Edmund F. Kelly; auto, home, and life insurance.

Limited Brands, Inc. (LTD): 3 Limited Pkwy., Columbus, OH 43216; (614) 415-7000; www.limitedbrands.com; Leslie H. Wexner; apparel stores (La Senza, Victoria's Secret, Henri Bendel), home decor (White Barn Candle Co.), personal care (Bath & Body Works).

Liz Claiborne, Inc. (LIZ): 1441 Broadway, NY, NY 10018; (212) 354-4900; www.lizclaiborne.com; William L. McComb; women's apparel (Kate Spade, Juicy Couture, Lucky Brand Jeans, Mexx).

L.L. Bean, Inc.: 3 Campus Dr., Freeport, ME 04033; (207) 552-3028; www.llbean.com; Christopher J. McCormick; catalog and retail outdoor apparel, footwear, gear.

Lockheed Martin Corp. (LMT): 6801 Rockledge Dr., Bethesda, MD 20817; (301) 897-6000; www.lockheedmartin.com; Robert J. Stevens; leading U.S. defense contractor; commercial and military aircraft, electronics, missiles, information tech., and communications.

Loews Corp. (L): 667 Madison Ave., NY, NY 10065; (212) 521-2000; www.loews.com; James S. Tisch; hotels, insurance (CNA Financial), offshore drilling (Diamond). Spun off Lorillard, Inc., tobacco prods. mfr., 12/17/2007.

Longs Drug Stores: see CVS Caremark Corp.

Lorillard, Inc. (LO): 714 Green Valley Rd., Greensboro, NC 27408; (336) 335-7000; www.lorillard.com; Martin Orlowsky; 3rd-largest U.S. cigarette mfr. (Newport, Kent). Spun off from Loews Corp., 12/17/2007.

Lowe's Cos., Inc. (LOW): 1000 Lowe's Blvd., Mooresville, NC 28117; (704) 758-1000; www.lowes.com; Robert A. Niblock; building material and home improvement superstores.

Macy's, Inc. (M): 7 W. 7th St., Cincinnati, OH 45202; (513) 579-7000; www.federated-fds.com; Terry J. Lundgren; dept. stores (Macy's, Bloomingdale's). Acquired May Dept. Stores (Lord & Taylor, Marshall Field's), 2/28/2005. Federated Dept. Stores changed its name to Macy's, 6/1/2007.

Manpower Inc. (MAN): 100 Manpower Pl., Milwaukee, WI 53212; (414) 961-1000; www.manpower.com; Jeffrey A. Joerres; employment services.

Marathon Oil Corp. (MRO): 5555 San Felipe Rd., Houston, TX 77056; (713) 629-6600; www.marathon.com; Clarence P. Cazalot Jr.; integrated oil co.

Marriott International, Inc. (MAR): 10400 Fernwood Rd., Bethesda, MA 20058; (301) 380-3000; www.marriott.com; J. W. Marriott Jr.; hotels (Renaissance, Courtyard, Fairfield Inn, Ritz-Carlton).

Mars, Inc.: 6885 Elm St., McLean, VA 22101; (703) 821-4900; www.mars.com; Paul S. Michaels; one of the largest food mfrs. in the world, including of chocolate (M&M's, Snickers, Dove), food (Uncle Ben's), pet food (Pedigree, Whiskas). Acquired Wm. Wrigley Jr., 10/6/2008.

Masco Corp. (MAS): 21001 Van Born Rd., Taylor, MI 48180; (313) 274-7400; www.masco.com; Richard A. Manoogian; mfr. kitchen, bathroom prods. (Delta, Peerless faucets; Merillat cabinets); paints (Behr).

Massachusetts Mutual Life Insurance Co. (MassMutual Financial Group): 1295 State St., Springfield, MA 01111; (413) 744-1000; www.massmutual.com; Stuart H. Reese; financial planning and investment, life insurance.

Mattel, Inc. (MAT): 333 Continental Blvd., El Segundo, CA 90245; (310) 252-2000; www.mattel.com; Robert A. Eckert; largest U.S. toymaker (Barbie, Fisher-Price, Hot Wheels, Matchbox, American Girls).

McClatchy Co. (MNI): 2100 Q St., Sacramento, CA 95816; (916) 321-1846; www.mcclatchy.com; Gary B. Pruitt; 3rd-largest U.S. newspaper publisher. Acquired Knight Ridder papers, 6/27/2006.

McDonald's Corp. (MCD): 2111 McDonald's Dr., Oak Brook, IL 60523; (630) 623-3000; www.mcdonalds.com; James A. Skinner; world's largest fast food co.

McGraw-Hill Cos., Inc. (MHP): 1221 Ave. of the Americas, NY, NY 10020; (212) 512-2000; www.mcgraw-hill.com; Harold McGraw III; book, textbook, magazine publishing (*BusinessWeek*); information and financial services (Standard & Poor's); TV stations.

McKesson Corp. (MCK): 1 Post St., San Francisco, CA 94104; (415) 983-8300; www.mckesson.com; John H. Hammergren; distributor of drugs and toiletries; provides mgmt. software and services.

MeadWestvaco Corp. (MWV): 11013 W. Broad St., Glen Allen, VA 23060; (804) 327-5200; www.meadwestvaco.com; John A. Luke Jr.; packaging, shipping containers, chemicals, school supplies.

Medco Health Solutions, Inc. (MHS): 100 Parsons Pond Dr., Franklin Lakes, NJ 07417; (201) 269-3400; www.medco.com; David B. Snow Jr.; pharmacy benefits management.

Medtronic, Inc. (MDT): 710 Medtronic Pkwy., Minneapolis, MN 55432; (763) 514-4000; www.medtronic.com; William A. Hawkins III; mfr. of implantable biomedical devices.

Merck & Co., Inc. (MRK): 1 Merck Dr., Whitehouse Station, NJ 08889; (908) 423-1000; www.merck.com; Richard T. Clark; pharmaceuticals (Gardasil, Propecia, Singulair, Vytorin, Zocor). Announced plans to merge with Schering-Plough Corp., 3/9/2009.

Meredith Corp. (MDP): 1716 Locust St., Des Moines, IA 50309; (515) 284-3000; www.meredith.com; Stephen M. Lacy; magazine publishing (*Better Homes and Gardens*, *Ladies' Home Journal*, *Parents*, *Family Circle*), book publishing, broadcasting.

Merrill Lynch & Co., Inc.: see Bank of America Corp.

MetLife, Inc. (MET): 200 Park Ave., NY, NY 10166; (212) 578-2211; www.metlife.com; C. Robert Henrikson; insurance, financial services.

MGM MIRAGE (MGM): 3600 Las Vegas Blvd. S., Las Vegas, NV 89109; (702) 693-7120; www.mgmmirage.com; James J. Murren; hotel-casino operator (Mirage, New York-New York, Luxor, Circus Circus, Monte Carlo). Acquired Mandalay Resort Group, 4/25/2005.

Microsoft Corp. (MSFT): One Microsoft Way, Redmond, WA 98052; (425) 882-8080; www.microsoft.com; William H. Gates III; world's largest consumer software maker (Windows, Word, Excel); video game consoles (Xbox).

Miller Brewing Co.: see SABMiller plc.

Molson Coors Brewing Co. (TAP): 1225 17th St., Ste. 3200, Denver, CO 80202; (303) 279-6565; www.molsoncoors.com; Peter H. Coors; brewer (Coors, Killian's, Molson). Formed by merger of Adolph Coors and Molson, 2/9/2005. Announced creation of Miller-Coors, joint venture with SABMiller, 7/1/2008.

Morgan Stanley (MS): 1585 Broadway, NY, NY 10036; (212) 761-4000; www.morganstanley.com; John J. Mack; diversified financial services.

Motorola, Inc. (MOT): 1303 E. Algonquin Rd., Schaumburg, IL 60196; (847) 576-5000; www.motorola.com; Greg Brown and Sanjay K. Jha; electronic equipment and components; communication devices.

National Semiconductor Corp. (NSM): 2900 Semiconductor Dr., Santa Clara, CA 95052; (408) 721-5000; www.national.com; Brian L. Halla; mfr. semiconductors, integrated circuits.

Nationwide Mutual Insurance Co.: One Nationwide Plz., Columbus, OH 43215; (614) 249-7111; www.nationwide.com; Stephen S. Rasmussen; property/casualty, life insurance; financial services.

Navistar Intl. Corp. (NAV): 4201 Winfield Rd., Warrenville, IL 60555; (630) 753-5000; www.navistar.com; Daniel Ustian; mfr. heavy-duty trucks, parts, school buses.

NCR Corp. (NCR): 1700 S. Patterson Blvd., Dayton, OH 45479; (937) 445-5000; www.ncr.com; William R. Nuti; mfr. ATMs, retail technology, hardware and software; computer services and supplies.

Nestlé USA, Inc.: 800 N. Brand Blvd., Glendale, CA 91203; (818) 549-6000; www.nestleusa.com; Brad Alford; candy (Baby Ruth, Raisinets), beverages (Nestea), frozen foods (Stouffer's), pet foods (Purina, Alpo, Friskies). Subsidiary of Nestlé SA in Switzerland, world's largest food co.

Netflix, Inc. (NFLX): 100 Winchester Cir., Los Gatos, CA 95032; (408) 540-3700; www.netflix.com; Reed Hastings; online DVD rentals.

New York Life Insurance Co.: 51 Madison Ave., Ste. 3200, NY, NY 10010; (212) 576-7000; www.newyorklife.com; Theodore A. Mathas; life insurance, annuities, mutual funds.

New York Times Co. (NYT): 620 8th Ave., NY, NY 10018; (212) 556-1234; www.nytco.com; Arthur O. Sulzberger Jr.; newspapers (New York Times, Boston Globe).

Newell Rubbermaid Inc. (NWL): 3 Glenlake Pkwy., Ste. 300, Atlanta, GA 30328; (770) 418-7000; www.newellrubbermaid.com; Mark D. Ketchum; housewares (Rubbermaid, Levolor); hair accessories (Goody); writing utensils (Parker, Sharpie); hardware and tools (Irwin, Amerock); juvenile prods. (Graco).

News Corp. (NWS): 1211 Ave. of the Americas, NY, NY 10036; (212) 852-7000; www.newscorp.com; K. Rupert Murdoch; newspaper, magazine, book publishing (HarperCollins); TV and CATV stations (FOX, Fox News Channel, FX); film (20th Century Fox, Fox Searchlight); websites (MySpace.com, RottenTomatoes.com). Acquired Dow Jones (*Wall Street Journal*), 12/13/2007.

NIKE, Inc. (NKE): 1 Bowerman Dr., Beaverton, OR 97005; (503) 671-6453; www.nikebiz.com; Mark G. Parker; world's largest footwear mfr. Acquired Umbro, 1/31/2008.

Nordstrom, Inc. (JWN): 1617 6th Ave., Seattle, WA 98101; (206) 628-2111; www.nordstrom.com; Enrique Hernandez Jr.; upscale dept. store chain.

Norfolk Southern Corp. (NSC): Three Commercial Pl., Norfolk, VA 23510; (757) 629-2600; www.nscorp.com; Charles W. Moorman IV; railway operator; freight carrier.

Northrop Grumman Corp. (NOC): 1840 Century Park East, Los Angeles, CA 90067; (310) 553-6262; www.northropgrumman.com; Ronald D. Sugar; world's largest shipbuilder; defense contractor: aircraft, electronics, data systems, information systems, missiles.

Northwest Airlines Corp.: 2700 Lone Oak Pkwy., Eagan, MN 55121; (612) 726-2111; www.nwa.com; Edward H. Bastian; air transportation; emerged from Chap. 11 reorganization, 5/31/2007; merged with Delta Air Lines, 10/29/2008.

Northwestern Mutual Life Insurance Co.: 720 E. Wisconsin Ave., Milwaukee, WI 53202; (414) 271-1444; www.northwesternmutual.com; John E. Schlifske; life insurance, investment products and services, annuities.

Occidental Petroleum Corp. (OXY): 10889 Wilshire Blvd., Los Angeles, CA 90024; (310) 208-8800; www.oxy.com; Ray R. Irani; oil, natural gas, chemicals, plastics, fertilizers.

Office Depot, Inc. (ODP): 6600 N. Military Trl., Boca Raton, FL 33496; (561) 438-4800; www.officedepot.com; Steve Odland; office supply retail stores.

Omnicom Group Inc. (OMC): 437 Madison Ave., NY, NY 10022; (212) 415-3600; www.omnicomgroup.com; John D. Wren; advertising, marketing, interactive/digital media.

Oracle Corp. (ORCL): 500 Oracle Pkwy., Redwood City, CA 94065; (650) 506-7000; www.oracle.com; Lawrence J. Ellison; database and file management software. Acquired BEA Systems, 4/29/2008; announced plans to acquire Sun Microsystems, 4/20/2009.

Owens Corning (OC): 1 Owens Corning Pkwy., Toledo, OH 43659; (419) 248-8000; www.owenscorning.com; Michael H. Thaman; world leader in insulation, advanced glass, composite materials. Emerged from Chap. 11 reorganization, 10/31/2006.

Owens-Illinois, Inc. (OI): 1 Michael Owens Way, Perrysburg, OH 43551; (567) 336-5000; Albert P. L. Stroucken; www.o-i.com; mfr. glass containers. Sold plastic packaging division, 8/1/2007.

PepsiCo, Inc. (PEP): 700 Anderson Hill Rd., Purchase, NY 10577; (914) 253-2000; www.pepsico.com; Indra K. Nooyi; soft drinks and other beverages (Pepsi-Cola, Mountain Dew, Gatorade, Tropicana), snacks and cereals (Fritos, Lay's, Ruffles, Quaker). Acquired Pepsi Bottling Group and PepsiAmericas, 3/1/2010, making it largest food and beverage co. in North America.

Pfizer, Inc. (PFE): 235 E. 42nd St., NY, NY 10017; (212) 733-2323; www.pfizer.com; Jeffrey B. Kindler; biopharmaceuticals (Celebrex, Lipitor, Viagra, Zoloft); human and animal health care prods. Acquired Wyeth, 10/15/2009.

PG&E Corp. (PCG): One Market, Spear Tower, Ste. 2400, San Francisco, CA 94105; (415) 267-7000; www.pgecorp.com; Peter A. Darbee; operates Pacific Gas and Electric public utility.

Philip Morris Intl. Inc. (PM): 120 Park Ave., NY, NY 10017; (917) 663-2000; www.pmi.com; Louis C. Camilleri; mfr. and distributor of tobacco. Spun off from parent company Altria Group, 3/28/2008.

Phillips-Van Heusen Corp. (PVH): 200 Madison Ave., NY, NY 10016; (212) 381-3500; www.pvh.com; Emanuel Chirico; mfr. of apparel, including licensed brands (Calvin Klein, IZOD, Geoffrey Beene, Kenneth Cole, DKNY, Tommy Hilfiger, Sean John).

Pitney Bowes Inc. (PBI): 1 Elmcroft Rd., Stamford, CT 06926; (203) 356-5000; www.pb.com; Murray D. Martin; postage meters and mailing equip.

Plains All American Pipeline, L.P. (PAA): 333 Clay St., Ste. 1600, Houston, TX 77002; (713) 646-4100; www.plainsallamerican.com; Greg L. Armstrong; oil transportation, storage.

Polo Ralph Lauren Corp. (RL): 650 Madison Ave., NY, NY 10022; (212) 318-7000; www.ralphlauren.com; Ralph Lauren; men's and women's apparel, home furnishings, fragrances.

PPG Industries, Inc. (PPG): 1 PPG Pl., Pittsburgh, PA 15272; (412) 434-3131; www.ppg.com; Charles E. Bunch; glass prods., silicas, fiberglass, chemicals, sealants; world's leading supplier of automobile/industrial coatings. Acquired SigmaKalon, 1/2/2008.

Procter & Gamble Co. (PG): 1 Procter & Gamble Plz., Cincinnati, OH 45202; (513) 983-1100; www.pg.com; Bob McDonald; soaps and detergents (Ivory, Cheer, Tide, Mr. Clean, Zest); toiletries (Crest, Scope, Head & Shoulders, Old Spice); pharmaceuticals (Pepto-Bismol, Vicks cough medicines); food (Pringles); paper prods. (Charmin toilet tissues, Bounty towels), Tampax tampons; Pampers & Luvs disposable diapers; CoverGirl and Max Factor cosmetics, Clairol hair care. Acquired Gillette (razors, batteries), 10/1/2005; sold Folgers to J. M. Smucker, 11/6/2008.

Prudential Financial, Inc. (PRU): 751 Broad St., Newark, NJ 07102; (973) 802-6000; www.prudential.com; John R. Strangfeld Jr.; insurance, financial services.

Publix Super Markets Inc.: 3300 Publix Corporate Pkwy., Lakeland, FL 33811; (863) 688-1188; www.publix.com; William Crenshaw; supermarket chain.

Quest Diagnostics Inc. (DGX): 3 Giralda Farms, Madison, NJ 07940; (201) 393-5000; www.questdiagnostics.com; Surya N. Mohapatra; leading clinical laboratory.

Qwest Communications Intl. Inc. (Q): 1801 California St., Denver, CO 80202; (800) 899-7780; www.qwest.com; Edward A. Mueller; telecommunications; wireless and directory services.

RadioShack Corp. (RSH): 300 RadioShack Cir., Fort Worth, TX 76102; (817) 415-3011; www.radioshack.com; Julian C. Day; consumer electronics retailer.

Ralcorp Holdings, Inc. (RAH): 800 Market St., St. Louis, MO 63101; (314) 877-7000; www.ralcorp.com; William P. Stiritz; private-label breakfast cereals, snack foods. Acquired Post cereals, 8/4/2008

Raytheon Co. (RTN): 870 Winter St., Waltham, MA 02451; (781) 522-3000; www.raytheon.com; William Swanson; defense, communications systems.

Reader's Digest Assn., Inc.: Reader's Digest Rd., Pleasantville, NY 10570; (914) 238-1000; www.rd.com; Mary G. Berner; publisher of world's largest paid-circulation magazine; marketer of books, music, video prods. Emerged from Chap. 11 reorganization, 2/19/2010.

Reebok Intl. Ltd.: 1895 J.W. Foster Blvd., Canton, MA 02021; (781) 401-5000; www.reebok.com; Uli Becker; athletic and leisure footwear, apparel. Acquired by Germany's adidas AG, 1/31/2006.

Republic Services, Inc. (RSG): 18500 N. Allied Way, Phoenix, AZ 85054; (480) 627-2700; www.republicservices.com; James E. O'Connor; waste management co. Merged with Allied Waste Industries, 12/5/2008.

Revlon, Inc. (REV): 237 Park Ave., NY, NY 10017; (212) 527-4000; www.revlon.com; Ronald O. Perelman; cosmetics, skin care.

Reynolds American Inc. (RAI): 401 N. Main St., Winston-Salem, NC 27101; (336) 741-2000; www.reynoldsamerican.com; Susan M. Ivey; 2nd-largest U.S. producer of

cigarettes (Winston, Camel, Pall Mall, Kool, Doral). Acquired Conwood smokeless tobacco co., 5/31/2006.

Rite Aid Corp. (RAD): 30 Hunter Ln., Camp Hill, PA 17011; (717) 761-2633; www.riteaid.com; John T. Standley; 3rd-largest U.S. drugstore chain. Acquired Brooks and Eckerd drugstore chains, 6/4/2007.

Rockwell Automation, Inc. (ROK): 1201 S. 2nd St., Milwaukee, WI 53204; (414) 382-2000; www.rockwellautomation.com; Keith D. Nosbusch; industrial automation co.

Rohm and Haas Co.: 100 Independence Mall West, Philadelphia, PA 19106; (215) 592-3000; www.rohmhaas.com; Jerome A. Peribere; adhesives and sealants, performance chemicals, automotive coatings; salt (Morton). Acquired by Dow Chemical, 4/1/2009.

Ryder System, Inc. (R): 11690 NW 105th St., Miami, FL 33178; (305) 500-3726; www.ryder.com; Gregory T. Swienton; truck-leasing service.

SABMiller plc: 1 Stanhope Gate, London, W1K 1AF, United Kingdom; +44-20-7659-0100; www.sabmiller.com; Ernest A. Mackay; brewing company (Miller, Peroni, Grolsch). Announced creation of MillerCoors, joint venture with Molson Coors, 7/1/2008.

Safeway Inc. (SWY): 5918 Stoneridge Mall Rd., Pleasanton, CA 94588; (925) 467-3000; www.safeway.com; Steven A. Burd; supermarkets.

Sara Lee Corp. (SLE): 3500 Lacey Rd., Downers Grove, IL 60515; (630) 598-8100; www.saralee.com; Brenda Barnes; baked goods, fresh and processed meats (Ball Park, Jimmy Dean, Hillshire Farm, Kahn's). Spun off apparel business as Hanesbrands Inc., 9/5/2006.

SBC Communications, Inc.: see AT&T Inc.

Schering-Plough Corp. (SGP): 2000 Galloping Hill Rd., Kenilworth, NJ 07033; (908) 298-4000; www.sch-plough.com; Fred Hassan; pharmaceuticals (Clarinex, Levitra, Nasonex, Proventil), consumer prods. (Afrin, Claritin, Coppertone, Dr. Scholl's, MiraLAX), animal health prods. Announced plans to merge with Merck & Co., 3/9/2009.

Sears Holdings Corp. (SHLD): 3333 Beverly Rd., Hoffman Estates, IL 60179; (847) 286-2500; www.searshc.com; Edward S. Lampert; 3rd-largest U.S. retailer; formed by merger of Kmart and Sears, 3/24/2005.

Shell Oil Co.: 910 Louisiana St., Houston, TX 77002; (713) 241-6161; www.shellus.com; Marvin Odum; integrated oil co; subsidiary of Royal Dutch Shell, world's 2nd-largest oil co.

Sherwin-Williams Co. (SHW): 101 Prospect Ave. NW, Cleveland, OH 44115; (216) 566-2000; www.sherwin-williams.com; Christopher M. Connor; largest North American paint and varnish producer (Dutch Boy, Krylon, Minwax).

Smithfield Foods, Inc. (SFD): 200 Commerce St., Smithfield, VA 23430; (757) 365-3000; www.smithfieldfoods.com; C. Larry Pope; world's largest producer of pork and processed meat products. Acquired Premium Standard Farms, 5/7/2007.

J. M. Smucker Co. (SJM): One Strawberry Ln., Orrville, OH 44667; (330) 682-3000; www.smuckers.com; Timothy P. Smucker; leading producer of fruit spreads, toppings (Magic Shell), peanut butter (Jif), oils (Crisco). Merged with Folgers Coffee Co., 11/6/2008.

Smurfit-Stone Container Corp.: 222 N. LaSalle St., Chicago, IL 60601; (312) 346-6600; www.smurfit.com; Patrick J. Moore; industry leader for corrugated containers, paper bags, and sacks. Filed for Chap. 11 reorganization, 1/26/2009.

Sony Corp. of America: 550 Madison Ave., NY, NY 10022; (212) 833-6800; www.sony.com; Howard Stringer; U.S. subsidiary of Japan-based Sony Corp.; electronics, movies, music. Acquired Bertelsmann's stake in Sony BMG and renamed it Sony Music Entertainment, 10/1/2008.

Southwest Airlines Co. (LUV): 2702 Love Field Dr., Dallas, TX 75235; (214) 792-4000; www.southwest.com; Gary C. Kelly; air transportation.

Sprint Nextel Corp. (S): 6200 Sprint Pkwy., Overland Park, KS 66251; (703) 433-4000; www.sprint.com; Dan Hesse; wireless and long-distance telecommunications; merged with Nextel, 8/12/2005.

Stanley Black & Decker, Inc. (SWK): 1000 Stanley Dr., New Britain, CT 06053; (860) 225-5111; www.bdk.com; John F. Lundgren; one of the top U.S. mfrs. of hand and power tools (DeWalt, Bostitch), household prods. (Kwikset). The Stanley Works and Black & Decker merged, 3/12/2010.

Staples, Inc. (SPLS): 500 Staples Dr., Framingham, MA 01702; (508) 253-5000; www.staples.com; Ronald L. Sargent; largest U.S. office-supply retailer.

Starbucks Corp. (SBUX): 2401 Utah Ave. S., Seattle, WA 98134; (206) 447-1575; www.starbucks.com; Howard D. Schultz; coffee producer; world's leading specialty coffee retailer.

Starwood Hotels & Resorts Worldwide, Inc. (HOT): 1111 Westchester Ave., White Plains, NY 10604; (914) 640-8100; www.starwoodhotels.com; Bruce W. Duncan; hotel and resort co. (Westin, Sheraton, W Hotels).

State Farm Mutual Automobile Ins. Co.: 1 State Farm Plz., Bloomington, IL 61710; (309) 766-2311; www.statefarm.com; Edward B. Rust Jr.; largest U.S. provider of auto/homeowners insurance.

Sun Microsystems, Inc. (JAVA): 4150 Network Cir., Santa Clara, CA 95054; (650) 960-1300; www.sun.com; Jonathan I. Schwartz; supplier of network computer systems. Announced plans to be acquired by Oracle, 4/20/2009.

Sunoco, Inc. (SUN): 1735 Market St., Ste. LL, Philadelphia, PA 19103; (215) 977-3000; www.sunocoinc.com; Lynn Elsenhans; energy resources co., gasoline retailer.

SUPERVALU Inc. (SVU): 11840 Valley View Rd., Eden Prairie, MN 55344; (952) 828-4000; www.supervalu.com; Craig R. Herkert; food retailer, wholesale distrib. (Albertsons, Shoppers).

SYSCO Corp. (SYY): 1390 Enclave Pkwy., Houston, TX 77077; (281) 584-1390; www.sysco.com; William J. DeLaney; largest food-service distributor in North America.

Systemax Inc. (SYX): 11 Harbor Park Dr., Port Washington, NY 11050; (516) 625-4300; www.systemax.com; Richard Leeds; computers, electronics, industrial prod. retailer. Acquired CompUSA, 1/6/2008; acquired Circuit City, 5/19/2009.

Target Corp. (TGT): 1000 Nicollet Mall, Minneapolis, MN 55403; (612) 304-6073; www.target.com; Gregg W. Steinhafel; 2nd-largest U.S. discount retailer.

Tenneco Inc. (TEN): 500 N. Field Dr., Lake Forest, IL 60045; (847) 482-5000; www.tenneco.com; Gregg M. Sherrill; automotive parts (Monroe, Walker).

Texas Instruments Inc. (TXN): 12500 TI Blvd., Dallas, TX 75266; (972) 995-2011; www.ti.com; Richard K. Templeton; processors, semiconductors, software, handheld calculators.

Textron Inc. (TXT): 40 Westminster St., Providence, RI 02903; (401) 421-2800; www.textron.com; Lewis B. Campbell; aircraft (Cessna, Bell), industrial, automotive prods.; financial services.

3M Co. (MMM): 3M Center, St. Paul, MN 55144; (651) 733-1110; www.mmm.com; George W. Buckley; abrasives, adhesives, electrical, health care, cleaning (Scotch-Brite, O-Cel-O sponges, Scotchgard), printing, consumer prods. (Scotch Tape, Post-it).

TIAA-CREF: 730 Third Ave., NY, NY 10017; (212) 490-9000; www.tiaa-cref.org; Roger W. Ferguson Jr.; financial services provider.

Timberland Co. (TBL): 200 Domain Dr., Stratham, NH 03885; (603) 772-9500; www.timberland.com; Jeffrey B. Swartz; footwear, apparel, accessories.

Time Warner Inc. (TWX): One Time Warner Ctr., NY, NY 10019; (212) 484-8000; www.timewarner.com; Jeffrey L. Bewkes; magazine publishing (*Time*, *Sports Illustrated*, *Fortune*, *Money*, *People*, DC Comics), TV and CATV (Cartoon Network, HBO, CNN, TBS, TNT), motion pictures (Warner Bros., New Line Cinema), recordings. AOL and Time Warner completed the largest corporate merger in history in 2001; Time Warner spun off AOL, 12/9/2009.

TJX Cos., Inc. (TJX): 770 Cochituate Rd., Framingham, MA 01701; (508) 390-1000; www.tjx.com; Carol Meyrowitz; world's largest off-price apparel retailer (T.J. Maxx, Marshalls); home furnishing retailer (Home Goods).

Toro Co. (TTC): 8111 Lyndale Ave. S, Bloomington, MN 55420; (952) 888-8801; www.thetorocompany.com; Michael J. Hoffman; lawn and turf maintenance prods. (Lawn-Boy), snow removal equip.; irrigation systems.

Toys "R" Us, Inc.: 1 Geoffrey Way, Wayne, NJ 07470; (973) 617-3500; www.toysrus.com; Gerald L. Storch; children's specialty retailer. Acquired FAO Schwarz, 5/28/2009.

Tribune Co.: 435 N. Michigan Ave., Chicago, IL 60611; (312) 222-9100; www.tribune.com; Sam Zell; newspapers (*Los Angeles Times*, *Chicago Tribune*), broadcasting (incl. WGN and 23 other television and radio stations), Chicago Cubs franchise. Filed for Chap. 11 reorganization, 12/8/2008.

Trinity Industries, Inc. (TRN): 2525 Stemmons Fwy., Dallas, TX 75207; (214) 631-4420; www.trin.net; Timothy R. Wallace; mfr. metal prods., rail and freight equip.

Tyco Intl. Ltd. (TYC): 9 Roszel Rd., Princeton, NJ 08540; (609) 720-4200; www.tyco.com; Edward D. Breen Jr.; security and engineered prods. Spun off health care and electronics divisions, 6/29/2007.

Tyson Foods, Inc. (TSN): 2200 Don Tyson Pkwy., Springdale, AR 72762; (479) 290-4000 www.tysonfoodsinc.com; Leland E. Tollett; fresh and processed poultry; beef and pork prods.

UAL Corp. (UAUA): 77 W. Wacker Dr., Chicago IL 60601; (312) 997-8000; www.united.com; Glenn F. Tilton; air transportation (United Airlines); merger with Continental Airlines closed 10/1/2010.

UBS Financial Services Inc.: 1285 Ave. of the Americas, NY, NY 10019; (212) 713-2000; www.ubs.com; Marten Hoekstra; financial services; subsidiary of Switzerland's UBS AG.

Unilever US (UN/UL): 800 Sylvan Ave., Englewood Cliffs, NJ 07632; (201) 894-4000; www.unilever.com; Paul Polman; food (Hellmann's mayonnaise, Knorr soups, Ragu pasta sauce, Wish-Bone salad dressing, Lipton, Skippy peanut butter, Slim-Fast), hygiene prods. (Dove, Q-tips, Vaseline). Subsidiary of Unilever NV (Neth.) and Unilever plc (UK).

Union Pacific Corp. (UNP): 1400 Douglas St., Omaha, NE, 68179; (402) 544-5000; www.up.com; James R. Young; one of the largest railroad freight cos. in U.S.

Unisys Corp. (UIS): Unisys Way, Blue Bell, PA 19424; (215) 986-4011; www.unisys.com; J. Edward Coleman; designs, manuf. computer information systems; IT consulting.

UnitedHealth Group Inc. (UNH): UHG Center, 9900 Bren Rd. E., Minnetonka, MN 55343; (952) 936-1300; www.unitedhealthgroup.com; Stephen J. Hemsley; health insurer.

United Parcel Service, Inc. (UPS): 55 Glenlake Pkwy. NE, Atlanta, GA 30328; (404) 828-6000; www.ups.com; D. Scott Davis; world's largest package delivery co.

United States Steel Corp. (X): 600 Grant St., Pittsburgh, PA 15219; (412) 433-1121; www.ussteel.com; John P. Surma Jr.; steel, tin prods., resource mgmt.

United Technologies Corp. (UTX): One Financial Plz., Hartford, CT 06103; (860) 728-7000; www.utc.com; George David; aerospace, industrial prods. and services (Carrier, Otis, Pratt & Whitney, Sikorsky).

US Airways Group, Inc. (LCC): 111 W. Rio Salado Pkwy., Tempe, AZ 85281; (480) 693-0800; www.usairways.com; William Douglas Parker; air transportation.

Verizon Communications Inc. (VZ): 140 West St., NY, NY 10007; (212) 395-1000; www.verizon.com; Ivan Seidenberg; broadband, wireless, wireline services provider. Acquired MCI, Inc., 1/6/2006.

V.F. Corp. (VFC): 105 Corporate Center Blvd., Greensboro, NC 27408; (336) 424-6000; www.vfc.com; Eric C. Wiseman; apparel (Lee, Wrangler, North Face).

Viacom Inc. (VIA): 1515 Broadway, NY, NY 10036; (212) 258-6000; www.viacom.com; Philippe P. Dauman; media networks (BET, Comedy Central, MTV, VH1, Nickelodeon); movies (Paramount). Spun off from company that became CBS Corp., 12/31/2005.

Visteon Corp.: One Village Center Dr., Van Buren Twp., MI 48111; (734) 710-5000; www.visteon.com; Donald J. Stebbins; automotive parts mfr. Filed for Chap. 11 reorganization, 5/28/2009.

Walgreen Co. (Walgreens) (WAG): 200 Wilmot Rd., Deerfield, IL 60015; (847) 914-2500; www.walgreens.com; Gregory D. Wasson; retail drugstores.

Wal-Mart Stores, Inc. (WMT): 702 SW 8th St., Bentonville, AR 72716; (479) 273-4000; www.walmartstores.com; Michael T. Duke; world's largest retailer; discount stores, membership warehouse clubs (Sam's Club).

Washington Post Co. (WPO): 1150 15th St. NW, Washington, DC 20071; (202) 334-6000; www.washpostco.com; Donald E. Graham; media (newspapers, *Newsweek*, Slate.com, TV) and education (Kaplan).

Waste Management, Inc. (WMI): 1001 Fannin St., Ste. 4000, Houston, TX 77002; (713) 512-6200; www.wm.com; David P. Steiner; North America's largest waste co., recycler.

WellPoint, Inc. (WLP): 120 Monument Cir., Indianapolis, IN 46204; (317) 532-6000; www.wellpoint.com; Angela F. Braly; largest U.S. health benefits co.; HMOs and PPOs, an independent licensee of the Blue Cross Blue Shield Assn.

Wells Fargo & Co. (WFC): 420 Montgomery St., San Francisco, CA 94163; (866) 249-3302; www.wellsfargo.com; John G. Stumpf; financial services. Acquired Wachovia, 12/31/2008.

Wendy's/Arby's Group, Inc. (WEN): 1155 Perimeter Ctr. W., Atlanta, GA 30338; (678) 514-4100; www.wendysarbys.com; Roland C. Smith; one of the largest fast food restaurant companies in the U.S. (Wendy's, Arby's).

Western Union Co. (WU): 12500 E. Belford Ave., Englewood, CO 80112; (720) 332-1000; www.westernunion.com; Christina A. Gold; money transfers, payment services.

Weyerhaeuser Co. (WY): 33663 Weyerhaeuser Way S., Federal Way, WA 98063; (253) 924-2345; www.weyerhaeuser.com; Daniel S. Fulton; produces, distributes wood prods; real estate development.

Whirlpool Corp. (WHR): 2000 N. M-63, Benton Harbor, MI 49022; (269) 923-5000; www.whirlpoolcorp.com; Jeff M. Fettig; mfr. of major home appliances (KitchenAid, Amana).

Whole Foods Market, Inc. (WFMI): 550 Bowie St., Austin, TX 78703; (512) 477-4455; www.wholefoodsmarket.com; John P. Mackey; largest U.S. retailer of natural and organic foods.

Winn-Dixie Stores, Inc. (WINN): 5050 Edgewood Ct., Jacksonville, FL 32254; (904) 783-5000; www.winndixie.com; Peter Lynch; one of the largest food retailers in U.S. (Winn-Dixie, SaveRite). Emerged from Chap. 11, 11/21/2006.

Winnebago Industries, Inc. (WGO): 605 W. Crystal Lake Rd., Forest City, IA 50436; (641) 585-3535; www.winnebagoind.com; Robert J. Olson; mfr. of motor homes, or recreational vehicles (RVs).

Wm. Wrigley Jr. Co.: 410 N. Michigan Ave., Chicago, IL 60611; (312) 644-2121; www.wrigley.com; William Wrigley Jr.; mfr. of chewing gum and other confections (Juicy Fruit, Wrigley's, Altoids). Acquired by Mars, Inc., 10/6/2008.

Xerox Corp. (XRX): 45 Glover Ave., P.O. Box 4505, Norwalk, CT 06856; (203) 968-3000; www.xerox.com; Ursula M. Burns; printers, multifunction devices, document publishing technology and support.

Yahoo! Inc. (YHOO): 701 First Ave., Sunnyvale, CA 94089; (408) 349-3300; www.yahoo.com; Carol Bartz; Internet media company.

YUM! Brands, Inc. (YUM): 1441 Gardiner Ln., Louisville, KY 40213; (502) 874-8300; www.yum.com; David C. Novak; fast food restaurants (Pizza Hut, KFC, Taco Bell, Long John Silver's, A&W).

Labor Unions and Professional Organizations

Source: Bureau of Labor Statistics, U.S. Dept. of Labor; AFL-CIO; World Almanac research.

= Member of Change to Win coalition formed in 2005 by unions disaffiliated from AFL-CIO. * = Independent union or one not otherwise affiliated with Change to Win or AFL-CIO. All other groups listed here are affiliated with AFL-CIO as of 2010. Year established is in parenthesis.

Labor Unions

Air Line Pilots Association (ALPA) (1931): 53,000 members, 38 U.S. and Canadian airlines; (703) 689-2270; www.alpa.org

American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) (1955): federation of 56 unions, 11.5 mil members; (202) 637-5000; www.aflcio.org

Automobile, Aerospace & Agricultural Implement Workers of America, International Union, United (UAW) (1935): 640,000 active (500,000 ret.) members, 800 locals; (313) 926-5000; www.uaw.org

Bakery, Confectionery, Tobacco Workers, and Grain Millers International Union (BCTGM) (1886): 100,000+ members; (301) 933-8600; www.bctgm.org

Bricklayers and Allied Craftworkers, International Union of (BAC) (1865): 100,000 members, 50 locals; (202) 783-3788; www.bacweb.org

Carpenters and Joiners of America, United Brotherhood of (UBC) (1881): 520,000+ members, 1,035 locals; (732) 417-9229; www.carpenters.org

#Change to Win Coalition (2005): 5 unions, ex-affiliates of AFL-CIO, 5.5 mil members; (202) 721-0660; www.changetowin.org

Communications Workers of America (IUE-CWA) (1938): 700,000+ members, 1,200 locals; (202) 434-1100; www.cwa-union.org

***Education Association, National** (NEA) (1857): 3.2 mil members, 14,000+ affiliates; (202) 833-4000; www.nea.org

Electrical Workers, International Brotherhood of (IBEW) (1891): 750,000 members, 900 locals; (202) 833-7000; www.ibew.org

Engineers, International Union of Operating (IUOE) (1896): 400,000 members, 170 locals; (202) 429-9100; www.iuoe.org

#Farm Workers of America, United (UFW) (1962): 27,000+ members; (661) 823-6250; www.ufw.org

***Federal Employees, National Federation of** (NFFE; affiliated with IAMAW) (1917): 110,000 members, nearly 200 locals; (202) 216-4420; www.nffe.org

Fire Fighters, International Association of (IAFF) (1918): 297,000 members, 3,100+ locals; (202) 737-8484; www.iaff.org

Flight Attendants, Association of (CWA-AFA) (1945): 50,000+ members, 22 airlines; merged with Communications Workers of America in 2004; (202) 434-1300; www.afanet.org

#Food and Commercial Workers International Union, United (UFCW) (1979): 1.3 mil members, 500 locals; (202) 223-3111; www.ufcw.org

Glass, Molders, Pottery, Plastics and Allied Workers Intl. Union (GMP) (1842): 51,000 members, 250+ locals; (610) 565-5051; www.gmpiu.org

Government Employees, American Federation of (AFGE) (1932): 600,000 members; 1,100 locals; (202) 737-8700; www.afge.org

Teamsters Graphic Communications Conference (GCC/IBT) (1983): 60,000+ members; merged with Teamsters in 2005; (202) 462-1400; www.gciu.org

Iron Workers, Intl. Assn. of Bridge, Structural, Ornamental, and Reinforcing (1896): 140,000 members, 213 locals; (202) 383-4800; www.ironworkers.org

Laborers' International Union of North America (LIUNA) (1903): 818,000 members, 500+ locals; (202) 737-8320; www.liuna.org

Letter Carriers, National Association of (NALC) (1889): 300,058 members, 2,500 locals; (202) 393-4695; www.nalc.org

#Locomotive Engineers and Trainmen, Brotherhood of (BLET) (1863): 59,000+ members, 600+ divisions; (216) 241-2630; www.ble-t.org

Longshoremen's Association, International (ILA) (1892): 65,000+ members, approx. 200 locals; (212) 425-1200; www.ilaunion.org

Machinists and Aerospace Workers, International Association of (IAMAW) (1888): 730,000 members (current and retired), 1,174 locals; merged with TCU in 2006; (301) 967-4500; www.goiam.org

Maintenance of Way Employes, Division of the Intl. Brotherhood of Teamsters; Brotherhood of (BMWED) (1887): 35,000 members, 770 locals; merged with Teamsters in 2004; (248) 948-1010; www.bmwed.org (Note: In honor of tradition, the union maintains the variant spelling of "employes" in its logo.)

Mine Workers of America, United (UMWA) (1890): 110,000 members, 600 locals; (703) 208-7200; www.umwa.org

Musicians of the United States and Canada, American Federation of (AFM) (1896): 90,000 members, 250 locals; (212) 869-1330; www.afm.org

Newspaper Guild—Communications Workers of America, The (TNG) (CWA) (1933): 34,000+ members, 90 locals; (202) 434-7177; www.newsguild.org

***Nurses Association, American** (ANA) (1897): 2.9 mil members, 54 constituent state & territorial assns.; (301) 628-5000; www.nursingworld.org

Office and Professional Employees International Union (OPEIU) (1945): 125,000 members, 200 locals; (800) 346-7348; www.opeiu.org

Painters and Allied Trades, International Union of (IUPAT) (1887): 140,000+ members, 425 locals; (202) 637-0700; www.ibpat.org

Plumbing and Pipe Fitting Industry of the U.S. and Canada, United Assn. of Journeymen and Apprentices of the (UA) (1889): 326,000 members, 300+ locals; (410) 269-2000; www.ua.org

***Police, National Fraternal Order of** (1915): 325,000 members, 2,100+ affiliates; (615) 399-0900; www.grandlodgefop.org

Police Associations, International Union of (IUPA) (1979): 80,000 members, 500 locals; (941) 487-2560; www.iupa.org

Postal Workers Union, American (APWU) (1971): 333,000+ U.S.P.S. employees, 2,000 private employees, 1,600+ locals; (202) 842-4200; www.apwu.org

Roofers, Waterproofers and Allied Workers, United Union of (1906): 22,000 members; (202) 463-7663; www.unionroofers.com

***Rural Letter Carriers' Association, National** (1903): 100,000+ members; 50 state org; (703) 684-5545; www.nrlca.org

***Security, Police, and Fire Professionals of America** (SPFPA) (1948): 30,000+ members, 300 locals; (800) 228-7492; www.spfpa.org

#Service Employees International Union (SEIU) (1921): 2.2 mil members, 150+ locals; (202) 730-7000; www.seiu.org

Sheet Metal Workers' International Association (SMWIA) (1888): 150,000+ members, 200 locals; (202) 783-5880; www.smwia.org

State, County, and Municipal Employees, American Federation of (AFSCME): 1.4 mil members, 3,400+ locals; (202) 429-1000; www.afscme.org

Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, United (USW) (2005): 850,000+ members, 1,800+ locals; formed from merger of the unions United Steelworkers of America (USWA) (1936) and Paper, Allied-Industrial, Chemical and Energy Workers (PACE) (1999); (412) 562-2400; www.usw.org

Teachers, American Federation of (AFT) (1916): 1.4+ mil members, 3,000 locals; (202) 879-4400; www.aft.org

#Teamsters, International Brotherhood of (IBT) (1903): 1.4 mil. members, 475 locals; (202) 624-6800; www.teamster.org

Theatrical Stage Employees, Moving Picture Technicians, Artists and Allied Crafts of the U.S., Its Territories, and Canada, Intl. Alliance of (IATSE) (1893): 110,000+ members, 555+ locals; (212) 730-1770; www.iatse-intl.org

Transit Union, Amalgamated (ATU) (1892): 185,000+ members, 268 locals; (202) 537-1645; www.atu.org

Transportation Communications Intl. Union (TCU) (1899): merged with IAMAW in 2006; see Machinists and Aerospace Workers.

Transportation Union, United (UTU) (1969): 125,000 members, 600+ locals; (216) 228-9400; www.utu.org

Transport Workers Union of America (TWU) (1934): 130,000 members, 114 locals; (212) 259-4900; www.twu.org

***Treasury Employees Union, National** (NTEU) (1938): 150,000 represented, 270+ chapters; (202) 572-5500; www.nteu.org

UNITE HERE (UNITE, 1900; HERE, 1891; merged 2004): 265,000 members; (212) 265-7000; www.unitehere.org

***Workers United** (affiliated with SEIU) (2009): 150,000 members; (646) 448-6402; workers-united.org

Writers Guild of America, West (1933): 12,045 members; (323) 951-4000; www.wga.org

Professional Organizations and Societies

Accountants, American Institute of Certified Public (1887): 349,170 members; (888) 777-7077; www.aicpa.org

Actuaries, Society of (1949):18,000 members; (847) 706-3500; www.soa.org

Administrative Professionals, Intl. Assn. of (1942): 40,000 members; (816) 891-6600; www.iaap-hq.org

Aerospace Medical Assn. (1929): 3,200+ members; (703) 739-2240; www.asma.org

Agricultural and Biological Engineers, American Soc. of (1907): 9,000 members; (269) 429-0300; www.asabe.org

Air & Waste Management Assn. (1907): 8,000+ members; (412) 232-3444; www.awma.org

AMSUS—The Society of the Federal Health Agencies (1891): 8,000 members; (301) 897-8800; www.amsus.org

APICS—The Assn. for Operations Management (1957): 43,000+ members; (773) 867-1777; www.apics.org

Architects, American Institute of (1857): 83,000+; (202) 626-7300; www.aia.org

Astrologers, Inc., American Federation of (1938): 4,000; (480) 838-1751; www.astrologers.com

Astronautical Society, American (1954): 1,500 members; (703) 866-0020; www.astronautical.org

Astronomical Society, American (1899): 6,467 members; (202) 328-2010 www.aas.org

Authors Guild, The (1912): 8,000+ members; (212) 563-5904; www.authorsguild.org

Bankers of America, Independent Community (1930): 5,000 members; (202) 659-8111; www.icba.org

Bar Assn., American (1878): 400,000+; (312) 988-5000; www.abanet.org

Bar Assn., Federal (1920): 16,000 members; (571) 481-9100; www.fedbar.org

Biochemistry and Molecular Biology, American Society for (1906): 12,000+ members; (301) 634-7145; www.asbmb.org

Broadcasters, Natl. Assn. of (1923): 8,300 members; (202) 429-5300; www.nab.org

Business Women's Assn., American (1949): 40,000 members; (800) 228-0007; www.abwa.org

Cartoonists Society, Natl. (1948): 500+ members; (407) 647-8839; www.reuben.org

Ceramic Society, American (1899): 6,000+ members; (240) 646-7054; www.ceramics.org

Chamber Music Players, Inc., Amateur (1969): 5,400+ members; (212) 645-7424; www.acmp.net

Chemical Society, American (1876): 160,000+ members; (202) 872-4600; www.chemistry.org

Chiefs of Police, Intl. Assn. of (1893): 20,000+ members; (703) 836-6767; www.theiacp.org

Chiropractic Assn., American (1963): 15,000 members; (703) 276-8800; www.amerchiro.org

Civil Engineers, American Society of (1852): 141,000+ members; (800) 548-2723; www.asce.org

College Admission Counseling, Natl. Assn. for (1937): 10,000 members; (703) 836-2222; www.nacacnet.org

Commercial Law League of America (1895): 4,000 members; (312) 781-2000; www.clla.org

Communication Assn., Natl. (1914): 7,700 members; (202) 464-4622; www.natcom.org

Composers, Authors & Publishers, American Soc. of (ASCAP) (1914): 330,000+ members; (212) 621-6000; www.ascap.com

Computing Machinery, Assn. for (1947): 85,500 members; (212) 626-0500; www.acm.org

Computing Professionals, Institute for Certification of (1973): 50,000 members; (847) 299-4227; www.iccp.org

Construction Inspectors, Assn. of (1974): 1,000; (623) 580-4646; www.aci-assoc.org

Cosmetology Assn., Natl. (1921): 25,000 members; (866) 871-0656; www.ncacares.org

Counseling Assn., American (1952): 45,000 members; (800) 347-6647; www.counseling.org

Country Music Assn. (1958): 5,500 members; (615) 244-2840; www.CMAworld.com

Customs Brokers and Forwarders Assn. of America, Inc., Natl. (1897): 800 cos.; (202) 466-0222; www.ncbfaa.org

Dental Assn., American (1859): 155,000+ members; (312) 440-2500; www.ada.org

Directors Guild of America (1936): 13,400 members; (310) 289-2000; www.dga.org

Electrical and Electronics Engineers, Institute of (1963): 375,000+ members; (732) 981-0060; www.ieee.org

Electronics Technicians, Intl. Soc. of Certified (1980): 50,000+ members; (800) 946-0201; www.iscet.org

Energy Engineers, Assn. of (1977): 8,500 members; (770) 447-5083; www.aeecenter.org

Engineers, Natl. Society of Professional (1934): 45,000 members; (703) 684-2800; www.nspe.org

Environmental Assessment Association (1972): 3,500 members; (623) 580-4646; www.eaa-assoc.org

Environmental Health Assn., Natl. (1937): 4,500 members; (303) 756-9090; www.neha.org

Family Physicians, American Academy of (1947): 93,000+; (913) 906-6000; www.aafp.org

Farm Bureau, American (1919): 6.2 mil members; (202) 406-3600; www.fb.org

Farmers Union, Natl. (1902): 250,000 families; (202) 554-1600; www.nfu.org

Financial Professionals, Assn. for (1979): 16,000+ members; (301) 907-2862; www.AFPonline.org

Financial Service Professionals, Soc. of (1928): 18,000 members; (610) 526-2600; www.financialpro.org

Financial Women Intl. (1921): 1,000+ members; (651) 487-7632; www.fwi.org

Fire Chiefs, Intl. Assn. of (1873): 13,000 members; (703) 273-0911; www.iafc.org

Fire Protection Engineers, Soc. of (1950): 4,500 members; (301) 718-2910; www.sfpe.org

Food Technologists, Institute of (1939): 22,000 members; (312) 782-8424; www.ift.org

Forensic Sciences, American Academy of (1948): 6,000 members; (719) 636-1100; www.aafs.org

Funeral Directors Assn., Natl. (1882): 20,300 members; (262) 789-1880; www.nfda.org

General Contractors of America, Associated (1918): 32,000+ cos.; (703) 548-3118; www.agc.org

Geographers, Assn. of American (1904): 10,000 members; (202) 234-1450; www.aag.org

Graphic Arts, American Institute of (1914): 22,000 members; (212) 807-1990; www.aiga.org

Ground Water Assn., Natl. (1948): 14,000 members; (614) 898-7786; www.ngwa.org

Heating, Refrigerating and Air-Conditioning Engineers, Inc., American Soc. of (1894): 51,000 members; (404) 636-8400; www.ashrae.org

Home Builders, Natl. Assn. of (1942): 235,000 members; (202) 266-8200; www.nahb.org

Human Resource Management, Society for (SHRM) (1948): 225,000+ members; (703) 548-3440; www.shrm.org

Illustrators, Inc., Society of (1901): 1,000 members; (212) 838-2560; www.societyillustrators.org

Industrial Designers Society of America (1965): 3,300 members; (703) 707-6000; www.idsa.org

Industrial Security, American Soc. for (1955): 36,000+ members; (703) 519-6200; www.asisonline.org

Intelligence Officers, Assn. of Former (1975): 24 chap., 4,000 members; (703) 790-0320; www.afio.com

Interior Designers, American Society of (1975): 40,000 members; (202) 526-3240; www.asid.org

Investigative Pathology, American Soc. for (1900): 1,718 members; (301) 634-7130; www.asip.org

Jail Assn., American (1981): 5,000 members; (301) 790-3930; www.aja.org

Journalists, Society of Professional (1909): 10,000 members; (317) 927-8000; www.spj.org

Journalists and Authors, American Society of (1948): 1,100+ members; (212) 997-0947; www.asja.org

Judicature Society, American (1913): 6,000 members; (515) 271-2281; www.ajs.org

Landscape Architects, American Society of (1899): 18,000+ members; (202) 898-2444; www.asla.org

Legal Administrators, Assn. of (1971): 10,534 members; (847) 267-1252; www.alanet.org

Legal Secretaries, Natl. Assn. of (NALS) (1929): 6,000 members; (918) 582-5188; www.nals.org

Library Assn., American (1876): 66,000 members; (800) 545-2433; www.ala.org

Lifesaving Assn., U.S. (1964):11,000 members; (866) 367-8752; www.usla.org

Logistics, Intl. Society of (SOLE) (1966): 3,000+ members; (301) 459-8446; www.sole.org

Magicians, Intl. Brotherhood of (1922): 13,000 members; (314) 845-9200; www.magician.org

Management Accountants, Institute of (1919): 65,000 members; (201) 573-9000; www.imanet.org

Management Assn., American (1923): 4,100 cos., 38,000 ind.; (212) 903-7976; www.amanet.org

Marketing Assn., American (1915): 40,000 members; (312) 542-9000; www.marketingpower.com

Master Brewers Association of the Americas (1887): 3,500 members; (651) 454-7250; www.mbaa.com

Materials and Process Engineering, Soc. for the Advancement of (1944): 4,500 members; (626) 331-0616; www.sampe.org

Mechanical Engineers, American Soc. of (1880): 127,000 members; (973) 882-1170; www.asme.org

Medical Assn., American (1847): 250,000; (800) 621-8335; www.ama-assn.org

Medical Library Assn. (1898): 4,000 members; (312) 419-9094; www.mlanet.org

Motion Picture Arts & Sciences, Academy of (1927): 6,500+ members; (310) 247-3000; www.oscars.org

Motion Picture and Television Engineers, Soc. of (1916): 8,000 members; (914) 761-1100; www.smpte.org

Mystery Writers of America, Inc. (1945): 3,000+ members; (212) 888-8171; www.mysterywriters.org

Notaries, American Society of (1965): approx. 20,000 members; (850) 671-5164; www.notaries.org

Nursing, Natl. League for (1893): 30,000 members, 1,200 institutions; (212) 363-5555; www.nln.org

Operations Management, Assn. for (APICS) (1957): 43,000+ members; (773) 867-1777; www.apics.org

Optometric Assn., American (1898): 35,000+ members; (800) 365-2219; www.aoa.org

Organists, American Guild of (1896): 20,000 members; (212) 870-2310; www.agohq.org

Pen Women, Natl. League of American (1897): 3,000 members; (202) 785-1997; www.americanpenwomen.org

Pharmacists Assn., American (1852): 60,000+ members; (202) 628-4410; www.pharmacist.com

Physical Therapy Assn., American (1921): 72,000+ members; (703) 684-2782; www.apta.org

Plastics Engineers, Society of (1942): 20,000 members; (203) 775-0471; www.4spe.org

Police Assn.—United States Section, Intl. (1962): 10,000 members; (248) 486-7137; www.ipa-usa.org

Population Assn. of America (1931): 3,000 members; (301) 565-6710; www.popassoc.org

Postmasters of the U.S., Natl. Assn. of (1898): 42,000 members, 95 clubs; (703) 683-9027; www.napus.org

Press Club, National (1908): 3,500+ members; (202) 662-7500; www.press.org

Professional Ball Players of America, Assn. of (1924): 11,000 members; (714) 935-9993; www.apbpa.org

Psychiatric Assn., American (1844): 38,000 members; (703) 907-7300; www.psych.org

Psychological Assn., American (1892): 148,000 members; (202) 336-5500; www.apa.org

Public Administration, American Soc. for (1939): 9,000 members; (202) 393-7878; www.aspanet.org

Public Health Assn., American (1872): 50,000+ members; (202) 777-2042; www.apha.org

Public Relations Society of America (1947): 32,000 members; (212) 460-1400; www.prsa.org

Range Management, Society for (1948): 4,000 members; (303) 986-3309; www.rangelands.org

Real Estate Appraisers, Natl. Assn. of (1966): 5,500 members; (623) 580-4646; www.narea-assoc.org

Rehabilitation Assn., Natl. (1925): 6,000 members; (703) 836-0850; www.nationalrehab.org

Road & Transportation Builders Assn., American (1902): 5,000+ members; (202) 289-4434; www.artba.org

Safety Engineers, American Soc. of (1911): 32,000+ members; (847) 699-2929; www.asse.org

School Administrators, American Assn. of (1865): 13,000+ members; (703) 528-0700; www.aasa.org

Science Teachers Assn., Natl. (1944): 55,000 members; (703) 243-7100; www.nsta.org

Science Writers, Natl. Assn. of (1955): 2,300 members; (304) 754-5077; www.nasw.org

Screen Actors Guild (1933): 120,000 members; (323) 954-1600; www.sag.com

Songwriters Guild of America (1931): 5,000+ members; (615) 742-9945; www.songwritersguild.com

Sportscasters Assn., American (1980): 500+ members; (212) 227-8080; www.americansportscastersonline.com

Surgeons, American College of (1913): 70,000+ members; (312) 202-5000; www.facs.org

Tax Administrators, Federation of (1937): (202) 624-5890; www.taxadmin.org

Teachers of English, Natl. Council of (1911): 60,000+ members; (217) 328-3870; www.ncte.org

Teachers of English to Speakers of Other Languages (1966): 14,000 members; (703) 836-0774; www.tesol.org

Teachers of French, American Assn. of (1927): 10,000 members; (618) 453-5731; www.frenchteachers.org

Teachers of German, American Assn. of (1926): 5,500 members; (856) 795-5553; www.aatg.org

Teachers of Mathematics, Natl. Council of (1920): 100,000+ members; (703) 620-9840; www.nctm.org

Teachers of Spanish and Portuguese, American Assn. of (1917): 11,000 members; (248) 960-2180; www.aatsp.org

Television Academy, Natl. (1955): (212) 586-8424; www.emmyonline.org

Theological Library Assn., American (1946): 1,000+ members; (312) 454-5100; www.atla.com

Transportation Engineers, Inst. of (1930): 17,000 members; (202) 289-0222; www.ite.org

Travel Agents, American Soc. of (1931): 12,000 members; (703) 739-2782; www.astanet.com

Underwriters, Soc. of Chartered Property and Casualty (1944): 28,000+ members; (800) 932-2728; www.cpcusociety.org

University Women, American Assn. of (1881): 100,000 members; (202) 785-7700; www.aauw.org

Veterinary Medical Assn., American (1863): 76,000+ members; (847) 925-8070; www.avma.org

Women in Communications, Association for (1909): 3,000+ members; (703) 370-7436; www.womcom.org

Women Engineers, Society of (1950): 17,000; (392) 596-5223; www.swe.org

Women in Radio and Television Inc., Amer. (1951): 1,500 members; (703) 506-3290; www.awrt.org

Sports Organizations

Source: World Almanac research

Major League Baseball

Office of the Commissioner, 245 Park Ave., 31st Fl., New York, NY 10167; www.mlb.com

American League

Baltimore Orioles (1953): 333 W. Camden St., Baltimore, MD 21201; (410) 685-9800; www.orioles.com

Boston Red Sox (1901): 4 Yawkey Way, Boston, MA 02215; (617) 267-9440; www.redsox.com

Chicago White Sox (1900, as Chicago White Stockings): 333 W. 35th St., Chicago, IL 60616; (312) 674-1000; www.whitesox.com

Cleveland Indians (1901): 2401 Ontario St., Cleveland, OH 44115; (216) 420-4200; www.indians.com

Detroit Tigers (1901): 2100 Woodward Ave., Detroit, MI 48201; (313) 471-2000; www.tigers.com

Kansas City Royals (1969): One Royal Way, Kansas City, MO 64129; (816) 921-8000; www.royals.com

Los Angeles Angels of Anaheim (1961): 2000 Gene Autry Way, Anaheim, CA 92806; (714) 940-2000; www.angelsbaseball.com

Minnesota Twins (1960): 1 Twins Way, Minneapolis, MN 55403; (612) 659-3400; www.twinsbaseball.com

New York Yankees (1903): One East 161st St., Bronx, NY 10451; (718) 293-4300; www.yankees.com

Oakland Athletics (1901, as Philadelphia Athletics): 7000 Coliseum Way, Oakland, CA 94621; (510) 638-4900; www.oaklandathletics.com

Seattle Mariners (1977): P.O. Box 4100, Seattle, WA 98104; (206) 346-4000; www.mariners.com

Tampa Bay Rays (1995, as Tampa Bay Devil Rays): One Tropicana Dr., St. Petersburg, FL 33705; (727) 825-3137; www.raysbaseball.com

Texas Rangers (1960): 1000 Ballpark Way, Arlington, TX 76011; (817) 273-5222; www.texasrangers.com

Toronto Blue Jays (1976): One Blue Jays Way, Ste. 3200, Toronto, ON M5V1J1, Canada; (416) 341-1000; www.bluejays.com

National League

Arizona Diamondbacks (1998): 401 E. Jefferson St., Phoenix, AZ 85001; (602) 462-6500; www.dbacks.com

Atlanta Braves (1876, as Boston Red Stockings): 755 Hank Aaron Dr., Atlanta, GA 30315; (404) 522-7630; www.braves.com

Chicago Cubs (1876, as Chicago White Stockings): 1060 W. Addison St., Chicago, IL 60613; (773) 404-2827; www.cubs.com

Cincinnati Reds (1869, as Cincinnati Red Stockings): 100 Main St., Cincinnati, OH 45202; (513) 765-7000; www.reds.com

Colorado Rockies (1991): 2001 Blake St., Denver, CO 80205; (303) 292-0200; www.coloradorockies.com

Florida Marlins (1991): 2267 Dan Marino Blvd., Miami, FL 33056; (305) 626-7400; www.floridamarlins.com

Houston Astros (1962, as Houston Colt .45s): 501 Crawford St., Houston, TX 77002; (713) 259-8000; www.astros.com

Los Angeles Dodgers (1890): 1000 Elysian Park Ave., Los Angeles, CA 90012; (323) 224-1500; www.dodgers.com

Milwaukee Brewers (1970): One Brewers Way, Milwaukee, WI 53214; (414) 902-4400; www.brewers.com

New York Mets (1961): Citi Field, Flushing, NY 11368; (718) 507-6387; www.mets.com

Philadelphia Phillies (1883): One Citizens Bank Way, Philadelphia, PA 19148; (215) 463-6000; www.phillies.com

Pittsburgh Pirates (1887): 115 Federal St., Pittsburgh, PA 15212; (412) 323-5000; www.pirates.com

St. Louis Cardinals (1892): 700 Clark St., St. Louis, MO 63102; (314) 345-9600; www.stlcardinals.com

San Diego Padres (1968): 100 Park Blvd., San Diego, CA 92101; (619) 795-5000; www.padres.com

San Francisco Giants (1883, as New York Gothams): 24 Willie Mays Plz., San Francisco, CA 94107; (415) 972-2000; www.sfgiants.com

Washington Nationals (1969, as Montreal Expos): 1500 South Capitol St., SE, Washington, DC 20003; (202) 675-6287; www.nationals.com

National Basketball Association

League Office, Olympic Tower, 645 Fifth Ave., New York, NY 10022; www.nba.com

Atlanta Hawks (1949, as Tri-City Blackhawks): 101 Marietta St. NW, Ste. 1900, Atlanta, GA 30303; (404) 878-3800; www.nba.com/hawks

Boston Celtics (1946): 226 Causeway St., 4th Fl., Boston, MA 02114; (866) 423-5849; www.nba.com/celtics

Charlotte Bobcats (2004): 333 E. Trade St., Charlotte, NC 28202; (704) 688-8600; www.nba.com/bobcats

Chicago Bulls (1966): 1901 W. Madison St., Chicago, IL 60612; (312) 455-4500; www.nba.com/bulls

Cleveland Cavaliers (1970): One Center Ct., Cleveland, OH 44115; (216) 420-2000; www.nba.com/cavaliers

Dallas Mavericks (1980): 2909 Taylor St., Dallas, TX 75226; (214) 747-6287; www.nba.com/mavericks

Denver Nuggets (1967, as Denver Rockets): 1000 Chopper Cir., Denver, CO 80204; (303) 405-1100; www.nba.com/nuggets

Detroit Pistons (1957): Five Championship Dr., Auburn Hills, MI 48326; (248) 377-0100; www.nba.com/pistons

Golden State Warriors (1946, as Philadelphia Warriors): 1011 Broadway, Oakland, CA 94607; (510) 986-2200; www.nba.com/warriors

Houston Rockets (1967, as San Diego Rockets): 1510 Polk St., Houston, TX 77002; (713) 627-3865; www.nba.com/rockets

Indiana Pacers (1967): 125 S. Pennsylvania St., Indianapolis, IN 46204; (317) 917-2500; www.nba.com/pacers

Los Angeles Clippers (1970, as Buffalo Braves): 1111 S. Figueroa St., Ste. 1100, Los Angeles, CA 90015; (888) 895-8662; www.nba.com/clippers

Los Angeles Lakers (1947, as Minneapolis Lakers): 555 N. Nash St., El Segundo, CA 90245; (310) 426-6000; www.nba.com/lakers

Memphis Grizzlies (1995, as Vancouver Grizzlies): 191 Beale St., Memphis, TN 38103; (901) 888-4667; www.nba.com/grizzlies

Miami Heat (1988): 601 Biscayne Blvd., Miami, FL 33132; (786) 777-4328; www.nba.com/heat

Milwaukee Bucks (1968): 1001 N. 4th St., Milwaukee, WI 53203; (414) 227-0599; www.nba.com/bucks

Minnesota Timberwolves (1989): 600 1st Ave. North, Minneapolis, MN 55403; (612) 673-1600; www.nba.com/timberwolves

New Jersey Nets (1967, as New Jersey Americans): 390 Murray Hill Pkwy., E. Rutherford, NJ 07073; (201) 935-8888; www.nba.com/nets

New Orleans Hornets (1988, as the Charlotte Hornets): 1250 Poydras St., 19th Fl., New Orleans, LA 70113; (504) 593-4700; www.nba.com/hornets

New York Knickerbockers (1946): Two Pennsylvania Plz., New York, NY 10121; (212) 465-6471; www.nba.com/knicks

Oklahoma City Thunder (1967, as Seattle SuperSonics): 2 Leadership Square, 211 N. Robinson Ave., Ste. 300; Oklahoma City, OK 73102; (405) 208-4800; www.nba.com/thunder

Orlando Magic (1989): 8701 Maitland Summit Blvd., Orlando, FL 32810; (407) 916-2400; www.nba.com/magic

Philadelphia 76ers (1937, as Syracuse Nationals): 3601 S. Broad St., Philadelphia, PA 19148; (215) 336-3600; www.nba.com/sixers

Phoenix Suns (1968): 201 E. Jefferson St., Phoenix, AZ 85004; (602) 379-7900; www.nba.com/suns

Portland Trail Blazers (1970): One Center Ct., Ste. 200, Portland, OR 97227; (503) 234-9291; www.nba.com/blazers

Sacramento Kings (1945, as Rochester Royals): One Sports Pkwy., Sacramento, CA 95834; (916) 928-0000; www.nba.com/kings

San Antonio Spurs (1967, as Dallas Chaparrals): One AT&T Center, San Antonio, TX 78219; (210) 444-5000; www.nba.com/spurs

Toronto Raptors (1995): 40 Bay St., Toronto, ON M5J 2X2, Canada; (416) 366-3865; www.nba.com/raptors

Utah Jazz (1974, as New Orleans Jazz): 301 W. South Temple, Salt Lake City, UT 84101; (801) 325-2500; www.nba.com/jazz

Washington Wizards (1963, as Baltimore Bullets): 601 F St. NW, Washington, DC 20004; (202) 661-5000; www.nba.com/wizards

National Hockey League

NHL Headquarters, 1185 Ave. of the Americas, New York, NY 10036; www.nhl.com

Anaheim Ducks (1993): 2695 E. Katella Ave., Anaheim, CA 92806; (877) 945-3946; www.ducks.nhl.com

Atlanta Thrashers (1999): Centennial Tower, 101 Marietta St. NW, Ste. 1900, Atlanta, GA 30303; (404) 878-3000; www.thrashers.nhl.com

Boston Bruins (1924): 100 Legends Way, Boston, MA 02114; (617) 624-1900; www.bruins.nhl.com

Buffalo Sabres (1970): One Seymour H. Knox III Plz., Buffalo, NY 14203; (716) 855-4100; www.sabres.nhl.com

Calgary Flames (1980): P.O. Box 1540, Station M, Calgary, AB T2P 3B9, Canada; (403) 777-2177; www.flames.nhl.com

Carolina Hurricanes (1972, as New England Whalers): 1400 Edwards Mill Rd., Raleigh, NC 27607; (919) 467-7825; www.hurricanes.nhl.com

Chicago Blackhawks (1926): 1901 W. Madison St., Chicago, IL 60612; (312) 455-7000; www.blackhawks.nhl.com

Colorado Avalanche (1972, as Quebec Nordiques): 1000 Chopper Cir., Denver, CO 80204; (303) 405-1100; www.avalanche.nhl.com

Columbus Blue Jackets (2000): 200 W. Nationwide Blvd., Columbus, OH 43215; (614) 246-4625; www.bluejackets.nhl.com

Dallas Stars (1967, as Minnesota North Stars): 2601 Ave. of the Stars, Frisco, TX 75034; (214) 387-5500; www.stars.nhl.com

Detroit Red Wings (1926, as Detroit Cougars): 600 Civic Center Dr., Detroit, MI 48226; (313) 983-6606; www.redwings.nhl.com

Edmonton Oilers (1972): 11230 110 St., Edmonton, AB T5G 3H7, Canada; (780) 414-4000; www.oilers.nhl.com

Florida Panthers (1993): One Panther Pkwy., Sunrise, FL 33323; (954) 835-7000; www.panthers.nhl.com

Los Angeles Kings (1967): 1111 S. Figueroa St., Ste. 3100, Los Angeles, CA 90015; (213) 742-7100; www.kings.nhl.com

Minnesota Wild (2000): 317 Washington St., St. Paul, MN 55102; (651) 602-6000; www.wild.nhl.com

Montreal Canadiens (1917): 1275 St. Antonie St. W, Montreal, QC H3C 5L2, Canada; (514) 932-2582; www.canadiens.nhl.com

Nashville Predators (1998): 501 Broadway, Nashville, TN 37203; (615) 770-2355; www.predators.nhl.com

New Jersey Devils (1974): Prudential Center, 165 Mulberry St., Newark, NJ 07102; (973) 757-6100; www.devils.nhl.com

New York Islanders (1972): 1255 Hempstead Tpke., Uniondale, NY 11553; (516) 501-6700; www.islanders.nhl.com

New York Rangers (1926): Two Pennsylvania Plz., New York, NY 10121; (212) 465-6000; www.rangers.nhl.com

Ottawa Senators (1901): 1000 Palladium Dr., Ottawa, ON K2V 1A5, Canada; (613) 599-0250; www.senators.nhl.com

Philadelphia Flyers (1967): 3601 South Broad St., Philadelphia, PA 19148; (215) 336-3600; www.flyers.nhl.com

Phoenix Coyotes (1979, as Winnipeg Jets): 6751 N. Sunset Blvd. #200, Glendale, AZ 85305; (623) 772-3200; www.coyotes.nhl.com

Pittsburgh Penguins (1967): One Chatham Ctr., Ste. 400, Pittsburgh, PA 15219; (412) 642-1300; www.penguins.nhl.com

St. Louis Blues (1967): 1401 Clark Ave., St. Louis, MO 63103; (314) 622-2500; www.blues.nhl.com

San Jose Sharks (1991): 525 W. Santa Clara St., San Jose, CA 95113; (408) 287-7070; www.sharks.nhl.com

Tampa Bay Lightning (1992): 401 Channelside Dr., Tampa, FL 33602; (813) 301-6500; www.lightning.nhl.com

Toronto Maple Leafs (1919, as Toronto St. Pats): 40 Bay St., Ste. 400, Toronto, ON M5J 2X2, Canada; (416) 815-5700; www.mapleleafs.nhl.com

Vancouver Canucks (1946): 800 Griffiths Way, Vancouver, BC V6B 6G1, Canada; (604) 899-7400; www.canucks.nhl.com

Washington Capitals (1974): 627 N. Glebe Rd., Ste. 850, Arlington, VA 22203; (202) 266-2200; www.capitals.nhl.com

National Football League

League Office, 280 Park Ave., New York, NY 10017; www.nfl.com

Arizona Cardinals (1898): P.O. Box 888, Phoenix, AZ 85001; (602) 379-0101; www.azcardinals.com

Atlanta Falcons (1965): 4400 Falcon Pkwy., Flowery Branch, GA 30542; (770) 965-3115; www.atlantafalcons.com

Baltimore Ravens (1946, as Baltimore Colts): 1101 Russel St., Baltimore, MD 21230; (410) 261-7283; www.baltimoreravens.com

Buffalo Bills (1959): One Bills Dr., Orchard Park, NY 14127; (877) 228-4257; www.buffalobills.com

Carolina Panthers (1993): 800 S. Mint St., Charlotte, NC 28202; (704) 358-7000; www.panthers.com

Chicago Bears (1920, as Decatur Staleys): 1000 Football Dr., Lake Forest, IL 60045; (888) 792-3277; www.chicagobears.com

Cincinnati Bengals (1968): One Paul Brown Stadium, Cincinnati, OH 45202; (513) 621-3550; www.bengals.com

Cleveland Browns (1946): 100 Alfred Lerner Way, Cleveland, OH 44114; (440) 824-6284; www.clevelandbrowns.com

Dallas Cowboys (1960): 900 E. Randol Mill Rd., Arlington, TX 76011; (817) 892-5000; www.dallascowboys.com

Denver Broncos (1960): 13655 Broncos Pkwy., Englewood, CO 80112; (303) 649-9000; www.denverbroncos.com

Detroit Lions (1934): 222 Republic Dr., Allen Park, MI 48101; (313) 262-2002; www.detroitlions.com

Green Bay Packers (1919): 1265 Lombardi Ave., Green Bay, WI 54304; (920) 569-7500; www.packers.com

Houston Texans (2002): Two Reliant Park, Houston, TX 77054; (832) 667-2000; www.houstontexans.com

Indianapolis Colts (1946): 7001 W. 56th St., Indianapolis, IN 46254; (317) 297-2658; www.colts.com

Jacksonville Jaguars (1995): One Stadium Pl., Jacksonville, FL 32202; (904) 633-2000; www.jaguars.com

Kansas City Chiefs (1960): One Arrowhead Dr., Kansas City, MO 64129; (816) 920-9300; www.kcchiefs.com

Miami Dolphins (1966): 7500 SW 30th St., Davie, FL 33314; (888) 346-7849; www.miamidolphins.com

Minnesota Vikings (1961): 9520 Viking Dr., Eden Prairie, MN 55344; (952) 858-6500; www.vikings.com

New England Patriots (1960): One Patriot Pl., Foxboro, MA 02035; (800) 543-1776; www.patriots.com

New Orleans Saints (1967): 5800 Airline Dr., Metairie, LA 70003; (504) 731-1700; www.neworleanssaints.com

New York Giants (1925): Giants Stadium, E. Rutherford, NJ 07073; (201) 935-8111; www.giants.com

New York Jets (1960): One Jets Dr., Florham Park, NJ 07932; (516) 560-8200; www.newyorkjets.com

Oakland Raiders (1960): 1220 Harbor Bay Pkwy., Alameda, CA 94502; (510) 864-5000; www.raiders.com

Philadelphia Eagles (1933): One NovaCare Way, Philadelphia, PA 19145; (215) 463-2500; www.philadelphiaeagles.com

Pittsburgh Steelers (1933): 100 Art Rooney Ave., Pittsburgh, PA 15212; (412) 432-7800; www.steelers.com

St. Louis Rams (1937): One Rams Way, St. Louis, MO 63045; (314) 982-7267; www.stlouisrams.com

San Diego Chargers (1960): 4020 Murphy Canyon Rd., San Diego, CA 92123; (858) 874-4500; www.chargers.com

San Francisco 49ers (1950): 4949 Centennial Blvd., Santa Clara, CA 95054; (408) 562-4949; www.sf49ers.com

Seattle Seahawks (1976): 12 Seahawks Way, Renton, WA 98056; (888) 635-4295; www.seahawks.com

Tampa Bay Buccaneers (1976): One Buccaneer Pl., Tampa, FL 33607; (813) 870-2700; www.buccaneers.com

Tennessee Titans (1960): One Titans Way, Nashville, TN 37213; (615) 565-4000; www.titansonline.com

Washington Redskins (1937): 21300 Redskin Park Dr., Ashburn, VA 20147; (703) 726-7000; www.redskins.com

Other North American Sports Organizations

American Kennel Club (1884): 260 Madison Ave., New York, NY 10016; (919) 233-9767; www.akc.org

Archery, USA (1879): 711 N. Tejon St., Colorado Springs, CO 80903; (719) 866-4576; www.usarchery.org

Athletic Union, Amateur (1888): P.O. Box 22409, Lake Buena Vista, FL 32830; (407) 934-7200; www.aausports.org

Auto Club, U.S. (1955): 4910 W. 16th St., Speedway, IN 46224; (317) 247-5151; www.usacracing.com

Badminton Assn., USA (1938): One Olympic Plz., Colorado Springs, CO 80909; (719) 866-4808; www.usabadminton.org

Baseball, Little League (1939): 539 US Rte. 15 Hwy, P.O. Box 3485, Williamsport, PA 17701; (570) 326-1921; www.littleleague.org

Baseball Congress, American Amateur (1935): 100 W. Broadway, Farmington, NM 87401; (505) 327-3120; www.aabc.us

Baseball Congress, Natl. (1934): 300 S. Sycamore, Wichita, KS 67213; (316) 264-4625; www.nbcbaseball.com

Baseball Research, Inc., Society for American (1971): 812 Huron Rd., Ste. 719, Cleveland, OH 44115; (216) 575-0500; www.sabr.org

Basketball Association, Women's National (WNBA) (1996): 645 Fifth Ave., New York, NY 10022; (212) 688-9622; www.wnba.com

Bowlers Assn., Pro (1958): 719 2nd Ave., Ste. 701, Seattle, WA 98104; (206) 332-9688; www.pbatour.org

Bowling Congress, U.S. (2005): 621 Six Flags Dr., Arlington, TX 76011; (800) 514-2695; www.bowl.com

Canadian Football League (1958): 50 Wellington St. E., 3rd Fl., Toronto, ON M5E 1C8, Canada; (416) 322-9650; www.cfl.ca

Cheer and Dance Teams, U.S. All Star Federation for (2003): 6745 Lenox Center Ct., Ste. 300, Memphis, TN 38115; (800) 929-6237; www.usasf.net

Chess Federation, U.S. (1939): P.O. Box 3967, Crossville, TN 38557; (931) 787-1234; www.uschess.org

Contract Bridge League, American (1937): 2990 Airways Blvd., Memphis, TN 38116; (901) 332-5586; www.acbl.org

Curling Association, United States (1948): 5525 Clem's Way, Stevens Point, WI 54482; (715) 344-1199; www.curlingrocks.net

Cycling, USA (1920): 210 USA Cycling Pt., Ste. 100, Colorado Springs, CO 80919; (719) 434-4200; www.usacycling.org

Dance, USA (1965): P.O. Box 152988, Cape Coral, FL 33915; (800) 447-9047; www.usadance.org

Disabled Sports USA (1967): 451 Hungerford Dr., Ste. 100, Rockville, MD 20850; (301) 217-0960; www.dsusa.org

Equestrian Federation, U.S. (1917): 4047 Iron Works Pkwy., Lexington, KY 40511; (859) 258-2472; www.usef.org

Figure Skating Assn., U.S. (1921): 20 First St., Colorado Springs, CO 80906; (719) 635-5200; www.usfigureskating.org

Game Fish Assn., Intl. (1939): 300 Gulf Stream Way, Dania Beach, FL 33004; (954) 927-2628; www.igfa.org

Golf Assn., Ladies Professional (LPGA) (1950): 100 International Golf Dr., Daytona Beach, FL 32124; (386) 274-6200; www.lpga.com

Golf Assn., U.S. (1894): P.O. Box 708, Far Hills, NJ 07931; (908) 234-2300; www.usga.org

Golfers' Association of America, Professional (PGA) (1916): 100 Ave. of the Champions, Palm Beach Gardens, FL 33418; (561) 624-8400; www.pga.com

Gymnastics, USA (1963): 132 E. Washington St., Ste. 700, Indianapolis, IN 46204; (317) 237-5050; www.usa-gymnastics.org

Handball Assn., U.S. (1951): 2333 N. Tucson Blvd., Tucson, AZ 85716; (520) 795-0434; www.ushandball.org

Highpointers Club (1986): P.O. Box 6364, Sevierville, TN 37864; (303) 278-1915; www.highpointers.org

Hockey, USA (1936): 1775 Bob Johnson Dr., Colorado Springs, CO 80906; (719) 576-8724; www.usahockey.com

Hot Rod Assn., Natl. (1951): 2035 Financial Way, Glendora, CA 91741; (626) 914-4761; www.nhra.com

Indy Racing League (1994): 4565 W. 16th St., Indianapolis, IN 46222; (317) 492-6526; www.indycar.com

Intercollegiate Athletics, Natl. Assn. of (1937): 1200 Grand Blvd., Kansas City, MO 64106; (816) 595-8000; www.naia.org

Lacrosse, US (1998): 113 W. University Pkwy., Baltimore, MD 21210; (410) 235-6882; www.uslacrosse.org

Muzzle Loading Rifle Assn., Natl. (1933): P.O. Box 67, Friendship, IN 47021; (812) 667-5131; www.nmlra.org

NASCAR (National Association for Stock Car Auto Racing) (1948): P.O. Box 2875, Daytona Beach, FL 32120; (386) 253-0611; www.nascar.com

NCAA (National Collegiate Athletic Association) (1906, as Intercollegiate Athletic Association of the United States): 700 W. Washington St., P.O. Box 6222, Indianapolis, IN 46206; (317) 917-6222; www.ncaa.org

Olympic Committee, U.S. (1896, as American Olympic Association): One Olympic Plz., Colorado Springs, CO 80909; (719) 632-5551; www.usoc.org

Paralympics, U.S. (2001): One Olympic Plz., Colorado Springs, CO 80909; (719) 866-2030; www.usparalympics.org

Polo Assn., U.S. (1890): 4037 Ironworks Pkwy., Ste. 110, Lexington, KY 40511; (859) 219-1000; www.us-polo.org

Power Boat Assn., American (1903): 17640 E. Nine Mile Rd., P.O. Box 377, Eastpointe, MI 48021; (586) 773-9700; www.apba-racing.com

Rifle Assn., National (1871): 11250 Waples Mill Rd., Fairfax, VA 22030; (800) 672-3888; www.nra.org

Rodeo Cowboys Assn., Pro (1936): 101 Pro Rodeo Dr., Colorado Springs, CO 80919; (719) 593-8840; www.prorodeo.com

Roller Sports, U.S.A. (1937): 4730 South St., Lincoln, NE 68506; (402) 483-7551; www.usarollersports.org

Rugby, USA (1975): 2500 Arapahoe Ave., Ste. 200, Boulder, CO 80302; (303) 539-0300; www.usarugby.org

Running Assn., American (1968): 4405 East West Hwy., Ste. 405, Bethesda, MD 20814; (800) 776-2732; www.americanrunning.org

Skeet Shooting Assn., Natl. (1928): 5931 Roft Rd., San Antonio, TX 78253; (210) 688-3371; www.mynssa.com

Ski and Snowboard Assn., U.S. (1964): 1 Victory Ln., P.O. Box 100, Park City, UT 84060; (435) 649-9090; www.ussa.org

Soccer, Major League (MLS) (1993): 420 Fifth Ave., 7th Fl., New York, NY 10018; (212) 450-1200; www.mlsnet.com

Soccer Federation, U.S. (1903): 1801 S. Prairie Ave., Chicago, IL 60616; (312) 808-1300; www.ussoccer.com

Softball Assn., Amateur (1993): 2801 NE 50th St., Oklahoma City, OK 73111; (405) 424-5266; www.softball.org

Special Olympics (1968): 1133 19th St. NW, Washington, DC 20036; (202) 628-3630; www.specialolympics.org

Speedskating, U.S. (1966): 5662 S. 4800 W., Kearns, UT 84118; (801) 417-5360; www.usspeedskating.org

Speleological Society, Natl. (1941): 2813 Cave Ave., Huntsville, AL 35810; (256) 852-1300; www.caves.org

Swimming, USA (1979): One Olympic Plz., Colorado Springs, CO 80909; (719) 866-4578; www.usa-swimming.org

Table Tennis Assn., U.S. (1933): One Olympic Plz., Colorado Springs, CO 80909; (719) 866-4583; www.usatt.org

Tennis Assn., U.S. (1881): 70 W. Red Oak Ln., White Plains, NY 10604; (914) 696-7000; www.usta.com

Thoroughbred Racing Associations (1942): 420 Fair Hill Dr., Ste. 1, Elkton, MD 21921; (410) 392-9200; www.tra-online.com

Track & Field, USA (1878, as Amateur Athletic Union): 132 E. Washington St., Ste. 800, Indianapolis, IN 46204; (317) 261-0500; www.usatf.org

Trapshooting Assn. of America, Amateur (1900): 601 W. National Rd., Vandalia, OH 45377; (937) 898-4638; www.shootata.com

Trotting Assn., U.S. (1939): 750 Michigan Ave., Columbus, OH 43215; (614) 224-2291; www.ustrotting.com

Ultimate, USA (1979): 4730 Table Mesa Dr., Ste. I-200C, Boulder, CO 80305; (303) 447-3472; www.usaultimate.org

Volleyball, USA (1928): 715 S. Circle Dr., Colorado Springs, CO 80910; (719) 228-6800; www.usavolleyball.org

Wheelchair Sports, USA (1956): 1236 Jungermann Rd., St. Peters, MO 63376; (636) 614-6784; www.wsusa.org

Wrestling, USA (1968): 6155 Lehman Dr., Colorado Springs, CO 80918; (719) 598-8181; www.themat.com

Health Organizations

Source: World Almanac research

Entries are roughly alphabetized by the basic condition addressed or organization name. Year established is in parentheses. In addition to these selected sites, there is a vast array of medical information on the Internet. It is important, however, to be certain that the source of information is reliable and accurate. Always check with a physician before embarking on any new health-related undertaking.

Al-Anon/Alateen (1951): (757) 563-1600; www.al-anon.alateen.org

Alcohol and Drug Information, SAMHSA National Clearinghouse: (800) 729-6686; ncadi.samhsa.gov

Alcoholics Anonymous (1935): (212) 870-3400; www.alcoholics-anonymous.org

Alcoholism, American Council on (1953): (800) 527-5344; www.aca-usa.org

Alcoholism and Drug Dependence Hopeline, National Council on (1944): (212) 269-7797; www.ncadd.org

Aging, National Institute on (1974): (301) 496-1752; www.nia.nih.gov

Aging's Eldercare Locator Line, Administration on (1991): (800) 677-1116; www.eldercare.gov

AIDSinfo: (800) HIV-0440 (448-0440); www.aidsinfo.nih.gov

AIDS Society, Canadian (1988): (613) 230-3580; www.cdnaids.ca

Allergy, Asthma, and Immunology, American Academy of (1943): (414) 272-6071; www.aaaai.org

ALS Association [Lou Gehrig's disease] (1985): (818) 880-9007; www.alsa.org

Alzheimer's Association (1979): (312) 335-8700; www.alz.org

Alzheimer's Society of Canada (1978): (416) 488-8772; www.alzheimer.ca

Anorexia Nervosa and Associated Disorders, National Association of (1976): (847) 831-3438; www.anad.org

Arc of the United States, The [intellectual and developmental disabilities] (1950): (800) 433-5255; www.thearc.org

Arthritis Foundation (1948): (800) 283-7800; www.arthritis.org

Arthritis and Musculoskeletal and Skin Diseases, National Institute of (1986): (877) 226-4267; www.niams.nih.gov

Asthma and Allergy Foundation of America (1953): (800) 727-8462; www.aafa.org

Autism Society of America (1965): (800) 328-8476; www.autism-society.org

Blind, American Council of the (1961): (202) 467-5081; www.acb.org

Blind, Inc., Guide Dog Foundation for the (1946): (800) 548-4337; www.guidedog.org

Blind, National Federation of the (1940): (410) 659-9314; www.nfb.org

Blind and Physically Handicapped, National Library Service for the (1931): (202) 707-5100; TTY (202) 707-0744; www.loc.gov/nls

Blindness, Foundation Fighting (1971): (800) 683-5555; www.blindness.org

Blindness America, Prevent (1908): (800) 331-2020; www.preventblindness.org

Brain Tumor Society, National (2008): (800) 770-8287; www.braintumor.org

Breast Cancer Network of Strength (1978): (800) 221-2141 or (800) 986-9505 (Spanish); www.networkofstrength.org

Cancer Institute's Cancer Information Service, National (1975): (800) 422-6237; cis.nci.nih.gov

Cancer Society, American (1913): (800) 227-2345; www.cancer.org

Cancer Society, Canadian (1938): (416) 961-7223; www.cancer.ca

Centers for Disease Control and Prevention (CDC) (1946): (800) 311-3435; www.cdc.gov

Cerebral Palsy, Inc., United (1949): (202) 776-0406; www.ucp.org

CFIDS Association of America [chronic fatigue syndrome] (1987): (704) 365-2343; www.cfids.org

Child Abuse and Family Violence, National Council on (1984): (800) 422-4453; www.nccafv.org

Childhelp National Child Abuse Hotline (1959): (800) 4-A-CHILD (422-4453); www.childhelp.org

Children, National Center for Missing and Exploited (1984): (703) 274-3900; www.missingkids.com

Children's Tumor Foundation (1978): (212) 344-6633; www.ctf.org

Chronic Pain Association, American (1980): (800) 533-3231; www.theacpa.org

Continence, National Association for (1982): (843) 377-0900; www.nafc.org

Continence, Simon Foundation for (1983): (800) 237-4666; www.simonfoundation.org

Cooley's Anemia Foundation [thalassemia major] (1954): (800) 522-7222; www.thalassemia.org

Crohn's and Colitis Foundation of America (1967): (800) 932-2423; www.ccfa.org

Crohn's and Colitis Foundation of Canada (1974): (416) 920-5035; www.ccfc.ca

Cystic Fibrosis Foundation (1955): (800) 344-4823 or (301) 951-4422; www.cff.org

Deaf, Natl. Assn. of the (1880): (301) 587-1788, TTY (301) 587-1789; www.nad.org

Depression and Bipolar Support Alliance (1985): (800) 826-3632; www.dbsalliance.org

Diabetes Association, American (1940): (800) 342-2383; www.diabetes.org

Diabetes Association, Canadian (1953): (416) 363-0177; www.diabetes.ca

Diabetes Research Foundation Hotline, Juvenile (1973): (800) 533-2873; www.jdrf.org

Dial-A-Hearing Screening Test: (800) 222-EARS (322-3277)

Domestic Violence Hotline, National (1996): (800) 799-7233; TTY (800) 787-3224; www.ndvh.org

Down Syndrome Congress, National (1973): (800) 232-6372; www.ndsccenter.org

Down Syndrome Society, National (1979): (800) 221-4602; www.ndss.org

Dyslexia Association, International (1949): (410) 296-0232; www.interdys.org

Easter Seals [disabilities, special needs] (1919): (800) 221-6827; www.easterseals.com

Endometriosis Association (1980): (414) 355-2200; www.endometriosisassn.org

Epilepsy Foundation's Answer Place (1967): (800) 332-1000; www.epilepsyfoundation.org/answerplace

Fat Acceptance, Natl. Assn. to Advance (1969): (916) 558-6880; www.naafa.org

First Candle [sudden infant death syndrome] (1987): (800) 221-7437; www.sidsalliance.org

FoodSafety.gov—Gateway to Federal Food Safety Information: Food (except for meat, poultry, eggs): (888) 723-3366 (FDA Center for Food Safety and Applied Nutrition); Meat, poultry, eggs: (888) 674-6854 (USDA Meat and Poultry Hotline); Illness or food poisoning: (800) 232-4636 (CDC)

Gamblers Anonymous (1957): (213) 386-8789; www.gamblersanonymous.org

Geriatrics Society, American (1942): (212) 308-1414; www.americangeriatrics.org

Hard of Hearing Association, Canadian (1982): (613) 526-1584, TTY (613) 526-2692; www.chha.ca

Headache Foundation, National (1970): (888) 643-5552; www.headaches.org

Hearing Society, Intl. (1951): (734) 522-7200; www.ihsinfo.org

Heart Association, American (1924): (800) 242-8721; www.americanheart.org

Hearts, Inc., Mended (1950): (214) 360-6149; www.mendedhearts.org

Hospice Education Institute Hospicelink (1985): (800) 331-1620; www.hospiceworld.org

Hospice International, Children's (1983): (800) 242-4453; www.chionline.org

Hospital Association, American (1898): (312) 422-3000; www.aha.org

Huntington's Disease Society of America (1967): (800) 345-4372; www.hdsa.org

Kidney Foundation, National (1950): (212) 889-2210; www.kidney.org

Kidney Foundation of Canada (1964): (514) 369-4806; www.kidney.ca

Kidney Fund, American (1971): (800) 638-8299; www.kidneyfund.org

Kidney and Urologic Diseases Information Clearinghouse, National: (800) 891-5390; www.kidney.niddk.nih.gov

La Leche League Intl. [breastfeeding] (1957): (800) 525-3243; www.llli.org

Leukemia and Lymphoma Society (1949): (800) 955-4572; www.lls.org

Liver Foundation, American (1976): (212) 668-1000; www.liverfoundation.org

Living Bank [organ donation] (1968): (800) 528-2971; www.livingbank.org

Lung Association, American (1904): (800) 586-4872; www.lungusa.org

Lung Line (1983): (800) 222-5864; www.nationaljewish.org/about/contact/lung-line.aspx

Lupus Foundation of America, Inc. (1977): (202) 349-1155; www.lupus.org

Lyme Disease Foundation (1988): (860) 870-0070; www.lyme.org

March of Dimes [babies' health] (1938): (914) 997-4488; www.marchofdimes.com

Marfan Foundation, Natl. (1981): (800) 8-MARFAN (862-7326); www.marfan.org

Mayo Clinic (1889): (507) 284-2511; www.mayoclinic.com

Mental Health, National Institute of (1946): (301) 443-4513, TTY (301) 443-8431; www.nimh.nih.gov

Mental Health America (1909): (800) 969-6642; www.nmha.org

Mentally Ill, Natl. Alliance for the (1979): (703) 524-7600; www.nami.org

Multiple Sclerosis Society, National (1946): (800) 344-4867; www.nationalmssociety.org

Multiple Sclerosis Society of Canada (1948): (416) 922-6065; www.mssociety.ca

Muscular Dystrophy Association (1950): (800) 572-1717; www.mdausa.org

Myeloma Foundation, Intl. (1990): (800) 452-2873; www.myeloma.org

Narcotics Anonymous (1953): (818) 773-9999; www.na.org

National Health Council (1920): (202) 785-3910; www.nationalhealthcouncil.org

National Health Information Center (1979): (800) 336-4797; www.health.gov/NHIC

National Institutes of Health (NIH) (1887): (301) 496-4000; www.nih.gov

Neurological Disorders and Stroke, National Institute of (1950): (800) 352-9424, TTY (301) 468-5981: www.ninds.nih.gov

Organ Sharing, United Network for (1984): (804) 782-4800; www.unos.org

Osteoporosis Foundation, National (1984): (800) 231-4222; www.nof.org

Overeaters Anonymous (1960): (505) 891-2664; www.oa.org

Parkinson Foundation, National (1957): (800) 327-4545; www.parkinson.org

Parkinson's Disease Foundation, Inc. (1957): (212) 923-4700; www.pdf.org

Parkinson Society Canada (1965): (416) 227-9700; www.parkinson.ca

Pediatrics, American Academy of (1930): (847) 434-4000; www.aap.org

Phoenix House [substance abuse] (1967): (800) DRUG-HELP; www.phoenixhouse.org

Physically Handicapped, Inc., Natl. Assn. of the (1958): www.naph.net

Planned Parenthood Federation of America, Inc. (1916): (212) 541-7800; www.plannedparenthood.org

Plastic Surgery Referral Service (1931): (847) 228-9900; www.plasticsurgery.org

Post-Polio Health International (1960): (314) 534-0475; www.post-polio.org

Psoriasis Foundation, Natl. (1968): (503) 244-7404; www.psoriasis.org

Rare Disorders, National Organization for (1983): (203) 744-0100; www.rarediseases.org

Rehabilitation Information Center, National (1977): (800) 346-2742; TTY (301) 459-5984; www.naric.com

Reye's Syndrome Foundation, Natl. (1974): (419) 924-9000; www.reyessyndrome.org

Runaway Switchboard, National (1971): (773) 880-9860; www.nrscrisisline.org

Scleroderma Foundation, United (1998): (800) 722-HOPE (722-4673); www.scleroderma.org

Sickle Cell Disease Association of America (1971): (800) 421-8453; www.sicklecelldisease.org

Sjögren's Syndrome Foundation (1983): (800) 475-6473; www.sjogrens.org

Speech-Language-Hearing Association Action Center, American (1958): (800) 638-8255, TTY (301) 296-5650; www.asha.org

Spinal Cord Injury Association, National (1948): (800) 962-9629; www.spinalcord.org

STD Hotline, National (1914): (800) 227-8922; www.ashastd.org

Stroke Association, National (1984): (800) 787-6537; www.stroke.org

Stuttering, National Center for (1976): (800) 221-2483; www.stuttering.com

Stuttering Association, Natl. (1977): (212) 944-4050; www.nsastutter.org

Stuttering Foundation of America (1947): (800) 992-9392; www.stutteringhelp.org

Sudden Infant Death Syndrome Institute, American (1983): (800) 232-7437; www.sids.org

Suicide Prevention Lifeline, National (2004): (800) 273-TALK (273-8255); www.suicidepreventionlifeline.org

Therapy Dogs Intl. (1976): (973) 252-9800; www.tdi-dog.org

Tourette Syndrome Association (1972): (718) 224-2999; tsa-usa.org

Tuberous Sclerosis Alliance (1974): (301) 562-9890; www.tsalliance.org

Urological Association, American (1902): (866) 746-4282; www.auanet.org

Visual Impairments, Natl. Assn. for Parents of Children with (1980): (800) 562-6265; www.napvi.org

Women's Health Network, National (1975): (202) 347-1140; www.nwhn.org

Women's Health Resource Center, National (1988): (877) 986-9472; www.healthywomen.org

UNITED STATES FACTS

Superlative U.S. Statistics[1]

Source: U.S. Geological Survey, Dept. of the Interior; U.S. Census Bureau, Dept. of Commerce; World Almanac research

Total area for 50 states and Washington, DC (land, 3,537,440 sq mi; water, 256,648 sq mi)		3,794,085 sq mi[2]
Largest state	Alaska	663,267 sq mi
Smallest state	Rhode Island	1,545 sq mi
Largest county (excluding Alaska)	San Bernardino County, CA	20,105 sq mi
Smallest county	Arlington County, VA[3]	26 sq mi
Largest incorporated city (in area; pop. 1,000+)	Sitka, AK	4,812 sq mi
Northernmost city	Barrow, AK	71°17´ N
Northernmost point	Point Barrow, AK	71°23´ N
Southernmost city	Hilo, HI	19°44´ N
Southernmost settlement	Naalehu, HI	19°03´ N
Southernmost point	Ka Lae (South Cape), island of Hawaii	18°55´ N (155°41´ W)
Easternmost city	Eastport, ME	66°59´05´´ W
Easternmost settlement[4]	Attu Station, AK	173°11´ E
Easternmost point[4]	Pochnoi Point, on Semisopochnoi Island, AK	179°46´ E
Westernmost city	Adak Station, AK	173°11´ E
Westernmost settlement	Adak Station, AK	173°11´ E
Westernmost point	Amatignak Isl., AK	179°06´ W
Highest settlement	Tordal Estates, CO	10,653 ft
Lowest settlement	Bombay Beach, CA	–223 ft
Highest point on Atlantic coast	Cadillac Mountain, Mount Desert Island, ME	1,530 ft
Oldest national park	Yellowstone National Park (1872), WY-MT-ID	2,219,791 acres
Largest national park	Wrangell-St. Elias, AK	8,323,148 acres
Highest waterfall	Yosemite Falls—total in 3 sections (Upper Yosemite Fall, 1,430 ft; Cascades, 675 ft; Lower Yosemite Fall, 320 ft)	2,425 ft
Longest river system	Mississippi-Missouri-Red Rock	3,710 mi
Highest mountain	Mount McKinley (Denali), AK	20,320 ft
Lowest point	Death Valley, CA	–282 ft
Deepest lake	Crater Lake, OR	1,958 ft
Rainiest spot	Mount Waialeale, HI	annual avg. rainfall 426 in.
Largest gorge	Grand Canyon, Colorado River, AZ	277 mi long, 600 ft to 18 mi wide, 1 mi deep
Deepest gorge	Hells Canyon, Snake River, OR-ID	7,900 ft
Largest dam	New Cornelia Tailings, Ten Mile Wash, AZ[5]	274,026,000 cu yds material used
Tallest building	Willis Tower, Chicago, IL[6]	1,451 ft
Largest building	Boeing Manufacturing Plant, Everett, WA	472,000,000 cu ft; covers 98 acres
Largest office building	Pentagon, Arlington, VA	77,025,000 cu ft; covers 29 acres
Tallest structure	TV tower, Blanchard, ND	2,063 ft
Longest bridge span	Verrazano-Narrows, NY	4,260 ft
Highest bridge	Royal Gorge, CO	1,053 ft above water
Deepest well	Bertha Rogers gas well (inactive), Washita County, OK	31,441 ft

The 48 Contiguous States

Total area for 48 states and Washington, DC (land, 2,959,066 sq mi; water, 160,824 sq mi)		3,119,887 sq mi[2]
Largest state	Texas	268,581 sq mi
Northernmost city	Bellingham, WA	48°46´ N
Northernmost settlement	Angle Inlet, MN	49°21´ N
Northernmost point	Northwest Angle, MN	49°23´ N
Southernmost city	Key West, FL	24°33´ N
Southernmost mainland city	Florida City, FL	25°27´ N
Southernmost point	Ballast Key	24°31´ N
Easternmost settlement	Lubec, ME	66°58´49´´ W
Easternmost point	West Quoddy Head, ME	66°57´ W
Westernmost town	La Push, WA	124°38´ W
Westernmost point	Bodelteh Islands, WA	124°46´ W
Highest mountain	Mount Whitney, CA	14,494 ft

(1) All areas are total area, including water, unless otherwise noted. (2) Does not add, because of rounding. (3) Smallest county by land area is New York County (Manhattan) at 23 sq mi; its total area including water is 34 sq mi. Superlative shown is for smallest total area. (4) Alaska's Aleutian Islands extend into the eastern hemisphere (across 180° longitude) and thus technically contain the easternmost point and settlement in the U.S. (5) The New Cornelia Tailings Dam is a privately owned industrial dam composed of tailings, remnants of a mining process. (6) The former Sears Tower became formally known as the Willis Tower as of July 16, 2009.

Geodetic Datum of North America

In July 1986, the National Oceanic and Atmospheric Administration's National Geodetic Survey (NGS), in cooperation with Canada and Mexico, completed readjustment and redefinition of the system of latitudes and longitudes. The resulting North American Datum of 1983 (NAD 83) replaces the North American Datum of 1927, as well as local reference systems for Hawaii, Puerto Rico, and the Virgin Islands. The change was prompted by Hawaii's increased need for accurate coordinate information. To facilitate use of satellite surveying and navigation systems, such as the Global Positioning System (GPS), the new datum was redefined using the Geodetic Reference System 1980 as the reference ellipsoid because this model more closely approximates the true size and shape of the earth. In addition, the origin of the coordinate system is referenced to the mass center of the Earth to coincide with the orbital orientation of the GPS satellites. Positional changes resulting from the datum redefinition can reach 330 ft in the continental U.S., Canada, and Mexico. Changes that exceed 660 ft can be expected in Alaska, Puerto Rico, and the Virgin Islands. Hawaii's coordinates changed about 1,300 ft.

Additional Statistical Information About the U.S.

The annual *Statistical Abstract of the United States*, published by the U.S. Commerce Dept., Bureau of the Census, contains additional data. For information, write Supt. of Documents, P.O. Box 979050, St. Louis, MO 63197-9000; bookstore.gpo.gov/help/ordering.jsp, call 1-866-512-1800, or e-mail ContactCenter@gpo.gov. The *Statistical Abstract* can be viewed online at www.census.gov/compendia/statab

Highest and Lowest Altitudes in U.S. States and Territories

Source: U.S. Geological Survey, Dept. of the Interior
(negative sign indicates below sea level)

State/territory	Highest point Name	Highest point County	Highest point Elev. (ft)	Lowest point Name	Lowest point County	Lowest point Elev. (ft)
Alabama	Cheaha Mountain	Cleburne	2,407	Gulf of Mexico		Sea level
Alaska	Mount McKinley	Denali	20,320	Pacific Ocean		Sea level
American Samoa	Lata Mountain	Tau Island	3,160	Pacific Ocean		Sea level
Arizona	Humphreys Peak	Coconino	12,633	Colorado R.	Yuma	70
Arkansas	Magazine Mountain	Logan	2,753	Ouachita R.	Ashley-Union	55
California	Mount Whitney	Inyo-Tulare	14,494	Death Valley	Inyo	–282
Colorado	Mount Elbert	Lake	14,433	Arikaree R.	Yuma	3,315
Connecticut	S. slope of Mt. Frissell	Litchfield	2,380	Long Island Sound		Sea level
Delaware	Ebright Azimuth	New Castle	448	Atlantic Ocean		Sea level
Dist. of Columbia	Tenleytown	NW part	410	Potomac R.		1
Florida	Britton Hill	Walton	345	Atlantic Ocean		Sea level
Georgia	Brasstown Bald	Towns-Union	4,784	Atlantic Ocean		Sea level
Guam	Mount Lamlam	Agat District	1,332	Pacific Ocean		Sea level
Hawaii	Mauna Kea	Hawaii	13,796	Pacific Ocean		Sea level
Idaho	Borah Peak	Custer	12,662	Snake R.	Nez Perce	710
Illinois	Charles Mound	Jo Daviess	1,235	Mississippi R.	Alexander	279
Indiana	Hoosier Hill	Wayne	1,257	Ohio R.	Posey	320
Iowa	Hawkeye Point	Osceola	1,670	Mississippi R.	Lee	480
Kansas	Mount Sunflower	Wallace	4,039	Verdigris R.	Montgomery	679
Kentucky	Black Mountain	Harlan	4,145	Mississippi R.	Fulton	257
Louisiana	Driskill Mountain	Bienville	535	New Orleans	Orleans	–8
Maine	Mount Katahdin	Piscataquis	5,268	Atlantic Ocean		Sea level
Maryland	Hoye Crest	Garrett	3,360	Atlantic Ocean		Sea level
Massachusetts	Mount Greylock	Berkshire	3,491	Atlantic Ocean		Sea level
Michigan	Mount Arvon	Baraga	1,979	Lake Erie		571
Minnesota	Eagle Mountain	Cook	2,301	Lake Superior		601
Mississippi	Woodall Mountain	Tishomingo	806	Gulf of Mexico		Sea level
Missouri	Taum Sauk Mountain	Iron	1,772	St. Francis R.	Dunklin	230
Montana	Granite Peak	Park	12,799	Kootenai R.	Lincoln	1,800
Nebraska	Panorama Point	Kimball	5,424	Missouri R.	Richardson	840
Nevada	Boundary Peak	Esmeralda	13,140	Colorado R.	Clark	479
New Hampshire	Mount Washington	Coos	6,288	Atlantic Ocean		Sea level
New Jersey	High Point	Sussex	1,803	Atlantic Ocean		Sea level
New Mexico	Wheeler Peak	Taos	13,161	Red Bluff Reservoir	Eddy	2,842
New York	Mount Marcy	Essex	5,344	Atlantic Ocean		Sea level
North Carolina	Mount Mitchell	Yancey	6,684	Atlantic Ocean		Sea level
North Dakota	White Butte	Slope	3,506	Red R. of the North	Pembina	750
Ohio	Campbell Hill	Logan	1,550	Ohio R.	Hamilton	455
Oklahoma	Black Mesa	Cimarron	4,973	Little R.	McCurtain	289
Oregon	Mount Hood	Clackamas-Hood R.	11,239	Pacific Ocean		Sea level
Pennsylvania	Mount Davis	Somerset	3,213	Delaware R.	Delaware	Sea level
Puerto Rico	Cerro de Punta	Ponce District	4,390	Atlantic Ocean		Sea level
Rhode Island	Jerimoth Hill	Providence	812	Atlantic Ocean		Sea level
South Carolina	Sassafras Mountain	Pickens	3,560	Atlantic Ocean		Sea level
South Dakota	Harney Peak	Pennington	7,242	Big Stone Lake	Roberts	966
Tennessee	Clingmans Dome	Sevier	6,643	Mississippi R.	Shelby	178
Texas	Guadalupe Peak	Culberson	8,749	Gulf of Mexico		Sea level
Utah	Kings Peak	Duchesne	13,528	Beaver Dam Wash	Washington	2,000
Vermont	Mount Mansfield	Chittenden	4,393	Lake Champlain		95
Virginia	Mount Rogers	Grayson-Smyth	5,729	Atlantic Ocean		Sea level
Virgin Islands	Crown Mountain	St. Thomas Island	1,556	Atlantic Ocean		Sea level
Washington	Mount Rainier	Pierce	14,411	Pacific Ocean		Sea level
West Virginia	Spruce Knob	Pendleton	4,863	Potomac R.	Jefferson	240
Wisconsin	Timms Hill	Price	1,951	Lake Michigan		579
Wyoming	Gannett Peak	Fremont	13,804	Belle Fourche R.	Crook	3,099

U.S. Coastline by States

Source: National Oceanic and Atmospheric Administration, U.S. Dept. of Commerce
(in statute miles)

	Coastline[1]	Shoreline[2]
Atlantic Coast	**2,069**	**28,673**
Connecticut	0	618
Delaware	28	381
Florida	580	3,331
Georgia	100	2,344
Maine	228	3,478
Maryland	31	3,190
Massachusetts	192	1,519
New Hampshire	13	131
New Jersey	130	1,792
New York	127	1,850
North Carolina	301	3,375
Pennsylvania	0	89
Rhode Island	40	384
South Carolina	187	2,876
Virginia	112	3,315
Gulf Coast	**1,631**	**17,141**
Alabama	53	607
Florida	770	5,095
Louisiana	397	7,721
Mississippi	44	359
Texas	367	3,359
Pacific Coast	**7,623**	**40,298**
Alaska	5,580	31,383
California	840	3,427
Hawaii	750	1,052
Oregon	296	1,410
Washington	157	3,026
Arctic Coast	**1,060**	**2,521**
United States	**12,383**	**88,633**

(1) Figures are lengths of general outline of seacoast. Measurements were made with a unit measure of 30 minutes of latitude on charts as near the scale of 1:1,200,000 as possible. Coastline of sounds and bays is included to a point where they narrow to width of unit measure, and includes the distance across at such point. (2) Figures obtained in 1939-40 with a recording instrument on the largest-scale charts and maps then available. Shoreline of outer coast, offshore islands, sounds, bays, rivers, and creeks is included to the head of tidewater or to a point where tidal waters narrow to a width of 100 ft.

States: Capitals, Key Dates, Geographic Data

Source: Statistical Abstract of the United States, U.S. Census Bureau, Dept. of Commerce

The 13 colonies that declared independence from Great Britain and fought the War of Independence (American Revolution) became the 13 original states. They were (in the order in which they ratified the Constitution): Delaware, Pennsylvania, New Jersey, Georgia, Connecticut, Massachusetts, Maryland, South Carolina, New Hampshire, Virginia, New York, North Carolina, and Rhode Island.

State	Settled[1]	Capital	Entered Union Date	Entered Union Order	Extent (mi) Long (approx.)	Extent (mi) Wide mean)	Area (sq mi) Land	Area (sq mi) Water	Area (sq mi) Total	Rank in area[2]
AL	1702	Montgomery	Dec. 14, 1819	22	330	190	50,644	1,776	52,420	30
AK	1784	Juneau	Jan. 3, 1959	49	1,480[3]	810	570,665	94,323	664,988	1
AZ	1776	Phoenix	Feb. 14, 1912	48	400	310	113,595	396	113,990	6
AR	1686	Little Rock	June 15, 1836	25	260	240	52,030	1,149	53,178	29
CA	1769	Sacramento	Sept. 9, 1850	31	770	250	155,766	7,928	163,694	3
CO	1858	Denver	Aug. 1, 1876	38	380	280	103,641	454	104,094	8
CT	1634	Hartford	Jan. 9, 1788	5	110	70	4,840	703	5,544	48
DE	1638	Dover	Dec. 7, 1787	1	100	30	1,949	539	2,489	49
DC	NA	NA	NA	NA	NA	NA	61	7	68	51
FL	1565	Tallahassee	Mar. 3, 1845	27	500	160	53,603	12,154	65,758	22
GA	1733	Atlanta	Jan. 2, 1788	4	300	230	57,501	1,924	59,425	24
HI	1820	Honolulu	Aug. 21, 1959	50	NA	NA	6,428	4,499	10,926	43
ID	1842	Boise	July 3, 1890	43	570	300	82,643	926	83,568	14
IL	1720	Springfield	Dec. 3, 1818	21	390	210	55,518	2,398	57,916	25
IN	1733	Indianapolis	Dec. 11, 1816	19	270	140	35,823	594	36,417	38
IA	1788	Des Moines	Dec. 28, 1846	29	310	200	55,858	415	56,273	26
KS	1727	Topeka	Jan. 29, 1861	34	400	210	81,762	516	82,278	15
KY	1774	Frankfort	June 1, 1792	15	380	140	39,492	919	40,411	37
LA	1699	Baton Rouge	Apr. 30, 1812	18	380	130	43,199	8,789	51,988	31
ME	1624	Augusta	Mar. 15, 1820	23	320	190	30,841	4,543	35,384	39
MD	1634	Annapolis	Apr. 28, 1788	7	250	90	9,705	2,700	12,406	42
MA	1620	Boston	Feb. 6, 1788	6	190	50	7,801	2,754	10,554	44
MI	1668	Lansing	Jan. 26, 1837	26	490	240	56,528	40,185	96,713	11
MN	1805	St. Paul	May 11, 1858	32	400	250	79,607	7,328	86,935	12
MS	1699	Jackson	Dec. 10, 1817	20	340	170	46,920	1,512	48,432	32
MO	1735	Jefferson City	Aug. 10, 1821	24	300	240	68,716	987	69,702	21
MT	1809	Helena	Nov. 8, 1889	41	630	280	145,541	1,498	147,039	4
NE	1823	Lincoln	Mar. 1, 1867	37	430	210	76,825	524	77,349	16
NV	1849	Carson City	Oct. 31, 1864	36	490	320	109,780	792	110,572	7
NH	1623	Concord	June 21, 1788	9	190	70	8,952	396	9,348	46
NJ	1660	Trenton	Dec. 18, 1787	3	150	70	7,354	1,369	8,723	47
NM	1610	Santa Fe	Jan. 6, 1912	47	370	343	121,297	293	121,590	5
NY	1614	Albany	July 26, 1788	11	330	283	47,126	7,429	54,555	27
NC	1660	Raleigh	Nov. 21, 1789	12	500	150	48,619	5,200	53,819	28
ND	1812	Bismarck	Nov. 2, 1889	39	340	211	69,001	1,697	70,698	19
OH	1788	Columbus	Mar. 1, 1803	17	220	220	40,858	3,967	44,825	34
OK	1889	Oklahoma City	Nov. 16, 1907	46	400	220	68,603	1,296	69,899	20
OR	1811	Salem	Feb. 14, 1859	33	360	261	95,985	2,394	98,379	9
PA	1682	Harrisburg	Dec. 12, 1787	2	283	160	44,739	1,316	46,055	33
RI	1636	Providence	May 29, 1790	13	40	30	1,034	511	1,545	50
SC	1670	Columbia	May 23, 1788	8	260	200	30,070	1,951	32,021	40
SD	1859	Pierre	Nov. 2, 1889	40	380	210	75,811	1,305	77,116	17
TN	1769	Nashville	June 1, 1796	16	440	120	41,235	910	42,144	36
TX	1682	Austin	Dec. 29, 1845	28	790	660	261,226	7,371	268,597	2
UT	1847	Salt Lake City	Jan. 4, 1896	45	350	270	82,191	2,706	84,897	13
VT	1724	Montpelier	Mar. 4, 1791	14	160	80	9,217	400	9,616	45
VA	1607	Richmond	June 25, 1788	10	430	200	39,493	3,282	42,775	35
WA	1811	Olympia	Nov. 11, 1889	42	360	240	66,449	4,849	71,298	18
WV	1727	Charleston	June 20, 1863	35	240	130	24,038	192	24,230	41
WI	1766	Madison	May 29, 1848	30	310	260	54,154	11,342	65,496	23
WY	1834	Cheyenne	July 10, 1890	44	360	280	97,088	724	97,812	10

NA = Not applicable. **Note:** Land and water areas may not add up to totals because of rounding. (1) First permanent settlement by Europeans. (2) Rank is based on total area as shown. (3) Aleutian Islands and Alexander Archipelago not included.

The Continental Divide of the U.S.

The Continental Divide of the U.S., also known as the Great Divide, is located at the watershed created by the mountain ranges, or tablelands, of the Rocky Mountains. This watershed separates the waters that drain easterly into the Atlantic Ocean and its marginal seas, such as the Gulf of Mexico, from those waters that drain westerly into the Pacific Ocean. The majority of easterly flowing water in the U.S. drains into the Gulf of Mexico before reaching the Atlantic Ocean. The majority of westerly flowing water, before reaching the Pacific Ocean, drains either through the Columbia River or through the Colorado River, which flows into the Gulf of California before reaching the Pacific Ocean.

The location and route of the Continental Divide across the U.S. can briefly be described as follows:

Beginning at the U.S.-Mexican boundary, near long. 108° 45´ W, the Divide, in a northerly direction, crosses New Mexico along the W edge of the Rio Grande drainage basin, entering Colorado near long. 106° 41´ W.

From there by a very irregular route north across Colorado along the W summits of the Rio Grande and of the Arkansas, the South Platte, and the North Platte river basins, and across Rocky Mountain National Park, entering Wyoming near long. 106° 52´ W.

From there in a northwesterly direction, forming the W rims of the North Platte, the Big Horn, and the Yellowstone river basins, crossing the SW portion of Yellowstone National Park.

From there in a westerly and then a northerly direction forming the common boundary of Idaho and Montana, to a point on said boundary near long. 114° 00´ W.

From there northeasterly and northwesterly through Montana and the Glacier National Park, entering Canada near long. 114° 04´ W.

Chronological List of Territories, With State Admissions to Union

Source: National Archives and Records Administration

Name of territory	Date of act creating territory	When act took effect	Admission as state	Years as terr.
Northwest Territory[1]	July 13, 1787	No fixed date	Mar. 1, 1803[2]	16
Territory southwest of Ohio River	May 26, 1790	No fixed date	June 1, 1796[3]	6
Mississippi	Apr. 7, 1798	When president acted	Dec. 10, 1817	19
Indiana	May 7, 1800	July 4, 1800	Dec. 11, 1816	16
Orleans	Mar. 26, 1804	Oct. 1, 1804	Apr. 30, 1812[4]	7
Michigan	Jan. 11, 1805	June 30, 1805	Jan. 26, 1837	31
Louisiana-Missouri[5]	Mar. 3, 1805	July 4, 1805	Aug. 10, 1821	16
Illinois	Feb. 3, 1809	Mar. 1, 1809	Dec. 3, 1818	9
Alabama	Mar. 3, 1817	When MS became a state	Dec. 14, 1819	2
Arkansas	Mar. 2, 1819	July 4, 1819	June 15, 1836	17
Florida	Mar. 30, 1822	No fixed date	Mar. 3, 1845	23
Wisconsin	Apr. 20, 1836	July 3, 1836	May 29, 1848	12
Iowa	June 12, 1838	July 3, 1838	Dec. 28, 1846	8
Oregon	Aug. 14, 1848	Date of act	Feb. 14, 1859	10
Minnesota	Mar. 3, 1849	Date of act	May 11, 1858	9
New Mexico	Sept. 9, 1850	On president's proclamation	Jan. 6, 1912	61
Utah	Sept. 9, 1850	Date of act	Jan. 4, 1896	46
Washington	Mar. 2, 1853	Date of act	Nov. 11, 1889	36
Nebraska	May 30, 1854	Date of act	Mar. 1, 1867	12
Kansas	May 30, 1854	Date of act	Jan. 29, 1861	6
Colorado	Feb. 28, 1861	Date of act	Aug. 1, 1876	15
Nevada	Mar. 2, 1861	Date of act	Oct. 31, 1864	3
Dakota	Mar. 2, 1861	Date of act	Nov. 2, 1889	28
Arizona	Feb. 24, 1863	Date of act	Feb. 14, 1912	49
Idaho	Mar. 3, 1863	Date of act	July 3, 1890	27
Montana	May 26, 1864	Date of act	Nov. 8, 1889	25
Wyoming	July 25, 1868	When officers were qualified	July 10, 1890	22
Alaska[6]	May 17, 1884	No fixed date	Jan. 3, 1959	75
Oklahoma	May 2, 1890	Date of act	Nov. 16, 1907	17
Hawaii	Apr. 30, 1900	June 14, 1900	Aug. 21, 1959	59

(1) Included what is now Ohio, Indiana, Illinois, Michigan, Wisconsin, E Minnesota. (2) Ohio was the first state of NW territory admitted. (3) Admitted as the state of Tennessee. (4) Admitted as the state of Louisiana. (5) The act creating Missouri Territory (June 4, 1812) became effective Dec. 7, 1812. (6) Although the May 17, 1884, act actually constituted Alaska as a district, it was often referred to as a territory, and administered as such. The Territory of Alaska was formally organized by an act of Aug. 24, 1912.

Geographic Centers, U.S. and Each State

Source: U.S. Geological Survey, Dept. of the Interior

There is no generally accepted definition of geographic center and no uniform method for determining it. Following the U.S. Geological Survey, the geographic center of an area is defined here as the center of gravity of the surface, or that point on which the surface would balance if it were a plane of uniform thickness. All locations in the following list are approximate.

No marked point has been officially established by any government agency as the geographic center of the 50 states, the conterminous U.S. (48 states), or the North American continent. A group of private citizens erected a monument in Lebanon, KS, marking it as geographic center of the conterminous U.S., and a cairn erected in Rugby, ND, asserts that location as the center of the North American continent.

Geographic centers as reported by the U.S. Geological Survey are indicated below:

United States, including Alaska and Hawaii: W of Castle Rock, Butte County, SD; lat. 44° 58´ N, long. 103° 46´ W
Conterminous U.S. (48 states): Near Lebanon, Smith County Kansas; lat. 39° 50´ N, long. 98° 35´ W
North American continent: 6 mi W of Balta, Pierce County, North Dakota; lat. 48° 10´ N, long. 100° 10´ W
Alabama: Chilton, 12 mi SW of Clanton
Alaska: approx. 60 mi NW of Mt. McKinley; lat. 63° 50´ N, long. 152° W;
Arizona: Yavapai, 55 mi E-SE of Prescott
Arkansas: Pulaski, 12 mi NW of Little Rock
California: Madera, 38 mi E of Madera
Colorado: Park, 30 mi NW of Pikes Peak
Connecticut: Hartford, at East Berlin
Delaware: Kent, 11 mi S of Dover
District of Columbia: Near 4th and L Sts. NW
Florida: Hernando, 12 mi N-NW of Brooksville
Georgia: Twiggs, 18 mi SE of Macon
Hawaii: off Maui; lat. 20° 15´ N, long. 156° 20´ W
Idaho: Custer, SW of Challis
Illinois: Logan, 28 mi NE of Springfield
Indiana: Boone, 14 mi N-NW of Indianapolis
Iowa: Story, 5 mi NE of Ames
Kansas: Barton, 15 mi NE of Great Bend
Kentucky: Marion, 3 mi N-NW of Lebanon
Louisiana: Avoyelles, 3 mi SE of Marksville
Maine: Piscataquis, 18 mi N of Dover
Maryland: Prince George's, 4.5 mi NW of Davidsonville
Massachusetts: Worcester, N part of city
Michigan: Wexford, 5 mi N-NW of Cadillac
Minnesota: Crow Wing, 10 mi SW of Brainerd
Mississippi: Leake, 9 mi W-NW of Carthage
Missouri: Miller, 20 mi SW of Jefferson City
Montana: Fergus, 11 mi W of Lewistown
Nebraska: Custer, 10 mi NW of Broken Bow
Nevada: Lander, 26 mi SE of Austin
New Hampshire: Belknap, 3 mi E of Ashland
New Jersey: Mercer, 5 mi SE of Trenton
New Mexico: Torrance, 12 mi S-SW of Willard
New York: Madison, 12 mi S of Oneida and 26 mi SW of Utica
North Carolina: Chatham, 10 mi NW of Sanford
North Dakota: Sheridan, 5 mi SW of McClusky
Ohio: Delaware, 25 mi N-NE of Columbus
Oklahoma: Oklahoma, 8 mi N of Oklahoma City
Oregon: Crook, 25 mi S-SE of Prineville
Pennsylvania: Centre, 2.5 mi SW of Bellefonte
Rhode Island: Kent, 1 mi S-SW of Crompton
South Carolina: Richland, 13 mi SE of Columbia
South Dakota: Hughes, 8 mi NE of Pierre
Tennessee: Rutherford, 5 mi NE of Murfreesboro
Texas: McCulloch, 15 mi NE of Brady
Utah: Sanpete, 3 mi N of Manti
Vermont: Washington, 3 mi E of Roxbury
Virginia: Buckingham, 5 mi SW of Buckingham
Washington: Chelan, 10 mi W-SW of Wenatchee
West Virginia: Braxton, 4 mi E of Sutton
Wisconsin: Wood, 9 mi SE of Marshfield
Wyoming: Fremont, 58 mi E-NE of Lander

International Boundary Lines of the U.S.

The length of the N boundary of the conterminous U.S.—the U.S.-Canadian border, excluding Alaska—is 3,987 mi according to the U.S. Geological Survey, Dept. of the Interior. The length of the Alaskan-Canadian border is 1,538 mi. The U.S.-Mexican border, from the Gulf of Mexico to the Pacific Ocean, is about 1,933 mi (1963 boundary agreement).

Origins of the Names of U.S. States

Source: State officials; Smithsonian Institution; Topographic Division, U.S. Geological Survey, Dept. of the Interior

Alabama: Choctaw word for a Chickasaw tribe. First noted in accounts of De Soto expedition.

Alaska: Russian version of Aleutian (Eskimo) word, *alakshak*, for "peninsula," "great lands," or "land that is not an island."

Arizona: Spanish version of Pima Indian word for "little spring place," or Aztec *arizuma*, meaning "silver-bearing."

Arkansas: Algonquin name for the Quapaw Indians, meaning "south wind."

California: Bestowed by the Spanish conquistadors (possibly by Cortez). It was the name of an imaginary island, an earthly paradise, in *Las Serges de Esplandian*, a Spanish romance written by Montalvo in 1510. *Baja California* (Lower California, in Mexico) was first visited by Spanish in 1533. The present U.S. state was called *Alta* (Upper) *California*.

Colorado: From Spanish for "red," first applied to Colorado River.

Connecticut: From Mohican and other Algonquin words meaning "long river place."

Delaware: Named for Lord De La Warr, early governor of Virginia; first applied to river, then to Indian tribe (Lenni-Lenape), and the state.

District of Columbia: For Christopher Columbus, 1791.

Florida: Named by Juan Ponce de León *Pascua Florida*, "Flowery Easter," on Easter Sunday, 1513.

Georgia: For King George II of England, by James Oglethorpe, colonial administrator, 1732.

Hawaii: Possibly derived from native word for homeland, *Hawaiki* or *Owhyhee*.

Idaho: Said to be a coined name with the invented meaning "gem of the mountains"; originally suggested for the Pikes Peak mining territory (Colorado), then applied to the new mining territory of the Pacific Northwest. Another theory suggests *Idaho* may be a Kiowa Apache term for the Comanche.

Illinois: French for *Illini* or "land of *Illini*," Algonquin word meaning "men" or "warriors."

Indiana: Means "land of the Indians."

Iowa: Indian word variously translated as "here I rest" or "beautiful land." Named for the Iowa River, which was named for the Iowa Indians.

Kansas: Sioux word for "south wind people."

Kentucky: Indian word that is variously translated as "dark and bloody ground," "meadowland," and "land of tomorrow."

Louisiana: Part of territory called Louisiana by Robert Cavelier Sieur de La Salle for French King Louis XIV.

Maine: From Maine, ancient French province. Also descriptive, referring to the mainland as distinct from the many coastal islands.

Maryland: For Queen Henrietta Maria, wife of Charles I of England.

Massachusetts: From Indian tribe whose name meant "at or about the Great Hill" in Blue Hills region south of Boston.

Michigan: From Chippewa words, *mici gama*, meaning "great water," after the lake of the same name.

Minnesota: From Dakota Sioux word meaning "cloudy water" or "sky-tinted water" of the Minnesota River.

Mississippi: Probably Chippewa: *mici zibi*, "great river" or "gathering-in of all the waters." Also: Algonquin word, *messipi*.

Missouri: An Algonquin Indian term meaning "river of the big canoes."

Montana: Latin or Spanish for "mountainous."

Nebraska: From Omaha or Otos Indian word meaning "broad water" or "flat river," describing the Platte River.

Nevada: Spanish, meaning "snow-clad."

New Hampshire: Named, 1629, by Capt. John Mason of Plymouth Council for his home county in England.

New Jersey: The Duke of York, 1664, gave a patent to John Berkeley and Sir George Carteret to be called *Nova Caesaria*, or New Jersey, after England's Isle of Jersey.

New Mexico: Spaniards in Mexico applied term to land north and west of Rio Grande in the 16th century.

New York: For Duke of York and Albany, who received patent to New Netherland from his brother Charles II and sent an expedition to capture it, 1664.

North Carolina: In 1619 Charles I gave a large patent to Sir Robert Heath to be called Province of Carolana, from *Carolus*, Latin name for Charles. A new patent was granted by Charles II to Earl of Clarendon and others. Divided into North and South Carolina, 1710.

North Dakota: *Dakota* is Sioux for "friend" or "ally."

Ohio: Iroquois word for "fine or good river."

Oklahoma: Choctaw word meaning "red man," proposed by Rev. Allen Wright, Choctaw-speaking Indian.

Oregon: Origin unknown. One theory holds that the name possibly derives from *wauregan*, meaning "beautiful," term used by Indians in New England.

Pennsylvania: William Penn, the Quaker who was made full proprietor of this area by King Charles II in 1681, suggested "Sylvania," or "woodland," for his tract. The king's government owed Penn's father, Admiral William Penn, 16,000 pounds, and the land was granted as partial settlement. Charles II added the "Penn" to Sylvania, against the desires of the modest proprietor, in honor of the admiral.

Puerto Rico: Spanish for "rich port."

Rhode Island: Exact origin is unknown. One theory notes that Giovanni de Verrazano recorded an island about the size of Rhodes in the Mediterranean in 1524, but others believe the state was named *Roode Eylandt* by Adriaen Block, Dutch explorer, because of its red clay.

South Carolina: See North Carolina.

South Dakota: See North Dakota.

Tennessee: *Tanasi* was the name of Cherokee villages on the Little Tennessee River. From 1784 to 1788 this was the State of Franklin, or Frankland.

Texas: Variant of word used by Caddo and other Indians meaning "friends" or "allies," and applied to them by the Spanish in eastern Texas. Also written *Texias*, *Tejas*, *Teysas*.

Utah: From a Navajo word meaning "upper," or "higher up," as applied to a Shoshone tribe called Ute. Spanish form is *Yutta*; the English is *Uta* or *Utah*. Proposed name *Deseret*, "land of honeybees," from Book of Mormon, was rejected by Congress.

Vermont: From French words *vert* (green) and *mont* (mountain). The Green Mountains were said to have been named by Samuel de Champlain. When the state was formed, 1777, Dr. Thomas Young suggested combining *vert* and *mont* into Vermont.

Virginia: Named by Sir Walter Raleigh, who fitted out the expedition of 1584, in honor of Queen Elizabeth, the Virgin Queen of England.

Washington: Named after George Washington. When the bill creating the Territory of Columbia was introduced in the 32nd Congress, its name was changed to Washington because of the existence of the District of Columbia.

West Virginia: So named when western counties of Virginia refused to secede from the U.S. in 1863.

Wisconsin: An Indian name, spelled *Ouisconsin* and *Mesconsing* by early chroniclers. Believed to mean "grassy place" in Chippewa. Congress made it *Wisconsin*.

Wyoming: From the Algonquin words for "large prairie place," "at the big plains," or "on the great plain."

Territorial Sea of the U.S.

According to a Dec. 27, 1988, proclamation by Pres. Ronald Reagan, "The territorial sea of the United States henceforth extends to 12 nautical miles from the baselines of the United States determined in accordance with international law. In accordance with international law, as reflected in the applicable provisions of the 1982 United Nations Convention on the Law of the Sea, within the territorial sea of the United States, the ships of all countries enjoy the right of innocent passage and the ships and aircraft of all countries enjoy the right of transit passage through international straits."

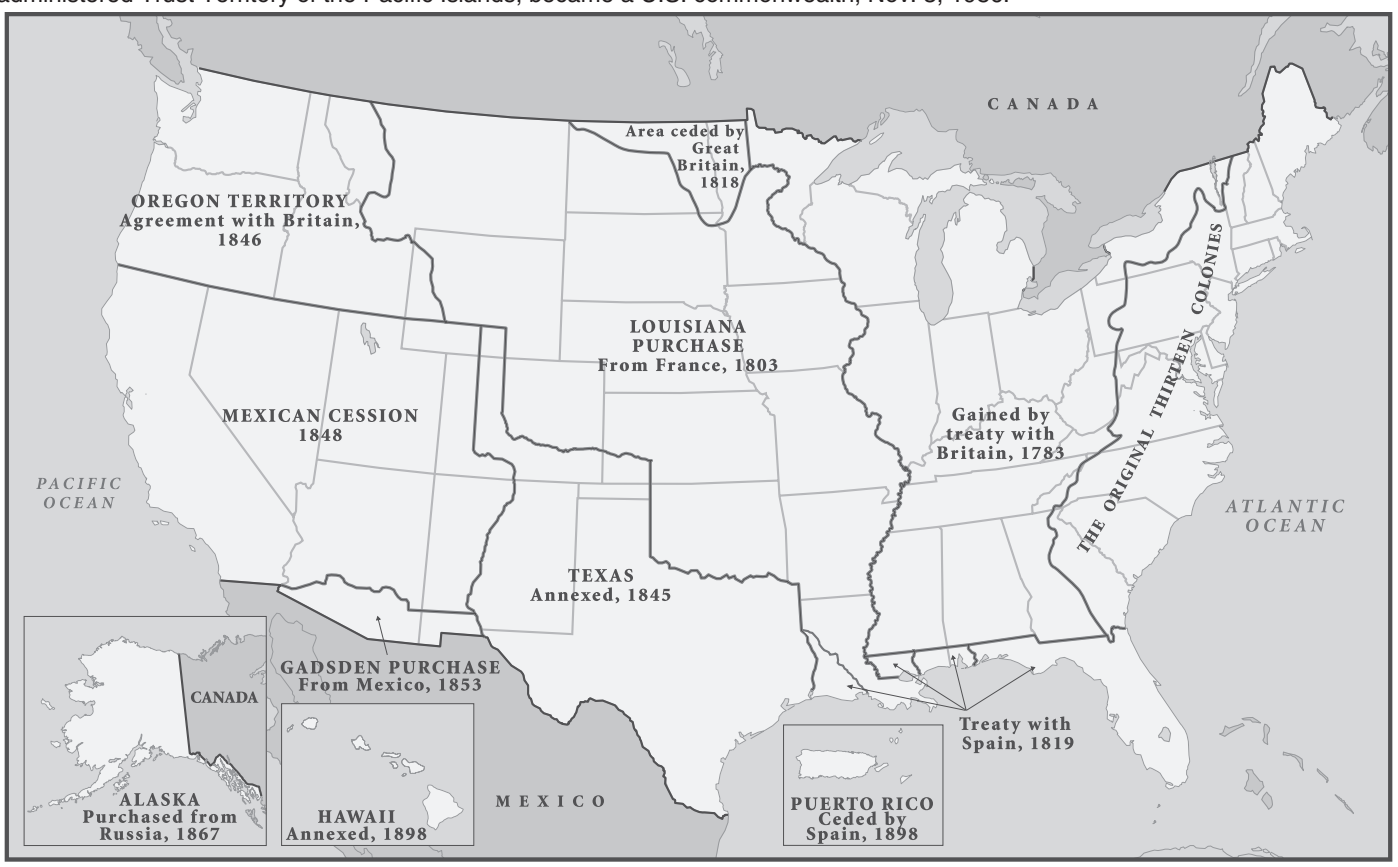
Major Accessions of Territory by the U.S.

Source: U.S. Dept. of the Interior; U.S. Census Bureau, U.S. Dept. of Commerce

Not including territories such as Panama Canal Zone and the Philippines which are no longer under U.S. jurisdiction; area figures are for total area and may differ from figures for current areas given elsewhere.

Accession	Date	Area (sq mi)	Accession	Date	Area (sq mi)	Accession	Date	Area (sq mi)
Territory in 1790[1]	NA	888,685	Mexican Cession	1848	529,017	Guam[3]	1899	212
Louisiana Purchase	1803	827,192	Gadsden Purchase	1853	29,640	American Samoa[4]	1900	76
Treaty of Florida	1819	72,003	Alaska	1867	586,412	U.S. Virgin Islands	1917	133
Texas	1845	390,143	Hawaii	1898	6,450	Northern Marianas[5]	1986	179
Oregon Territory	1846	285,680	Puerto Rico[2]	1899	3,435			

NA = Not applicable. (1) Includes that part of a drainage basin of Red River of the North, S of 49th parallel, sometimes considered part of Louisiana Purchase. (2) Ceded by Spain in 1898, ratified in 1899, and became the Commonwealth of Puerto Rico by Act of Congress on July 25, 1952. (3) Acquired in 1898; ratified 1899. (4) Acquired in 1899; ratified 1900. (5) Formerly a part of the U.S. administered Trust Territory of the Pacific Islands; became a U.S. commonwealth, Nov. 3, 1986.



Special Areas Administered by the U.S. Forest Service, 2009

Source: U.S. Forest Service, Dept. of Agriculture

NHL = Natl. Historic Landmark; NS(A) = Natl. Scenic (Area); NM = Natl. Monument; NP = Natl. Preserve; NRA = Natl. Recreation Area; NVM = Natl. Volcanic Monument; SRA = Scenic Recreation Area

Area name	Location	Estab.	Acres[1]	Area name	Location	Estab.	Acres[1]
Admiralty Island NM	AK	1980	978,881	Mount Hood NRA	OR	2009	34,550
Allegheny NRA	PA	1984	23,063	Mount Pleasant NSA	VA	1994	7,580
Arapaho NRA	CO	1978	30,690	Mount Rogers NRA	VA	1966	114,520
Bear Creek NSA	VA	2009	5,128	Mount St. Helens NVM	WA	1989	112,593
Beech Creek NS & Botanic Area	OK	1988	7,500	Newberry NVM	OR	1990	54,822
Cascade Head NS Research Area	OR	1974	6,630	North Cascades NSA	WA	1984	87,600
Columbia River Gorge NSA	OR-WA	1986	63,150	Opal Creek SRA	OR	1996	13,000
Coosa Bald NSA	GA	1991	7,100	Oregon Dunes NRA	OR	1972	27,212
Ed Jenkins NRA	GA	1991	23,166	Pine Ridge NRA	NV	1986	6,600
Flaming Gorge NRA	UT-WY	1968	189,825	Rattlesnake NRA	MT	1980	59,119
Giant Sequoia NM	CA	2000	327,769	Santa Rosa and San Jacinto Mountains NM	CA	2000	272,000
Grand Island NRA	MI	1990	12,961	Sawtooth NRA	ID	1972	729,322
Grey Towers NHL	PA	1963	102	Seng Mountain NSA	VA	2009	5,192
Hells Canyon NRA	OR-ID	1975	536,648	Smith River NRA	CA	1990	305,169
Indian Nations NS & Wildlife Area	OK	1988	40,051	Spring Mountain NRA	NV	1993	316,000
Jemez NRA	NM	1993	57,000	Spruce Knob-Seneca Rocks NRA	WV	1965	57,237
Land Between the Lakes NRA	KY-TN	1998	170,000	Valles Caldera NP	NM	2000	88,900
Misty Fiords NM	AK	1980	2,293,428	Whiskeytown-Shasta-Trinity NRA	CA	1965	176,367
Mono Basin NSA	CA	1984	115,600	White Rocks NRA	VT	1984	36,400
Moosalamoo NRA	VT	2006	15,857	Winding Stair Mt. NRA	OK	1988	25,890
Mount Baker NRA	WA	1984	8,473				

(1) Area administered by the Forest Service or federally owned.

20 Most-Visited Sites in the National Park System, 2009

Source: National Park Service, Dept. of the Interior

Attendance at all areas administered by the National Park Service in 2009 totaled 285,579,941 recreation visits.

Site (location)	Recreation visits
Blue Ridge Parkway (NC-VA)	15,936,316
Golden Gate Natl. Recreation Area (CA)	15,036,372
Great Smoky Mountains NP (NC-TN)	9,491,437
Gateway Natl. Recreation Area (NJ-NY)	9,010,522
Lake Mead Natl. Recreation Area (AZ-NV)	7,668,689
George Washington Memorial Pkwy. (VA-MD-DC)	6,938,309
Natchez Trace Parkway (MS-AL-TN)	5,934,363
Lincoln Memorial (DC)	5,255,570
Delaware Water Gap Natl. Recreation Area (NJ-PA)	5,213,030
Vietnam Veterans Memorial (DC)	4,437,771
Grand Canyon National Park (AZ)	4,348,068
Cape Cod National Seashore (MA)	4,311,949
San Francisco Maritime Natl. Historical Park (CA)	4,152,497
Gulf Islands National Seashore (FL-MS)	4,132,674
World War II Memorial (DC)	4,118,528
Castle Clinton National Monument (NY)	4,080,152
Independence National Historical Park (PA)	3,967,694
Statue of Liberty NM	3,829,483
Chesapeake & Ohio Canal Natl. Historical Park (DC-MD-WV)	3,751,681
Yosemite National Park (CA)	3,737,472

National Parks, Other Areas Administered by National Park Service

As of Dec. 31, 2009, the National Park Service administered 84,378,873 acres of federal and non-federal land across 392 sites. Dates when sites were authorized for initial protection by Congress or by presidential proclamation are given in parentheses. If different, the date the area got its current designation, or was transferred to the National Park Service, follows. Gross area in acres, as of Dec. 31, 2009, follows date(s). Some parks, trails, and other areas are not listed.

National Parks

Acadia, ME (1916/1929): 47,414. Includes Mount Desert Isl., half of Isle au Haut, Schoodic Peninsula on mainland. Highest elevation on Eastern seaboard.

American Samoa, AS (1988): 9,000. Features a paleotropical rain forest and a coral reef.

Arches, UT (1929/1971): 76,679. Contains giant red sandstone arches and other products of erosion.

Badlands, SD (1929/1978): 242,756. Reformations and native prairie. Animal fossils 23-37 mil years old.

Big Bend, TX (1935): 801,163. Rio Grande, Chisos Mts.

Biscayne, FL (1968/1980): 172,971. Aquatic park encompassing chain of islands south of Miami.

Black Canyon of the Gunnison, CO (1933/1999): 30,750. Has a canyon 2,900 ft deep and 40 ft wide at its narrowest part.

Bryce Canyon, UT (1923/1928): 35,835. Spectacularly colorful and unusual display of erosion effects.

Canyonlands, UT (1964): 337,598. At junction of Colorado and Green rivers; extensive evidence of prehistoric Indians.

Capitol Reef, UT (1937/1971): 241,904. A 70-mi uplift of sandstone cliffs dissected by high-walled gorges.

Carlsbad Caverns, NM (1923/1930): 46,766. Largest known caverns; not yet fully explored.

Channel Islands, CA (1938/1980): 249,561. Sea lion breeding place, nesting sea birds, unique plants.

Congaree, SC (1976/2003): 26,546. Largest intact tract of old-growth bottomland hardwood forest in the U.S.

Crater Lake, OR (1902): 183,224. Extraordinary blue lake in the crater of Mt. Mazama, a volcano that erupted about 7,700 years ago; deepest U.S. lake.

Cuyahoga Valley, OH (1974/2000): 32,856. Rural landscape along Ohio and Erie Canal system between Akron and Cleveland.

Death Valley, CA-NV (1933/1994): 3,373,042. Large desert area. Includes the lowest point in the Western Hemisphere; also includes Scotty's Castle.

Denali, AK (1917/1980): 4,740,912. Name changed from Mt. McKinley National Park. Has highest mountain in U.S.; wildlife.

Dry Tortugas, FL (1935/1992): 64,701. Ft. Jefferson and seven coral reef and sand islands near Key West.

Everglades, FL (1934): 1,398,893. Largest remaining subtropical wilderness in continental U.S.

Gates of the Arctic, AK (1978/1984): 7,523,898. Vast wilderness in north central region. Limited federal facilities.

Glacier, MT (1910): 1,013,322. Superb Rocky Mt. scenery, numerous glaciers and glacial lakes. Part of Waterton-Glacier Intl. Peace Park established by U.S. and Canada in 1932.

Glacier Bay, AK (1925/1986): 3,224,841. Great tidewater glaciers that move down mountainsides and break up into the sea; much wildlife.

Grand Canyon, AZ (1893/1919): 1,217,403. Most spectacular part of Colorado River's greatest canyon.

Grand Teton, WY (1929): 310,044. Most impressive part of the Teton Mts., winter feeding ground of largest American elk herd.

Great Basin, NV (1922/1986): 77,180. Includes Wheeler Pk., Lexington Arch, and Lehman Caves.

Great Sand Dunes, CO (1932/2000): 44,246. North America's tallest dunes.

Great Smoky Mountains, NC-TN (1926/1934): 522,051. Largest Eastern U.S. mountain range, magnificent forests.

Guadalupe Mountains, TX (1966): 86,416. Extensive Permian limestone fossil reef; tremendous earth fault.

Haleakala, HI (1916/1960): 33,223. Dormant volcano on Maui with large colorful craters.

Hawaii Volcanoes, HI (1916/1961): 323,431. Contains Kilauea and Mauna Loa, active volcanoes.

Hot Springs, AR (1832/1921): 5,550. Bathhouses are furnished with thermal waters from the park's 47 hot springs; these waters are used for bathing and drinking.

Isle Royale, MI (1931): 571,790. Largest island in Lake Superior, noted for its wilderness area and wildlife.

Joshua Tree, CA (1936/1994): 789,866. Desert region includes Joshua trees, other plant and animal life.

Katmai, AK (1918/1980): 3,674,540. "Valley of Ten Thousand Smokes," scene of 1912 volcanic eruption.

Kenai Fjords, AK (1978/1980): 669,983. Abundant marine mammals, birdlife; Harding Icefield, one of 4 major icecaps in U.S.

Kings Canyon, CA (1890/1940): 461,901. Mountain wilderness, dominated by Kings River Canyons and High Sierra; contains giant sequoias.

Kobuk Valley, AK (1978/1980): 1,750,717. Contains geological and recreational sites. Limited federal facilities.

Lake Clark, AK (1978/1980): 2,619,733. Across Cook Inlet from Anchorage. A scenic wilderness rich in fish and wildlife. Limited federal facilities.

Lassen Volcanic, CA (1907/1916): 106,372. Contains Lassen Peak, recently active volcano, and other volcanic phenomena.

Mammoth Cave, KY (1926/1941): 52,830. 365 mi of explored underground passages, beautiful natural formations, river 300 ft below surface.

Mesa Verde, CO (1906): 52,485. Most notable and best preserved prehistoric cliff dwellings in the U.S.

Mount Rainier, WA (1899): 236,381. Greatest single-peak glacial system in the U.S.

North Cascades, WA (1968): 504,781. Spectacular mountainous region with many glaciers, lakes.

Olympic, WA (1909/1938): 922,651. Mountain wilderness containing finest remnant of Pacific Northwest rainforest, active glaciers, Pacific shoreline, rare elk.

Petrified Forest, AZ (1906/1962): 221,621. Extensive petrified wood and Indian artifacts. Contains part of Painted Desert.

Redwood, CA (1968): 112,582. 40 mi of Pacific coastline, groves of ancient redwoods and world's tallest trees.

Rocky Mountain, CO (1915): 265,758. On the Continental Divide; includes peaks over 14,000 ft.

Saguaro, AZ (1933/1994): 91,440. Part of the Sonoran Desert; includes the giant saguaro cacti, unique to the region.

Sequoia, CA (1890): 404,063. Groves of giant sequoias, highest mountain in conterminous U.S.: Mt. Whitney (14,494 ft). World's largest tree.

Shenandoah, VA (1926): 199,100. Portion of the Blue Ridge Mts.; overlooks Shenandoah Valley; Skyline Drive.

Theodore Roosevelt, ND (1947/1978): 70,447. Contains part of Roosevelt's ranch and scenic badlands.

Virgin Islands, VI (1956): 15,006. Authorized to cover 75% of St. John Isl. and Hassel Isl.; lush growth, lovely beaches, Carib Indian petroglyphs, evidence of colonial Danes.

Voyageurs, MN (1971): 218,200. Abundant lakes, forests, wildlife, canoeing, boating.

Wind Cave, SD (1903): 28,295. Limestone caverns in Black Hills. Extensive wildlife includes a herd of bison.

Wrangell-St. Elias, AK (1978/1980): 8,323,043. Largest area in park system, most peaks over 16,000 ft, abundant wildlife; day's drive east of Anchorage. No federal facilities.

Yellowstone, ID-MT-WY (1872): 2,219,791. World's first national park. World's greatest geyser area has about 10,000 geysers and hot springs; spectacular falls and impressive canyons of the Yellowstone River; grizzly bear, moose, and bison.

Yosemite, CA (1890): 761,268. Yosemite Valley, the nation's highest waterfall, grove of sequoias, and mountains.

Zion, UT (1909/1919): 146,597. Unusual shapes and landscapes resulting from erosion and faulting; evidence of past volcanic activity; contains the "Great White Throne," 2,394-ft monolith.

National Historical Parks

Abraham Lincoln Birthplace, Hodgenville, KY (1916/1959): 11. Memorial building, sinking spring.

Adams, MA (1946/1998): 24. Home of Pres. John Adams, John Quincy Adams, and celebrated descendants.

Appomattox Court House, VA (1930/1954): 1,774. Where Lee surrendered to Grant.

Boston, MA (1974): 44. Includes Faneuil Hall, Old North Church, Bunker Hill, Paul Revere House.

Cane River Creole (and heritage area), LA (1994): 207. Preserves the Creole culture as it developed along the Cane R.

Cedar Creek & Belle Grove, VA (2002): 3,712. Civil War battle site and an antebellum plantation in the Shenandoah Valley.

Chaco Culture, NM (1907/1980): 33,960. Ruins of pueblos built by prehistoric Indians including the Pueblo, Hopi, and Navajo.

Chesapeake and Ohio Canal, MD-DC-WV (1938/1971): 19,616. 184-mi historic canal; DC to Cumberland, MD.

Colonial, VA (1930/1936): 8,677. Includes most of Jamestown Isl., site of first successful English colony; Yorktown, site of Cornwallis's surrender to George Washington; and Colonial Parkway.

Cumberland Gap, KY-TN-VA (1940): 22,366. Mountain pass of the Wilderness Road, which carried the first great migration of pioneers into America's interior.

Dayton Aviation Heritage, OH (1992): 86. Commemorates the area's aviation heritage.

Edison, West Orange, NJ (1955/1962): 21. Inventor's home and laboratory.

George Rogers Clark, IN (1966): 26. Commemorates American defeat of British in West during Revolution.

Harpers Ferry, MD-VA-WV (1944/1963): 3,647. At the confluence of the Shenandoah and Potomac rivers, the site of John Brown's 1859 raid on the Army arsenal.

Hopewell Culture, OH (1923/1992): 1,170. Remains of ceremonial mounds built in the Ohio River Valley, 200 BCE-500 CE.

Independence, PA (1948): 45. Contains several properties associated with the American Revolution and the founding of the U.S. Includes Independence Hall and the Liberty Bell Center.

Jean Lafitte (and preserve), LA (1907/1978): 20,001. Includes Chalmette, site of 1815 Battle of New Orleans; French Quarter.

Kalaupapa, HI (1980): 10,779. Molokai's former leper colony.

Kaloko-Honokohau, HI (1978): 1,161. Preserves the native culture of Hawaii.

Keweenaw, MI (1992): 1,870. Site of first significant copper mine in U.S.

Klondike Gold Rush, AK-WA (1976): 12,996. Preserves Chilkoot Trail used in 1898 Gold Rush. Museum in Seattle.

Lewis & Clark, OR-WA (1958/2004): 1,584. Lewis and Clark encampment, 1805-06. Incorporates former Fort Clatsop Natl. Mem. Park and OR-WA state parks.

Lowell, MA (1978): 141. Textile mills, canal, 19th-cent. structures; park shows planned city of Industrial Revolution.

Lyndon B. Johnson, TX (1969/1980): 1,570. President's birthplace, boyhood home, ranch.

Marsh-Billings-Rockefeller, VT (1992): 643. Boyhood home of conservationist George Perkins Marsh.

Minute Man, MA (1959): 961. Where the Minute Men battled the British, Apr. 19, 1775. Also contains Nathaniel Hawthorne's home.

Morristown, NJ (1933): 1,711. Sites of important military encampments during the American Revolution; Washington's headquarters, 1779-80.

Natchez, MS (1988): 108. Mansions, townhouses, and villas related to history of Natchez.

New Bedford Whaling, MA (1996): 34. Preserves structures and relics associated with the city's 19th-cent. whaling industry.

New Orleans Jazz, LA (1994): 5. Preserves, educates, and interprets jazz as it has evolved in New Orleans.

Nez Perce, ID-MT-OR-WA (1965): 4,570. Illustrates the history and culture of the Nez Perce Indian country (38 separate sites).

Palo Alto Battlefield, TX (1978): 3,407. Scene of first battle of the Mexican War.

Pecos, NM (1965/1990): 6,669. Ruins of ancient Pueblo of Pecos, archaeological sites, and 2 associated Spanish colonial missions from the 17th and 18th centuries.

Pu'uhonua o Honaunau, HI (1955/1978): 420. Until 1819, a sanctuary for Hawaiians vanquished in battle and for those guilty of crimes or breaking taboos.

Rosie the Riveter/WWII Home Front, CA (2000): 145. Site of a shipyard that employed thousands of women in WWII; commemorates women who worked in wartime industries.

Salt River Bay (and ecological preserve), St. Croix, VI (1992): 982. The only known site where, in 1493, members of a Columbus party landed on what is now territory of the U.S.

San Antonio Missions, TX (1978): 826. Four of finest Spanish missions in U.S., 18th-cent. irrigation system.

San Francisco Maritime, CA (1988): 50. Artifacts, photographs, and historic vessels related to the development of the Pacific Coast.

San Juan Island, WA (1966): 1,752. Commemorates peaceful relations between the U.S., Canada, and Great Britain since the 1872 boundary disputes.

Saratoga, NY (1938): 3,394. Scene of a major 1777 battle that became a turning point in the American Revolution.

Sitka, AK (1910/1972): 112. Scene of last major resistance of the Tlingit Indians to the Russians, 1804.

Tumacacori, AZ (1908/1990): 360. Historic Spanish mission building stands near site first visited by Father Kino in 1691.

Valley Forge, PA (1976): 3,466. Continental Army campsite in 1777-78 winter.

War in the Pacific, GU (1978): 2,037. Seven distinct units illustrating the Pacific theater of WWII. Limited federal facilities.

Women's Rights, NY (1980): 7. Seneca Falls site where Lucretia Mott, Elizabeth Cady Stanton organized movement in 1848.

National Battlefields/Parks/Sites

Antietam, MD (1890/1978): 3,230. Battle here ended first Confederate invasion of North, Sept. 17, 1862.

Big Hole, MT (1910/1963): 1,011. Site of major battle with Nez Perce Indians, Aug. 9-10, 1877.

Brices Cross Roads, MS (1929): 1. Site of the Confederate victory, June 10, 1864.

Cowpens, SC (1929/1972): 842. American Revolution battlefield, Jan. 17, 1781.

Fort Donelson, TN-KY (1928/1985): 1,006. Site of first major Union victory, Feb. 14-16, 1862.

Fort Necessity, PA (1931/1961): 903. Site of first battle of French and Indian War, July 3, 1754.

Kennesaw Mountain, GA (1917/1935): 2,853. Site of major battle of Atlanta campaign in Civil War.

Manassas, VA (1940): 5,073. Scene of two battles in Civil War, 1861 and 1862.

Monocacy, MD (1934/1976): 1,647. Civil War battle in defense of Washington, DC, fought here, July 9, 1864.

Moores Creek, NC (1926/1980): 88. Feb. 27, 1776, battle between Patriots and Loyalists commemorated here.

Petersburg, VA (1926/1962): 2,740. Scene of 10-month Union campaigns, 1864-65.

Richmond, VA (1936): 7,131. Site of battles defending Confederate capital.

Stones River, TN (1927/1960): 709. Scene of battle that began federal offensive to trisect Confederacy, Dec. 31, 1862-Jan. 2, 1863.

Tupelo, MS (1929/1961): 1. Site of crucial battle over Sherman's supply line, July 14-15, 1865.

Wilson's Creek, MO (1960/1970): 2,369. Scene of Civil War battle for control of Missouri, Aug. 10, 1861.

National Military Parks

Chickamauga and Chattanooga, GA-TN (1890): 9,036. Site where Gen. Sherman and Union armies gained control of TN, 1863.

Fredericksburg and Spotsylvania County, VA (1927/1933): 8,382. Sites of several major Civil War battles and campaigns.

Gettysburg, PA (1895/1933): 5,990. Site of decisive Confederate defeat in North, July 1863, and of Gettysburg Address.

Guilford Courthouse, NC (1917/1933): 230. American Revolution battle site.

Horseshoe Bend, AL (1956): 2,040. On Tallapoosa River, where Gen. Andrew Jackson's forces broke the power of the Upper Creek Indian Confederacy on Mar. 27, 1814.

Kings Mountain, SC (1931/1933): 3,945. Site of American Revolution battle, fought on Oct. 7, 1780.

Pea Ridge, AR (1956): 4,300. Scene of Civil War battle, fought Mar. 7-8, 1862.

Shiloh, TN (1894/1933): 6,181. Major Civil War battle site; includes some well-preserved Indian burial mounds.

Vicksburg, MS (1899/1933): 1,795. Union victory gave North control of the Mississippi and split the Confederate forces.

National Memorials

Arkansas Post, AR (1960): 758. First permanent French settlement in the lower Mississippi River valley.

Arlington House, The Robert E. Lee Memorial, VA (1925/1972): 28. Lee's home overlooking the Potomac River.

Chamizal, El Paso, TX (1966/1974): 55. Commemorates 1963 settlement of 99-year border dispute with Mexico.

Coronado, AZ (1941/1952): 4,750. Commemorates first European exploration of the Southwest.

De Soto, FL (1948): 30. Commemorates 16th-cent. Spanish explorations.

Federal Hall, NY (1939/1955): 0.45. First seat of U.S. government under the Constitution.

Flight 93, Shanksville, PA (2002): 2,262. Commemorates the passengers and crew of Flight 93, who died thwarting an attack on Sept. 11, 2001. Permanent memorial expected for completion in 2011.

Fort Caroline, FL (1950): 138. On St. Johns River, overlooks site of a former French Huguenot colony.

Franklin Delano Roosevelt, DC (1982): 8. Statues of Pres. Roosevelt and Eleanor Roosevelt; waterfalls and gardens.

General Grant, NY (1958): 0.76. Tomb of Ulysses Grant and wife.

Hamilton Grange, NY (1962): 1. Home of Alexander Hamilton.

Jefferson National Expansion, MO (1935): 91. Commemorates westward expansion.

Johnstown Flood, PA (1964): 178. Commemorates 1889 flood.

Korean War Veterans, DC (1986): 2. Dedicated in 1995; honors those who served in the Korean War.

Lincoln Boyhood, IN (1962): 200. Site of Lincoln cabin, Lincoln's boyhood home, and grave site of Lincoln's mother.

Lincoln Memorial, DC (1911/1933): 107. Marble statue of the 16th U.S. president.

Lyndon Baines Johnson Memorial Grove on the Potomac, DC (1973): 17. Overlooks the Potomac R.; vista of the Capitol.

Mount Rushmore, SD (1925): 1,278. World-famous sculpture of 4 presidents: Washington, Jefferson, Lincoln, T. Roosevelt.

Perry's Victory and International Peace Memorial, Put-in-Bay, OH (1936/1972): 25. The world's most massive Doric column, constructed 1912-15, promotes pursuit of peace through arbitration and disarmament.

Port Chicago Naval Magazine, Danville, CA (2009): 5. 1944 munitions ship explosion killed 320 men.

Roger Williams, Providence, RI (1965): 5. Memorial to founder of Rhode Island.

Thaddeus Kosciuszko, PA (1972): 0.02. Memorial to Polish hero of American Revolution.

Theodore Roosevelt Island, DC (1932/1933): 89. Statue of Roosevelt in wooded island sanctuary.

Thomas Jefferson, DC (1934): 18. Statue of Jefferson in an inscribed circular, colonnaded structure.

Vietnam Veterans, DC (1980): 2. Black granite wall inscribed with names of those missing or killed in action in Vietnam War.

Washington Monument, DC (1848/1933): 106. Obelisk honoring the first U.S. president.

World War II, DC (1994/2004): 7. Oval plaza with central pool commemorating those who fought and died.

Wright Brothers, NC (1927/1953): 428. Site of first powered flight.

National Historic Sites

Allegheny Portage Railroad, PA (1964): 1,284. Linked the Pennsylvania Canal system and the West.

Andersonville, GA (1970): 515. Noted Civil War prisoner-of-war camp.

Andrew Johnson, Greeneville, TN (1935/1963): 17. Two homes and the tailor shop of the 17th U.S. president.

Bent's Old Fort, CO (1960): 799. Replica of S. Plains outpost.

Boston African-American, MA (1980): 0.59. Pre-Civil War black-owned structures.

Brown v. Board of Education, KS (1992): 2. Commemorates the landmark 1954 U.S. Supreme Court decision, which ended legal segregation in schools.

Carl Sandburg Home, Flat Rock, NC (1968): 264.

Carter G. Woodson Home, DC (2006): 0.15.

Charles Pinckney, SC (1988): 28. Statesman's farm. Pinckney was a principal author and signer of the Constitution.

Christiansted, St. Croix, VI (1952/1961): 27. Commemorates Danish colony.

Clara Barton, MD (1974): 9. Home of founder of American Red Cross.

Edgar Allan Poe, Philadelphia, PA (1978/1980): 0.52. Writer's home, where he wrote short stories.

Eisenhower, Gettysburg, PA (1967): 690. Home of 34th president.

Eleanor Roosevelt, Hyde Park, NY (1977): 181. The former first lady's personal retreat.

Eugene O'Neill, Danville, CA (1976): 13. Playwright's home where he wrote his final plays, including *The Iceman Cometh*.

First Ladies, Canton, OH (2000): 0.33. Home of first lady Ida Sexton McKinley. Library now devoted to America's first ladies.

Ford's Theatre, DC (1866/1970): 0.30. Includes theater, now restored, where Lincoln was assassinated, house where he died, and Lincoln Museum.

Fort Bowie, AZ (1964): 999. Focal point of operations against Geronimo and the Apaches.

Fort Davis, TX (1961): 474. Frontier outpost in West Texas. Established to guard the San Antonio-El Paso Road.

Fort Laramie, WY (1938/1960): 833. Military post on Oregon Trail.

Fort Larned, KS (1964/1966): 718. Military post on Santa Fe Trail.

Fort Point, San Francisco, CA (1970): 29. West Coast fortification. Protected San Francisco during and after Civil War.

Fort Raleigh, NC (1941): 513. First attempted English settlement in North America.

Fort Scott, KS (1965/1978): 17. Commemorates U.S. frontier of 1840s and '50s. Was a major focal point of black troop activity and training during Civil War.

Fort Smith, AR-OK (1961): 75. One of the earliest U.S. posts in Missouri Territory, active 1817-90.

Fort Union Trading Post, MT-ND (1966): 444. Principal fur-trading post on upper Missouri, 1829-67.

Fort Vancouver, WA-OR (1948/1961): 194. Headquarters for Hudson's Bay Company in 1825. Early political seat.

Frederick Douglass, DC (1962/1988): 9. Home of famous black abolitionist, writer, and orator.

Frederick Law Olmsted, MA (1979): 7. Home of city planner, famous for designing Central Park in NYC.

Friendship Hill, PA (1978): 675. Home of Albert Gallatin, Jefferson's and Madison's secretary of treasury.

Golden Spike, UT (1957): 2,735. Commemorates completion of first transcontinental railroad in 1869.

Grant-Kohrs Ranch, MT (1972): 1,618. Ranch house owned by John Grant, a 19th-cent. range-cattle industry pioneer.

Hampton, MD (1948): 62. 18th-cent. Georgian mansion, which in 1790 was the largest house in the U.S.

Harry S. Truman, MO (1983): 7. Home of pres. after 1919.

Herbert Hoover, West Branch, IA (1965): 187. Birthplace and boyhood home of 31st president.

Home of Franklin D. Roosevelt, Hyde Park, NY (1944): 792. FDR's birthplace, home, and "summer White House."

Hopewell Furnace, PA (1938/1985): 848. 19th-cent. iron-making village.

Hubbell Trading Post, AZ (1965): 160. Trading post that allowed interaction between the Navajo and white traders in the late 19th and 20th century. Still active today.

James A. Garfield, Mentor, OH (1980): 8. Home of 20th president. Site of his front-porch campaign.

Jimmy Carter, GA (1987): 72. Birthplace and home of 39th president.

John Fitzgerald Kennedy, Brookline, MA (1967): 0.09. Birthplace and childhood home of 35th president.

John Muir, Martinez, CA (1964): 345. Home of Sierra Club founder and "Father of the National Park Service."

Knife River Indian Villages, ND (1974): 1,758. Remnants of villages last occupied by Hidatsa and Mandan Indians.

Lincoln Home, Springfield, IL (1971): 12. Lincoln's residence at the time he was elected 16th president, 1860.

Little Rock Central High School, AR (1998): 27. Commemorates 1957 desegregation during which federal troops had to be called in to protect 9 black students.

Longfellow, Cambridge, MA (1972): 2. Poet's home, 1837-82; Washington's headquarters during Boston siege, 1775-76.

Maggie L. Walker, VA (1978): 1. Richmond home of black leader and first female bank president, daughter of a former slave.

Manzanar, Lone Pine, CA (1992): 814. Commemorates Manzanar War Relocation Ctr., a Japanese-American internment camp during WWII.

Martin Luther King Jr., Atlanta, GA (1980): 39. Birthplace, grave, church of the civil rights leader.

Martin Van Buren, NY (1974): 40. Lindenwald, home of 8th president, near Kinderhook.

Mary McLeod Bethune Council House, DC (1982/1991): 0.07. Commemorates Bethune's leadership in the black women's movement.

Minidoka, ID (2008): 72.75. WWII Japanese internment center.

Minuteman Missile, SD (1999): 15. Missile launch facilities dating back to the Cold War era.

Nicodemus, KS (1996): 5. Only remaining Western town established by African Americans during Reconstruction.

Ninety Six, SC (1976): 1,022. Colonial trading village and the site of Gen. Nathanael Greene's siege on Loyalist-held fort in 1781.

Pennsylvania Avenue, DC (1965): 0.26. Includes area between Capitol and White House, encompassing the U.S. Navy Memorial, Freedom Plaza, the Old Post Office Pavilion, and other sites.

Puukohola Heiau, HI (1972): 86. Ruins of temple built by King Kamehameha, first king of united Hawaiian islands.

Sagamore Hill, Oyster Bay, NY (1962): 83. Home of Pres. Theodore Roosevelt from 1885 until his death in 1919.

Saint-Gaudens, Cornish, NH (1964): 148. Home, studio, and gardens of American sculptor Augustus Saint-Gaudens.

Saint Paul's Church, New York**,** NY (1943): 6. Site associated with John Peter Zenger's "freedom of press" trial.

Salem Maritime, MA (1938): 9. Major fishing and whaling port famous for 1692 witchcraft trials.

San Juan, PR (1949): 75. 16th-cent. Span. fortifications.

Sand Creek Massacre, CO (2000): 12,583. Site where more than 160 Cheyenne and Arapaho Indians were killed by U.S. soldiers in 1864.

Saugus Iron Works, MA (1974): 9. Reconstructed 17th-cent. colonial ironworks.

Springfield Armory, MA (1974): 55. Small-arms manufacturing center for nearly 200 years.

Steamtown, PA (1986): 62. Rail yard, roadhouse, repair shops of former Delaware, Lackawanna & Western Railroad.

Theodore Roosevelt Birthplace, New York, NY (1962): 0.11. Reconstructed brownstone where the president was born.

Theodore Roosevelt Inaugural, Buffalo, NY (1966): 1. Wilcox House, where he took oath of office, 1901.

Thomas Stone, MD (1978): 328. Home of signer of Declaration of Independence.

Tuskegee Airmen, AL (1998): 90. Airfield where pilots of all-black air corps unit of WWII received flight training.

Tuskegee Institute, AL (1974): 58. College founded by Booker T. Washington in 1881 for blacks.

Ulysses S. Grant, St. Louis Co., MO (1989): 10. Home of Grant during pre-Civil War years.

Vanderbilt Mansion, Hyde Park, NY (1940): 212. Mansion of 19th-cent. financier.

Washita Battlefield, OK (1996): 315. Scene of Nov. 27, 1868, battle between Plains tribes and the U.S. army.

Weir Farm, Wilton, CT (1990): 74. Home and studio of American impressionist painter J. Alden Weir.

Whitman Mission, WA (1936/1963): 139. Site of Protestant Missionaries to the Cayuse Indians during the mid-19th cent.

William Howard Taft, Cincinnati, OH (1969): 3. Birthplace and early home of the 27th president.

Name	State	Year[1]	Acreage
National Monuments			
African Burial Ground[4]	NY	2006	0.35
Agate Fossil Beds	NE	1965	3,058
Alibates Flint Quarries	TX	1965	1,371
Aniakchak[2]	AK	1978	137,176
Aztec Ruins	NM	1923	318
Bandelier	NM	1916	33,677
Booker T. Washington	VA	1956	239
Buck Island Reef	VI	1961	19,015
Cabrillo	CA	1913	160
Canyon de Chelly	AZ	1931	83,840
Cape Krusenstern[3]	AK	1978	649,085
Capulin Volcano	NM	1916	793
Casa Grande Ruins	AZ	1889	473
Castillo de San Marcos	FL	1924	18
Castle Clinton	NY	1946	1
Cedar Breaks	UT	1933	6,155
Chiricahua	AZ	1924	11,985
Colorado	CO	1911	20,534
Craters of the Moon	ID	1924	53,571
Devils Postpile	CA	1911	798
Devils Tower	WY	1906	1,347
Dinosaur	CO-UT	1915	210,278
Effigy Mounds	IA	1949	2,526
El Malpais	NM	1987	114,277
El Morro	NM	1906	1,279
Florissant Fossil Beds	CO	1969	5,998
Fort Frederica	GA	1936	284
Fort Matanzas	FL	1924	300
Fort McHenry (and Historic Shrine)	MD	1925	43
Fort Pulaski	GA	1924	5,623
Fort Stanwix	NY	1935	16
Fort Sumter	SC	1948	235
Fort Union	NM	1954	721
Fossil Butte	WY	1972	8,198
George Washington Birthplace	VA	1930	662
George Washington Carver	MO	1943	210
Gila Cliff Dwellings	NM	1907	533
Governors Island	NY	2001	23
Grand Portage	MN	1951	710
Hagerman Fossil Beds	ID	1988	4,351
Hohokam Pima[4]	AZ	1972	1,690
Homestead NM of America	NE	1936	211
Hovenweep	CO-UT	1923	785
Jewel Cave	SD	1908	1,274
John Day Fossil Beds	OR	1974	13,944
Lava Beds	CA	1925	46,560
Little Bighorn Battlefield	MT	1879	765
Montezuma Castle	AZ	1906	859
Muir Woods	CA	1908	554
Natural Bridges	UT	1908	7,636
Navajo	AZ	1909	360
Ocmulgee	GA	1934	702
Oregon Caves	OR	1909	488
Organ Pipe Cactus	AZ	1937	330,689
Papahanaumokuakea Marine	HI	2006	88,190,080
Petroglyph	NM	1990	7,232
Pinnacles	CA	1908	26,491
Pipe Spring	AZ	1923	40
Pipestone	MN	1937	282
Poverty Point[2]	LA	1988	911
Rainbow Bridge[3]	UT	1910	160
Russell Cave	AL	1961	310
Salinas Pueblo Missions	NM	1909	1,071
Scotts Bluff	NE	1919	3,005
Statue of Liberty	NJ-NY	1924	61
Sunset Crater Volcano	AZ	1930	3,040
Timpanogos Cave	UT	1922	250
Tonto	AZ	1907	1,120
Tuzigoot	AZ	1939	812
Virgin Islands Coral Reef	VI	2001	13,893
Walnut Canyon	AZ	1915	3,529
White Sands	NM	1933	143,733
World War II Valor in the Pacific	HI-CA	2008	53.55
Wupatki	AZ	1924	35,422
Yucca House[2]	CO	1919	34
National Preserves			
Aniakchak	AK	1978	464,118
Bering Land Bridge	AK	1978	2,697,392
Big Cypress	FL	1974	574,448
Big Thicket	TX	1974	99,404
Craters of the Moon	ID	2002	410,733
Denali	AK	1917	1,334,118
Gates of the Arctic	AK	1978	948,608
Glacier Bay	AK	1925	58,406
Great Sand Dunes	CO	2000	41,686
Katmai	AK	1918	418,699
Lake Clark	AK	1978	1,410,292
Little River Canyon[3]	AL	1992	13,633
Mojave	CA	1994	1,533,563
Noatak	AK	1978	6,569,904
Tallgrass Prairie	KS	1996	10,894
Timucuan Ecological and Historic	FL	1988	46,295
Wrangell-St. Elias	AK	1978	4,852,753
Yukon-Charley Rivers[3]	AK	1978	2,526,512
National Seashores			
Assateague Island	MD-VA	1965	39,727
Canaveral	FL	1975	57,662
Cape Cod	MA	1961	43,609
Cape Hatteras	NC	1937	30,351
Cape Lookout	NC	1966	28,243
Cumberland Island	GA	1972	36,347
Fire Island	NY	1964	19,580
Gulf Islands	FL-MS	1971	137,991
Padre Island	TX	1962	130,434
Point Reyes	CA	1962	71,070
National Parkways			
Blue Ridge	NC-VA	1933	94,250
George Washington Memorial	VA-MD-DC	1930	6,997
John D. Rockefeller Jr. Mem.	WY	1972	23,777
Natchez Trace	MS-AL-TN	1938	52,316
National Lakeshores			
Apostle Islands	WI	1970	69,372
Indiana Dunes	IN	1966	15,096
Pictured Rocks	MI	1966	73,236
Sleeping Bear Dunes	MI	1970	71,291
National Reserves			
City of Rocks	ID	1988	14,407
Ebey's Landing Historical	WA	1978	19,333
National Rivers			
Big South Fork (and Rec. Area)	KY-TN	1976	125,310
Buffalo	AR	1972	94,293
Mississippi (and Rec. Area)	MN	1988	53,775
New River Gorge	WV	1978	72,186
Ozark Riverways	MO	1964	80,785
National Wild and Scenic Rivers			
Alagnak Wild	AK	1980	30,665
Bluestone Scenic[2]	WV	1978	4,310
Delaware Scenic	NY-NJ-PA	1978	1,973
Great Egg Harbor Scenic/Rec.	NJ	1992	43,311
Missouri Recreational	NE-SD	1991	34,159
Niobrara Scenic	NE	1991	23,074
Obed Wild and Scenic	TN	1976	5,073
Rio Grande Wild and Scenic[3]	TX	1978	9,600
Saint Croix Riverway	MN-WI	1968	67,469
Upper Delaware Scenic/Recreational	NY-PA	1978	75,000
National Recreation Areas			
Amistad	TX	1965	58,500
Bighorn Canyon	MT-WY	1966	120,296
Boston Harbor Islands	MA	1996	1,482
Chattahoochee R.	GA	1978	9,354
Chickasaw	OK	1902	9,899
Curecanti	CO	1965	41,972
Delaware Water Gap	NJ-PA	1965	66,741
Gateway	NJ-NY	1972	26,607
Gauley R.[3]	WV	1988	11,560
Glen Canyon	AZ-UT	1958	1,254,117
Golden Gate	CA	1972	80,020
Lake Chelan	WA	1968	61,947
Lake Mead	AZ-NV	1936	1,495,664
Lake Meredith	TX	1965	44,978
Lake Roosevelt[2]	WA	1946	100,390
Ross Lake	WA	1968	117,575
Santa Monica Mts.[5]	CA	1978	156,673
Whiskeytown-Shasta-Trinity	CA	1965	42,503
Other Designations			
Catoctin Mountain	MD	1954	5,810
Constitution Gardens	DC	1974	52
Fort Washington	MD	1930	341
Greenbelt	MD	1950	1,175
National Capital	DC	1933	6,726
National Mall	DC	1933	146
Piscataway	MD	1961	4,626
Prince William Forest	VA	1948	16,047
Rock Creek	DC	1890	1,755
White House	DC	1933	18
Wolf Trap Park for Performing Arts	VA	1966	130
International Historic Site			
Saint Croix Island[3]	ME	1949	45
National Scenic Trails			
Appalachian	ME to GA	1968	2,175
Ice Age	WI	1980	1,000
Natchez Trace	MS-TN	1983	64
North Country	NY to ND	1980	3,200
Potomac Heritage	VA to PA	1983	520

(1) Year first designated. (2) No federal facilities. (3) Limited federal facilities. (4) Not open to the public. (5) Formerly Coulee Dam National Recreation Area.

UNITED STATES HISTORY

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Chronology of Events

1492 **Christopher Columbus** and crew sighted land Oct. 12 in present-day Bahamas.

1513 **Juan Ponce de León** explored Florida coast.

1524 **Giovanni da Verrazano** led French expedition along coast from Carolina north to Nova Scotia; entered New York Harbor.

1526 San Miguel de Guadalupe, **first European settlement** in what became U.S. territory, was established in the summer off South Carolina coast; abandoned in Oct.

1539 **Hernando de Soto** landed in Florida May 28; crossed Mississippi River, **1541**.

1540 **Francisco Vásquez de Coronado** explored Southwest north of Rio Grande. **Hernando de Alarcón** reached Colorado River; **García López de Cárdenas** reached Grand Canyon. Others explored California coast.

1562 **First French colony** in what became U.S. territory founded on Parris Island off South Carolina coast; abandoned, **1564**.

1565 **St. Augustine, FL,** oldest continuously occupied European settlement in U.S., founded Sept. 8 by Pedro Menéndez de Avilés. Spain ceded settlement to U.S. in **1821**.

1579 **Sir Francis Drake** entered San Francisco Bay and claimed region for Britain.

1585 **First English colony** in America, sponsored by Sir Walter Raleigh, founded on **Roanoke Island,** off North Carolina coast; colony failed.

1587 Second colony attempted on Roanoke Island. Virginia Dare of colony became **first English infant born** in the New World. Settlers of second colony found to have vanished, **1590**.

1607 Capt. **John Smith** and 105 cavaliers in 3 ships landed on Virginia coast, started Jamestown, **first permanent English settlement** in New World.

1609 **Henry Hudson,** English explorer of Northwest Passage, employed by Dutch, sailed into New York Harbor in Sept. and up Hudson to Albany. **Samuel de Champlain** explored Lake Champlain, to the north. Spaniards settled **Santa Fe, NM**.

1619 House of Burgesses, **first representative assembly** in New World, elected July 30 at Jamestown, VA. **First black laborers**—indentured servants—in English North American colonies, brought by Dutch to Jamestown in Aug. Chattel slavery legally recognized, **1650**.

1620 **Pilgrims**, Puritan separatists, left Plymouth, England, Sept. 16 on *Mayflower*; reached Cape Cod Nov. 19; 103 passengers landed at Plymouth, Dec. 26. **Mayflower Compact**, signed Nov. 11, was agreement to form a self-government. Half of colony died during harsh winter.



1620: Pilgrims and other colonists sign the Mayflower Compact to form a "civil body politic."

1624 Dutch colonies started in Albany and in New York area, where **New Netherland** was established in May.

1626 Peter Minuit bought **Manhattan** for Dutch West India Co. from Manahatta Indians during summer for goods valued at $24; named island **New Amsterdam**.

1630 Settlement of **Boston** established by Massachusetts colonists led by John Winthrop; Winthrop began *The History of New England*. **William Bradford**, a governor of Plymouth Colony, began his chronicle *History of Plymouth Plantation (1620-1647)*, first published in entirety in **1856**.

1634 **Maryland** founded as Catholic colony under charter to Lord Baltimore. Act of Toleration passed **1649** provided for religious tolerance.

1635 Boston Latin School, **oldest public school** in continuous existence in U.S., founded Apr. 23.

1636 Roger Williams founded **Providence, RI**, in June, as a democratically ruled colony with separation of church and state. Charter granted, **1644**. **Harvard College** founded; **oldest institution of higher learning** in U.S.

1640 **First book printed** in America, the so-called *Bay Psalm Book*.

1647 **Liberal constitution** drafted in Rhode Island. First law in America providing for **free compulsory basic education** enacted in Massachusetts.

1660 British Parliament passed first **Navigation Act** Dec. 1, regulating colonial commerce to suit English needs.

1661 A version of the New Testament translated into Algonquian became the **first Bible printed** in the colonies.

1664 British troops Sept. 8 seized New Netherland from Dutch. Charles II granted New Netherland and city of New Amsterdam to brother, Duke of York; both renamed **New York**. Dutch recaptured colony **1673**, but ceded it to Britain Nov. 10, **1674**.

1670 **Charles Town, SC**, founded by English colonists in Apr.

1673 **Regular mail service** on horseback instituted Jan. 1 between New York and Boston. **Jacques Marquette** and **Louis Jolliet** reached the upper Mississippi and traveled down it.

1674 Future **Salem witch trial** judge Samuel Sewall began renowned diary covering events through **1729**.

1676 Bloody **Indian war** in New England ended Aug. 12. King Philip, Wampanoag chief, and Narragansett Indians killed. **Nathaniel Bacon** led planters against autocratic British Gov. Sir William Berkeley, burned Jamestown, VA, Sept. 19. Rebellion collapsed when Bacon died; 23 followers executed.

1678 A book of poetry by **Anne Bradstreet** (first published in Britain) revised and expanded for posthumous publication in Massachusetts. Considered first female poet in American colonies.

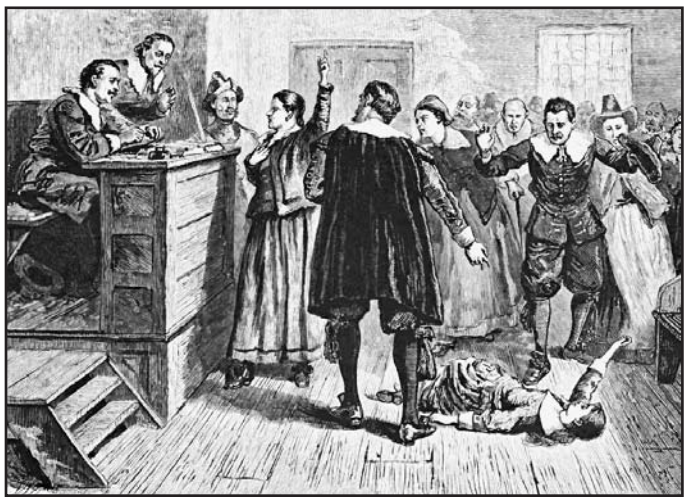
1679 Fire destroyed 150 houses in Boston. City imported **first fire engines** from England.

1681 John Bunyan's ***The Pilgrim's Progress*** published in America; became best seller.

1682 **Robert Cavelier, Sieur de La Salle**, claimed lower Mississippi River country for France and called it **Louisiana** Apr. 9. Had French outposts built in Illinois and Texas, **1684**. Killed during mutiny, **1687**. Spanish colonists became the **first Europeans to settle Texas**, at site of present-day El Paso.

1683 William Penn signed treaty with Delaware Indians Apr. 23 and made payment for **Pennsylvania** lands. The **first German colonists** in America settled near Philadelphia.

1689 New York's English colonial governor, **Sir Edmund Andros**, resigned after armed uprising in Boston on Apr. 18.



1692: Witch trials begin in Salem Village; 20 men and women are executed.

1690 **First colonial newspaper**, *Publick Occurrences*, published by Benjamin Harris but promptly shut down for lack of official permission. Harris also published *New England Primer* for use as elementary school textbook. Large-scale **whaling** operations began in Nantucket, MA.

1692 **Witchcraft hysteria** began in Salem Village (now Danvers), MA; 20 men and women convicted of witchcraft executed by special court.

1697 *The Essays* of **Sir Francis Bacon**, first published in England in **1597**, was published in America; it became a best seller.

1699 Former privateer Capt. **William Kidd** arrested and sent to England; hanged for piracy, **1701**. French settlements made in **Mississippi**, **Louisiana**.

1702 Legislation enacted making **Church of England** the established church in Maryland.

1704 **Indians attacked Deerfield**, MA, Feb. 28-29; killed 40, carried off 100. *Boston News Letter*, **first regular newspaper**, started by postmaster John Campbell.

1710 British-colonial troops captured French fort, Port Royal, Nova Scotia, in **Queen Anne's War**, **1702-13**. France yielded Nova Scotia by treaty, **1713**.

1712 **Slaves revolted** in New York Apr. 6; 21 were executed. Second uprising, **1741**; 13 slaves hanged, 13 burned, 71 deported.

1716 **First theater** in colonies opened in Williamsburg, VA.

1726 **Great Awakening**, general revival of evangelical religion, began in colonies.

1731 America's **first circulating library** founded in Philadelphia by Benjamin Franklin.

1732 Benjamin Franklin published the **first *Poor Richard's Almanack***; published annually until **1757**. Georgia, last of 13 colonies, chartered.

1733 **Influenza epidemic** swept through New York City and Philadelphia.

1735 Editor **John Peter Zenger** was acquitted of libel Aug. 5 in New York after criticizing the British governor's conduct in office.

1739 A series of **slave uprisings** put down in South Carolina.

1741 Famous sermon "Sinners in the Hands of an Angry God," delivered July 8 at Enfield, MA, by Jonathan Edwards, one of the most important preachers in the **Great Awakening** religious revival. Danish navigator **Vitus Bering**, commanding Russian expedition, reached Alaska.

1744 **King George's War** pitted British and colonials versus French. Colonials captured Louisbourg, Cape Breton Isl., Nova Scotia, June 17, **1745**. Returned to France **1748** by Treaty of Aix-la-Chapelle.

1752 **Benjamin Franklin**, flying kite in thunderstorm, proved lightning is electricity, June 15; invented lightning rod. **Liberty Bell**, cast in England, was delivered to Pennsylvania.

1754 **French and Indian War** began with Ft. Necessity campaign in Pennsylvania. Skirmish May 28, battle at fort July 3-4. British moved Acadian French from Nova Scotia to Louisiana Oct. 8, **1755**. British captured Québec Sept. 18, **1759**, in battles in which French Gen. Joseph de Montcalm and British Gen. James Wolfe were killed. Peace pact signed Feb. 10, **1763**. French lost Canada and Midwest. Delegates from 7 colonies to New York for **Albany Congress**, July 19, approved plan of union by Benjamin Franklin; plan rejected by the colonies.

1757 **First streetlights** appeared in Philadelphia.

1764 **Sugar Act**, Apr. 5, placed duties on lumber, foodstuffs in colonies. First law passed by Parliament to specifically raise revenue from colonies, alleviate French and Indian War debts. British enforced this act, unlike with **Molasses Act of 1733**.

1765 **Stamp Act**, enacted by Parliament Mar. 22, required revenue stamps to help fund royal troops. Nine colonies, at Stamp Act Congress in New York Oct. 7-25, adopted Declaration of Rights. Stamp Act repealed Mar. 17, **1766**. **Quartering Act**, requiring colonists to house British troops, went into effect Mar. 24.

1767 **Townshend Acts** levied taxes on glass, painter's lead, paper, and tea. In **1770** all duties except on tea were repealed.

1770 British troops fired Mar. 5 into Boston mob, killed 5 including **Crispus Attucks**, a black man, reportedly leader of group; later called **Boston Massacre**.

1773 **East India Co.** tea ships turned back at Boston, New York, and Philadelphia in May. Cargo ship burned at Annapolis, Oct. 14; cargo thrown overboard at **Boston Tea Party**, Dec. 16, to protest the tea tax. **First museum** in the colonies was officially established in Charleston, SC; later named the Charleston Museum.

1774 **"Intolerable Acts"** of Parliament curtailed Massachusetts self-rule; barred use of Boston Harbor until tea was paid for. **First Continental Congress** held in Philadelphia Sept. 5-Oct. 26; called for civil disobedience against British. Rhode Island **abolished slavery**.

1775 **Patrick Henry** addressed Virginia convention, Mar. 23, said, "Give me liberty or give me death!" **Paul Revere**, **William Dawes**, and Dr. **Samuel Prescott**, Apr. 18, rode to alert patriots that British were on their way to



1765: Demonstrations erupt in Boston in response to the Stamp Act proclamations.



1776: George Washington's army crosses the Delaware River to defeat Hessian forces in the Battle of Trenton.

Concord to destroy arms. At **Lexington**, MA, Apr. 19, Minutemen lost 8. On return from **Concord**, British suffered 273 casualties. Col. Ethan Allen (joined by Col. Benedict Arnold) captured **Ft. Ticonderoga** in New York, May 10, also Crown Point. Colonials headed for **Bunker Hill**, fortified Breed's Hill, Charlestown, MA. Repulsed British under Gen. William Howe twice before retreating, June 17. Continental Congress June 15 named **George Washington** commander in chief. Established a postal system, July 26; Benjamin Franklin became the **first postmaster general**.

1776 **Thomas Paine**'s *Common Sense*, famous pro-independence pamphlet, published Jan. 10; quickly sold some 100,000 copies. **France and Spain** agreed May 2 to provide arms to U.S. In Continental Congress June 7, Richard Henry Lee (VA) moved "that these united colonies are, and of right ought to be, free and independent states." Resolution adopted July 2. **Declaration of Independence** approved July 4, signed Aug. 2. Col. William Moultrie's batteries at **Charleston, SC**, repulsed British sea attack June 28. Washington lost **Battle of Long Island** Aug. 27; evacuated New York. **Nathan Hale** executed as spy by British Sept. 22. Brig. Gen. Arnold's **Lake Champlain** fleet was defeated at Valcour Oct. 11, but British returned to Canada. Howe failed to destroy Washington's army at White Plains, Oct. 28. Hessians captured Ft. Washington, Manhattan, and 3,000 men, Nov. 16; captured Ft. Lee, NJ, Nov. 20. Washington, in Pennsylvania, recrossed **Delaware River** Dec. 25-26, defeated Hessians at Trenton, NJ, Dec. 26.

1777 Washington defeated Lord Charles Cornwallis at **Princeton** Jan. 3. Continental Congress, June 14, authorized an **American flag**, the Stars and Stripes. Maj. Gen. John Burgoyne's force of 8,000 from Canada, captured **Ft. Ticonderoga**, July 6. Americans beat back Burgoyne at Bemis Heights, Oct. 7, cut off British escape route. Burgoyne surrendered 5,000 men at Saratoga, NY, Oct. 17. **Articles of Confederation** adopted by Continental Congress, Nov. 15; took effect Mar. 1, **1781**.

1778 **France signed treaty** of aid with U.S. Feb. 6. Sent fleet; British evacuated Philadelphia, June 18.

1779 **George Rogers Clark** took Ft. Vincennes in what is now Indiana in Feb. **John Paul Jones** on the *Bonhomme Richard* defeated *Serapis* in British North Sea waters, Sept. 23.

1780 Charleston, SC, fell to the British May 12, but Loyalists were defeated in battle of **Kings Mountain**, NC, Oct. 7 in what Thomas Jefferson called "the turn of the tide of success." **Benedict Arnold** found to be a traitor Sept. 23. Arnold escaped, made brigadier general in British army.

1781 Bank of North America, **first commercial bank**, incorporated May 26. Cornwallis retired to **Yorktown, VA**. Adm. Francois Joseph de Grasse landed 3,000 French and stopped British fleet in **Hampton Roads**. Washington and Jean Baptiste de Rochambeau joined forces, arrived near Williamsburg, Sept. 26. Siege of Cornwallis began, Oct. 6; **Cornwallis surrendered** Oct. 19.

1782 New British cabinet agreed in Mar. to **recognize U.S. independence**. Preliminary agreement signed in Paris, Nov. 30. Use of **scarlet letter A**, sewn on clothing or branded on skin of adulterers, discontinued in New England.

1783 Massachusetts Supreme Court decision in final Quock Walker trial **legally ended slavery**. Newspapers typically published weekly; **first regular daily newspaper**, *Pennsylvania Evening Post*, went on sale in Philadelphia, May 30. Britain, U.S. signed **Paris peace treaty**, Sept. 3, recognizing American independence; Congress ratified it Jan. 14, **1784**. **Washington ordered army disbanded** Nov. 3, bade farewell to his officers at Fraunces Tavern, New York City, Dec. 4.

1784 Thomas Jefferson's proposal to **ban slavery in new territories** after **1802** was narrowly defeated, Mar. 1.

1785 **Regular stagecoach routes** established between Albany, New York City, and Philadelphia.

1786 Delegates from 5 states at Annapolis, MD, Sept. 11-14 asked Congress to call a **constitutional convention**.

1787 **Shays's Rebellion** of debt-ridden farmers in Massachusetts failed, Jan. 25. **Constitutional convention** opened in Philadelphia, May 25, with Washington presiding. Constitution accepted by delegates, Sept. 17; Delaware became first state to ratify it, Dec. 7; Pennsylvania and New Jersey followed. **Northwest Ordinance** adopted July 13 by Continental Congress for Northwest Territory, north of Ohio River, west of New York; made rules for statehood. Guaranteed freedom of religion, support for schools, no slavery. ***Federalist Papers*** first appeared in *NY Independent Journal*.

1788 A **large fire in New Orleans**, then a Spanish territory, destroyed much of the city, Mar. 21. **Constitution adopted** June 21 after being ratified by the requisite ninth state (New Hampshire); also ratified by **Georgia, Connecticut, Massachusetts, Maryland, South Carolina, Virginia, and New York** throughout the year. **First U.S. senators elected** Sept. 30, from Pennsylvania.

1789 **George Washington** chosen president by all electors voting (73 eligible, 69 voting, 4 absent); **John Adams**, vice president, got 34 votes. **First Congress** met at Federal Hall, New York City, and declared Constitution in effect, Mar. 4; Washington inaugurated there Apr. 30; **first inaugural ball** held May 7. U.S. **State Dept.** established by Congress July 27. (Thomas Jefferson installed as first secretary of state Feb. **1790**.) **War Dept.** created Aug. 7, with Henry Knox as secretary; **Treasury Dept.** created Sept. 2, with Alexander Hamilton to be secretary. **Supreme Court** created by Federal Judiciary Act, Sept. 24; **John Jay** confirmed by Congress as **first Supreme Court chief justice**, Sept. 26.

1790 **First Supreme Court session** held Feb. 2 in New York City. Congress, Mar. 1, authorized decennial **U.S. census**. Collection of data took 18 months. **Naturalization Act** (2-year residency) passed Mar. 26. John Carroll consecrated as **first American Catholic bishop**, Aug. 15. Congress met in **Philadelphia**, new temporary capital, Dec. 6.

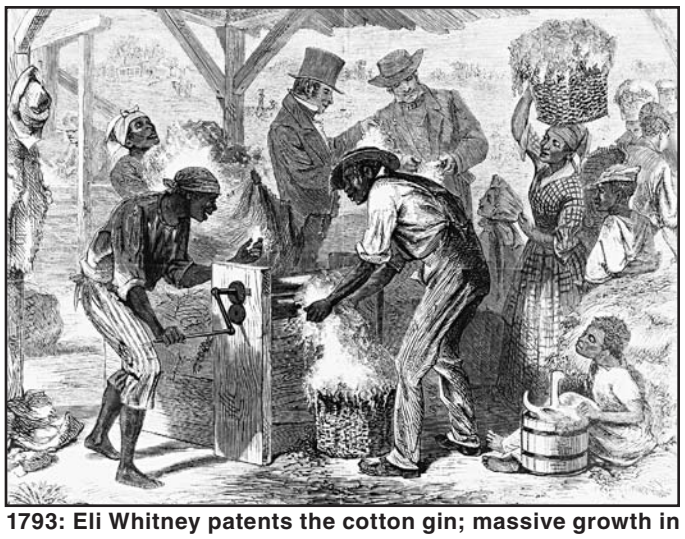
1791 **Bill of Rights**, submitted to states, Sept. 25, **1789**, went into effect Dec. 15. First Bank of the United States, **first bank to be chartered by federal government**, established in Philadelphia.

1792 Coinage Act established **U.S. Mint** in Philadelphia, Apr. 2. Gen. **"Mad" Anthony Wayne** made commander in Ohio-Indiana area, trained American Legion, established string of forts. Routed Indians at Fallen Timbers on Maumee River, Aug. 20, **1794**, checked British at Fort Miami, OH, same year. **White House** cornerstone laid Oct. 13.

1793 **Washington** inaugurated for second term, Mar. 4, having received 132 electoral votes; **John Adams** again became vice president, having received second highest total, 77. Washington declared **U.S. neutrality**, Apr. 22, in war between Britain and France. Eli Whitney invented **cotton gin**, reviving Southern slavery.

1794 **Whiskey Rebellion**, western Pennsylvania farmers protesting liquor tax of **1791**, suppressed by federal militia in Sept. **Jay's Treaty**, controversial treaty with Britain negotiated by John Jay, signed Nov. 19, ratified June 24, **1795**. This treaty intended to settle long-standing differences between U.S. and Britain.

1795 U.S. bought peace from **Algerian pirates** by paying $1 mil ransom for 115 seamen Sept. 5, followed by annual tributes. Gen. Wayne signed **Treaty of Greenville** with Indians, opening Northwest Territory to settlers. Univ. of North Carolina became **first operating state university**.



1793: Eli Whitney patents the cotton gin; massive growth in U.S. cotton production and expansion of Southern slavery follows.

1796 **Washington's farewell address** as president delivered Sept. 17. Warned against permanent alliances with foreign powers, big public debt, large military establishment, and devices of "small, artful, enterprising minority."

1797 **John Adams** inaugurated as second president Mar. 4, having received 71 electoral votes; **Thomas Jefferson** became vice president, having received 68. U.S. frigate *United States* launched at Philadelphia, July 10; ***Constellation*** at Baltimore, Sept. 7; ***Constitution*** (Old Ironsides) at Boston, Sept. 20.

1798 **Alien and Sedition Acts** passed by Federalists June-July; intended to silence political opposition. **War with France threatened** over French raids on U.S. shipping and rejection of U.S. diplomats. Navy (45 ships) and 365 privateers captured 84 French ships. USS *Constellation* took French warship *Insurgente*, **1799**. Napoleon stopped French raids after becoming first consul.

1800 Federal government moved to **Washington, DC**.

1801 **John Marshall** named Supreme Court chief justice, Jan. 20. **Thomas Jefferson**, who had received same number of electoral votes as Aaron Burr in **1800** election, won out over Burr in House vote reached Feb. 17; Burr named vice president. **Tripoli declared war** June 10 against U.S., which refused added tribute to commerce-raiding Arab corsairs. Land and naval campaigns forced Tripoli to negotiate peace, June 4, **1805**. **Oldest U.S. art institution**, Pennsylvania Academy of Fine Arts, founded in Philadelphia.

1802 Congress established U.S. Military Academy at **West Point**, NY.

1803 Supreme Court, in ***Marbury v. Madison***, overturned U.S. law for first time, Feb. 24. Napoleon sold all of Louisiana, stretching to Canadian border, to U.S. for $11,250,000 in bonds, plus $3,750,000 indemnities to American citizens with claims against France. U.S. took title Dec. 20. **Louisiana Purchase** doubled U.S. area.

1804 **Meriwether Lewis** and **William Clark** expedition ordered by Pres. Thomas Jefferson to explore what is now Northwest U.S. Started from St. Louis May 14; ended Sept. 23, **1806**, back in St. Louis. Vice Pres. **Aaron Burr** shot Alexander Hamilton in duel July 11 in Weehawken, NJ; Hamilton died next day.

1805 U.S. Marines aided by Arab mercenaries, Apr. 27, captured Tripolitan port of Derna. Major victory in war against **Barbary pirates**; inspiration for "to the shores of Tripoli" in Marines Corps song.

1807 Robert Fulton made **first practical steamboat trip**; left New York City Aug. 17, reached Albany, 150 mi away, in 32 hrs. **Embargo Act** banned all trade with foreign countries, forbidding ships to set sail for foreign ports Dec. 22.

1808 **Slave importation outlawed**. Some 250,000 slaves were illegally imported **1808-60**.

1810 **Third U.S. Census** found population of 7,239,814. The slave population was put at 1,191,364, and the population of all other non-white free persons at 186,446.

1811 Indiana Territory governor William Henry Harrison defeated Indians led by Tenskwatawa, called the Prophet, in **Battle of Tippecanoe**, Nov. 7. Construction began on **Cumberland Road** in Cumberland, MD; road became important route to West. About 400 **slaves revolted** in Louisiana, killing the son of a plantation owner and marching on New Orleans. The insurrection was suppressed; some 75 slaves killed.

1812 **War of 1812** had 3 main causes: Britain seized U.S. ships trading with France; Britain had seized 4,000 naturalized U.S. sailors by **1810**; Britain armed Indians, who raided Western border. U.S. stopped trade with Europe **1807** and **1809**. Trade with Britain only was stopped **1810**. Unaware that Britain had raised blockade against France two days before, **Congress declared war** June 18. British took **Detroit** Aug. 16.

1813 Oliver H. Perry defeated British fleet at **Battle of Lake Erie**, Sept. 10. U.S. won **Battle of the Thames**, Ontario, Oct. 5, but failed in Canadian invasion attempts. York (Toronto) and Buffalo were burned.

1814 Troops under Andrew Jackson defeated Creek Indians led by Chief Weatherford at **Battle of Horseshoe Bend** in Alabama, Mar. 29, ending **Creek Indian War**, begun a year earlier. British landed in Maryland in Aug., defeated U.S. force Aug. 24, **burned Capitol and White House**. Maryland militia stopped British advance, Sept. 12. British bombardment of Ft. McHenry, Baltimore, for 25 hours, Sept. 13-14, failed, inspiring **Francis Scott Key** to write the words to **"The Star-Spangled Banner."** U.S. won naval **Battle of Lake Champlain** Sept. 11. Peace treaty with Great Britain signed at Ghent, Dec. 24.

1815 Some 5,300 British, unaware of peace treaty, attacked U.S. entrenchments near **New Orleans**, Jan. 8. British had more than 2,000 casualties; Americans lost 71. U.S. flotilla finally ended attacks by **pirates** from Ottoman states of Algiers, Tunis, Tripoli.

1816 **Second Bank of the U.S.** chartered Apr. 10. The **American Colonization Society**, which sought to address slavery issue by transporting freed blacks to Africa, formed in Washington, DC, Dec. **1816**-Jan. **1817**.

1817 Thomas Hopkins Gallaudet established the **first free public school for the deaf** in Hartford, CT.

1818 Connecticut **expanded suffrage** among white male voters. Massachusetts followed suit in **1820**, and New York in **1821**, reducing or eliminating property qualifications.

1819 Spain ceded **Florida** to U.S. Feb. 22. American steamship *Savannah* made **first part-steam-powered, part-sail-powered crossing of Atlantic**, traveling from Savannah, GA, to Liverpool, England, in 29 days. **Washington Irving**'s *Sketch Book* became best seller.

1820 **First organized immigration of blacks to Africa** from U.S. began with 86 free blacks sailing to Sierra Leone in Feb. Henry Clay's **Missouri Compromise** bill passed by Congress, Mar. 3. Slavery was allowed in Missouri but not west of the Mississippi River, north of 36° 30′ (the southern line of Missouri). Repealed **1854**.

1821 Emma Willard founded Troy Female Seminary, **first U.S. women's college**. Stephen Austin established **first American community in Texas**, San Felipe de Austin. **James Fenimore Cooper**'s *The Spy*, novel set during American Revolution, published and became a best seller.

1822 Tension between sports and academics surfaced when Yale College Pres. Timothy Dwight **banned a primitive form of football**, setting fines for violators.

1823 **Monroe Doctrine**, opposing European intervention in the Americas, enunciated by Pres. James Monroe Dec. 2. The **Hudson River School**, painters who focused on the beauties of nature, began to come to public attention.

1824 Pawtucket, RI, **weavers strike**, first such action by women workers. **Slavery abolished** in state of Illinois Aug. 2.

1825 After a deadlocked election, **John Quincy Adams** was elected president by the House, Feb. 9. **Erie Canal** opened; first boat left Buffalo Oct. 26, reached New York City Nov. 4. John Stevens, of Hoboken, NJ, built and operated **first experimental steam locomotive** in U.S.

1826 **Thomas Jefferson** and **John Adams** both died July 4. **James Fenimore Cooper**'s *The Last of the Mohicans* published.

1827 Massachusetts became first state to pass a law providing for **tax-supported public high schools**.

1828 Baltimore & Ohio, the **first U.S. passenger railroad**, began operations July 4. South Carolina Dec. 19 declared right of **state nullification of federal laws**, opposing the "Tariff of Abominations." **Noah Webster** published his *American Dictionary of the English Language.*

1829 **Andrew Jackson** inaugurated as president, Mar. 4.

1830 Famous **debate** Jan. 27 between Sen. **Daniel Webster** (MA) and Robert Hayne (SC), on state right to nullify federal law. **Mormon church** organized by Joseph Smith in Fayette, NY, Apr. 6. Pres. Jackson, May 28, signed **Indian Removal Act**, granting president authority to negotiate treaties whereby Indians living east of Mississippi R. gave up lands in exchange for lands in West.

1831 William Lloyd Garrison began **abolitionist newspaper** *The Liberator* Jan. 1. **Nat Turner**, black slave in Virginia, led local slave rebellion, starting Aug. 21; 57 whites killed. Troops called in, 100 slaves killed. Turner captured, tried, hanged Nov. 11.

1832 **Black Hawk War** in Illinois and Wisconsin Apr.-Sept. pushed Sauk and Fox Indians west across Mississippi.

1833 **American Anti-Slavery Society** founded in Philadelphia, Dec. 4. **Oberlin College** became **first to adopt coeducation** in U.S.

1835 **Liberty Bell cracked** July 8 while tolling death of Chief Justice John Marshall. **Seminole Indians** in Florida under Osceola began attacks Nov. 1, protesting forced removal. The unpopular war ended Aug. 14, **1842**; most of the Indians sent to Oklahoma. **Texas** proclaimed right to secede from Mexico; **Sam Houston** put in command of Texas army, Nov. 2-4. **Gold** discovered on Cherokee land in Georgia. Indians forced to cede lands, Dec. 20, and to cross Mississippi.

1836 Texans besieged at **Alamo** in San Antonio by Mexicans under Santa Anna, Feb. 23-Mar. 6; entire garrison killed. Texas independence declared, Mar. 2. At San Jacinto Apr. 21, Sam Houston and Texans defeated Mexicans. **Ralph Waldo Emerson** published his first work, *Nature*, espousing his philosophy of **transcendentalism**. Marcus Whitman, H. H. Spaulding, and wives reached Fort Walla Walla on Columbia River, OR, **first white women to cross the Continental Divide**, in the Rocky Mountains.

1838 Cherokee Indians forced to walk **"Trail of Tears"** from southeast U.S. to area in present-day Oklahoma. At least 4,000—nearly one-fifth of Cherokee population—are estimated to have died.

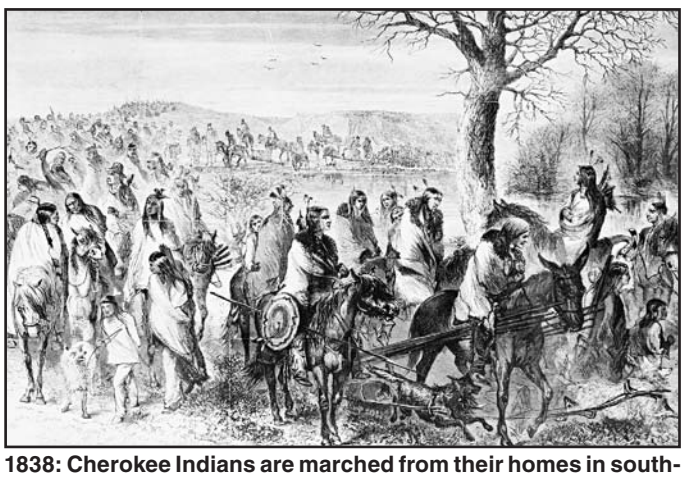
1841 **First emigrant wagon train bound for California**, 47 persons, left Independence, MO, May 1, reached California Nov. 4. **Edgar Allan Poe** published one of the **first American detective stories**, *The Murders in the Rue Morgue*.

1842 **Webster-Ashburton Treaty** signed Aug. 9, fixing U.S.-Canada border in Maine and Minnesota. **First use of anesthetic** (sulfuric ether gas).

1843 More than 1,000 settlers left Independence, MO, for Oregon May 22, arriving in Oct. via **Oregon Trail**.

1844 **First message over first telegraph line** sent May 24 by inventor Samuel F. B. Morse from Washington to Baltimore: "What hath God wrought?"

1845 Congress **overrode a presidential veto for the first time**, Mar. 3, after Pres. John Tyler vetoed a tariff bill. Congress of **Texas voted for annexation** by U.S., July 4. Texas admitted to Union, Dec. 29. **Edgar Allan Poe**'s poem "The Raven" published.



1838: Cherokee Indians are marched from their homes in southeast U.S. to present-day Oklahoma on the "Trail of Tears."

1846 **Mexican War** began after Pres. James K. Polk ordered Gen. Zachary Taylor to seize disputed Texan land settled by Mexicans. After border clash, U.S. declared war May 13; Mexico declared war May 23. About 12,000 U.S. troops took Vera Cruz Mar. 27, **1847**, and Mexico City Sept. 14, **1847**. Treaty signed Feb. 2, **1848**, ended war, and Mexico ceded claims to Texas, California, and other territory. Bear flag of **Republic of California** raised by American settlers at Sonoma, June 14. Treaty with Britain June 15 set **Oregon territory boundary** at 49th parallel (extension of existing line). Expansionists had used slogan "54° 40′ or fight." The term **"manifest destiny,"** coined by journalist in **1845**, also came into play. **Mormons**, after violent clashes with settlers over polygamy, left Nauvoo, IL, for West under Brigham Young. They settled July **1847** at Salt Lake City, UT. Elias Howe invented **sewing machine**.

1847 **First adhesive U.S. postage stamps**—Benjamin Franklin 5¢, Washington 10¢—sold July 1. **Henry Wadsworth Longfellow**'s *Evangeline* published.

1848 **Gold discovered** Jan. 24 in California; 80,000 prospectors emigrated in **1849**. **Lucretia Mott** and **Elizabeth Cady Stanton** led Seneca Falls, NY, **Women's Rights Convention** July 19-20.

1850 Sen. Henry Clay's **Compromise of 1850** admitted California as 31st state Sept. 9, with slavery forbidden; made Utah and New Mexico territories; made **Fugitive Slave Law** more harsh; and ended District of Columbia slave trade. **Nathaniel Hawthorne**'s *The Scarlet Letter* published.

1851 **Herman Melville**'s *Moby-Dick* published.

1852 **Harriet Beecher Stowe**'s *Uncle Tom's Cabin* published.

1853 Japan receives Comm. Matthew C. Perry, July 14. He negotiated **treaty to open Japan** to U.S. ships. New York City hosted **first World's Fair** in the U.S., beginning July 14. **Stephen Foster** published "My Old Kentucky Home."

1854 **Republican Party** formed at Ripon, WI, Feb. 28. Opposed Kansas-Nebraska Act, which left issue of slavery to vote of settlers. Act became law May 30. Treaty ratified with Mexico Apr. 25, providing for **Gadsden Purchase** of a strip of land. **Henry David Thoreau**'s *Walden* published.

1855 **First railroad train crossed Mississippi River** on river's first bridge, between Rock Island, IL, and Davenport, IA, Apr. 21. **Walt Whitman**'s *Leaves of Grass* published.

1856 Republican Party's **first presidential nominee**, John C. Fremont, defeated. Abraham Lincoln made 50 speeches for him. Proslavery group sacked **Lawrence, KS**, May 21; abolitionist John Brown led antislavery contingent against Missourians at Osawatomie, KS, Aug. 30. **First U.S. kindergarten** opened in Watertown, WI.

1857 In **Dred Scott** case, which involved determination of constitutionality of already-repealed Missouri Compromise, Supreme Court decided Mar. 6 that slaves did not become free in a free state, and blacks were not and could not be citizens. **Currier & Ives**, firm of American lithographers, issued their first print.

1858 **First Atlantic cable** completed, by Cyrus W. Field Aug. 5. **Lincoln-Douglas debates** in Illinois, Aug. 21-Oct. 15.

1859 Edwin L. Drake drilled the **first commercially productive oil well** near Titusville, PA, Aug. 27. Abolitionist **John Brown**, with 21 men, seized U.S. armory at **Harpers Ferry**, WV, Oct. 16. U.S. Marines captured raiders, killing several. Brown was hanged for treason Dec. 2.

1860 Shoeworkers in Lynn, MA, went on strike Feb. 22. Within a week, strike spread to include 20,000 shoeworkers throughout New England in country's **largest strike to date**. **First Pony Express** between Sacramento, CA, and St. Joseph, MO, started Apr. 3. Republican **Abraham Lincoln** elected president Nov. 6 in 4-way race.

1861 Seven southern states set up **Confederate States of America** Feb. 8, with **Jefferson Davis** as president. **Civil**

War began as Confederates fired on **Ft. Sumter** in Charleston, SC, Apr. 12. They captured it Apr. 14. Pres. Lincoln called for 75,000 volunteers Apr. 15. By May, 11 states had **seceded**. Lincoln blockaded Southern ports Apr. 19, cutting off vital exports and aid. Confederates repelled Union forces at first **Battle of Bull Run**, July 21. **First transcontinental telegraph line** put in operation.

1862 Union forces were victorious in Western campaigns, took New Orleans May 1. Battles in East were largely inconclusive despite heavy casualties. The **Battle of Antietam**, in western Maryland Sept. 17, was bloodiest one-day battle of war; each side lost more than 2,000 men. **Homestead Act**, which granted free farms to settlers, approved May 20. **Land Grant Act**, which provided for public land sale to benefit agricultural education, approved July 7. It eventually led to establishment of state university systems.

1863 Pres. Lincoln issued **Emancipation Proclamation** Jan. 1, freeing "all slaves in areas still in rebellion." Entire Mississippi River was in Union hands by July 4. Union forces won major victory at Gettysburg, PA, July 1-3. Pres. Lincoln gave his **Gettysburg Address** Nov. 19. Confederate forces under siege surrendered **Vicksburg, MS**, to Union forces under Gen. Ulysses S. Grant, July 4. About 1,000 were killed or wounded in **draft riots** in New York City; some blacks were hanged by mobs July 13-16. Pres. Lincoln declared **Thanksgiving** a national holiday.

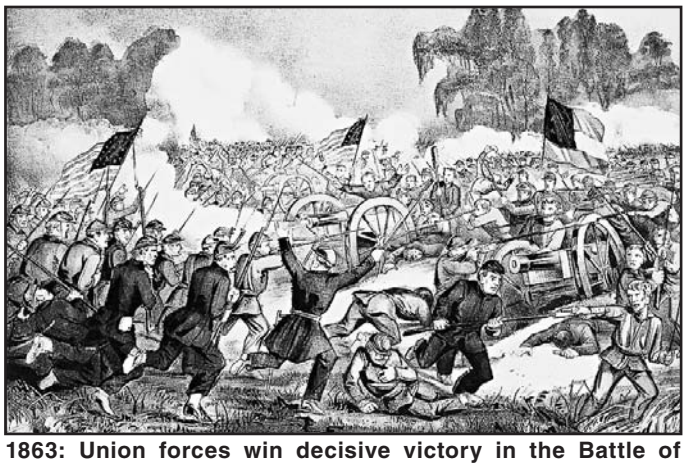
1864 Gen. **William Tecumseh Sherman** marched through Georgia, taking Atlanta Sept. 1 and Savannah Dec. 22. **Sand Creek massacre** of Cheyenne and Arapaho Indians Nov. 29. Soldiers drove Indians out of village; about 150 killed.

1865 Gen. **Robert E. Lee surrendered** 27,800 Confederate troops to Gen. Grant at Appomattox Court House in VA, Apr. 9. J. E. Johnston surrendered 31,200 to Sherman at Durham Station, NC, Apr. 18. Last rebel troops surrendered May 26. Pres. Lincoln shot Apr. 14 by **John Wilkes Booth** in Ford's Theater, Washington, DC. Died the following morning. Vice Pres. **Andrew Johnson** was sworn in as president. Booth was hunted down and fatally wounded, perhaps by his own hand, Apr. 26. Four co-conspirators were hanged July 7. **13th Amendment**, abolishing slavery, ratified Dec. 6.

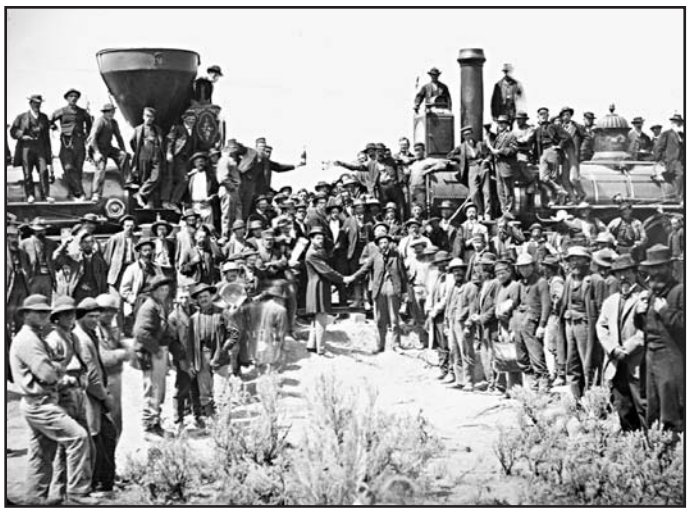
1866 Congress took control of Southern **Reconstruction**, backed freedmen's rights in legislation vetoed by Johnson; veto overridden by Congress, Apr. 9. **Ku Klux Klan** formed secretly in South to terrorize blacks who voted. Disbanded **1869-71**.

1867 **Alaska** sold to U.S. by Russia for $7.2 mil Mar. 30, through efforts of Sec. of State William H. Seward. Fraternal society the **Grange** was organized Dec. 4 to protect farmer interests. **Horatio Alger**'s *Ragged Dick* published.

1868 Pres. Johnson again dismissed Sec. of War Edwin M. Stanton after first dismissing him in **1867**. **Johnson impeached** by the House Feb. 24 for violation of Tenure of Office Act but actually in response to his opposition to congressional Reconstruction. He was acquitted by the Senate Mar.-May. **14th Amendment**, providing for citizenship



1863: Union forces win decisive victory in the Battle of Gettysburg, ending the Confederacy's second attempt to invade the north with the war's bloodiest battle.



1869: The golden spike is driven at Promontory Summit, UT, marking the completion of the transcontinental railroad.

of all persons born or naturalized in U.S. and subject to the jurisdiction thereof, ratified July 9. **Louisa May Alcott**'s *Little Women* published. ***The World Almanac***, a publication of the *New York World*, appeared for first time.

1869 **Transcontinental railroad** completed; golden spike driven at Promontory Summit, UT, May 10, marking junction of Central Pacific and Union Pacific lines. Attempt to "corner" gold led to financial **"Black Friday"** in New York Sept. 24. **Woman suffrage law** passed in Wyoming Territory Dec. 10. **Knights of Labor** labor union formed in Philadelphia. By **1886**, it had 700,000 members nationally.

1870 **15th Amendment**, making race no bar to voting rights, ratified Feb. 8. **First U.S. boardwalk** completed, in Atlantic City, NJ. **U.S. Weather Bureau** founded.

1871 **Great Chicago fire** destroyed city Oct. 8-11. **National Rifle Association (NRA)** founded.

1872 **Amnesty Act** May 22 restored civil rights to citizens of the South, except for 500 Confederate leaders. Congress established Yellowstone, **first national park**. James McNeill Whistler painted famous portrait known informally as **"Whistler's Mother."**

1873 **First U.S. postal card** issued May 1. **Jesse James** and his gang robbed their first passenger train July 21. Banks failed, panic began in Sept. **Depression** lasted 5 years. **"Boss" William Tweed** of New York City was convicted Nov. 19 of stealing public funds. He died in jail in **1878**. New York's Bellevue Hospital started **first nursing school**.

1874 **Women's Christian Temperance Union** established in Cleveland. **First public zoo** in U.S. established in Philadelphia.

1875 Congress passed **Civil Rights Act** Mar. 1, giving equal rights to blacks in public accommodations and jury duty. Act invalidated in **1883** by Supreme Court. **First Kentucky Derby** held May 17. First **Jim Crow segregation law** enacted, in Tennessee.

1876 Democrat **Samuel J. Tilden** received majority of popular votes for president over Republican **Rutherford B. Hayes**, but 22 electoral votes were in dispute. Congress agreed to certify Hayes as winner in Feb. **1877** after Republicans agreed to end federal Reconstruction of South. **Alexander Graham Bell** patented the telephone Mar. 7. Col. **George A. Custer** and 264 soldiers of the 7th Cavalry were killed June 25 in "last stand," **Battle of the Little Bighorn**, MT, in Sioux Indian War.

1877 **Molly Maguires**—Irish terrorist society in mining areas of Scranton, PA—was broken up by hanging, June 21, of 11 leaders for murders of mine officials and police. Pres. Rutherford B. Hayes sent federal troops to control violent national **railroad strike**.

1878 **First commercial telephone exchange** opened, New Haven, CT, Jan. 28. **Thomas A. Edison** founded Edison Electric Light Co. on Oct. 15.

1879 **F. W. Woolworth** opened his first five-and-ten store, in Utica, NY, Feb. 22. French actress **Sarah Bernhardt** made her U.S. debut Nov. 8 at New York City's Booth Theater.

Economist and social philosopher **Henry George** published *Progress & Poverty*, advocating single tax on land.

1881 **Clara Barton** founded **American Red Cross** May 21. Pres. **James A. Garfield** shot in Washington, DC, July 2; died Sept. 19. Famous gun battle between the Earp brothers and outlaw rustlers Oct. 26 near the **OK Corral**, Tombstone, AZ. **Booker T. Washington** founded Tuskegee Institute for blacks. **Helen Hunt Jackson**'s *A Century of Dishonor*, about mistreatment of Indians, published.

1882 **Chinese Exclusion Act**, barring immigration of Chinese laborers for 10 years, later made permanent, passed by Congress May 6; prohibited naturalization of Chinese resident aliens.

1883 Civil Service Act, or **Pendleton Act**, passed Jan. 16, created foundations of American civil service system. The **Brooklyn Bridge** opened May 24 as world's longest suspension bridge. The **Northern Pacific Railroad** was completed Sept. 8. **Buffalo Bill Cody**'s Wild West Show began its 30-year touring run.

1884 **First long-distance telephone call** completed, Mar. 27, between Boston and New York. Switchback Railway—**first U.S. roller coaster** built as amusement park ride—opened at Coney Island in New York City. **Mark Twain**'s *The Adventures of Huckleberry Finn* published.

1885 **Washington Monument** dedicated Feb. 21.

1886 **Haymarket riot** and bombing, May 4, followed labor battles for 8-hour day in Chicago; 7 police and 4 workers died. Eight anarchists found guilty Aug. 20; 4 hanged Nov. 11. **Coca-Cola** first sold, May 8, at Jacob's Pharmacy in Atlanta. Apache Indian **Geronimo** surrendered Sept. 4, ending last major Indian war. **Statue of Liberty** dedicated Oct. 28. **American Federation of Labor** (AFL) formed Dec. 8 by 25 craft unions.

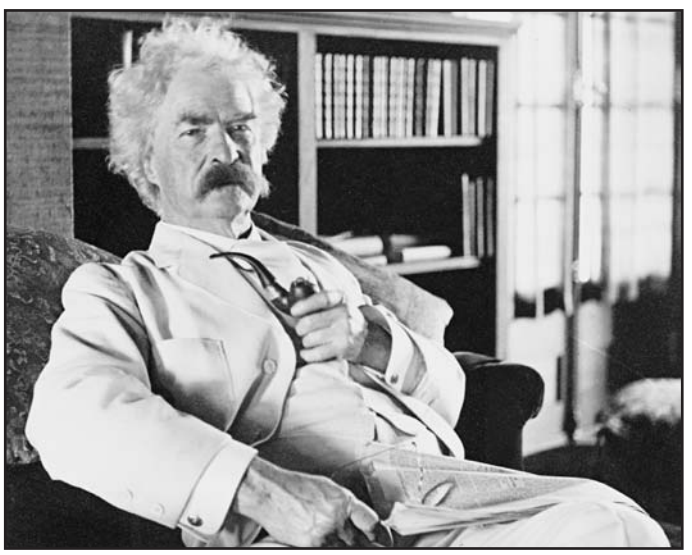
1887 **Interstate Commerce Act** enacted Feb. 4, created Interstate Commerce Commission.

1888 **Great blizzard** struck Eastern U.S. Mar. 11-14, causing about 400 deaths. Ernest Thayer's poem **"Casey at the Bat"** recited for first time in public at New York City theater in May.

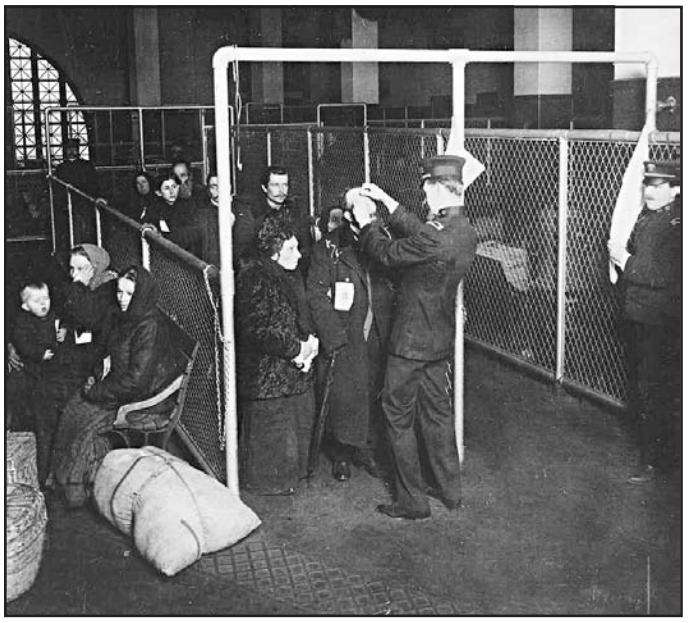
1889 U.S. opened 2-mil acre **Oklahoma District** to settlement Apr. 22, initiating land run; "sooner" settlers illegally entered the territory before that date to stake favorable claims. More than 2,200 lives lost in **Johnstown, PA, flood** May 31. **Electric lights** installed at White House.

1890 **Sherman Antitrust Act** passed July 2, began federal effort to curb monopolies. Massacre at **Wounded Knee**, SD, Dec. 29, the last major conflict between Indians and U.S. troops; about 200 Indian men, women, and children and 29 soldiers were killed. **Jacob Riis**'s *How the Other Half Lives*, about city slums, published, instigating reform legislation in New York City. **Emily Dickinson**'s poems published, 4 years after her death.

1891 **Forest Reserve Act**, Mar. 3, let president close public forest land to settlement for establishment of national parks. **Carnegie Hall**, in New York City, opened May 5.



1884: Mark Twain's masterpiece *Adventures of Huckleberry Finn* is published.



1892: Ellis Island immigration station opens; it would process more than 12 million immigrants before closing in 1954.

1892 **Ellis Island**, in New York Bay, opened Jan. 1 to receive immigrants; closed **1954**. **Homestead, PA, strike** at Carnegie steel mills; 7 guards and 11 strikers and spectators shot to death July 6. James J. Corbett defeated John L. Sullivan Sept. 7 to become **first world heavyweight champion** under Marquess of Queensbury rules.

1893 **Columbian Exposition** world's fair held May-Oct. in Chicago. Financial panic led to 4-year **depression**. **Mormon Temple** dedicated in Salt Lake City, UT.

1894 Thomas A. Edison's **kinetoscope**, for motion pictures (invented **1887**), given first public showing Apr. 14. **Jacob S. Coxey** led army of unemployed from the Midwest, reaching Washington, DC, Apr. 30. Coxey arrested May 1 for trespassing on Capitol grounds; his army disbanded. **Pullman strike** began May 11 at railroad car plant in Chicago. Milton Hershey started **Hershey Chocolate Company**.

1895 **"America, the Beautiful"** appeared for first time, in church publication, July 4. **Stephen Crane**'s *The Red Badge of Courage* published.

1896 Supreme Court, in ***Plessy v. Ferguson***, May 18, approved racial segregation under the **"separate but equal"** doctrine. **William Jennings Bryan** delivered "Cross of Gold" speech July 9; won Democratic Party nomination. **John Philip Sousa** composed "Stars and Stripes Forever" on Dec. 25.

1897 **Olney-Pauncefote Treaty** with Britain, Jan. 11, gave wide scope to arbitration in settling disputes; never ratified by U.S. John J. McDermott won **first Boston Marathon** Apr. 19. First Klondike gold arrived in San Francisco July 14, helping set off **Klondike gold rush**. **First subway service** in country opens to public in Boston, Sept. 1.

1898 U.S. battleship ***Maine*** blown up Feb. 15 in Havana, Cuba; 260 killed. U.S. blockaded Cuba Apr. 22 in aid of independence forces. U.S. declared **war on Spain** Apr. 24; destroyed Spanish fleet in Philippines May 1; took Guam June 20. U.S. took **Puerto Rico** July 25-Aug. 12. Spain agreed Dec. 10 to cede Philippines, Puerto Rico, and Guam, and approved independence for Cuba. Annexation of **Hawaii** signed by Pres. William McKinley, July 7.

1899 Filipino insurgents, unable to get recognition of independence from U.S., started guerrilla war Feb. 4. Their leader, Emilio Aguinaldo, captured May 23, **1901**. **Philippine insurrection** ended **1902**. Killed were 20,000 Filipino troops and some 200,000 civilians, mostly from disease and starvation. Pres. McKinley signed treaty officially ending **Spanish-American War**, Feb. 10. U.S. declared **Open Door Policy** Sept. 6, to make China an open international market. Philosopher **John Dewey**'s *School and Society*, advocating progressive education ("learn by doing"), published. Pianist Scott Joplin's "Maple Leaf Rag" published, popularizing **ragtime music**.

1900 **International Ladies' Garment Workers Union** founded in New York City June 3. Fought sweatshop

working conditions. **Carry Nation**, Kansas temperance leader, began raiding saloons with a hatchet. U.S. helped suppress **Boxer Rebellion** in Beijing. Eastman Kodak Co. introduced the **Brownie camera**, popularizing picture-taking.

1901 Texas had first significant oil strike at **Spindletop** well near Beaumont, Jan. 10. Pres. **McKinley** shot Sept. 6 in Buffalo, NY, by anarchist Leon Czolgosz; died Sept. 14. Vice Pres. **Theodore Roosevelt** sworn in as **youngest-ever president**, at age 42 years, 11 months. **Booker T. Washington**'s *Up from Slavery* published. U.S. withdrew troops from **Cuba** May 20, and Cuba became independent.

1902 Permanent **Bureau of the Census** established Mar. 6. **Helen Keller** autobiography appeared in serial form.

1903 Treaty between U.S. and Colombia to have U.S. dig **Panama Canal** signed Jan. 22, rejected by Colombia. Panama declared independence from Colombia with U.S. support Nov. 3; recognized by Pres. Theodore Roosevelt Nov. 6. U.S., Panama signed canal treaty Nov. 18. Wisconsin set first **direct primary voting system**, May 23. **Henry Ford** founded Ford Motor Co., June 16. Boston defeated Pittsburgh, 5 games to 3, Oct. 13 in **first modern World Series**. **First successful flight** in heavier-than-air mechanically propelled airplane by **Orville Wright** Dec. 17 near Kitty Hawk, NC, 120 ft. in 12 secs. Later flight same day by **Wilbur Wright**, 852 ft. in 59 secs. Improved plane patented, **1906**. **Iroquois Theater fire** in Chicago killed about 600 out of 1,900 in audience, Dec. 30. Pioneering film ***Great Train Robbery*** produced.

1904 St. Louis hosted **first Olympics in U.S.**, July 1-Nov. 23. **First section of New York subway** system opened, Oct. 27. **Ida Tarbell** published muckraking *The History of the Standard Oil Company*. **Henry James**'s last great novel, *The Golden Bowl*, published.

1905 **Industrial Workers of the World**, which advocated Marxian theory of class struggle between workers and capitalists, founded in Chicago, June 27. **Rotary**, oldest service club organization in U.S., founded in Chicago.

1906 **San Francisco earthquake** and fire, Apr. 18-19, caused more than 3,000 deaths and $400 mil in damages. **Upton Sinclair**'s *The Jungle*, which exposed working conditions in meat-packing industry, published. Helped spur passage of the **Pure Food and Drug Act** and **Meat Inspection Act** June 30.

1907 Financial panic and **depression** started Mar. 13. Pres. Roosevelt sent **"Great White Fleet"** of 16 U.S. battleships around the world in show of power.

1908 Springfield, IL, torn by **anti-black rioting**, Aug. 14-15. Henry Ford introduced **Model T** car, priced at $850, Oct. 1.

1909 Adm. Robert E. Peary claimed to have reached **North Pole** Apr. 6 on sixth attempt, accompanied by black explorer Matthew Henson and 4 Inuit; may have fallen short. National Conference on the Negro convened May 30, leading to founding of **National Association for the Advancement of Colored People** (NAACP).

1910 **Boy Scouts** of America founded Feb. 8. Former Pres. Roosevelt called for **"new nationalism"** in famous speech in Kansas, Aug. 10.

1911 Building with New York City's **Triangle Shirtwaist Co.** factory caught fire Mar. 25; 146 died. Supreme Court ruled May 15 that **Standard Oil Co.** must be dissolved because it unreasonably restrained trade. **First transcontinental airplane flight** (with numerous stops) by C. P. Rodgers, from New York to Pasadena, CA, Sept. 17-Nov. 5; time in air 82 hrs., 4 mins.

1912 American Girl Guides founded Mar. 12; name changed in **1913** to **Girl Scouts**. U.S. Marines, Aug. 14, sent to **Nicaragua**, which was in default of loans to U.S. and Europe.

1913 **16th Amendment**, authorizing federal income tax, ratified Feb. 3. The **Armory Show** in New York City brought modern art to U.S. for first time, Feb. 17. **17th Amendment**, providing for direct popular election of U.S. senators, ratified Apr. 8. **Federal Reserve System** authorized Dec. 23, in major reform of U.S. banking and finance.

1914 **Ford Motor Co.** raised basic wage rates from $2.40 for 9-hr. day to $5 for 8-hr. day, Jan. 5, increasing stability in labor force. When U.S. sailors were arrested in Tampico, Mexico, Apr. 9, Atlantic fleet was sent to **Veracruz**, occupied city. Pres. Woodrow Wilson proclaimed **U.S. neutrality** in the European war, Aug. 4. The **Panama Canal** officially opened Aug. 15. The **Clayton Antitrust Act** passed Oct. 15, strengthening federal antimonopoly powers.

1915 **First transcontinental telephone call**, New York to San Francisco, completed Jan. 25 by Alexander Graham Bell and Thomas A. Watson. British ship ***Lusitania*** sunk May 7 by German submarine; 1,198 passengers died, including 128 Americans. (In notice in morning newspapers the day *Lusitania* set sail, Germany had warned Americans against taking passage on British vessels.) As result of U.S. campaign, Germany issued apology and promise of payments, Oct. 5. Pres. Wilson asked for a military fund increase, Dec. 7. U.S. troops landed in **Haiti**, July 28. Haiti became virtual U.S. protectorate under Sept. 16 treaty. D. W. Griffith's film ***The Birth of a Nation*** released. William J. Simmons partly inspired by film to revive **Ku Klux Klan**, which peaks in 1920s.

1916 Gen. **John J. Pershing** entered Mexico to pursue **Francisco (Pancho) Villa**, who had raided U.S. border areas. Forces withdrew Feb. 5, **1917**. **Rural Credits Acts** passed July 17, followed by **Warehouse Act** Aug. 11; both provided financial aid to farmers. Bomb exploded during **San Francisco Preparedness Day parade** July 22, killed 10. Thomas J. Mooney, labor organizer, and Warren K. Billings, shoeworker, convicted **1917**; both later pardoned. U.S. bought **Virgin Islands** from Denmark Aug. 4. U.S. established military government in the **Dominican Republic** Nov. 29. **Jeannette Rankin** (R, MT) elected to House of Representatives, **first female member of Congress**.

1917 Germany, suffering from British blockade, declared almost unrestricted **submarine warfare** Jan. 31. U.S. cut diplomatic ties with Germany Feb. 3 and formally **declared war** Apr. 6. Jones Act, passed Mar. 2, made **Puerto Rico** a U.S. territory, its inhabitants U.S. citizens. **Conscription law** passed May 18. First U.S. troops arrived in Europe June 26.

1918 Pres. Wilson set out his **14 Points** as basis for peace, Jan. 8. More than 1 mil American troops were in Europe by July. Allied counteroffensive launched at Château-Thierry July 18. War ended with signing of **armistice** Nov. 11. **Influenza epidemic** killed an estimated 20 mil worldwide, 548,000 in U.S.

1919 **18th Amendment**, providing for prohibition of manufacture, sale, or transportation of alcoholic beverages, ratified Jan. 16, to take effect on Jan. 16, **1920**. **First transatlantic flight**, by U.S. Navy seaplane, left Rockaway, NY, May 8, stopped at Newfoundland, Azores, Lisbon May 27. **Boston police strike** Sept. 9, earliest strike conducted



1918: So-called Spanish flu strikes the U.S., infecting more than 25 million and causing a half-million American deaths.

by government employees. About 250 **foreign-born radicals** deported Dec. 21 to Soviet Union. **Sherwood Anderson**'s *Winesburg, Ohio* published.

1920 In national **Red Scare**, some 2,700 Communists, anarchists, and other radicals were arrested Jan.-May. **League of Women Voters** founded Feb. 14. Senate refused Mar. 19 to ratify **League of Nations Covenant**. **Nicola Sacco** and **Bartolomeo Vanzetti** accused of killing 2 men in Massachusetts payroll holdup Apr. 15. Found guilty **1921**. A 7-year campaign for their release failed; both executed Aug. 23, **1927**. Verdict repudiated **1977** by proclamation of Massachusetts Gov. Michael Dukakis. **19th Amendment** ratified Aug. 18, giving women the vote. **First regular licensed radio broadcasting** began Aug. 20. **Wall St. bombing** in New York City killed 30, injured 100, did $2 mil damage, Sept. 16. **Sinclair Lewis**'s *Main Street*, **F. Scott Fitzgerald**'s *This Side of Paradise*, and **Edith Wharton**'s *The Age of Innocence* published.

1921 Congress sharply curbed immigration, set **national quota system** May 19. Joint congressional resolution declaring **peace with Germany, Austria, and Hungary** signed July 2 by Pres. Warren G. Harding; treaties were signed in Aug. In so-called **Black Sox scandal**, 8 Chicago White Sox players were banned from baseball Aug. 4 for conspiring with gamblers to throw the **1919 World Series**. **Limitation of Armaments Conference** met in Washington, DC, Nov. 12-Feb. 6, **1922**. Major powers agreed to curtail naval construction, outlaw poison gas, restrict submarine attacks on merchant vessels, and respect China's integrity.

1922 During nationwide coal strike, union miners killed some 21 strike-breakers at Herrin, IL, June 21-22, in incident referred to as the **Herrin Massacre**. ***Reader's Digest*** founded. **T. S. Eliot**'s *The Waste Land* published in London.

1923 **First sound-on-film motion picture**, *Phonofilm*, shown at Rivoli Theater, New York City, beginning in Apr. Pres. Calvin Coolidge addressed Congress, Dec. 6; **first radio broadcast of president's annual speech**.

1924 Law approved by Congress June 15 made all **Native Americans U.S. citizens**. **Nellie Tayloe Ross** elected governor of Wyoming and **Miriam (Ma) Ferguson** elected governor of Texas Nov. 9. Ross inaugurated as nation's **first female governor** Jan. 5, **1925**. Ferguson installed Jan. 20, **1925**. **George Gershwin** wrote "Rhapsody in Blue."

1925 John T. Scopes found guilty of having taught **evolution** in Dayton, TN, high school, fined $100 and costs, July 24. **F. Scott Fitzgerald**'s *The Great Gatsby* published.

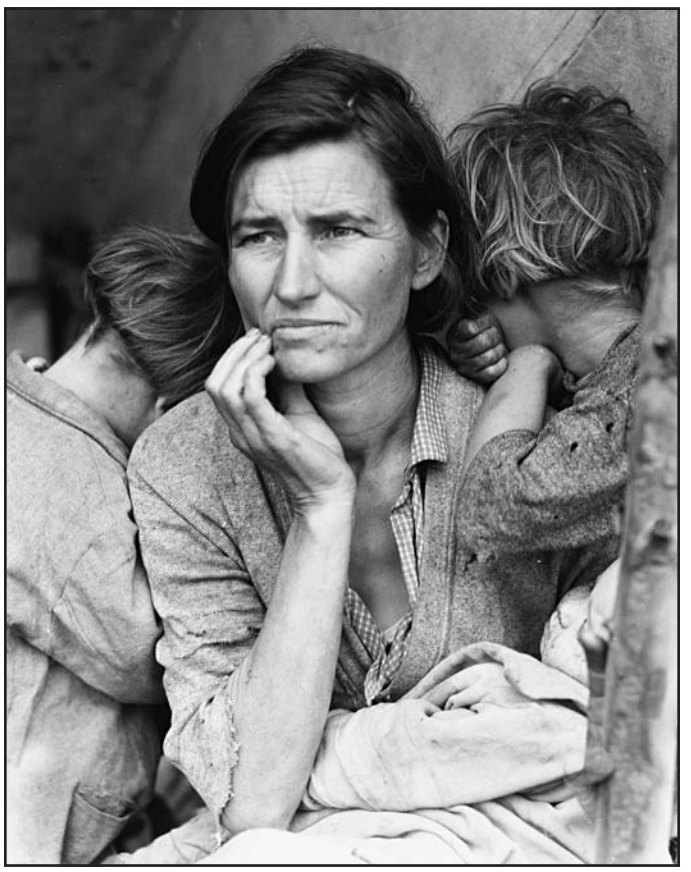
1926 Dr. Robert H. Goddard demonstrated practicality of rockets Mar. 16 in Auburn, MA, with **first liquid-fuel rocket**; rocket traveled 184 ft. in 2.5 secs. Congress established **Army Air Corps** July 2. **Air Commerce Act** passed Nov. 2, established government agencies for development of airports, radio navigation, and other services. **Ernest Hemingway**'s *The Sun Also Rises* published.

1927 Capt. **Charles A. Lindbergh** left Roosevelt Field, NY, May 20 alone in ***Spirit of St. Louis*** on first New York-Paris nonstop flight. Reached Le Bourget airfield May 21, 3,610 mi. in 33½ hrs. *The Jazz Singer*, **first feature-length film** in which **spoken dialogue was part of narrative action**, released Oct. 6. Noted for line, "You ain't heard nothin' yet!" ***Show Boat***, Jerome Kern and Oscar Hammerstein II's adaptation of Edna Ferber's novel, opened in New York Dec. 27. Considered musical with first serious libretto.

1928 **Amelia Earhart** became first woman to fly across the Atlantic, June 17. **Herbert Hoover** elected president Nov. 6, defeating New York Gov. Alfred E. Smith, a Catholic.

1929 Gangsters killed 7 rivals in Chicago **St. Valentine's Day massacre** Feb. 14, which won Al Capone control of Chicago's underworld. Stock market crash Oct. 29 marked end of past prosperity as stock prices plummeted. Stock losses for **1929-31** estimated at $50 bil; beginning of **Great Depression**. Albert B. Fall, former secretary of the interior, was convicted of accepting $10,000 bribe in leasing of the **Elk Hills (Teapot Dome)** naval oil reserve; sentenced Nov. 1 to a year in prison and fined. **Thomas Wolfe**'s *Look Homeward, Angel* and **William Faulkner**'s *The Sound and the Fury* published.

1930 London **Naval Reduction Treaty** signed by U.S., Britain, Italy, France, and Japan Apr. 22; in effect Jan. 1, **1931**;



1929: The Great Depression devastates Americans nationwide; Dorothea Lange's iconic photo, taken in 1936, comes to represent the desperation.

expired Dec. 31, **1936**. **Hawley-Smoot Tariff** signed; rate hikes slash world trade. **Sinclair Lewis** became first American to win a **Nobel Prize in literature**. **Dashiell Hammett**'s *The Maltese Falcon*, which introduced detective Sam Spade, published.

1931 **Empire State Building** opened in New York City May 1, displacing Chrysler Building as world's tallest. **Al Capone** convicted of tax evasion Oct. 17. **Pearl Buck**'s *The Good Earth* published. **Charlie Chaplin** film *City Lights* released.

1932 **Reconstruction Finance Corp.** established Jan. 22 to stimulate banking and business. Unemployment at 12 mil. Twenty-month-old **Charles Lindbergh Jr.** kidnapped Mar. 1; found dead May 12. Bruno Hauptmann found guilty Feb. **1935**; executed Apr. 3, **1936**. Unemployed World War I veterans demanding Congress pay promised bonus early launched **Bonus March** on Washington, DC, May 29. **Franklin D. Roosevelt** elected president for first time in Democratic landslide, Nov. 8. Chicago Bears won **first NFL title game** Dec. 18, defeating the Portsmouth (OH) Spartans, 9-0.

1933 Pres. Roosevelt named **Frances Perkins** U.S. secretary of labor; **first woman in U.S. cabinet**. Pres. Roosevelt ordered **all U.S. banks closed** Mar. 6. In a "100 days" special session, Mar. 9-June 16, Congress passed **New Deal**, including measures to regulate banks, distribute funds to the jobless, create jobs, raise agricultural prices, and set wage and production standards for industry. **Gold standard** dropped by U.S. in favor of "modified gold bullion standard"; announced by Pres. Roosevelt Apr. 19, ratified by Congress June 5. **Tennessee Valley Authority (TVA)** created by act of Congress, May 18. **Prohibition** ended in the U.S. as 36th state ratified **21st Amendment** Dec. 5. Pres. Roosevelt foreswore armed intervention in **Western Hemisphere** nations, Dec. 26.

1934 Pres. Roosevelt signed law creating **Securities and Exchange Commission**, June 6. U.S. troops pulled out of **Haiti**, Aug. 6.

1935 **Works Progress Administration (WPA)** instituted May 6. Rural Electrification Administration created May 11. National Industrial Recovery Act struck down by Supreme Court May 27. **Boulder Dam** (later renamed **Hoover Dam**) completed, May 29. **Social Security Act** passed by Congress Aug. 8-9. Comedian **Will Rogers** and

aviator Wiley Post killed Aug. 15 in Alaska plane crash. **Huey Long**, Louisiana senator and national political leader, shot Sept. 8; died Sept. 10. George Gershwin's jazz opera ***Porgy and Bess*** opened Oct. 10 in New York. **Committee for Industrial Organization** (later Congress of Industrial Organizations) formed to expand industrial unionism Nov. 9.

1936 **Jesse Owens** won 4 gold medals at the **Berlin Olympics** in Aug., first American to do so in track-and-field events at single Olympics. **Baseball Hall of Fame** founded in Cooperstown, NY. **Margaret Mitchell**'s *Gone with the Wind* published.

1937 Airship ***Hindenburg*** caught fire, was destroyed May 6 as it was landing in Lakehurst, NJ. **Golden Gate Bridge** opened May 27, becoming suspension bridge with world's longest span. **Joe Louis** knocked out James J. Braddock to become world heavyweight champ June 22. Aviator **Amelia Earhart** and copilot Fred Noonan disappeared July 2 near Howland Island, in the Pacific. Pres. Roosevelt asked for 6 additional Supreme Court justices; **"packing" plan** defeated. **Auto, steel labor unions** won first big contracts. **Zora Neale Hurston**'s *Their Eyes Were Watching God* published.

1938 **National minimum wage** enacted June 25. Orson Welles's radio dramatization of H. G. Wells's ***War of the Worlds***, Oct. 30, caused Martian invasion scare. **Seabiscuit** beat War Admiral in match race of the century, at Pimlico track, MD, Nov. 1. Artist Anna Mary Robertson, **"Grandma Moses,"** discovered. **Thornton Wilder**'s *Our Town* produced on Broadway.

1939 Opera singer **Marian Anderson** performed for integrated crowd of 75,000 at Lincoln Memorial Apr. 9. First Lady Eleanor Roosevelt had quit Daughters of the American Revolution after organization refused to let Anderson sing in DC's Constitution Hall. **New York World's Fair**—theme: "The World of Tomorrow"—opened Apr. 30, closed Oct. 31. Reopened for second season May 11, **1940**, ended Oct. 27. **Lou Gehrig**, seriously ill, said farewell to fans at Yankee Stadium, July 4. Albert Einstein alerted Pres. Roosevelt to **A-bomb possibilities** in Aug. 2 letter. **U.S. declared its neutrality** in European war Sept. 5. Pres. Roosevelt proclaimed limited **national emergency** Sept. 8, unlimited emergency May 27, **1941**. Both ended by Pres. Harry Truman, Apr. 28, **1952**. Pocket Books, **first paperback publisher** in U.S., established. **John Steinbeck**'s *The Grapes of Wrath* published. Film versions of ***Gone with the Wind***—which went on to win a record 8 Academy Awards—and ***The Wizard of Oz*** released.

1940 U.S. OK'd sale of **surplus war material** to Britain June 3; announced transfer of 50 overaged destroyers Sept. 3. **First peacetime military draft** in U.S. history approved, Sept. 14. **Forty-hour work week** went into effect, Oct. 24. Pres. **Roosevelt** elected Nov. 5 to third presidential term. **Carson McCullers**'s *The Heart Is a Lonely Hunter* and **Richard Wright**'s *Native Son* published.

1941 **Four Freedoms**—freedom of speech and religion, freedom from want and fear—termed essential by Pres. Roosevelt in speech to Congress Jan. 6. **Lend-Lease Act** signed Mar. 11 provided $7 bil in military credits for Britain. Lend-lease for USSR approved in Nov. Pres. Roosevelt signed executive order June 25 barring federal government and war contractors from **racial discrimination**. Order also established Fair Employment Practice Committee. The **Atlantic Charter**, 8-point declaration of principles, issued by Pres. Roosevelt and British Prime Min. Winston Churchill, Aug. 14. Japan attacked **Pearl Harbor**, Hawaii, 7:55 am Hawaiian time, Dec. 7; 19 ships sunk or damaged, 2,300 dead. Pres. Roosevelt called it "a date which will live in infamy." U.S. declared war on Japan Dec. 8. Germany and Italy declared war on U.S. Dec. 11. U.S. responded with declaration of war later on same day. Japanese invaded **Philippines**, Dec. 22; Wake Island fell, Dec. 23. ***Citizen Kane***, directed by Orson Welles, released.

1942 Japanese troops took **Bataan** peninsula Apr. 8, took **Corregidor** May 6. Federal government began forcibly moving 110,000 Japanese-Americans from West Coast to **detention camps**. Exclusion lasted 3 years. **Battle of Midway** June 4-7 was Japan's first major defeat. Marines landed on **Guadalcanal** Aug. 7; last Japanese not expelled until



1944: More than 160,000 Allied troops storm a highly fortified stretch of French coastline on D-Day (June 6).

Feb. 9, **1943**. U.S., Britain invaded **North Africa** Nov. 8. **First nuclear chain reaction** (fission of uranium isotope U-235) produced at Univ. of Chicago under physicists Arthur Compton, Enrico Fermi, others, Dec. 2. The movie ***Casablanca***, starring Humphrey Bogart and Ingrid Bergman, released.

1943 ***Oklahoma!*** opened Mar. 31 on Broadway. Pres. Roosevelt signed June 10 pay-as-you-go income tax bill. Starting July 1, wage and salary earners were subject to **paycheck withholding tax**. **Detroit race riot** June 21 left 34 dead, 700 injured. Six killed in riot in New York City's **Harlem** section Aug. 2. U.S., Britain invaded **Sicily** July 9, Italian **mainland** Sept. 3. Marines in Nov. recaptured the **Gilbert Islands**, captured by Japan in **1941** and **1942**.

1944 U.S., Allied forces invaded Europe at Normandy, France, on **"D Day,"** June 6, in greatest amphibious landing in history. **Battle of the Bulge**, failed Nazi counteroffensive, waged Dec. 16 to Jan. 28, **1945**. **GI Bill of Rights**, providing benefits to veterans, signed by Pres. Roosevelt June 22. Representatives of the U.S. and other major powers met at **Dumbarton Oaks**, Washington, DC, Aug. 21-Oct. 7, to work out formation of postwar world organization that became the **United Nations**. U.S. forces landed on **Leyte**, Philippines, Oct. 20. Pres. **Roosevelt** elected to fourth term as president Nov. 7.

1945 **Yalta Conference** met in the Crimea, USSR, Feb. 4-11. Pres. Roosevelt, Prime Min. Churchill, and Soviet leader Joseph Stalin agreed that their 3 countries, plus France, would occupy Germany and that the Soviet Union would enter war against Japan. Marines landed on **Iwo Jima** Feb. 19, won control Mar. 16 after heavy casualties. U.S. forces invaded **Okinawa** Apr. 1, captured it June 21. Pres. **Roosevelt** died in Warm Springs, GA, Apr. 12; Vice Pres. **Harry S. Truman** became president. Germany surrendered May 7; May 8 proclaimed **V-E Day**. **First atomic bomb**, produced at Los Alamos, NM, exploded at Alamogordo, NM, July 16. Bomb dropped on **Hiroshima** Aug. 6, killing about 75,000; bomb dropped on **Nagasaki** Aug. 9, killing about 40,000. Japan agreed to surrender Aug. 14; formally surrendered Sept. 2. At **Potsdam Conference**, July 17-Aug. 2, leaders of U.S., USSR, and Britain agreed on disarmament of Germany, occupation zones, war crimes trials. **Empire State Building** struck accidentally by Army B-25 bomber, July 28, killing 14. U.S. forces entered **Korea** south of 38th parallel to displace Japanese Sept. 8. Gen. **Douglas MacArthur** took over supervision of Japan Sept. 9.

1946 **Steel strike** by 750,000 started Jan. 21, settled in 4 weeks. Strike by 400,000 **mine workers** began Apr. 1 (settled May 29); other industries (including rail, maritime) followed. Winston Churchill employed the phrase **"Iron Curtain"** in Mar. 5 speech at Westminster College in Fulton, MO. Atomic bomb tested off **Bikini Atoll** in Pacific, July 1. In all, U.S. conducted 23 nuclear tests between 1946 and **1958**. **Philippines** given independence by U.S. July 4. Mother Frances Xavier Cabrini **first American to be canonized**, July 7. Dr. Benjamin Spock's *Baby and Child Care* published as **baby boom** began. **John Hersey**'s *Hiroshima* published.

1947 Pres. Truman asked Congress for financial and military aid for Greece and Turkey to help combat Communist subversion **(Truman Doctrine)**, Mar. 12. Approved May 15. UN Security Council voted Apr. 2 to place under U.S. trusteeship the **Pacific islands** formerly mandated to Japan. **Jackie Robinson** joined Brooklyn Dodgers Apr. 11, breaking color barrier in major league baseball. The **Marshall Plan** for U.S. aid to European countries proposed by Sec. of State George C. Marshall June 5. Congress authorized some $12 bil in next 4 years. **Taft-Hartley Labor Act** restricting labor union power vetoed by Pres. Truman June 20; Congress overrode veto. Air Force Capt. **Chuck Yeager** broke sound barrier, Oct. 14, in X-1 rocket plane.

1948 **Organization of American States** founded Apr. 30 by 21 countries. USSR halted all surface traffic into **West Berlin** June 24; in response, U.S. and British troops launched an **airlift**. Soviet blockade halted May 12, **1949**; airlift ended Sept. 30. Pres. **Truman** elected Nov. 2, defeating Gov. Thomas E. Dewey in historic upset. **Alger Hiss** indicted Dec. 15 for perjury, after denying he had passed secret documents to Whittaker Chambers to go to a Communist spy ring. Convicted Jan. 21, **1950**. **Kinsey Report** on sexuality in the human male published.

1949 North Atlantic Treaty Organization **(NATO)** established Aug. 24 by U.S., Canada, and 10 Western European nations, agreeing that an armed attack against one would be considered an attack against all. Eleven leaders of U.S. **Communist Party** convicted Oct. 14 of advocating violent overthrow of U.S. government; sentenced to prison. Supreme Court upheld convictions, **1951**. Pres. Truman, Oct. 26, signed legislation raising **federal minimum wage** from 40¢ an hour to 75¢. **Arthur Miller**'s *Death of a Salesman* opened on Broadway.

1950 Masked bandits robbed **Brink's, Inc.**, Boston express office, Jan. 17 of $2.8 mil. Case solved **1956**; 8 sentenced to life. Pres. Truman authorized production of **H-bomb** Jan. 31. Sen. **Estes Kefauver** (D, TN) chaired Special Committee to Investigate Organized Crime in Interstate Commerce, organized May 3. Also known as Kefauver Committee.

North Korean forces **invaded South Korea** June 25. UN asked for troops to restore peace. Pres. Truman ordered Air Force and Navy to Korea June 27. Truman approved ground forces, air strikes against North Korea June 30. U.S. sent 35 military advisers to **South Vietnam** June 27 and agreed to aid anti-Communist government. U.S. forces landed at **Inchon**, South Korea, Sept. 15. UN forces took Pyongyang Oct. 20, reached China border Nov. 20; China sent troops across border Nov. 26. U.S. banned shipments Dec. 8 to **Communist China** and to Asiatic ports trading with it.

Army **seized all railroads** Aug. 27 on Truman's order to prevent general strike; returned to owners in **1952**. Charles Schulz's ***Peanuts*** comic strip first appeared in newspapers, Oct. 2. Two members of **Puerto Rican nationalist movement** tried to kill Pres. Truman Nov. 1. Variety show ***Your Show of Shows*** debuted on TV. David Riesman's ***The Lonely Crowd*** published.

1951 **22nd Amendment**, limiting presidential term of office, ratified Feb. 27. **Julius Rosenberg**, his wife, **Ethel Rosenberg**, and **Morton Sobell** found guilty Mar. 29 of conspiracy to commit wartime espionage. Rosenbergs received death penalty. Sobell sentenced to 30 years; released **1969**.

Pres. Truman removed Gen. **Douglas MacArthur** from Korea command Apr. 11 for unauthorized policy statements. **Korea cease-fire talks** began in July; lasted 2 years. Fighting ended July 27, **1953**.

Transcontinental TV began Sept. 4 with Pres. Truman's address at Japanese Peace Treaty Conference in San Francisco. **Japanese peace treaty** signed in San Francisco Sept. 8 by U.S., Japan, and 47 other nations. **J. D. Salinger**'s *Catcher in the Rye* published.

1952 Pres. Truman ordered **seizure of nation's steel mills** Apr. 8 to avert strike. Ruled illegal by Supreme Court June 2. **Peace contract** between West Germany, U.S., Great Britain, and France signed May 26. Last racial and ethnic barriers to naturalization removed, June 26-27, with passage of **Immigration and Naturalization Act of 1952**. **Puerto Rico** proclaimed commonwealth July 25, after referendum Mar. 3. Richard Nixon, as vice-pres. candidate, gave **"Checkers" speech**, so called because of sentimental reference to his dog Checkers, Sept. 23. **First hydrogen device explosion** Nov. 1 in Pacific. **Ralph Ellison**'s *Invisible Man* published.

1953 Federal jury in New York convicted 13 **Communist** leaders on conspiracy charges, Jan. 20. **Julius and Ethel Rosenberg** executed in Sing Sing Prison electric chair, Ossining, NY, June 19, for relaying nuclear secrets to Soviet Union. **Korean War armistice** signed July 27. California Gov. **Earl Warren** sworn in Oct. 5 as 14th chief justice of U.S. Supreme Court.

1954 *Nautilus*, **first atomic-powered submarine**, launched at Groton, CT, Jan. 21. Five members of Congress were wounded in the House Mar. 1 by 4 **Puerto Rican independence supporters** who fired at random from a spectators' gallery.

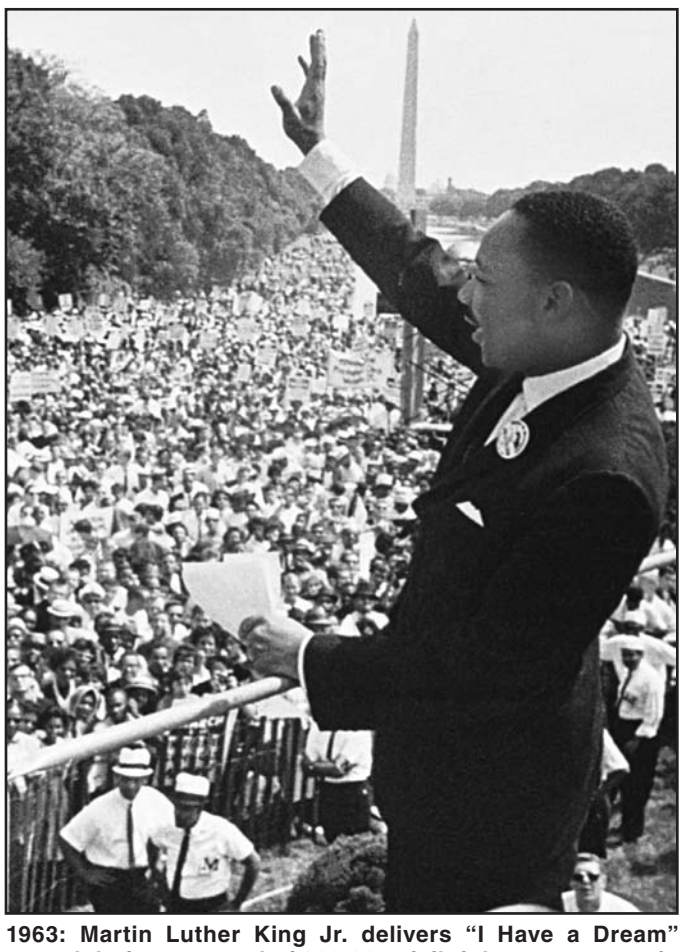
At televised Army-McCarthy hearings, Apr. 22-June 17, before a Senate subcommittee, Army officials accused Sen. **Joseph McCarthy** (R, WI) of seeking preferential treatment for a draftee, and McCarthy accused Army of hindering probe of Communist infiltration into Army. McCarthy was cleared in the hearings, but the Senate later voted to condemn him, 67-22, for his abuse of the Senate during hearings and debates.

Supreme Court ruled unanimously May 17 that racial segregation in public schools was unconstitutional, in ***Brown v. Board of Education of Topeka***. **Ernest Hemingway** won Nobel Prize in literature for *The Old Man and the Sea*.

1955 U.S. agreed Feb. 12 to help train **South Vietnamese army**. Supreme Court ordered "all deliberate speed" in **integration** of public schools, May 31. A summit meeting of leaders of **Big 4**—U.S., Britain, France, and USSR—took place July 18-23 in Geneva, Switzerland.

Rosa Parks refused Dec. 1 to give her seat to white man on bus in Montgomery, AL. Her arrest, detention, and conviction sparked boycott of bus system, organized by Rev. **Martin Luther King Jr.**, by Montgomery's black community, Dec. 5. Bus segregation ordinance declared unconstitutional by federal court in **1956**. Boycott ended Dec. 23 of that year.

America's 2 largest labor organizations merged Dec. 5, creating **AFL-CIO**. Russian-born U.S. citizen **Vladimir Nabokov**'s *Lolita* published.



1963: Martin Luther King Jr. delivers "I Have a Dream" speech before a crowd of 200,000 civil rights supporters in Washington, DC.



1963: Lyndon Johnson takes the presidential oath aboard *Air Force One*, hours after Pres. John F. Kennedy was assassinated.

1956 Massive resistance to **Supreme Court desegregation rulings** was called for Mar. 12 by 101 Southern congressmen. U.S. Supreme Court, Apr. 23, unanimously ruled against **racial segregation** on intrastate buses.

Federal-Aid Highway Act signed June 29, creating **interstate highway system**. **First transatlantic telephone cable** activated Sept. 25. On Oct. 8, in Game 5, Yankee right-hander Don Larsen pitched **only perfect World Series game**. **Eugene O'Neill**'s *Long Day's Journey into Night*, autobiographical play about dissolution of his family, opened in Nov. on Broadway.

1957 Congress approved **Civil Rights Act of 1957**, Apr. 29, first such bill since Reconstruction to protect voting rights. The U.S. surgeon general July 12 said studies showed "direct link" between cigarette **smoking and lung cancer**.

Arkansas Gov. Orval Faubus called National Guardsmen Sept. 4 to bar 9 black students from entering all-white high school in **Little Rock**. Faubus complied Sept. 21 with federal court order to remove Guardsmen, but local authorities ordered black students to withdraw. Pres. Eisenhower sent troops Sept. 24 to enforce court order. Pres. Eisenhower signed **Civil Rights Act** into law Sept. 9; provided for creation of Civil Rights Commission.

Jack Kerouac's *On the Road* published.

1958 Army launched **first U.S. Earth-orbiting satellite**, *Explorer I*, Jan. 31 from Cape Canaveral, FL; discovered Van Allen radiation belt. U.S. Marines sent to **Lebanon** to protect elected government from threatened overthrow July-Oct. Nuclear sub *Nautilus* made **first undersea crossing of North Pole** Aug. 5. Presidential aide **Sherman Adams** resigned Sept. 22 over scandal involving alleged improper gifts. **First domestic jet airline passenger service** in U.S. opened by National Airlines Dec. 10 between New York and Miami.

1959 **Alaska** admitted as 49th state, Jan. 3; **Hawaii** admitted as 50th, Aug. 21. Completion of **St. Lawrence Seaway** Apr. 25 allowed passage of oceangoing vessels between Atlantic Ocean and Great Lakes.

Vice Pres. Richard Nixon, on tour of USSR, held **"kitchen debate,"** July 24, with Soviet Prem. Nikita Khrushchev at U.S. exhibit in Moscow. Prem. **Khrushchev** paid unprecedented visit to U.S. Sept. 15-27; made transcontinental tour.

Pres. Eisenhower issued injunction Oct. 12, upheld and made effective by Supreme Court Nov. 7, ending **record 116-day steel strike**. In **quiz show scandal**, Columbia Univ. Prof. Charles Van Doren admitted to U.S. House subcommittee Nov. 2 that he had been coached before appearances on NBC-TV's *21* in **1956**; he had won $129,000. William Wyler's ***Ben-Hur*** released; the movie won a record 11 Academy Awards the following year.

1960 **Sit-ins** began Feb. 1 when 4 black college students in Greensboro, NC, refused to move from a Woolworth lunch counter after being denied service. By Sept. **1961**, more than 70,000 students, whites and blacks, had participated in sit-ins. Pres. Eisenhower signed **Civil Rights Act** May 6.

A U.S. **U-2 reconnaissance plane** was shot down in the Soviet Union May 1; pilot Gary Powers captured. The incident led to cancellation of a Paris summit conference. A **birth control pill** approved as safe for first time by Food and Drug Administration May 9. Vice Pres. **Richard Nixon** and Sen. **John F. Kennedy** faced each other Sept. 26 in first in series of televised debates. Kennedy defeated Nixon to win presidency, Nov. 8. U.S. announced Dec. 15 its backing of rightist group in **Laos**, which took power the next day. Alfred Hitchcock film ***Psycho*** released.

1961 U.S. severed diplomatic and consular relations with Cuba Jan. 3, after disputes over nationalizations of U.S. firms, U.S. military presence at Guantanamo base. U.S.-directed invasion of Cuba's **Bay of Pigs** Apr. 17 by Cuban exiles unsuccessfully attempted to overthrow the regime of Prem. Fidel Castro.

Peace Corps created by executive order, Mar. 1. **23rd Amendment**, giving DC citizens the right to vote in presidential elections, ratified Mar. 29. Comdr. Alan B. Shepard Jr. rocketed from Cape Canaveral, FL, in a Mercury capsule May 5, in **first U.S.-crewed suborbital space flight**.

"Freedom Rides" from Washington, DC, across Deep South were launched May 20 to protest segregation in interstate transportation.

1962 Pres. Kennedy said Feb. 14 that U.S. military advisers in **Vietnam** would fire if fired upon. Lt. Col. John H. Glenn Jr. became **first American in orbit** Feb. 20 when he circled the Earth 3 times in the Mercury capsule *Friendship 7*.

In ***Baker v. Carr***, Mar. 26, Supreme Court ruled that constitutional challenges to unequal distribution of voters among legislative districts could be resolved by federal courts. **James Meredith** became first black student at Univ. of Mississippi Oct. 1 after 3,000 troops put down riots.

A Soviet **offensive missile buildup** in Cuba was revealed Oct. 22 by Pres. Kennedy, who ordered naval and air quarantine on shipment of offensive military equipment to the island. He and Soviet Prem. Khrushchev agreed Oct. 28 on formula to end crisis. Kennedy announced Nov. 2 that missile bases in Cuba were being dismantled.

Rachel Carson's *Silent Spring* launched environmentalist movement.

1963 In ***Gideon v. Wainwright***, Mar. 18, Supreme Court ruled that all criminal defendants must have counsel.

March for civil rights began May 2 in Birmingham, AL, led to desegregation accord, which in turn sparked rioting and violence. Univ. of Alabama **desegregated** after Gov. George Wallace stepped aside when confronted by federally deployed National Guard troops June 11. Civil rights leader **Medgar Evers** assassinated June 12. On Aug. 28, 200,000 joined in **March on Washington** in support of black demands for equal rights led by Rev. Martin Luther King Jr.; highlight was King's **"I have a dream" speech**. Four black girls killed in bombing of **16th St. Baptist Church** in Birmingham, AL, Sept. 15.

Supreme Court ruled June 17 that laws requiring **recitation of Lord's Prayer or Bible verses** in public schools were unconstitutional. Pres. Kennedy, on Europe trip, addressed huge crowd in **West Berlin**, June 23. Limited **nuclear test-ban treaty** agreed upon July 25 by the U.S., the Soviet Union, and Britain.

South Vietnam Pres. **Ngo Dinh Diem** assassinated Nov. 2; U.S. had earlier withdrawn support. Pres. **Kennedy** shot and fatally wounded Nov. 22 as he rode in motorcade through downtown Dallas, TX. Vice Pres. **Lyndon B. Johnson** sworn in as president. **Lee Harvey Oswald** arrested and charged with murder but was himself shot and fatally wounded Nov. 24. Nightclub owner **Jack Ruby** convicted of Oswald's murder; Ruby died in **1967** while awaiting retrial following reversal of his conviction. **Betty Friedan**'s feminist work *The Feminine Mystique* published.

1964 **Panama** suspended relations with U.S. Jan. 9 after riots. U.S. offered Dec. 18 to negotiate new canal treaty. **The Beatles** arrived in U.S. for first time; appeared Feb. 9 on *The Ed Sullivan Show*. Supreme Court ruled Feb. 17 in *Wesberry v. Sanders* that **congressional districts** as near as practicable be equal in population so that "one man's vote in a Congressional election is to be worth as much as another's." U.S. reported May 27 it was sending military planes to **Laos**.

Three **civil rights workers** reported missing in Mississippi June 22; bodies found Aug. 4. Eighteen white men tried. On Oct. 20, **1967**, an all-white federal jury convicted 7 of conspiracy in the slayings. Omnibus **civil rights bill** signed by Pres. Johnson July 2, banning discrimination in voting, jobs, public accommodations.

Congress Aug. 7 passed **Tonkin Gulf Resolution**, authorizing presidential action in Vietnam, after North Vietnamese boats reportedly attacked 2 U.S. destroyers Aug. 2. Congress approved War on Poverty bill Aug. 11, providing for a domestic Peace Corps **(VISTA)**, **Job Corps**, and antipoverty funding. The **Warren Commission** released a report Sept. 27 concluding that Lee Harvey Oswald was solely responsible for the Kennedy assassination. Pres. **Johnson** elected to full term, Nov. 3, defeating Sen. **Barry Goldwater** (R, AZ) in landslide. **Verrazano-Narrows Bridge** opened in New York City Nov. 21, with world's longest suspension span.

1965 In State of the Union address Jan. 4, Pres. Johnson outlined plans for **"Great Society,"** program of civil rights, antipoverty, and health-care legislation. Pres. Johnson in Feb. ordered continuous bombing of **North Vietnam** below 20th parallel.

Malcolm X assassinated Feb. 21 at New York City rally. **March from Selma to Montgomery**, AL, Mar. 21-25, by Rev. Martin Luther King Jr. to demand federal protection of blacks' voting rights. New **Voting Rights Act**, which banned literacy tests and other voter qualification tests, signed Aug. 6. Arrest of black motorist by white police officers precipitated **Watts riot** in predominantly-black Los Angeles neighborhood Aug. 11-16. Riots resulted in 34 deaths and $200 mil in property damage.

Some 14,000 U.S. troops sent to **Dominican Republic** during civil war Apr. 28. All troops withdrawn by next year. Bill establishing **Medicare**, government health insurance program for elderly, signed by Pres. Johnson July 30.

National **immigration quota system** abolished Oct. 3. **Electric power failure** blacked out most of northeastern U.S., parts of 2 Canadian provinces the night of Nov. 9-10.

1966 U.S. forces began firing into **Cambodia** May 1. Bombing of **Hanoi** area of North Vietnam by U.S. planes began June 29. By Dec. 31, 385,300 U.S. troops were stationed in South Vietnam, plus 60,000 offshore and 33,000 in Thailand.

Supreme Court ruled June 13, in ***Miranda v. Arizona***, that suspects must be read their rights before police questioning. **Medicare** began July 1. In 96-minute shooting rampage, 25-year-old student **Charles Whitman** killed 15 and wounded 31 from atop a tower at the Univ. of Texas, Austin, Aug. 1; shot dead by police. Whitman had earlier killed his mother and wife.

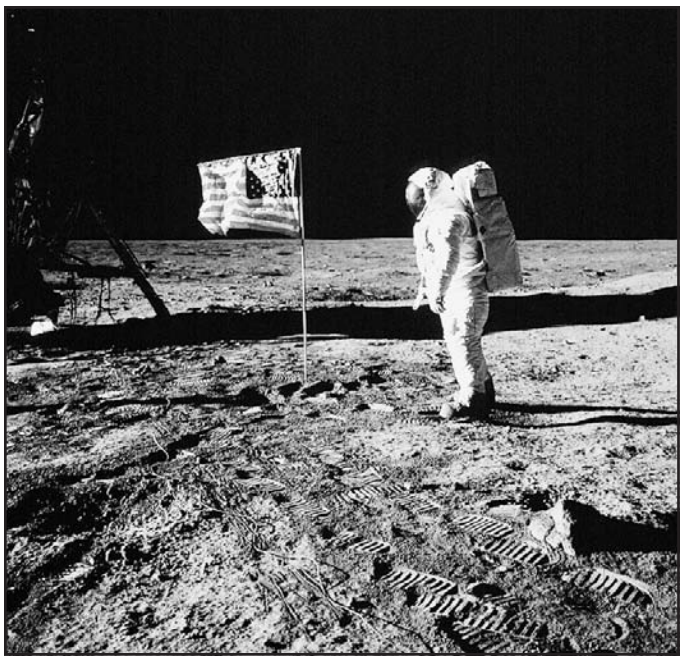
Dept. of Transportation created, Oct. 15. Edward Brooke (R, MA) elected Nov. 8 as **first black U.S. senator** in 85 years. Robert C. Weaver named secretary of newly created Dept. of Housing and Urban Development, becoming **first black cabinet member**.

1967 Green Bay Packers beat Kansas City Chiefs, 35-10, in **first Super Bowl**, Jan. 15, in Los Angeles. Three astronauts died Jan. 27 in ***Apollo 1*** fire on ground at Cape Canaveral, FL. **25th Amendment**, providing for presidential succession, ratified Feb. 10. Rep. **Adam Clayton Powell** (D, NY) was denied seat Mar. 1 because of charges he misused government funds. Seated following reelection in **1968** but was fined and stripped of seniority. Pres. **Johnson** and Soviet Prem. **Aleksei Kosygin** met June 23 and 25 at Glassboro State College in New Jersey; agreed not to let any crisis push them into war.

Riots erupted among residents of predominantly black **Newark**, NJ, July 12-17; 26 killed, 1,500 injured, more than 1,000 arrested. In **Detroit**, MI, July 23-30, 43 died, 2,000 injured; 5,000 left homeless by rioting, looting, and burning in city's black neighborhoods. **Thurgood Marshall** sworn in Oct. 2 as first black Supreme Court justice. **Antiwar march** on Washington, DC, Oct. 21-22, drew 50,000 participants. Carl B. Stokes (D, Cleveland) and Richard G. Hatcher (D, Gary, IN) elected **first black mayors** of major U.S. cities Nov. 7.

1968 In **"Tet offensive,"** Communist troops attacked several provincial capitals and other major cities, including Saigon, Jan. 30, but suffered heavy casualties. Pres. Johnson **curbed bombing** of North Vietnam Mar. 31. Peace talks began in Paris May 10. All bombing of North halted Oct. 31.

Rev. **Martin Luther King Jr.** assassinated Apr. 4 in Memphis, TN. **James Earl Ray**, an escaped convict, pleaded guilty to slaying, was sentenced to 99 years. Students at **Columbia Univ.**, Apr. 23-24, seized school buildings in protest



1969: *Apollo 11* lands on the lunar surface; Edwin "Buzz" Aldrin (pictured) and Neil Armstrong are first men to walk on the Moon's surface.

demonstrations. Sen. **Robert F. Kennedy** (D, NY) shot June 5 in Los Angeles after celebrating presidential primary victories, died June 6. **Sirhan Bishara Sirhan** convicted of murder, **1969**; death sentence commuted to life in prison, **1972**.

Vice Pres. Hubert Humphrey nominated for president at **Democratic National Convention** in Chicago, marked by clash between police and antiwar protestors, Aug. 26-29. Republican nominee **Richard Nixon** won presidency, defeating Humphrey in close race Nov. 5.

Apollo 8 **orbited moon** in 5-day mission, Dec. 21-27. **USS *Pueblo*** and 83-man crew seized in Sea of Japan Jan. 23 by North Koreans; 82 men released Dec. 22.

1969 Expanded 4-party **Vietnam peace talks** began Jan. 18. U.S. force peaked at 543,400 in Apr. Withdrawal started July 8. Pres. Nixon set Vietnamization policy Nov. 3. Earl Warren retired upon swearing in **Warren Burger**, June 23, as Supreme Court chief justice. In incident that marked birth of gay rights movement, police clashed with patrons of gay bar, the **Stonewall Inn**, in New York City June 27.

U.S. astronaut **Neil Armstrong**, commander of the *Apollo 11* mission, became the **first person to set foot on the moon**, July 20, followed by astronaut **Edwin "Buzz" Aldrin**. Astronaut **Michael Collins** remained aboard command module.

Woodstock rock music festival near Bethel, NY, drew 300,000-500,000 people, Aug. 15-18. **Anti-Vietnam War demonstrations** held in cities across the U.S., marking Vietnam Moratorium day, Oct. 15; on Nov. 15, some 250,000 marched in Washington, DC. Massacre of hundreds of civilians by U.S. troops at **My Lai**, South Vietnam, in **1968** reported Nov. 16. **Kurt Vonnegut Jr.**'s *Slaughterhouse Five* published. ***Sesame Street*** launched on public TV.

1970 A federal jury Feb. 18 found the **"Chicago 7"** antiwar activists innocent of conspiring to incite riots during **1968** Democratic National Convention. However, 5 were convicted of crossing state lines with intent to incite riots.

Three astronauts safely returned to Earth Apr. 17 after oxygen tank on ***Apollo 13*** ruptured. Lunar landing cancelled. Millions of Americans participated in antipollution demonstrations Apr. 22 to mark **first Earth Day**.

U.S. and South Vietnamese forces crossed **Cambodian** borders Apr. 30 to get at enemy bases. Four students killed May 4 at **Kent State Univ.** in Ohio by National Guardsmen during war protest. In protest at **Jackson State Univ.** in Mississippi, 2 killed when police fired on protesters.

Anna Mae Hayes of Army Nurse Corps and Elizabeth P. Hoisington, director of Women's Army Corps, became **first female generals** June 11. **Postal reform** measure signed Aug. 12 created an independent U.S. Postal Service. Pres. Nixon, Dec. 31, signed **clean air bill** calling for development of cleaner auto engine and national air quality standards for 10 major pollutants. Garry Trudeau's ***Doonesbury*** comic strip launched in 30 papers.



Note: Flag proportions have been standardized to fit page.



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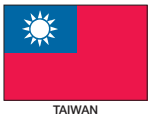
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SWAZILAND


SWEDEN


SWITZERLAND


SYRIA


TAIWAN


TAJIKISTAN


TANZANIA


THAILAND


TIMOR-LESTE
(EAST TIMOR)


TOGO

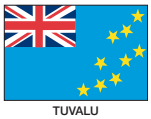

TONGA


TRINIDAD AND TOBAGO


TUNISIA


TURKEY


TURKMENISTAN


TUVALU


UGANDA


UKRAINE


UNITED ARAB EMIRATES


UNITED KINGDOM


UNITED STATES


URUGUAY


UZBEKISTAN


VANUATU


VATICAN CITY


VENEZUELA

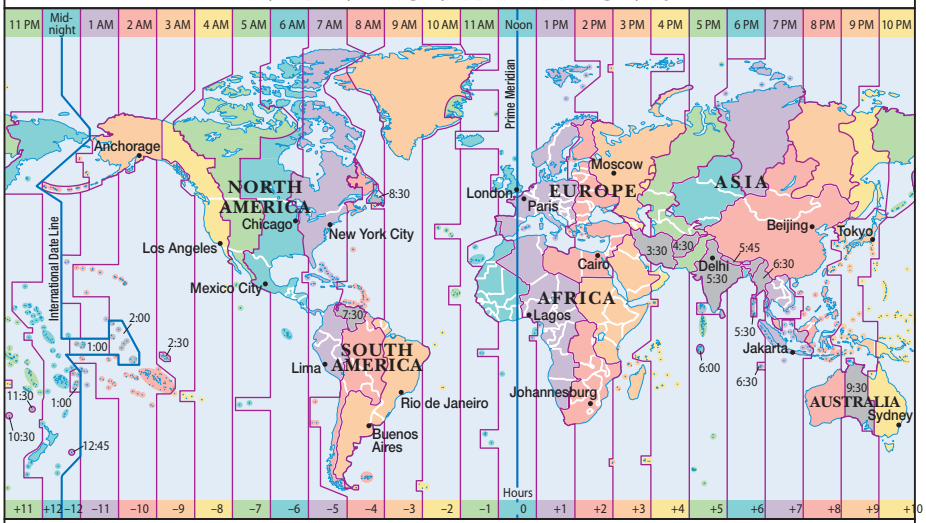

VIETNAM


YEMEN


ZAMBIA


ZIMBABWE

INTERNATIONAL TIME ZONES



The world is divided into 24 time zones, each 15° longitude wide. The longitudinal meridian passing through Greenwich, England, is the starting point, and is called the *prime meridian.* The 12th zone is divided by the 180th meridian (International Date Line). When the line is crossed going west, the date is advanced one day; when crossed going east, the date becomes a day earlier.

Note: Flag proportions have been standardized to fit page.


UNITED STATES
CANADA
MEXICO
Gulf of Mexico
PACIFIC OCEAN
ATLANTIC OCEAN
Vancouver
Victoria
Seattle
Tacoma
Portland
Spokane
Washington
Oregon
Idaho
Montana
North Dakota
Minnesota
Wisconsin
Michigan
South Dakota
Wyoming
Nebraska
Iowa
Illinois
Indiana
Ohio
Nevada
Utah
Colorado
Kansas
Missouri
Kentucky
West Virginia
Virginia
Pennsylvania
New York
Maine
California
Arizona
New Mexico
Oklahoma
Texas
Arkansas
Louisiana
Mississippi
Alabama
Georgia
Florida
Tennessee
North Carolina
South Carolina
Maryland
Delaware
New Jersey
Connecticut
Rhode Island
Massachusetts
Vermont
New Hampshire
Toronto
Ottawa
Montreal
Québec
Winnipeg
Regina
Thunder Bay
Sault Ste. Marie
Houghton
Duluth
Minneapolis
St. Paul
Chicago
Milwaukee
Detroit
Cleveland
Buffalo
Pittsburgh
Philadelphia
New York
Boston
Washington D.C.
Baltimore
Richmond
Norfolk
Charlotte
Atlanta
Birmingham
Jacksonville
Miami
Tampa
Orlando
New Orleans
Houston
Dallas
Fort Worth
San Antonio
Austin
El Paso
Albuquerque
Phoenix
Tucson
Las Vegas
Los Angeles
San Diego
San Francisco
Sacramento
Portland
Seattle
Denver
Kansas City
St. Louis
Omaha
Des Moines
Indianapolis
Cincinnati
Louisville
Nashville
Memphis
Oklahoma City
Wichita
Tulsa
Little Rock
Jackson
Mobile
Pensacola
Tallahassee
Savannah
Charleston
Raleigh
Greensboro
Richmond
Virginia Beach
Newport News
Norfolk
Hartford
Providence
Boston
New Haven
Albany
Syracuse
Rochester
Buffalo
Niagara Falls
Scranton
Allentown
Harrisburg
Pittsburgh
Youngstown
Akron
Toledo
Cleveland
Detroit
Flint
Saginaw
Grand Rapids
Lansing
Kalamazoo
Milwaukee
Madison
Green Bay
Appleton
Wausau
Eau Claire
La Crosse
Rochester
Mankato
Sioux Falls
Watertown
Pierre
Rapid City
Aberdeen
Mobridge
Bismarck
Fargo
Grand Forks
Williston
Minot
Bemidji
International Falls
Virginia
Hibbing
Superior
Marquette
Escanaba
Houghton
Sault Ste. Marie
Thunder Bay
Lake of the Woods
Lake Superior
Lake Michigan
Lake Huron
Lake Erie
Lake Ontario
Great Salt Lake
Salt Lake City
Provo
Ogden
Logan
Reno
Carson City
Las Vegas
Phoenix
Tucson
Albuquerque
Santa Fe
Amarillo
Lubbock
Abilene
Midland
Odessa
San Angelo
Fort Worth
Dallas
Shreveport
Monroe
Jackson
Meridian
Tuscaloosa
Montgomery
Columbus
Macon
Savannah
Brunswick
Valdosta
Albany
Dothan
Panama City
Gainesville
Daytona Beach
Orlando
Tampa
St. Petersburg
Sarasota
Fort Myers
West Palm Beach
Fort Lauderale
Miami
Key West
Cape Sable
Florida Keys
Straits of Florida
THE BAHAMAS
CUBA
Tropic of Cancer
Cape Hatteras
Cape Canaveral
Cape Cod
Mount Rainier 4392 m (14,410 ft)
Mount Olympus 2428 m (7,965 ft)
Mount Cleveland 3185 m (10,448 ft)
Mount Hood 3424 m (11,239 ft)
Mount Shasta 4317 m (14,162 ft)
Mount Elbert 4399 m (14,433 ft)
Mount Whitney 4418 m (14,494 ft)
Mount Katahdin 1606 m (5,267 ft)
Mount Washington 1917 m (6,288 ft)
Mount Mitchell 2037 m (6,684 ft)
Spruce Knob 1482 m (4,862 ft)
Borah Pk. 3859 m (12,662 ft)
Granite Pk. 3901 m (12,799 ft)
Gannett Pk. 4207 m (13,804 ft)
Harney Pk. 2207 m (7,242 ft)
Kings Pk. 7123 m (13,528 ft)
Pikes Pk. 4301 m (14,110 ft)
Wheeler Pk. 4011 m (13,161 ft)
Highest point in the U.S. outside Alaska
Lowest point in the U.S.
Death Valley
Great Salt Lake
Grand Canyon
Colorado Plateau
Great Basin
Rocky Mountains
Sierra Nevada
Cascade Range
Coast Ranges
Columbia Plateau
Great Plains
Black Hills
Edwards Plateau
Coastal Plain
Ozark Plateau
Appalachian Mountains
Adirondack Mts.
Mojave Desert
Chesapeake Bay
Long I.
Florida Keys
Lake Okeechobee
Cape Sable
Niagara Falls
Lake Champlain
Lake Ontario
Lake Erie
Lake Huron
Lake Michigan
Lake Superior
Lake of the Woods
Gulf of Mexico
Rio Grande
Colorado
Columbia
Missouri
Mississippi
Ohio
Arkansas
Red
Tennessee
Platte
Yukon
Saint John
Saint Lawrence
Chesapeake Bay
Long I.
ALASKA....See page 462
Hawai'i
Ni'ihau
Kaua'i
O'ahu
Honolulu
Moloka'i
Kahului
Lāna'i
Maui
Kaho'olawe
Mauna Kea 4205 m (13,796 ft)
Mauna Loa 4169 m (13,680 ft)
Kailua-Kona
Hilo
Nā'ālehu
PACIFIC OCEAN
0 100 Miles
0 150 Kilometers
0 250 500 Miles
0 250 500 750 Kilometers


RUSSIA
ASIA
NORWAY
Oslo
EUROPE
Svalbard (Nor.)
North Pole
Greenland Sea
Cape Morris Jesup
Nord
ARCTIC OCEAN
GREAT BRITAIN
Cape Columbia
Alert
Ittoqqortoormiit (Scoresbysund)
ICELAND
Reykjavik
Ellesmere I.
Chukchi Sea
Point Hope
Point Barrow
Barrow
Bering Sea
Bering Strait
Nome
SEWARD PENINSULA
Kotzebue
Qaanaaq (Thule)
GREENLAND (KALAALLIT NUNAAT) (Den.)
Denmark Strait
Arctic Circle
Queen Elizabeth Islands
Grise Fiord
Melville I.
Devon I.
Beaufort Sea
Baffin Bay
Tasiilaq
Alaska
BROOKS RANGE
Yukon
Fort Yukon
Highest point in North America
Mt. McKinley
6194 m (20,320 ft)
Sachs Harbour
Banks I.
Resolute
Arctic Bay
Pond Inlet
Bethel
Fairbanks
ALASKA RANGE
Inuvik
Fort McPherson
Victoria I.
Baffin Island
Davis Strait
Mt. Katmai
2047 m
(6,716 ft)
Kenai
Anchorage
Seward
Valdez
Dawson
YUKON PLATEAU
Mackenzie
Great Bear Lake
Cambridge Bay
Kugluktuk
Nuuk
Kodiak
Kodiak I.
Mt. Logan
5959 m
(19,551 ft)
Carmacks
Déline
Pangnirtung
Cape Farewell
Yukon Territory
Whitehorse
Northwest Territories
Nunavut
Repulse Bay
Iqaluit
Gulf of Alaska
Skagway
Juneau
Watson Lake
Fort Simpson
Yellowknife
Great Slave Lake
Southampton I.
Hudson Strait
Labrador Sea
Sitka
Alexander Archipelago
COAST MOUNTAINS
British Columbia
Hay River
Fort Smith
Rankin Inlet
UNGAVA PENINSULA
Hebron
CANADA
Uranium City
Arviat
Puvimituq
Ketchikan
Alberta
Hudson Bay
Labrador
Newfoundland & Labrador
Prince Rupert
Peace River
Dawson Creek
Peace
Lake Athabasca
Churchill
Schefferville
Happy Valley-Goose Bay
St. Anthony
Queen Charlotte Is.
Kitimat
Prince George
Grande Prairie
Ft. McMurray
Saskatchewan
La Loche
Manitoba
Belcher Is.
Labrador City
Newfoundland
ROCKY MOUNTAIN TRENCH
Fraser
Williams Lake
Athabasca
La Ronge
Thompson
Flin Flon
Quebec
St. John's
Port Hardy
Vancouver I.
Mt. Waddington
3994 m
(13,104 ft)
Jasper
Edmonton
Saskatchewan
Lake Winnipeg
James Bay
Sept-Îles
Corner Brook
Anticosti I.
St. Pierre & Miquelon Is. (Fr.)
Vancouver
Victoria
Prince Albert
Saskatoon
Moosonee
Chibougamau
Sydney
Cape Breton I.
Seattle
Tacoma
Calgary
Regina
CANADIAN SHIELD
Ontario
Chicoutimi
P.E.I.
New Brunswick
Charlottetown
Fredericton
Columbia
Brandon
Winnipeg
Spokane
Thunder Bay
Timmins
Val-d'Or
Québec


NORTH AMERICA AND THE CARIBBEAN
PACIFIC OCEAN
ATLANTIC OCEAN
Gulf of Mexico
Caribbean Sea
UNITED STATES
MEXICO
CUBA
Greater Antilles
SOUTH AMERICA
Tropic of Cancer
Tropic of Cancer
Bermuda (U.K.)
Straits of Florida
Lake Nicaragua
Gulf of California
Bay of Campeche
Rio Grande
Mississippi
Missouri
Colorado
Arkansas
Ohio
Platte
Great Salt Lake
Lake Michigan
L. Superior
L. Huron
L. Erie
L. Ontario
Cascade Mts.
Coast Ranges
Sierra Nevada
Great Basin
Colorado Plateau
Great Plains
Coastal Plain
Appalachian Mts.
Sierra Madre Occidental
Sierra Madre Oriental
Baja California
Yucatan Peninsula
Isla de la Juventud
Cayman Is. (U.K.)
Turks & Caicos Is. (U.K.)
Virgin Is. (U.K.&U.S.)
Puerto Rico (U.S.)
Anguilla (U.K.)
Guadeloupe (Fr.)
Martinique (Fr.)
Lesser Antilles
Mt. Rainier 4392 m (14,410 ft)
Mt. Whitney 4418 m (14,494 ft)
Death Valley Lowest point in North America
Pico de Orizaba 5747 m (18,855 ft)
Tajumulco 4220 m (13,845 ft)
Cerro Mohinora 3250 m (10,663 ft)
Mt. Mitchell 2037 m (6,684 ft)
Cape Sable
Cape Hatteras
False Cape
Point Conception
Cape Sable
Lake Nicaragua
Wash.
Oregon
California
Nevada
Idaho
Montana
Wyoming
Utah
Arizona
New Mexico
Colorado
N. Dakota
S. Dakota
Nebraska
Kansas
Oklahoma
Texas
Minnesota
Iowa
Missouri
Arkansas
Louisiana
Wisconsin
Illinois
Michigan
Indiana
Ohio
Kentucky
Tennessee
Mississippi
Alabama
Georgia
Florida
S. Carolina
N. Carolina
Virginia
W. Va.
Pa.
N.Y.
Maine
Vt.
N.H.
Mass.
R.I.
Conn.
N.J.
Del.
Md.
Ontario
Québec
Manitoba
Saskatchewan
Alberta
British Columbia
Nunavut
Yukon Territory
Northwest Territories
Newfoundland
Nova Scotia
Prince Edward Island
New Brunswick
Portland
Seattle
Spokane
Great Falls
Missoula
Billings
Butte
Boise
Pocatello
Eureka
Reno
Salt Lake City
Cheyenne
Casper
Denver
Colorado Springs
Albuquerque
Las Vegas
Los Angeles
San Diego
Tijuana
Mexicali
San Francisco
Sacramento
San Jose
Fresno
Santa Barbara
Phoenix
Tucson
Nogales
El Paso
Ciudad Juárez
Amarillo
Lubbock
Fort Worth
Dallas
Shreveport
Austin
San Antonio
Houston
Baton Rouge
New Orleans
Mobile
Jackson
Little Rock
Memphis
Nashville
Atlanta
Birmingham
Savannah
Charleston
Jacksonville
Miami
Tampa
St. Petersburg
Sarasota
Tallahassee
Freeport
Nassau
THE BAHAMAS
Havana
Santa Clara
Camagüey
Holguín
Guantánamo
Santiago de Cuba
Santiago
Port-au-Prince
HAITI
Santo Domingo
DOMINICAN REPUBLIC
Montego Bay
JAMAICA
Kingston
Cayman Is. (U.K.)
Ponce
San Juan
ST. KITTS & NEVIS
DOMINICA
BARBADOS
ST. LUCIA
ST. VINCENT & THE GRENADINES
GRENADA
TRINIDAD & TOBAGO
Port-of-Spain
ANTIGUA & BARBUDA
Caracas
VENEZUELA
Bogotá
COLOMBIA
BRAZIL
Panama City
PANAMA
San José
COSTA RICA
Managua
NICARAGUA
Tegucigalpa
HONDURAS
San Salvador
EL SALVADOR
Guatemala City
GUATEMALA
Belmopan
BELIZE
Villahermosa
Tuxtla Gutiérrez
Oaxaca
Acapulco
Veracruz
Campeche
Mérida
Cancún
Tampico
Monterrey
Matamoros
Brownsville
Nuevo Laredo
Ciudad Victoria
Torreón
Chihuahua
Ciudad Obregón
Hermosillo
La Paz
Culiacán
Durango
Mazatlán
Tepic
Guadalajara
León
San Luis Potosí
Colima
Mexico City
Puebla
Toluca
Pachuca
Querétaro
Morelia
Zacatecas
Aguascalientes
Guanajuato
San Luis Potosí
Monterrey
Saskatoon
Regina
Winnipeg
Brandon
Thunder Bay
Sudbury
Timmins
Val-d'Or
Sherbrooke
Montréal
Ottawa
Toronto
Hamilton
Rochester
Buffalo
Detroit
Cleveland
Pittsburgh
Columbus
Cincinnati
Louisville
Indianapolis
Chicago
Milwaukee
Madison
Minneapolis
St. Paul
Duluth
Fargo
Bismarck
Sioux Falls
Rapid City
Omaha
Des Moines
Kansas City
St. Louis
Wichita
Oklahoma City
Boston
New York
Philadelphia
Baltimore
Washington, D.C.
Richmond
Norfolk
Raleigh
Charlotte
Fredericton
Saint John
Halifax
Portland
Bangor
0 250 500 750 Miles
0 250 500 750 1,000 Kilometers
120°
110°
100°
90°
80°
70°
60°
50°
40°
30°
20°
10°
130°


Caribbean Sea
ATLANTIC OCEAN
PACIFIC OCEAN
CENTRAL AMERICA
HONDURAS
San Salvador
Tegucigalpa
EL SALVADOR
Managua
NICARAGUA
San Jose
COSTA RICA
Panama City
PANAMA
COLOMBIA
VENEZUELA
GUYANA
SURINAME
French Guiana (Fr.)
ECUADOR
PERU
BOLIVIA
PARAGUAY
BRAZIL
Aruba (Neth.)
Bonaire (Neth.)
Curaçao (Neth.)
Margarita I.
TRINIDAD AND TOBAGO
Port-of-Spain
Pico Cristóbal Colón 5775 m (18,947 ft)
Nevada del Huila 5750 m (18,865 ft)
Pico do Neblina 3014 m (9,889 ft)
Cotopaxi 5897 m (19,347 ft)
Chimborazo 6310 m (20,702 ft)
Nev. Huascarán 6768 m (22,205 ft)
Nev. Yerupaja 6635 m (21,709 ft)
Galapagos Islands (Ecuador)
Aguja Point
Lake Maracaibo
Lake Titicaca
Lake Poopo
Orinoco
Amazon
Negro
Madeira
Purus
Juruá
Tapajos
Xingu
Tocantins
São Francisco
Araguaia
Paraguay
Paraná
Pilcomayo
Guaporé
Beni
Mamoré
Grande
Equator
Caracas
Maracaibo
Barquisimeto
Valencia
Barcelona
Ciudad Guayana
Ciudad Bolívar
Georgetown
New Amsterdam
Paramaribo
Kourou
Cayenne
Boa Vista
Macapá
Manaus
Santarém
Belém
Marajó Island
São Luís
Parnaíba
Fortaleza
Natal
João Pessoa
Recife
Maceió
Aracaju
Salvador
Feira de Santana
Alagoinhas
Jequié
Ilhéus
Vitória da Conquista
Itabuna
Petrolina
Juàzeiro
Juàzeiro do Norte
Campina Grande
Mossoro
Imperatriz
Caxias
Teresina
Maraba
Altamura
Araguaina
Floriano
Itaituba
Porto Velho
Rio Branco
Guajará-Mirim
Ji-Paraná
Cruzeiro do Sul
Riberalta
Cobija
Iquitos
Leticia
Benjamin Constant
Yurimaguas
Pucallpa
Huánuco
Cerro de Pasco
Huáncayo
Ayacucho
Cuzco
Puerto Maldonado
Callao
Lima
Ica
Arequipa
Juliaca
Puno
La Paz
Cochabamba
Oruro
Santa Cruz
Sucre
Potosí
Camiri
Trinidad
Cuiabá
Rondonopolis
Brasília
Anápolis
Goiânia
Montes Claros
Jatai
Uberlândia
Teofilo Otoni
Governador Valadares
Campo Grande
Corumbá
São José do Rio Preto
Belo Horizonte
Pico da Bandeira 2890 m (9,482 ft)
Vitória
Presidente Prudente
Dourados
Bauru
Ribeirão Preto
Juiz de Fora
Campinas
Volta Redonda
Londrina
Sorocaba
Jundiaí
Niterói
São Paulo
Santos
Rio de Janeiro
Concepción
Coronel Oviedo
Asunción
Ponta
Tarija
Calama
Antofagasta
San Salvador de Jujuy
Salta
Iquique
Tacna
Arica
Valledupar
Cartagena
Barranquilla
Santa Marta
Sincelejo
Montería
Cúcuta
Bucaramanga
San Cristóbal
Barrancabermeja
Medellín
Manizales
Pereira
Armenia
Ibagué
Bogotá
Villavicencio
Buenaventura
Cali
Palmira
Neiva
Popayán
Pasto
Tumaco
Florencia
Esmeraldas
Quito
Portoviejo
Ambato
Riobamba
Guayaquil
Machalá
Tumbes
Cuenca
Loja
Talara
Sullana
Piura
Chiclayo
Cajamarca
Trujillo
Chimbote
Tunja
Puerto Ayacucho
San Fernando de Apure
Mérida
Valera
El Tigre
Maturín
Cumaná
Barcelona
Coro
Cabimas
Maracay
Yungas
Chaco
Altiplano
Atacama Desert
Andes
Llanos
Guiana Highlands
Amazon Basin
Selvas
Pampas
Brazilian Highlands
Mato Grosso Plateau
Pico da Bandeira 2890 m (9,482 ft)


SOUTH AMERICA
ANTARCTICA
Tropic of Capricorn
Antarctic Circle
CHILE
ARGENTINA
URUGUAY
PAMPAS
PATAGONIA
Santiago
Buenos Aires
Montevideo
Asunción
Córdoba
Santa Fe
Rosario
Mendoza
Concepción
Valparaíso
La Serena
Neuquén
Bahía Blanca
Mar del Plata
Punta Arenas
Ushuaia
Cape Horn
Strait of Magellan
Tierra Del Fuego
Falkland Islands (Islas Malvinas) (U.K.) (claimed by Arg.)
Stanley
South Georgia (U.K.)
Cerro Aconcagua 6960 m (22,834 ft)
Cerro Ojos del Salado 6880 m (22,572 ft)
Cerro Bonete 6872 m (22,546 ft)
Cerro Tupungato 6800 m (22,310 ft)
Highest point in South America
Valdés Peninsula
Lowest point in South America
San Matias Gulf
Gulf of San Jorge
Bahia Grande
Los Chonos Archipelago
Taitao Peninsula
Chiloé Island
San Ambrosio Island (Chile)
San Félix Island (Chile)
Juan Fernandez Islands (Chile)
Río de la Plata
Uruguay
Paraguay
Iguaçu Falls
Curitiba
Florianópolis
Porto Alegre
Caxias do Sul
Pelotas
Rio Grande
Montevideo
La Plata
Mar del Plata
Bahía Blanca
Punta Alta
Necochea
Comodoro Rivadavia
Cape Tres Puntas
Puerto Deseado
Rawson
Trelew
Esquel
Bariloche
Viedma
Neuquén
Temuco
Valdivia
Osorno
Puerto Montt
Talca
Chillán
Los Angeles
Talcahuano
Coihaique
Rancagua
San Bernardo
Viña del Mar
Rio Cuarto
San Rafael
Junin
Minas
Paysandú
Melo
Salto
Rivera
Uruguaiana
Santa Maria
Santo Tomé
Posadas
Encarnación
Corrientes
Resistencia
Formosa
Reconquista
La Rioja
Catamarca
Santiago del Estero
San Miguel de Tucumán
Copiapó
La Serena
Coronel Oviedo
Foz do Iguaçu
Ponta Grossa
Joinvile
Itajaí
Lajes
Passo Fundo
Santa Angelo
Caxias do Sul
Porto Alegre
Falkland Is. (U.K.)
South Shetland Is.
Elephant I.
Joinville I.
South Orkney Is.
Adelaide I.
Bellingshausen Sea
Thurston I.
Alexander I.
Siple I.
Weddell Sea
Ronne Ice Shelf
Berkner I.
Roosevelt I.
Ross Sea
Ross Ice Shelf
Scott I.
McMurdo Sound
Cape Adare
Balleny Is.
South Pole
Cape Norvegia
Larsen Ice Shelf
Larsen Pen.
Filchner-Ronne Ice Shelf
Amery Ice Shelf
Shackleton Ice Shelf
West Ice Shelf
South Magnetic Pole
Cape Poinsett
Thickest ice 5141m (16,867 ft)
Rise of Larsen-Holm Bay
WEST ANTARCTICA
EAST ANTARCTICA
TRANSANTARCTIC MTS.
ANTARCTIC PENINSULA
PALMER LAND
ELLSWORTH MOUNTAINS
MARIE BYRD LAND
QUEEN MAUD LAND
QUEEN MAUD MTS.
COATS LAND
ENDERBY LAND
MAC ROBERTSON LAND
KING HAAKON VII SEA
AMERICAN HIGHLAND
VICTORIA LAND
EDWARD VII PENINSULA
PENSACOLA MTS.
POLAR PLATEAU
0 250 500 750 Miles
0 250 500 750 1,000 Kilometers
0 800 Miles
0 800 Kilometers
PACIFIC OCEAN
ATLANTIC OCEAN
INDIAN OCEAN
SOUTHERN OCEAN


EUROPE
GREENLAND (KALAALLIT NUNAAT) (Denmark)
ICELAND
Ísafjörður
Akureyri
Keflavík
Reykjavik
Seydhisfjördhur
Arctic Circle
Norwegian Sea
Faroe Islands (Den.)
Torshavn
Shetland Islands (U.K.)
Orkney Islands
Thurso
Hebrides
Inverness
Scotland
Aberdeen
Dundee
Glasgow
Ayr
Edinburgh
Londonderry
Northern Ireland
Belfast
Galway
IRELAND
Dublin
Limerick
Waterford
Cork
UNITED KINGDOM
Newcastle
Liverpool
Leeds
Kingston upon Hull
Manchester
Sheffield
Birmingham
Coventry
Wales
Swansea
Cardiff
Bristol
England
London
Plymouth
Land's End
Portsmouth
ATLANTIC OCEAN
North Sea
English Channel
Channel Is. (U.K.)
Brest
Le Havre
Caen
Rouen
Rennes
Le Mans
Nantes
Loire
Orleans
Tours
Paris
Seine
Dover
NETHERLANDS
Amsterdam
The Hague
Rotterdam
Antwerp
Groningen
Bremen
Hamburg
Hannover
Bielefeld
Berlin
Brussels
Lille
BELGIUM
Liege
Essen
Cologne
Bonn
Wiesbaden
Luxembourg
LUXEMBOURG
Frankfurt
Mannheim
Saarbrucken
Nancy
Strasbourg
Stuttgart
Regensburg
Augsburg
Munich
Nürnberg
Prague
Pizen
CZECH REP.
Chemnitz
Liberec
Dresden
Leipzig
Kassel
Erfurt
Madgeburg
GERMANY
Lubeck
Kiel
Rostock
Szczecin
Bydgoszcz
Poznań
Wrocław
Walbrzych
Ostrava
Brno
POLAND
Gdańsk
Oder
Elbe
Rhine
Danub
Bratislava
Vienna
Linz
Salzburg
Innsbruck
Graz
Klagenfurt
AUSTRIA
Györ
HUNG
Zürich
Bern
Basel
SWITZERLAND
LIECHTENSTEIN
Geneva
Lyon
Dijon
Limoges
Clermont-Ferrand
Saint-Etienne
Bordeaux
FRANCE
Bay of Biscay
Garonne
Grenoble
Mt. Blanc 4807 m (15,771 ft)
Matterhorn 4505 m (14,690 ft)
Bergamo
Milan
Udine
Trieste
Ljubljana
SLOVENIA
Zagreb
Pécs
Verona
Venice
Rijeka
CROATIA
Banja Luka
BOS. & HERZ.
Sarajevo
Split
Ancona
SAN MARINO
Florence
Pisa
Perugia
Parma
Genoa
Bologna
Po
Rhone
Avignon
Montpellier
Toulouse
Marseille
Nice
Toulon
MONACO
Corsica (Fr.)
Ajaccio
Elba
Sassari
Sardinia (It.)
Cagliari
Tyrrhenian Sea
Adriatic Sea
Dubrovnik
VATICAN CITY
Rome
ITALY
Naples
Vesuvius 1277 m (4,190 ft)
Salerno
Foggia
Bari
Taranto
Ionian Sea
Messina
Etna 3369 m (11,053 ft)
Palermo
Reggio di Calabria
Sicily (It.)
Catania
Tunis
TUNISIA
MALTA
Valletta
Algiers
Rabat
AFRICA
MOROCCO
ALGERIA
Mediterranean Sea
Strait of Gibraltar
GIBRALTAR (U.K.)
Cape St. Vincent
PORTUGAL
Lisbon
Setubal
Tagus
Badajoz
Toledo
Madrid
Coimbra
Porto
Braga
Vigo
A Coruña
Gijón
Santander
Bilbao
Leon
Donostia-San Sebastián
Vitoria-Gasteiz
Pamplona
Valladolid
Duero
IBERIAN PENINSULA
Salamanca
Zaragoza
Ebro
PYRENEES
Pico de Aneto 3404 m (11,169 ft)
ANDORRA
Barcelona
Tarragona
Castellon de la Plana
Valencia
SPAIN
Cordoba
Seville
Cádiz
Málaga
Granada
Alicante
Murcia
Cartagena
Almeria
Palma de Mallorca
Majorca
Minorca
Balearic Is. (Sp.)
Jutland
Arhus
Esbjerg
Odense
DENMARK
Copenhagen
Malmö
Helsingborg
Öland
Bornholm (Den.)
Baltic
Halmstad
Växjö
Göteborg
Kristiansand
Stavanger
Haugesund
Drammen
Oslo
Skien
Karlstad
Örebro
Uppsala
Vänern
Vättern
Norrköping
Stockholm
Linköping
Jönköping
Borlänge
Sundsvall
Östersund
Trondheim
Molde
Ålesund
Bergen
NORWAY
SWEDEN
Namsos
Narvik
Bodo
0 250 500 Miles
0 250 500 750 Kilometers

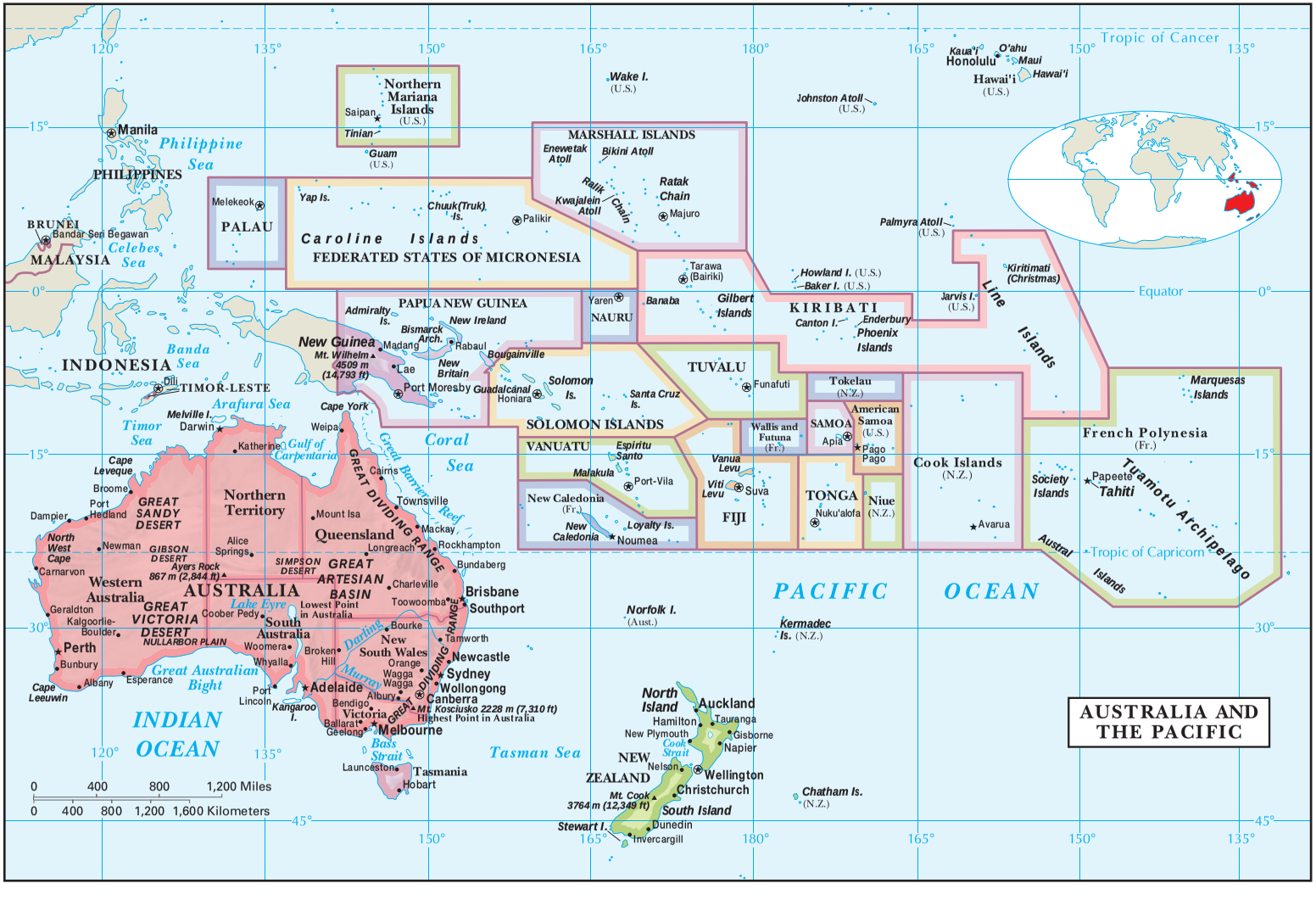

Barents Sea
North Cape
Hammerfest
Vardø
Tromso
Murmansk
Novaya Zemlya
Nar'yan-Mar
Pechora
Pechora
URAL MOUNTAINS
ASIA
RUSSIA
Ivalo
LAPLAND
Apatity
KOLA PENINSULA
Kiruna
Ukhta
White Sea
Rovaniemi
Arkhangel'sk
Luleå
Oulu
Belomorsk
Syktyvkar
Skellefteå
Dvina
Berezniki
Umeå
FINLAND
Gulf of Bothnia
Kotlas
Vaasa
Kuopio
Lake Onega
Perm'
Lake Ladoga
Petrozavodsk
Kirov
Jyvaskyla
Kama
Izhevsk
Ufa
Pori
Tampere
Lahti
Naberezhnye Chelny
Turku
Kotka
Helsinki
St. Petersburg
Cherepovets
Vologda
Gulf of Finland
Åland Is. (Fin.)
Yoshkar Ola
Kostroma
Rybinsk
Kazan
Tallinn
ESTONIA
Velikiy Novgorod
Yaroslavl'
Nizhniy Novgorod
Cheboksary
Sterlitamak
Tartu
Ivanovo
Pskov
Ul'yanovsk
Tver'
Orsk
Gotland (Swe.)
Vladimir
Saransk
Tol'yatti
Orenburg
Riga
Moscow
Samara
Liepaja
LATVIA
Ural
Daugavpils
Ryazan'
Penza
Klaipeda
Kaluga
Vitsyebsk
Smolensk
Tula
Volga
LITHUANIA
Kaunas
Vilnius
Orsha
EUROPEAN PLAIN
(RUSSIA)
Kaliningrad
Minsk
Mahilyow
Tambov
Saratov
Lipetsk
Bryansk
Hrodna
Babruysk
Voronezh
KAZAKHSTAN
Bialystok
BELARUS
Homyel'
Vistula
Warsaw
Brest
Pinsk
Kursk
Chernihiv
Belgorod
Sumy
Łódź
Volgograd
Radom
Lublin
Kharkiv
Kyiv (Kiev)
Poltava
Kielce
Zhytomyr
Cherkasy
Luhans'k
Astrakhan'
Katowice
Kraków
L'viv
UKRAINE
Dnieper
Horlivka
Don
Donets'k
Vinnytsia
Dnipropetrovs'k
Rostov-na-Donu
CARPATHIAN MOUNTAINS
SLOVAKIA
Banska Bystrica
Košice
Chernivtsi
Prut
Zaporizhzhia
Kryvyy Rih
Mariupol'
MOLDOVA
Miskolc
Budapest
Debrecen
Iasi
Chişinău
Mykolaiv
Caspian Sea
Oradea
Sea of Azov
Stavropol'
Cluj-Napoca
Odesa
Krasnodar
Groznyy
Makhachkala
Kecskemét
Szeged
CRIMEA PENINSULA
Mt. Elbrus 5642 m (18,510 ft) Highest point in Europe
Nal'chik
Vladikavkaz
ROMANIA
Galati
Brasov
Timişoara
Simferopol'
Sevastopol'
CAUCASUS MTS.
Ploieşti
Novi Sad
GEORGIA
Tbilisi
Baku
Bucharest
Constanța
Craiova
Black Sea
AZERBAIJAN
Belgrade
Danube
Ruse
SERBIA
Varna
ARMENIA
Yerevan
Pleven
Nis
BULGARIA
Sofia
Stara Zagora
Burgas
AZER.
MONTENEGRO
Pristina
KOSOVO
BALKAN
Podgorica
Plovdiv
Skopje
Shkoder
İstanbul
MACEDONIA
PENINSULA
Durres
Kavala
Tirana
ALBANIA
Thessaloniki
Olympus 2917 m (9,570 ft)
Dardanelles
Ankara
TURKEY
IRAN
Vlore
Larisa
Aegean Sea
Ioannina
Volos
Corfu
GREECE
ASIA
Patras
Athens
Corinth
Peloponnese
Cyclades
Kalamata
Sparta
SYRIA
Baghdad
IRAQ
Rhodes (Gr.)
Sea of Crete
Crete (Gr.)
Hania
Iraklion
Nicosia
CYPRUS
LEBANON
Beirut
Damascus
20°
30°
40°
50°
60°
70°


ATLANTIC OCEAN
ARCTIC OCEAN
EUROPE
RUSSIA
AFRICA
ASIA
IRELAND
UNITED KINGDOM
London
Madrid
SPAIN
PORT.
Paris
FRANCE
BEL.
NETH.
NORWAY
Oslo
SWEDEN
DEN.
Copenhagen
Stockholm
GERMANY
Berlin
FINLAND
Helsinki
SWITZ.
Baltic Sea
CZECH REP.
POLAND
EST.
AUS.
LAT.
ITALY
SLOV.
Warsaw
LITH.
Rome
CRO.
SLVK.
BELARUS
HUNG.
BOS. & HERZ.
MONT.
SERB.
KOS.
ROMANIA
MOL.
ALB.
MAC.
UKRAINE
Bucharest
Moscow
BUL.
Kyiv (Kiev)
GREECE
Athens
Mediterranean Sea
Black Sea
Izmir
Bursa
Ankara
Samsun
TURKEY
LIBYA
GEORGIA
Trabzon
Mt. Ararat (5137 m 16,853 ft)
Tbilisi
CYPRUS
Nicosia
Adana
Erzurum
Aleppo
Yerevan
ARMENIA
Latakia
Diyarbakir
Ganca
AZERBAIJAN
LEBANON
Beirut
Cairo
SYRIA
Euphrates
Tabriz
Baku
Tel Aviv-Yafo
Jerusalem
Amman
Damascus
Mosul
Caspian Sea
EGYPT
ISRAEL
Al Aqabah
JORDAN
Arbil
Lake Urmia
Kirkuk
Basht
IRAQ
Kermanshah
Tehran
Tabuk
Baghdad
Al Hillah
ZAGROS MOUNTAINS
Qom
Esfahan
Al Basrah
Hail
AN NAFUD
Buraydah
Kuwait City
KUWAIT
IRAN
Yazd
Shiraz
Kerman
Jeddah
Mecca
Riyadh
Manama
BAHRAIN
At Taif
Red Sea
SUDAN
Khartoum
SAUDI ARABIA
Doha
QATAR
Persian Gulf
Zahedan
Bandar-e Abbas
ERITREA
Asmara
Abha
UNITED ARAB EMIRATES
Abu Dhabi
RUB AL KHALI
Muscat
Sur
Gulf of Oman
OMAN
Ras al Hadd
Sanaa
YEMEN
Aden
Al Mukalla
Salalah
Addis Ababa
DJI.
ETHIOPIA
Gulf of Aden
SOMALIA
Socotra (Yemen)
Arabian Sea
Oral
Atyrau
Aktau
USTYURT PLATEAU
KAZAKHSTAN
URAL MOUNTAINS
Aral Sea
Zhezkazgan
Qyzylorda
Lake Balkhash
Taldykorgan
Almaty
Bishkek
KYRGYZSTAN
Tashkent
UZBEKISTAN
Turkmenbashy
Nukus
TURKMENISTAN
KYZYL KUM DESERT
Mt. Damavand 5671 m (18,606 ft)
Urganch
Ashgabat
Bukhara
KARA KUM DESERT
Amu Darya
Gorgan
Dushanbe
TAJIKISTAN
Ismail Samani Pk. 7498 m (24,599 ft)
Lenin Peak 7134 m (23,405 ft)
Kashi
TIEN SHAN
Tarim
TAKLIMAKAN DESERT
Shache
PAMIRS
HINDU KUSH
K2 8611 m (28,250 ft)
Mashhad
Herat
Mazar-e Sharif
AFGHANISTAN
Kabul
Helmand
Kandahar
Farah
Birjand
DASHT-E LUT
DASHT-E KAVIR
Peshawar
Islamabad
Rawalpindi
Srinagar
KUNLUN MTS.
PLATEAU OF TIBET
Mt. Everest 8849 m (29,035 ft)
Highest point in Asia
HIMALAYAS
Faisalabad
Lahore
Multan
Chandigarh
Quetta
PAKISTAN
Sukkur
Turbat
Indus
THAR DESERT
Delhi
New Delhi
Agra
Jaipur
Jodhpur
Hyderabad
Karachi
NEPAL
Lucknow
Kathmandu
BHUTAN
Thimphu
Kanpur
Varanasi
Patna
Allahabad
Ganges
Brahmaputra
Lhasa
Imphal
BANGLADESH
Asansol
Ranchi
Khulna
Dhaka
Chittagong
Akyab
MYANMAR (BURMA)
Pathein
Ahmadabad
INDIA
DECCAN PLATEAU
Nagpur
Raipur
Kolkata (Calcutta)
Cuttack
Visakhapatnam
Bay of Bengal
Mumbai (Bombay)
Pune
Solapur
Hyderabad
Vijayawada
Panaji
Hubballi (Hubli)
WESTERN GHATS
EASTERN GHATS
Bengaluru (Bangalore)
Mysuru (Mysore)
Chennai (Madras)
Laccadive Is. (India)
Andaman Is. (India)
Coimbatore
Kochi
Madurai
Thiruvananthapuram
Cape Comorin
Trincomalee
Colombo
SRI LANKA
Sri Jayewardenepura Kotte
Galle
Male
MALDIVES
Nicobar Is. (India)
INDIAN OCEAN
Equator
Severnaya Zemlya
Kara Sea
Dickson
Noril'sk
Yenisey
Vorkuta
Salekhard
Novyy Urengoy
Tura
Serov
Surgut
WEST SIBERIAN PLAIN
Nizhniy Tagil
Nizhnevartovsk
Yekaterinburg
Ob
Chelyabinsk
Tyumen
Tobol'sk
Kurgan
Tara
Magnitogorsk
Petropavlovsk
Kolpashevo
Lesosibirsk
Angara
Kansk
Tomsk
Achinsk
Krasnoyarsk
Omsk
Novosibirsk
Kemerovo
Novokuznetsk
Barnaul
Pavlodar
Astana
Tashtagol
SAYAN MTS.
Irtysh
Qaraghandy (Karaganda)
Semey (Semipalatinsk)
Oskemen (Ust' Kamenogorsk)
KAZAKH UPLAND
Balqash
Ayagoz
ALTAY MTS.
Dund-Us
Jengish Chokusu 7439 m (24,406 ft)
Yining
Ürümqi
Turpan Depression
SHAN TIEN
Kashi
Taraz
Qyzylorda
Aktau
Zhezkazgan
Qaraghandy (Karaganda)
Astana
Pavlodar
Barnaul
Tashtagol
Semey (Semipalatinsk)
Oskemen (Ust' Kamenogorsk)
Ayagoz
Balqash
Taldykorgan
Almaty
Jengish Chokusu 7439 m (24,406 ft)
Yining
Ürümqi
Turpan Depression
Kashi
Shache
Tarim
TAKLIMAKAN DESERT
Dushanbe
Lenin Peak 7134 m (23,405 ft)
Ismail Samani Pk. 7498 m (24,599 ft)
PAMIRS
HINDU KUSH
K2 8611 m (28,250 ft)
Bishkek
KYRGYZSTAN
Tashkent
Bukhara
Amu Darya
KARA KUM DESERT
KYZYL KUM DESERT
Mt. Damavand 5671 m (18,606 ft)
Urganch
Ashgabat
Turkmenbashy
Nukus
UZBEKISTAN
TURKMENISTAN
Gorgan
Basht
Kermanshah
ZAGROS MOUNTAINS
Tehran
Qom
DASHT-E KAVIR
DASHT-E LUT
Mashhad
Esfahan
Yazd
Shiraz
Kerman
Zahedan
Bandar-e Abbas
Persian Gulf
Gulf of Oman
Ras al Hadd
Muscat
Sur
OMAN
Buraydah
Kuwait City
KUWAIT
Al Basrah
Hail
AN NAFUD
Al Hillah
Baghdad
IRAQ
Euphrates
Tigris
Mosul
Arbil
Lake Urmia
Kirkuk
Tabriz
Baku
Caspian Sea
Yerevan
ARMENIA
Ganca
AZERBAIJAN
Aleppo
Diyarbakir
Latakia
LEBANON
Beirut
Cairo
SYRIA
Damascus
Tel Aviv-Yafo
Jerusalem
Amman
ISRAEL
Al Aqabah
JORDAN
Tabuk
EGYPT
AFRICA
INSET AREA
Red Sea
Izmir
Bursa
Ankara
Samsun
TURKEY
Trabzon
Mt. Ararat (5137 m 16,853 ft)
Tbilisi
GEORGIA
CAUCASUS MTS.
Black Sea
Mediterranean Sea
LIBYA
CYPRUS
Nicosia
Adana
Erzurum
Aleppo
Yerevan
ARMENIA
Latakia
Diyarbakir
Ganca
AZERBAIJAN
LEBANON
Beirut
Cairo
SYRIA
Euphrates
Tabriz
Baku
Tel Aviv-Yafo
Jerusalem
Amman
Damascus
Mosul
Caspian Sea
EGYPT
ISRAEL
Al Aqabah
JORDAN
Arbil
Lake Urmia
Kirkuk
Basht
IRAQ
Kermanshah
Tehran
Tabuk
Baghdad
Al Hillah
ZAGROS MOUNTAINS
Qom
Esfahan
Al Basrah
Hail
AN NAFUD
Buraydah
Kuwait City
KUWAIT
IRAN
Yazd
Shiraz
Kerman
Jeddah
Mecca
Riyadh
Manama
BAHRAIN
At Taif
Red Sea
SUDAN
Khartoum
SAUDI ARABIA
Doha
QATAR
Persian Gulf
Zahedan
Bandar-e Abbas
ERITREA
Asmara
Abha
UNITED ARAB EMIRATES
Abu Dhabi
RUB AL KHALI
Muscat
Sur
Gulf of Oman
OMAN
Ras al Hadd
Sanaa
YEMEN
Aden
Al Mukalla
Salalah
Addis Ababa
DJI.
ETHIOPIA
Gulf of Aden
SOMALIA
Socotra (Yemen)
Arabian Sea
TURKEY
Adana
Antalya
Mersin
Sanliurfa
Al Hasakah
Ar Raqqah
Mosul
Antakya
Aleppo
Latakia
Euphrates
CYPRUS
Nicosia
Hamah
Abu Kamal
Bayji
Limassol
Hims
SYRIA
Tadmur
LEBANON
Beirut
Damascus
Ar Ramadi
Mediterranean Sea
Haifa
The West Bank currently occupied by Israel. Permanent status to be determined.
WEST BANK
IRAQ
ISRAEL
Tel Aviv-Yafo
Port Said
Jerusalem
Amman
Jericho
SYRIAN DESERT
GAZA STRIP
Tanta
Suez Canal
JORDAN
SAUDI ARABIA
Cairo
Suez
Maan
Giza
Elat
AN NAFUD
EGYPT
Al Aqabah
SINAI
Gulf of Suez
Gulf of Aqaba
Nile
Tabuk
0 250 Miles
0 250 Kilometers


NORTH AMERICA
ASIA
PACIFIC OCEAN
AUSTRALIA
CHINA
MONGOLIA
JAPAN
N. KOREA
S. KOREA
TAIWAN
PHILIPPINES
VIETNAM
LAOS
CAMBODIA
THAILAND
MALAYSIA
BRUNEI
SINGAPORE
INDONESIA
TIMOR LESTE
PALAU
PAPUA NEW GUINEA
Bering Strait
Chukchi Sea
Bering Sea
East Siberian Sea
Laptev Sea
New Siberian Islands
Wrangel I.
Sea of Okhotsk
Sea of Japan (East Sea)
Yellow Sea
East China Sea
South China Sea
Philippine Sea
Celebes Sea
Java Sea
Banda Sea
Arafura Sea
Timor Sea
Sulu Sea
Gulf of Thailand
Andaman Sea
Tropic of Cancer
Equator
Kamchatka Pen.
Kolyma Mountains
Verkhoyansk Ra.
Stanovoy Range
Greater Khingan Range
Gobi Desert
Mongolian Plateau
Sakhalin
Kuril Is.
(Russia)
Hokkaido
Honshu
Shikoku
Kyushu
Ryukyu Is.
(Japan)
Okinawa
Luzon
Mindanao
Borneo
Sumatra
Java
Celebes
Halmahera
New Guinea
Timor
Sumba
Bali
Lombok
Sumbawa
Flores
Ceram
Moluccas
Taiwan
Hainan
(China)
Natuna Is.
Northern Mariana Islands
(U.S.)
Shiveluch
3168 m (10,771 ft)
Klyuchevskaya
4750 m (15,584 ft)
Karymsky
1536 m (5,039 ft)
Alaid
2339 m
(7,674 ft)
Sarycheva
1496 m
(4,908 ft)
Tiatia
1819 m
(5,968 ft)
Mt. Fuji 3776 m (12,388 ft)
0 500 1,000 Miles
0 500 1,000 1,500 Kilometers


ATLANTIC OCEAN
EUROPE
ASIA
AFRICA
Paris
FRANCE
GER.
CZECH REP.
SLOVAKIA
SWITZ.
AUSTRIA
HUNGARY
SLOVE.
CRO.
BOS. & HER.
SERB.
ROMANIA
Bucharest
UKRAINE
MOLDOVA
RUSSIA
KAZAKHSTAN
UZBEKISTAN
Aral Sea
Caspian Sea
Black Sea
ITALY
Rome
MONT.
KOS.
MAC.
ALBANIA
BULGARIA
GEORGIA
ARMENIA
AZERBAIJAN
TURKMENISTAN
Ankara
TURKEY
GREECE
Athens
Madrid
SPAIN
PORTUGAL
Lisbon
Azores (Portugal)
Strait of Gibraltar
Ceuta (Sp.)
Tangier
Tetouan
Melilla (Sp.)
Algiers
Chlef
Oran
Bejaia
Skikda
Annaba
Cape Bon
Tunis
Constantine
Batna
Tebessa
Sfax
MALTA
Mediterranean Sea
CYPRUS
SYRIA
LEBANON
Baghdad
IRAQ
IRAN
Damascus
ISRAEL
Jerusalem
JORDAN
Port Said
Suez Canal
Alexandria
Tanta
Giza
Cairo
Suez
SINAI
KUWAIT
Persian Gulf
BAHRAIN
QATAR
SAUDI ARABIA
Riyadh
Tehran
Sidi Bel Abbes
Oujda
Biskra
Djebel Chelia 2326 m (7,631 ft)
Kenitra
Rabat
Fès
Casablanca
Khouribga
Safi
Marrakech
Jebel Toubkal 4165 m (13,665 ft)
Agadir
MOROCCO
ATLAS MTS.
Béchar
Ghardaïa
Touggourt
TUNISIA
Tripoli
Misratah
Gulf of Sidra
Benghazi
Al Bayda
Tobruk
Siwa
Al Fayyum
Asyut
Luxor
Aswan
Al Kharjah
EGYPT
Nile
Lake Nasser
NUBIAN DESERT
Port Sudan
Marawi
Atbara
Omdurman
Khartoum
Kassala
Massawa
Asmara
ERITREA
YEMEN
Sanaa
Al Qadarif
Wad Medani
Al Fashir
Al Ubayyid
Kusti
Gonder
Mekele
Assab
DJIBOUTI
Djibouti
Berbera
Gulf of Aden
Cape Guardafui
Lake Tana
Bahir Dar
Dese
Dire Dawa
Hargeysa
ETHIOPIAN HIGHLANDS
SOMALI PENINSULA
Addis Ababa
Nazret
Harer
Jima
ETHIOPIA
RIFT VALLEY
Lowest point in Africa
Guna 4231 m (13,881 ft)
Ras Dashan 4620 m (15,158 ft)
Batu 4307 m (14,131 ft)
Kelafo
Beledweyne
Juba
Waw
Rumbek
Malakal
Blue Nile
White Nile
SUDAN
Nyala
MARRA MTS.
CHAD
N'Djamena
Abéché
Lake Chad
Faya-Largeau
Emi Koussi 3415 m (11,204 ft)
TIBESTI
LIBYAN DESERT
LIBYA
Waha
Al Jawf
Ghadamis
Tamanrasset
Mt. Tahat 2918 m (9,573 ft)
AHAGGAR
I-n-Amenas
I-n-Salah
ALGERIA
Laayoune
Western Sahara
(Occ. by Morocco)
Canary Islands (Sp.)
Santa Cruz
Las Palmas
Funchal
Madeira Islands (Portugal)
Tropic of Cancer
Nouâdhibou
Atâr
MAURITANIA
Nouakchott
Saint-Louis
Senegal
Dakar
SENEGAL
Thies
Kaolack
Kayes
Banjul
THE GAMBIA
Zinguinchor
Bissau
GUINEA-BISSAU
Labe
GUINEA
Conakry
Freetown
SIERRA LEONE
Monrovia
LIBERIA
Cape Palmas
Kaédi
Ayoûn el Atroûs
Tombouctou
Gao
MALI
Agadez
AÏR
NIGER
Mt. Greboun 1944 m (6,378 ft)
Mopti
Ségou
Bamako
Sikasso
Kankan
Bobo-Dioulasso
BURKINA FASO
Ouagadougou
Niamey
Maradi
Zinder
Sokoto
Katsina
Kano
Zaria
Maiduguri
Kumo
Maroua
Garoua
Sarh
Moundou
Abéché
Korhogo
CÔTE D'IVOIRE
Yamoussoukro
Abidjan
Bouaké
Tamale
GHANA
TOGO
Accra
Takoradi
Lomé
Ogbomoso
Ibadan
Osogbo
Ilorin
Minna
Abuja
NIGERIA
Benue
Makurdi
Enugu
Onitsha
Aba
Port Harcourt
Bafoussam
CAMEROON
Douala
Yaoundé
Malabo
Bouar
Bambari
CENTRAL AFRICAN REPUBLIC
Bangui
Abeokuta
Lagos
Porto-Novo
Kumasi
Lake Volta
BENIN
Cape Palmas


AFRICA
ATLANTIC OCEAN
INDIAN OCEAN
Gulf of Guinea
Equator
Tropic of Capricorn
0°
10°
20°
30°
40°
50°
EQUATORIAL GUINEA
Malabo
Bioko
Yaounde
Douala
SÃO TOMÉ AND PRÍNCIPE
Sao Tome
Principe
São Tomé
Tome
Libreville
GABON
Port-Gentil
Lambarene
Franceville
Annobón
(Eq. Guinea)
Ascension
(U.K.)
REPUBLIC OF THE CONGO
Brazzaville
Loubomo
Pointe-Noire
Cabinda
(Angola)
Matadi
Boma
Mbanza-Ngungu
Kinshasa
Bandundu
Kikwit
Ilebo
Tshikapa
Kananga
Mbuji-Mayi
Kabinda
Mwene-Ditu
Kamina
Kabalo
Kalemie
Luanda
Malanje
ANGOLA
Lobito
Benguela
Huambo
Luena
Namibe
Lubango
Menongue
KATANGA
PLATEAU
Kolwezi
Likasi
Lubumbashi
Chingola
Kitwe
Ndola
Luanshya
Chipata
Lilongwe
ZAMBIA
Kabwe
Lusaka
Livingstone
Victoria Falls
Tete
Harare
ZIMBABWE
Gweru
Mutare
Chimoio
MOZAMBIQUE
Beira
Quelimane
Nampula
Blantyre
Nacala
MALAWI
Lake Nyasa
Songea
Mtwara
Dar es Salaam
Morogoro
Iringa
Mbeya
Mbala
Tanga
Zanzibar
Pemba I.
Zanzibar I.
Dodoma
TANZANIA
Tabora
Kigoma
BURUNDI
Bujumbura
RWANDA
Kigali
Bukavu
Goma
Kindu
Mwanza
Kisangani
Mbandaka
Buta
Isiro
Bumba
Ubangi
Congo
Kasai
Lake Albert
Lake Victoria
Lake Tanganyika
Lake Mweru
Lake Kariba
Lake Turkana
Boyoma Falls
Margherita Pk. 5119 m (16,795 ft)
UGANDA
Kampala
Jinja
Eldoret
Nairobi
Nakuru
Kisumu
KENYA
Meru
Mt. Kenya 5199 m (17,058 ft)
Machakos
Kismaayo
HIGHLANDS
SERENGETI PLAIN
Kilimanjaro 5895 m (19,340 ft) (Highest point in Africa)
Mt. Meru 4565 m (14,979 ft)
Arusha
Mombasa
RIFT VALLEY
SOMALIA
Mogadishu
Marka
Baldea
Marsabit
SEYCHELLES
COMOROS
Moroni
Mayotte (Fr.)
Antsiranana
Mahajanga
Antsirabe
Toamasina
Antananarivo
MADAGASCAR
Fianarantsoa
Toliara
Tolanaro
Channel
Mozambique
NAMIBIA
Windhoek
Walvis Bay
NAMIB DESERT
Lüderitz
Keetmanshoop
Grootfontein
Tsumeb
Rundu
Cuvene
Rucana Falls
Okavango
BOTSWANA
Francistown
Bulawayo
Serowe
Palapye
Musina
Thohoyandou
KALAHARI DESERT
Gaborone
Inhambane
Xai-Xai
Limpopo
Pretoria (Tshwane)
Mmabatho
Johannesburg
Mbabane
Lobamba
SWAZILAND
Maputo
Klerksdorp
Vereeniging
Welkom
Newcastle
Augrabies Falls
Upington
Kimberley
Bloemfontein
Maseru
LESOTHO
Pietermaritzburg
Durban
Springbok
SOUTH AFRICA
Middelburg
Umtata
Bisho
East London
Port Elizabeth
Cape Town
Cape of Good Hope
Worcester
Cape Agulhas
Orange
Vaal
0 250 500 750 Miles
0 250 500 750 1,000 Kilometers


AUSTRALIA AND THE PACIFIC
Tropic of Cancer
Equator
Tropic of Capricorn
PACIFIC OCEAN
INDIAN OCEAN
Tasman Sea
Coral Sea
Philippine Sea
Celebes Sea
Banda Sea
Arafura Sea
Timor Sea
Great Australian Bight
Gulf of Carpentaria
Great Barrier Reef
Cook Strait
Bass Strait
Line Islands
Austral Islands
Tuamotu Archipelago
Marquesas Islands
Society Islands
French Polynesia (Fr.)
Cook Islands (N.Z.)
Tahiti
Papeete
Honolulu
Hawai'i
Kaua'i
O'ahu
Maui
Wake I. (U.S.)
Johnston Atoll (U.S.)
Palmyra Atoll (U.S.)
Howland I. (U.S.)
Baker I. (U.S.)
Jarvis I. (U.S.)
Kiritimati (Christmas)
Northern Mariana Islands (U.S.)
Saipan
Tinian
Guam (U.S.)
MARSHALL ISLANDS
Enewetak Atoll
Bikini Atoll
Ralik Chain
Ratak Chain
Kwajalein Atoll
Majuro
Yap Is.
Chuuk (Truk) Is.
Palikir
Caroline Islands
FEDERATED STATES OF MICRONESIA
Melekeok
PALAU
Manila
PHILIPPINES
BRUNEI
Bandar Seri Begawan
MALAYSIA
INDONESIA
Dili
TIMOR-LESTE
Tarawa (Bairiki)
Gilbert Islands
KIRIBATI
Canton I.
Enderbury
Phoenix Islands
Banaba
Yaren
NAURU
PAPUA NEW GUINEA
Admiralty Is.
Bismarck Arch.
New Ireland
New Guinea
Mt. Wilhelm 4509 m (14,793 ft)
Madang
Rabaul
Lae
New Britain
Port Moresby
Bougainville
Guadalcanal
Honiara
Solomon Is.
Santa Cruz Is.
SOLOMON ISLANDS
VANUATU
Espiritu Santo
Malakula
Port-Vila
TUVALU
Funafuti
Tokelau (N.Z.)
Wallis and Futuna (Fr.)
SAMOA
Apia
American Samoa (U.S.)
Pago Pago
Vanua Levu
Viti Levu
Suva
FIJI
TONGA
Nuku'alofa
Niue (N.Z.)
Avarua
New Caledonia (Fr.)
New Caledonia
Noumea
Loyalty Is.
Norfolk I. (Aust.)
Kermadec Is. (N.Z.)
Chatham Is. (N.Z.)
Northern Territory
Darwin
Melville I.
Katherine
Weipa
Cape York
Cape Leveque
Broome
Port Hedland
Dampier
GREAT SANDY DESERT
North West Cape
Carnarvon
Newman
GIBSON DESERT
Ayers Rock 867 m (2,844 ft)
Alice Springs
Mount Isa
Cairns
Townsville
Mackay
Rockhampton
Bundaberg
Brisbane
Southport
Queensland
Longreach
SIMPSON DESERT
GREAT ARTESIAN BASIN
Charleville
Toowoomba
GREAT DIVIDING RANGE
Western Australia
AUSTRALIA
Lake Eyre
Lowest Point in Australia
Coober Pedy
South Australia
GREAT VICTORIA DESERT
NULLARBOR PLAIN
Geraldton
Kalgoorlie-Boulder
Perth
Bunbury
Albany
Esperance
Cape Leeuwin
Woomera
Broken Hill
Whyalla
Port Lincoln
Kangaroo I.
Adelaide
Murray
Darling
Bourke
Tamworth
New South Wales
Orange
Wagga Wagga
Albury
Newcastle
Sydney
Wollongong
Canberra
Mt. Kosciusko 2228 m (7,310 ft)
Highest Point in Australia
Victoria
Bendigo
Ballarat
Geelong
Melbourne
Launceston
Tasmania
Hobart
North Island
Auckland
Hamilton
Tauranga
New Plymouth
Gisborne
Napier
Nelson
Wellington
NEW ZEALAND
Christchurch
Mt. Cook 3764 m (12,349 ft)
South Island
Dunedin
Invercargill
Stewart I.
0 400 800 1,200 Miles
0 400 800 1,200 1,600 Kilometers

1971 **Charles Manson** and 3 of his cult followers found guilty Jan. 25 of first-degree murder in **1969** slaying of actress Sharon Tate and 6 others. A court-martial jury Mar. 29 convicted Lt. William L. Calley Jr. in murder of 22 South Vietnamese at **My Lai** on Mar. 16, **1968**. He was sentenced to life in prison Mar. 31, later reduced to 20 years.

Pres. Nixon, Apr. 14, relaxed 20-year **trade embargo with China**. **26th Amendment**, lowering the minimum voting age to 18 in all elections, ratified June 30. *New York Times* began publishing June 13 classified **Pentagon Papers**, secret Pentagon study on U.S. involvement in Vietnam. Supreme Court June 30 upheld, 6-3, right of the *Times* and *Washington Post* to publish the documents. Pres. Nixon, Aug. 15, instituted 90-day **wage and price freeze**.

U.S. bombers initiated massive 5-day strike Dec. 26 in North Vietnam in retaliation for alleged violations of agreements reached prior to **1968** bombing halt.

1972 Pres. Nixon arrived in **Beijing** Feb. 21 for 8-day visit to China, in "journey for peace." Joint communiqué released Feb. 27 called for increased Sino-U.S. contacts. Senate, Mar. 22, approved **Equal Rights Amendment** banning discrimination on basis of sex; sent measure to states for ratification.

North Vietnamese forces launched biggest attacks in 4 years across the demilitarized zone Mar. 30. The U.S. responded Apr. 15 with **resumption of bombing** of Hanoi and Haiphong after 4-year lull. Pres. Nixon announced May 8 the mining of North Vietnam ports. Last U.S. combat troops left Aug. 11.

Gov. **George C. Wallace** (D, AL), campaigning for president at Laurel, MD, shopping center May 15, shot and seriously wounded. **Arthur Bremer** convicted Aug. 4, sentenced to 63 years for shooting Wallace and 3 others. In **first visit of U.S. president to Moscow**, Pres. Nixon arrived May 22 for summit talks with Kremlin leaders that culminated in landmark strategic arms pact **(SALT I)**. Five men arrested June 17 for breaking into Democratic National Committee offices in **Watergate** office complex in Washington, DC. Supreme Court in *Furman v. Georgia* June 29 ruled **capital punishment** as currently practiced was unconstitutional.

Mark Spitz won 7 gold medals in world record times at the Munich Olympics in Aug.-Sept. **Billie Jean King** defeated Bobby Riggs in 3 straight sets in tennis's nationally televised "Battle of the Sexes," Sept. 20.

Pres. **Nixon** reelected Nov. 7 in landslide, carrying 49 states to defeat Sen. George McGovern (D, SD). Three astronauts, part of ***Apollo 17***, made 6th and last lunar landing on Dec. 11. Full-scale **bombing of North Vietnam** resumed after Paris peace negotiations reached impasse Dec. 18. ***The Godfather***, directed by Francis Ford Coppola and based on a Mario Puzo novel, is released.

1973 In ***Roe v. Wade***, Supreme Court ruled, 7-2, Jan. 22, fetus not a person with constitutional rights and that right to privacy protected woman's decision to have abortion; states may not ban abortions during first 3 months of pregnancy and may regulate, but not ban, abortions during second trimester.

Four-party **Vietnam peace pacts** signed in Paris Jan. 27, and North Vietnam released some 590 U.S. prisoners by Apr. 1. Last U.S. troops left Mar. 29. **End of military draft** announced Jan. 27. Pres. Nixon announced, Apr. 30, resignation of top Nixon aides H. R. Haldeman and John D. Ehrlichman and firing of White House Counsel John W. Dean III as a consequence of the widening **Watergate** scandal. John Dean told Senate hearings June 25 that Pres. Nixon, his staff and campaign aides, and Justice Dept. had conspired to cover up Watergate facts. The U.S. officially ceased bombing in **Cambodia** at midnight Aug. 14 in accord with June congressional action.

Vice Pres. **Spiro Agnew**, Oct. 10, resigned and pleaded no contest to charge of tax evasion on payments made to him by contractors when he was Maryland governor. **Gerald R. Ford**, Oct. 12, became **first appointed vice president** under 25th Amendment; sworn in Dec. 6. The **"Saturday Night Massacre"** occurred Oct. 20, when Pres. Nixon ordered Attorney Gen. Elliot Richardson to fire Watergate special prosecutor Archibald Cox, who had sought handover of Nixon's subpoenaed White House tapes. Richardson refused to comply and resigned; Dep. Attorney Gen. William Ruckelshaus refused and was fired. Solicitor Gen. Robert Bork, as acting attorney gen., then fired Cox. Nixon administration named Leon Jaworski, Nov. 1, to succeed Cox.



1974: Pres. Richard Nixon resigns from office and departs the White House.

Skylab, **first U.S. space station**, launched May 14. **Secretariat** became first Triple Crown winner since **Citation** in **1948** by winning Belmont Stakes June 9 in record time. Total **ban on oil exports** to U.S. imposed by Arab oil-producing nations Oct. 19-21 after outbreak of an Arab-Israeli war. Ban was lifted Mar. 18, **1974**. Congress overrode Nov. 7 Pres. Nixon's veto of **war powers bill**, which curbed president's power to commit forces to hostilities abroad without congressional approval.

1974 On Apr. 8, **Hank Aaron** of the Atlanta Braves hit his 715th career home run to break Babe Ruth's record.

House Judiciary Committee opened **impeachment** hearings May 9 against Pres. Nixon. John D. Ehrlichman and 3 **White House "plumbers"** found guilty July 12 of conspiring to violate the civil rights of the psychiatrist of Pentagon Papers leaker Daniel Ellsberg by breaking into psychiatrist's office. Supreme Court ruled, 8-0, July 24 that Pres. Nixon had to turn over 64 **tapes of White House conversations**. House Judiciary Committee, in televised hearings July 24-30, recommended 3 **articles of impeachment** against Pres. Nixon, involving conspiracy to obstruct justice in Watergate cover-up, abuses of power, and defiance of committee subpoenas. The House voted Aug. 20, 412-3, to accept the committee report, which included the impeachment articles.

Pres. Nixon announced his **resignation**, Aug. 8, and stepped down the next day. His support in Congress had begun to collapse Aug. 5, after release of tapes appearing to implicate him in Watergate cover-up. Vice Pres. **Ford** sworn in Aug. 9 as 38th U.S. president. Pres. Ford, Aug. 20, nominated **Nelson Rockefeller** to be vice president; Rockefeller sworn in Dec. 10. Pres. Ford, Sept. 8, issued **pardon to Nixon** for any federal crimes he committed while president.

New York Times published article Dec. 22 on CIA engagement in illegal domestic surveillance. Release of article led to revelation of **"family jewels,"** compilation of CIA reports on activities it engaged in between 1950s and 1970s possibly "outside the legislative charter of this Agency."

1975 Former Atty. Gen. John Mitchell and ex-presidential advisers H. R. Haldeman and John Ehrlichman found guilty Jan. 1 of **Watergate cover-up** charges. Mitchell released **1979**, last of 25 jailed over scandal to leave prison.

U.S. launched **evacuation from Saigon** of Americans and some South Vietnamese Apr. 29 as Communist forces completed takeover of South Vietnam; **South Vietnamese** government officially surrendered Apr. 30. U.S. merchant ship ***Mayaguez*** and its crew of 39 seized by Cambodian forces in Gulf of Siam May 12. In rescue operation, U.S. Marines attacked Tang Island, planes bombed air base; Cambodia surrendered ship and crew. Congress voted $405 mil for **South Vietnam refugees** May 16; 140,000 flown to U.S.

Publishing heiress **Patricia (Patty) Hearst**, kidnapped Feb. 5, **1974**, by Symbionese Liberation Army, captured in San Francisco Sept. 18 with other militants. She was convicted Mar. 20, **1976**, of bank robbery.

1976 In **"right to die"** case, New Jersey Supreme Court, Mar. 31, allowed comatose Karen Ann Quinlan to be removed from respirator. She survived, dying in nursing home in **1985**. U.S. Supreme Court reinstated **death penalty**, July 2, subject to conditions.

U.S. celebrated **200th anniversary of independence** July 4 with festivals, parades, and New York City's Operation Sail, gathering of tall ships from around the world. **"Legionnaire's disease"** killed 29 people who attended American Legion convention July 21-24 in Philadelphia.

Viking II set down on Utopia Plains of **Mars** Sept. 3, following successful landing by *Viking I* on Chryse Plains, July 20. Two U.S. officers on routine mission near DMZ slain by **North Korean soldiers** Aug. 18; North Korea stated "regret," Aug. 21.

1977 Convicted murderer Gary Gilmore executed by Utah firing squad Jan. 17; **first use of capital punishment** in U.S. since **1967**. Pres. Jimmy Carter Jan. 21 pardoned most **Vietnam War draft evaders**.

Natural gas shortage caused by severe winter weather led Congress Feb. 2 to approve emergency gas bill temporarily authorizing reallocation of interstate gas from surplus areas to shortage areas. Pres. Carter signed act Aug. 4 creating new cabinet-level **energy department**.

FBI Dec. 7 released 40,000 pages of previously secret files relating to **Kennedy assassination**. George Lucas's first ***Star Wars*** film produced.

1978 Senate voted, Apr. 18 to turn over **Panama Canal** to Panama on Dec. 31, **1999**; Mar. 16 vote had given approval to treaty guaranteeing area's neutrality after the year 2000. Californians, June 6, approved **Proposition 13**, state constitutional amendment slashing property taxes.

Supreme Court, June 28, ruled that special admissions program—under which set number of places reserved for minorities—violated civil rights act, which forbids anyone from being excluded from federally funded program because of race, in ***Regents of the Univ. of California v. Bakke***.

Egyptian Pres. **Anwar al-Sadat** and Israeli Prem. **Menachem Begin** reached accord on "framework for peace," Sept. 17, after Pres. Carter-mediated talks at Camp David. New York's Chemical Bank Dec. 20 initiated industry-wide move to raise **lending rate** to near-record 11.75%.

1979 Partial meltdown released radioactive material Mar. 28 at nuclear reactor on **Three Mile Island** near Middletown, PA. American Airlines DC-10 **jetliner crashed** May 25 after takeoff from Chicago, killing 275 people.

In speech July 15, Pres. Carter spoke of national "crisis of confidence" and outlined proposed 10-year $140 bil program to **reduce dependence on foreign oil**. Militant followers of **Ayatollah Khomeini** took hostage some 90 people, including 66 Americans, Nov. 4 at **American embassy in Tehran**, Iran. Khomeini demanded return of former Shah Muhammad Reza Pahlavi, who was undergoing medical treatment in New York City.

1980 Pres. Carter announced, Jan. 4, economic sanctions against USSR in retaliation for Soviet invasion of Afghanistan. At Carter's request, U.S. Olympic Committee voted, Apr. 12, against U.S. participation in **Moscow Summer Olympics**. **Lake Placid**, NY, hosted **Winter Olympics** for second time. The U.S. hockey team defeated heavily favored Russian team Feb. 22 en route to winning gold medal in what was called a "miracle on ice."

Eight Americans killed and 5 wounded, Apr. 24, in **ill-fated hostage rescue attempt** held by Iranian militants. **Mt. St. Helens**, in Washington state, erupted May 18. The blast, with others May 25 and June 12, left 57 dead. In sweeping victory, Nov. 4, **Ronald Reagan** (R) was elected 40th president, defeating incumbent Pres. Carter. Republicans gained control of Senate. Former Beatle **John Lennon** was shot and killed by Mark David Chapman, Dec. 8, in New York City.

1981 Minutes after Reagan's inauguration Jan. 20, 52 **American hostages in Iran** were freed after being held for 444 days. Pres. **Reagan** was shot and seriously wounded, Mar. 30, in Washington, DC; also seriously wounded were a Secret Service agent, a policeman, and Press Sec. **James Brady**. **John W. Hinckley Jr.** arrested, found not guilty by reason of insanity in **1982**, committed to mental institution.



1981: Pres. Ronald Reagan nominates Sandra Day O'Connor to be the first woman to serve on the Supreme Court.

World's **first reusable spacecraft**, space shuttle ***Columbia***, sent into space, Apr. 12. It performed its first operational mission in **1982**. Members of the **Professional Air Traffic Controllers Organization**, Aug. 3, went on strike. Most defied a back-to-work order and were dismissed by Pres. Reagan Aug. 5 for violating federal law. Pres. Reagan signed into law Aug. 13 **tax-cut legislation**, expected to save taxpayers $750 bil over 5 years, largest tax cut to date. The Senate confirmed, Sept. 21, appointment of **Sandra Day O'Connor** as **first female Supreme Court justice**.

1982 The 13-year-old Justice Dept. lawsuit against **AT&T** was settled Jan. 8. AT&T agreed to give up 22 Bell System companies and was allowed to expand. **Equal Rights Amendment**, sent to states in **1972**, defeated when deadline for ratification passed June 30 with only 35 of 38 necessary number of states supporting amendment. Centers for Disease Control, July 16, reported evidence of growing **AIDS epidemic**, responsible for 184 deaths in country since first reported in U.S. in June **1981**. The economy showed signs of recovery from **recession** that began in mid-**1981**, as Dow Jones Industrial Average hit 1,016.93 Oct. 13, its highest level in 18 months.

NFL strike ended Nov. 16 after 57 days when players and team owners settled with $1.6 bil pact. Retired dentist Dr. Barney B. Clark became **first permanent artificial heart recipient**, Dec. 2; he died Mar. 23, **1983**. The House, Dec. 16, cited EPA administrator Anne Gorsuch for contempt after refusing to produce certain documents concerning the **Superfund**, law that established fund for cleanup and authorized prosecution of hazardous waste dumpers. Singer **Michael Jackson**'s ***Thriller*** released; eventually considered best-selling album of all time.

1983 Pres. Reagan, Jan. 3, declared Times Beach, MO, a federal disaster area because of toxic **dioxin** in soil, prompting evacuation of residents and town's closure. Harold Washington elected Apr. 12 as **first black mayor of Chicago**. On Apr. 20, Pres. Reagan signed compromise bipartisan bill designed to save **Social Security** from bankruptcy.

Sally Ride became **first American woman to travel in space**, June 18, when space shuttle *Challenger* launched from Cape Canaveral, FL. On Sept. 1, **South Korean passenger jet** infringing on Soviet air space and apparently misidentified was shot down; 269 people, including 61 Americans, killed.

On Oct. 23, 241 U.S. Marines and sailors were killed when TNT-laden **suicide truck bomb** blew up Marine barracks at Beirut International Airport in Lebanon. U.S. troops, with small force from 6 Caribbean nations, invaded **Grenada** Oct. 25. After a few days, Grenadian militia and Cuban "construction workers" were overcome, U.S. citizens were evacuated, and the Marxist regime was deposed.

1984 Seven regional companies took over **local telephone service** from AT&T, Jan. 1. On space shuttle *Challenger*'s fourth trip, launched Feb. 3, two astronauts became **first humans to fly free of a spacecraft**. On May 7, Vietnam War veterans reached out-of-court settlement with 7 chemical companies in class-action suit over the herbicide **Agent Orange**.

Former Vice Pres. **Walter Mondale** won Democratic presidential nomination, June 6. He chose Rep. **Geraldine Ferraro** (D, NY) as vice presidential candidate, first woman to be

nominated for position by major political party. Pres. Reagan signed bill July 17 cutting federal transportation aid to states that keep their **drinking age** under 21. Pres. **Reagan** reelected Nov. 6 in Republican landslide, carrying 49 states for record 525 electoral votes. **Bernhard Goetz** shot and wounded 4 allegedly menacing teenage boys on NYC subway train, Dec. 22; later acquitted of major charges but was successfully sued.

1985 Visiting Germany, Pres. Reagan, May 5, laid wreath at Bergen-Belsen Nazi concentration camp site and also at military cemetery at **Bitburg**, where some Nazis were buried. Philadelphia police bombed a rowhouse occupied by **MOVE radical group**, May 13; 11 killed, and fire damaged 2 blocks of houses. On June 14, **terrorists seized TWA jet** after takeoff from Athens, Greece, with 153 passengers and crew. Thirty-nine Americans held hostage for 17 days; 1 U.S. service member killed.

Reversing an earlier decision to market "new" Coke, the **Coca-Cola Co.** said, July 10, it would resume marketing soda made under its original "Classic" formula. **Live Aid** rock concert broadcast around the world July 13, raised $70 mil for famine relief in Ethiopia.

On Oct. 7, 4 **Palestinian hijackers** seized Italian cruise ship *Achille Lauro* in the Mediterranean for 2 days. One American, Leon Klinghoffer, killed. For first time in 6 years U.S. and Soviet leaders met at **summit in Geneva**, Nov. 19-20. **General Electric** agreed Dec. 11 to buy RCA Corp. for $6.28 bil, largest merger to date outside oil industry.

1986 The U.S. officially observed **Martin Luther King Jr. Day** for first time Jan. 20. Space shuttle ***Challenger*** exploded 73 seconds after liftoff, Jan. 28, killing 6 astronauts and Teacher in Space Project participant Christa McAuliffe. In 4-day extravaganza in July, the U.S. celebrated 100th birthday of the **Statue of Liberty**.

The Senate confirmed, Sept. 17, Reagan's nomination of **William Rehnquist** as chief justice and **Antonin Scalia** as associate justice of Supreme Court. Congress completed action Oct. 2 overriding a veto to place economic sanctions on **South Africa**. Lebanese newspaper first broke news of **Iran-Contra scandal** Nov. 3, involving secret U.S. sale of arms to Iran and diversion of some of the proceeds to support the Contras, a right-wing, anti-Communist insurgent movement in Nicaragua.

Ivan Boesky, accused of **insider trading**, agreed Nov. 14 to pay $100 million in fines and illicit profits and to plead guilty to an unspecified criminal count. Largest penalty to date imposed for insider trading. Robert Penn Warren named America's **first poet laureate** by the Library of Congress.

1987 Pres. Reagan produced nation's **first trillion-dollar budget**, Jan. 5. **Dow Jones** closed above 2,000 for first time, Jan. 8. The FDA approved, Mar. 20, AZT—first drug shown to be effective in **fight against AIDS**. Nearly 1.4 mil **illegal aliens** met May 4 deadline for applying for amnesty under new federal policy.

Joint public hearings by Senate and House committees investigating **Iran-Contra affair** opened May 5. Lt. Col. **Oliver North**, former National Security Council staff member, said he had believed all his activities were authorized by his superiors. Hearings end Aug. 3. Pres. Reagan, Aug. 12, denied knowing of diversion of funds to contras.

An **Iraqi missile** killed 37 sailors on the USS *Stark* in the Persian Gulf, May 17. Iraq called it an accident. The 200th anniversary of **U.S. Constitution** signing was observed, Sept. 17, in Philadelphia and around the U.S. **Stock market crashed**, Oct. 19, with the Dow Jones plummeting a record 508 points to 1,738, ending bull market that began mid-**1982**. Pres. Reagan and Soviet leader Mikhail Gorbachev Dec. 8, signed **pact to dismantle** all 1,752 U.S. and 859 Soviet missiles with 300- to 3,400-mi range.

1988 In report issued May 16, Surgeon Gen. C. Everett Koop declared **cigarettes addictive**. Congress approved, in June, greatest expansion yet of **Medicare** benefits, to protect the elderly and disabled against "catastrophic" medical costs. The act was repealed in November **1989**. Much of U.S. suffered **worst drought** in over 50 years; by late June half the nation's agricultural counties had been declared disaster areas.

A missile, fired from U.S. Navy warship *Vincennes* in the Persian Gulf, mistakenly struck a commercial **Iranian airliner**, July 3, killing all 290 aboard. **George H. W. Bush** (R) elected 41st U.S. president, Nov. 8, decisively defeating Massachusetts Gov. **Michael Dukakis** (D). **Pan Am Flight 103** exploded and crashed, due to terrorist bomb, into town of Lockerbie, Scotland, Dec. 21, killing all 259 people aboard and 11 on the ground. **Drexel Burnham Lambert** agreed, Dec. 21, to plead guilty to insider trading and other violations, and pay penalties of $650 mil, largest such settlement ever.

1989 Major oil spill occurred when ***Exxon Valdez*** struck Bligh Reef in Alaska's Prince William Sound, Mar. 24. Oliver North convicted, May 4, on charges related to **Iran-Contra scandal**. Conviction thrown out on appeal in **1991** because of his immunized testimony. A measure to rescue **savings and loan industry** signed into law, Aug. 9, by Pres. Bush, launching largest federal rescue to date. Army Gen. **Colin Powell** became **first black chairman of Joint Chiefs of Staff** after being nominated Aug. 10 by Pres. Bush.

Baseball legend **Pete Rose** banned from game for life Aug. 24 for involvement with gamblers. **Hurricane Hugo** swept through the Caribbean and the Carolinas Sept. 10-22, causing at least 86 deaths and $7 bil in damage in the Carolinas alone. Just before a World Series game, Oct. 17, an **earthquake** struck the San Francisco Bay area, causing 63 deaths. L. Douglas Wilder (D) declared governor of Virginia Nov. 27, **first elected black governor** in U.S. history. U.S. troops invaded Panama, Dec. 20, overthrowing the government of **Manuel Noriega**. Noriega, wanted by U.S. authorities on drug charges, surrendered Jan. 3, **1990**.

1990 Junk bond financier **Michael Milken** pleaded guilty to fraud-related charges, Apr. 14; agreed to pay $500 mil in restitution; sentenced Nov. 21 to 10 years in prison. Justice **William Brennan** announced, July 20, resignation from U.S. Supreme Court. His replacement, Judge **David Souter**, confirmed Sept. 27. Pres. Bush signed **Americans with Disabilities Act**, barring discrimination against the disabled, July 26. **Operation Desert Shield** forces left for Saudi Arabia Aug. 7, to defend that country following invasion of **Kuwait** by Iraq, Aug. 2. Pres. Bush Nov. 15 signed into law **Clean Air Act**, strengthened version of Clean Air Act of 1970; focus on urban pollution, cancer-causing emissions from industrial sources.

1991 The U.S. and its allies defeated Iraq in **Persian Gulf War** and liberated Kuwait, which Iraq had invaded the previous year. On Jan. 17, the allies launched a devastating air attack. In rapid ground war starting Feb. 24, which lasted just 100 hours, U.S.-led forces killed or captured thousands of Iraqi soldiers and sent the rest into retreat before Pres. Bush ordered cease-fire Feb. 27.

An 8-month **recession** showed signs of having ended in Mar. The **Dow Jones** Industrial Average closed above 3,000 for first time, Apr. 17. House Speaker announced Oct. 3 closure of **House Bank** by end of year after revelations that House members had written 8,331 bad checks worth hundreds of thousands of dollars. Justice **Thurgood Marshall**, first black to sit on U.S. Supreme Court, announced, June 17, plans to retire. Senate approved, Oct. 15, nomination of **Clarence Thomas** to replace Marshall, despite allegations of sexual harassment against him by former aide Anita Hill. Thomas became second black person to serve on Court.

1992 Retail giant **R.H. Macy & Co.** filed for bankruptcy, Jan. 27. Major U.S. carrier Trans World Airlines (**TWA**), filed for bankruptcy, Jan. 31. **Riots** swept South Central Los Angeles Apr. 29 after jury acquitted 4 white police officers on all but one count in 1991 videotaped beating of black motorist **Rodney King**. Death toll in L.A. violence was put at 53. **27th Amendment**, regarding congressional pay raises, ratified May 7.

Hurricane Andrew ravaged South Florida and Louisiana Aug. 24-26, causing 65 deaths. White supremacist and fugitive Randall Weaver surrendered Aug. 31 after 11-day **FBI siege** at his **Ruby Ridge**, ID, cabin, during which his wife, son, and a deputy sheriff were killed in exchanges of gunfire. **Bill Clinton** (D) elected 42nd president, Nov. 3, defeating Pres. Bush (R) and independent Ross Perot. A UN-sanctioned military force, led by U.S. troops, arrived in **Somalia** Dec. 9. Presidents of U.S., Canada, and Mexico Dec. 17 signed **North American Free Trade Agreement** (NAFTA), which took effect Jan. 1, 1994. More than 1.1 mil votes were cast to choose portrait of the late **Elvis Presley** for **postage stamp**, first in the U.S. to honor a rock performer.

1993 A bomb exploded in a parking garage beneath the **World Trade Center** in New York City, Feb. 26, killing 6 people. Four men found guilty, Mar. 4, 1994. Four federal agents killed, Feb. 28, during an unsuccessful raid on **Branch**



1993: Bill Clinton is sworn in as the 42nd U.S. president after defeating incumbent Pres. George H. W. Bush and independent H. Ross Perot in the 1992 election.

Davidian compound near **Waco**, TX. A 51-day siege by agents ended Apr. 19, when the compound burned down, leaving more than 70 cult members dead. Eleven cult members acquitted Feb. 26, 1994, of charges in deaths of the federal agents. U.S. agents cleared of wrongdoing in 2000.

Janet Reno became **first female attorney general** Mar. 12. Federal jury, Apr. 17, found 2 Los Angeles police officers guilty and 2 not guilty of violating civil rights of motorist **Rodney King** in 1991 videotaped beating. Mostly white state jury had acquitted the officers on all charges in 1992, sparking riots in L.A. and other cities.

Defense Sec. Les Aspin, Apr. 28, removed restrictions on **aerial combat roles for women** in the armed forces. In a May 14 plebiscite, voters in **Puerto Rico** supported continuing commonwealth status with U.S. **"Motor-voter" bill** was signed by Pres. Clinton, May 20, allowing citizens to register to vote by mail when applying for a driver's license or certain benefits. The **"Great Flood of 1993"** inundated at least 15 mil acres in 9 Midwestern states in summer, leaving about 50 dead as direct result of flood and $15 bil in damages.

Pres. Clinton, July 2, approved recommendations that 33 major U.S. military bases be closed. On July 19 he announced **"don't ask, don't tell, don't pursue"** policy for homosexuals in the military. Judge **Ruth Bader Ginsburg** sworn in, Aug. 10, as 107th justice and second woman on Supreme Court. Pres. Clinton, Aug. 10, signed measure designed to **cut federal budget deficits** by $496 bil over 5 years, through spending cuts and new taxes. **Brady Bill**, a major gun-control measure named after Sarah Brady and former Reagan press sec. James Brady, was signed into law by Pres. Clinton Nov. 30.

1994 A predawn **earthquake** in the Los Angeles area, Jan. 17, claimed 61 lives and caused widespread devastation. Pres. Clinton Feb. 3 lifted 19-year ban on U.S. trade with **Vietnam**. Byron De La Beckwith convicted Feb. 5 of 1963 murder of civil rights leader **Medgar Evers**. Longtime CIA officer **Aldrich Ames** and his wife charged, Feb. 21, with spying. Under plea bargain, he received life in prison, while she drew 63 months.

U.S. troops, Mar. 25, officially ended peacekeeping and humanitarian aid mission in **Somalia**, begun in 1992. Congressional committees, late July, began **Whitewater hearings**. Kenneth Starr named Aug. 5 as independent counsel to probe Whitewater affair. Major league **baseball players** went on **strike** following Aug. 11 games. World Series canceled; strike ended Apr. 25, 1995. Senate Majority Leader George Mitchell (D, ME), Sept. 26, dropped efforts to pass Pres. Clinton's **health-care reform** package.

1995 104th Congress opened, Jan. 4. A bill to end Congress's exemption from federal labor laws, first in series of measures in Republicans' **"Contract with America,"** cleared Congress Jan. 17; signed into law Jan. 23. Pres. Clinton, Jan. 31, authorized $20 bil **loan to Mexico** to help it avert financial collapse. Last UN peacekeeping troops withdrew from **Somalia** Feb. 28-Mar. 3, with aid of U.S. Marines. In **Haiti**, peacekeeping responsibilities were transferred from U.S. to UN forces Mar. 31, with U.S. providing 2,400 soldiers.

Truck **bomb exploded outside Oklahoma City federal office** building Apr. 19, killing 168 people in deadliest terrorist attack up to then on U.S. soil; **Timothy McVeigh** arrested as key suspect, Apr. 21. U.S. space shuttle *Atlantis* made first in series of dockings with Russian space station ***Mir***, June 29-July 4. The U.S. announced July 11 it was reestablishing diplomatic **relations with Vietnam.**

Ten **Muslim militants** convicted, Oct. 1, in failed **plot to blow up UN Headquarters** and other buildings and assassinate political leaders. Former football star **O. J. Simpson** found not guilty Oct. 3 of June 1994 murders of former wife, Nicole Brown Simpson, and a friend of hers. Hundreds of thousands of black men participated in **Million Man March** and rally in Washington, DC, Oct. 16, organized by Rev. Louis Farrakhan.

Five Americans among 7 killed, Nov. 13, in **bombing** of U.S. military post in **Riyadh, Saudi Arabia**. Budget impasse between Congress and Pres. Clinton led to **partial government shutdown** beginning Nov. 14; operations resumed Nov. 20 under continuing resolutions. After talks outside Dayton, OH, warring parties in **Bosnia and Herzegovina** reached agreement Nov. 21 to end their conflict; treaty signed Dec. 14, after which U.S. peacekeeping troops arrived. A 1973 federal law imposing **55-mph speed limit** repealed Nov. 28.

1996 Senate, Jan. 26, approved, 87-4, **Second Strategic Arms Reduction Treaty** (START II). Congress, Mar. 27-28, approved **line item veto** bill, giving president power to delete individual expenditures from spending bills; struck down by Supreme Court, June 1998.

James and Susan McDougal convicted May 28 of fraud and conspiracy in **Whitewater** case; Arkansas Gov. Jim Guy Tucker convicted on similar charges. The antitax **Freemen surrendered** to federal authorities June 13, after 81-day standoff near Jordan, MT; 4 were convicted, July 1998, of conspiring to defraud banks.

Bomb exploded at **Khobar Towers** military complex near Dhahran, Saudi Arabia, June 25, killing 19 American service personnel. Homemade **pipe bomb** exploded July 27 in **Atlanta**, GA, park during **Summer Olympics**; 1 person killed. Fugitive Eric Robert Rudolph, arrested in May 2003, pleaded guilty to this and other bombings, later sentenced to consecutive life terms.

Major **welfare reform bill** signed into law, Aug. 22. U.S. signed **Comprehensive Test Ban Treaty**, Sept. 24, which banned all nuclear weapons tests and explosions; Senate failed to ratify treaty. Pres. **Clinton reelected** to 2nd term, Nov. 5.

1997 **Madeleine Albright** sworn in as sec. of state Jan. 23, becoming **first female State Dept. head**. Former CIA official Harold Nicholson pleaded guilty, Mar. 3, to **spying for Russia**. Thirty-nine members of **Heaven's Gate** religious cult found dead in Rancho Santa Fe, CA, house Mar. 26, in apparent mass suicide.

Timothy McVeigh convicted of conspiracy and murder, June 2, in **1995 Oklahoma City bombing**; Terry Nichols convicted Dec. 23 on related charges. Islamic militants Ramzi Ahmed Yousef and Eyad Ismoil Yousef convicted, Nov. 12, of key roles in **1993 bombing of World Trade Center**.

1998 After *Drudge Report* website broke the story, several media outlets reported Jan. 21 on evidence of **sexual relationship** between Pres. Clinton and former White House intern **Monica Lewinsky**; Clinton initially denied affair, but in grand jury testimony and address to the nation, Aug. 17, acknowledged his relationship with Lewinsky had been "not appropriate." On Sept. 9, independent counsel **Kenneth Starr** sent findings to House of Representatives; Judiciary Committee, Oct. 5, voted 21-16 to recommend that Clinton impeachment investigation proceed. Full House, Dec. 19, approved 2 articles of **impeachment** charging Pres. Clinton with grand jury **perjury** and **obstruction of justice** in cover-up of relationship with Lewinsky; 2 other articles failed.

"Unabomber" Theodore Kaczynski, arrested in Montana in 1993, pleaded guilty Jan. 22 to California and New Jersey bombings that killed 3 people; sentenced in May to 4 life terms plus 30 years. Texas, Feb. 3, executed its first female convict in 135 years—Karla Faye Tucker.

Bombs at U.S. embassies in Nairobi, Kenya, and Dar-es-Salaam, Tanzania, killed at least 257, Aug. 7; U.S. launched retaliatory strikes, Aug. 20, against targets in Afghanistan and Sudan. On Sept. 30, Pres. Clinton announced federal **budget surplus** of $70 bil for fiscal year 1998, the first since 1969.

Pres. **Clinton**, Nov. 13, settled suit by agreeing to pay $850,000 to **Paula Jones**, who alleged he had made an unwanted sexual advance in 1991. Country's 4 largest **tobacco**

companies, in settlement Nov. 23, agreed to pay states and territories $206 bil over 25 years to cover public health costs related to smoking.

1999 Pres. **Clinton's impeachment trial**—2nd such trial in U.S. history—began in GOP-controlled Senate Jan. 7. He was **acquitted**, Feb. 12. Perjury article failed with 45 votes; obstruction of justice article drew 50-50 vote, with two-thirds vote needed for conviction.

Dr. **Jack Kevorkian**, who claimed to have helped 130 people kill themselves, **convicted** of 2nd degree murder Mar. 26 in one death; sentenced to 10-25 years. One man pleaded guilty in April, another convicted in November, in 1998 kidnapping and beating **death of Matthew Shepard**, an **openly gay** student at the Univ. of Wyoming.

Eric Harris, 18, and Dylan Klebold, 17, killed 12 fellow students and a teacher Apr. 20 at **Columbine High School** in Littleton, CO, then fatally shot themselves. One NYC police officer pleaded guilty to 6 charges, May 25, another convicted of assault, June 8, in 1997 police-station **torture of Abner Louima**, Haitian immigrant. **John F. Kennedy Jr.**, son of former president, died in a plane crash, July 16, along with wife and sister-in-law.

2000 Across U.S., midnight celebrations marked changeover to year 2000 on Jan. 1; feared **Y2K** computer glitch caused only minor problems. Vermont Gov. Howard Dean (D) signed legislation Apr. 26 allowing same-sex couples in **civil unions** to gain legal rights. Scientists from U.S. and Britain announced jointly, June 26, that they had determined structure of the **human genome**.

Following international custody dispute, 6-year-old **Elián González** was returned to father in Cuba June 28, 7 months after rescue from boat wreck in which his mother and other refugees drowned.

Tiger Woods became youngest player, at age 24, to win all 4 of golf's majors, with record score in British Open, July 23.

Food and Drug Administration announced, Sept. 28, approval of **RU-486**, a pill that induces abortions.

Seventeen U.S. sailors died Oct. 12 in **terrorist bombing of USS *Cole***, which was refueling in Aden, Yemen.

On presidential election night, Nov. 7, the winner of **Florida's 25 decisive electoral votes** remained uncertain, leaving national result in doubt for weeks. Florida Supreme Court, Dec. 8, ordered manual recount of certain ballots; on Dec. 12, U.S. Supreme Court reversed that decision, and Vice Pres. **Al Gore** (D), the following day, conceded election to Texas Gov. **George W. Bush** (R).

2001 Congress, Jan. 6, certified **George W. Bush** as president by electoral vote of 271-266 (1 Gore elector abstained). He was **sworn in** as 43rd president Jan. 20.

AOL-Time Warner merger completed Jan. 11. FBI agent **Robert Hanssen** arrested Feb. 20, **charged with spying** for Soviet Union and Russia over 20-year period; under plea bargain, sentenced in 2002 to life in prison. **U.S. Navy spy plane** collided with Chinese fighter plane over South China Sea Apr. 1, killing fighter pilot: 24 U.S. crew members detained in Hainan until U.S. officials expressed apology, Apr. 12.

Sen. **James Jeffords** (R, VT) announced May 24 he was leaving his party, giving Democrats control of Senate. Pres. Bush signed, June 7, **$1.35 tril tax-cut package**. Oklahoma City bomber **Timothy McVeigh** executed June 11. Bush announced Aug. 9 he would allow federal funding of limited **stem-cell research** using human embryos.

On morning of **Sept. 11**, 2 hijacked commercial airliners struck **World Trade Center twin towers** in New York City in **worst-ever terrorist attack** on American soil. A 3rd hijacked plane destroyed a portion of the **Pentagon**; a 4th crashed in Pennsylvania field. Some 3,000 people killed, including about 2,750 at World Trade Center. U.S. observed national day of mourning, Sept. 14. Five people died and 14 became ill from exposure to **anthrax** through U.S. postal system, Oct. 4-Nov. 21; former Army microbiologist **Bruce Ivins**, later suspected of the crime, apparently committed suicide in July 2008.

On Oct. 7, San Francisco Giants outfielder **Barry Bonds** hit his 73rd **home run** for a single-season record.

U.S. and Britain, Oct. 7, launched **air-strike** campaign against Afghan-based terrorist organization **al-Qaeda** and the country's **ruling Taliban militia**. Pres. Bush created **Office of Homeland Security**, Oct. 8, and signed federal



2001: The attacks of Sept. 11, 2001, kill more than 2,750 people in New York, including 343 firefighters.

antiterrorism bill, Oct. 26. **Taliban** surrendered Kabul, Nov. 13, and fled from Kandahar, their stronghold, Dec. 7. Taliban member and U.S. citizen **John Walker Lindh** captured Dec. 2 in Afghanistan; under plea bargain sentenced in Oct. 2002 to 20 years. U.S. government, Dec. 11, indicted al Qaeda member **Zacarias Moussaoui** as Sept. 11 co-conspirator; he pleaded guilty, sentenced in May 2006 to life in prison.

Leading energy-trading company **Enron** filed for **bankruptcy**, Dec. 2. Pres. Bush announced, Dec. 13, U.S. withdrawal from **1972 Antiballistic Missile Treaty**.

2002 Taliban and al-Qaeda fighters captured in Afghanistan flown to U.S. naval base at **Guantánamo Bay** in Cuba, starting Jan. 11. House committee, Jan. 14, released parts of whistle-blowing letter from Enron employee Sherron Watkins to CEO **Kenneth Lay**. Lay resigned Jan. 23; Congress, Jan. 24, began hearings into **Enron bankruptcy**.

In State of the Union address, Jan. 29, Pres. Bush called **Iran, Iraq, and North Korea** part of **"axis of evil."** Eight U.S. troops killed Mar. 2-4 in assault against Taliban and al-Qaeda forces in Afghanistan. By Mar. 6, 1,200 U.S. troops were involved in **Operation Anaconda**, which ended Mar. 12.

Independent prosecutor's report, Mar. 20, found insufficient evidence that Pres. Clinton or Hillary Clinton committed any crime in connection with **Whitewater**. Pres. Bush, Mar. 27, signed into law McCain-Feingold **campaign-finance reform bill** banning unregulated, unrestricted "soft money" donations; part of bill struck down by Supreme Court, June 2007.

Ceremonial last girder removed May 30 from **World Trade Center** site, signaling end of massive clean-up and recovery operation. **Coleen Rowley** testified before congressional committee June 6 that Washington FBI agents had stymied investigative efforts in Minneapolis prior to Sept. 11. **WorldCom** announced June 25 it had overstated its cash flow by billions; filed for bankruptcy, July 21.

Richard Reid pleaded guilty Oct. 4 to all charges stemming from incident aboard plane in Dec. 2001, when he tried to ignite **explosives in his shoes**; sentenced Jan. 2003 to life



2003: About 1.5 million U.S. troops have deployed to Iraq since Operation Iraqi Freedom began in 2003.

in prison. Former Pres. Jimmy Carter named Oct. 10 as winner of **Nobel Peace Prize**. On Oct. 10-11 the House, 296-133, and Senate, 77-23, gave Bush **backing to use military force against Iraq**. Bush administration revealed Oct. 16 that **North Korea** had acknowledged it was developing **nuclear arms**.

Republicans emerged from elections, Nov. 5, with majority in Senate and increased margin in House. Pres. Bush, Nov. 25, signed legislation creating **Dept. of Homeland Security**.

U.S. Roman Catholic bishops, Nov. 13, approved revised, Vatican-vetted policies dealing with priests who **sexually abuse minors**. Cardinal **Bernard Law**, Dec. 13, resigned as archbishop of Boston; accused of covering up sexual abuse by priests. **Trent Lott** (R, MS) bowed out as new Senate majority leader Dec. 20, amid furor over comment apparently supporting segregation; Sen. **Bill Frist** (R, TN) elected as leader Dec. 23.

2003 On Jan. 10-11, Gov. **George Ryan** (R, IL) pardoned or **commuted death sentences** of 171 Illinois death row convicts. U.S. Senate, Jan. 22, approved Pres. Bush's nomination of **Tom Ridge** to be **first sec. of homeland security**.

Space shuttle ***Columbia*** broke apart Feb. 1 during descent toward planned landing; **all 7 crew members killed**. Report issued Aug. 26 blamed damage sustained during liftoff, also cited "broken safety culture" at NASA.

Senate, Mar. 6, approved the **Strategic Offensive Reductions Treaty**, or **Moscow Treaty**, signed in **2002** by U.S. and Russian leaders. Both sides required to reduce deployed nuclear warheads to 1,700-2,200 by **2012**.

U.S.-led military offensive aimed at **ousting Saddam Hussein** got underway Mar. 19, when 40 Tomahawk cruise missiles hit targets in Baghdad. U.S. forces Mar. 21 seized oil fields near Basra. On Apr. 3, U.S. Marines crossed Tigris River and moved close to **Baghdad**. By Apr. 8, major government buildings had been occupied; U.S. forces reported control over much of Baghdad, Apr. 9. With **collapse of regime**, services were disrupted and looting became widespread. Pres. Bush, speaking from aircraft carrier, declared on May 1 the **end of major combat operations in Iraq**; insurgents continued to mount attacks.

Pres. **Bush signed** bill May 28 providing $330 bil in **tax cuts** over several years. Under settlement in private antitrust suit brought by Netscape (unit of AOL), **Microsoft** agreed May 29 to pay **AOL Time Warner** $750 mil.

On June 23, U.S. **Supreme Court** upheld **affirmative action program** for admission to Univ. of Michigan law school, but rejected university's undergraduate affirmative action program that employed numerical formulas. A **power failure** spread through Ohio, Michigan, and the Northeast, as well as eastern Canada, on Aug. 14; some 50 mil people in 8 states and Ontario lost electricity.

On Sept. 9, Roman Catholic archdiocese of Boston and lawyers representing about 550 victims of **sexual abuse by priests** announced settlement worth up to $85 mil. **Californians**, Oct. 7, voted to recall Gov. Gray Davis (D) and replace him with Republican actor-turned-politician **Arnold Schwarzenegger**. Rev. V. Gene Robinson consecrated Nov. 2 as Episcopal bishop of New Hampshire, church's **first openly gay bishop**.

Senate, Nov. 3, approved $87.5 bil for **U.S. military forces in Iraq** and help rebuilding the country. Virginia jury, Nov. 17, found **John Muhammad** guilty in 2002 Washington, DC, area **sniper attacks** that killed 10 people; sentenced to death. Another Virginia jury found **Lee Malvo** guilty of murder in the attacks, Dec. 18; sentenced to life in prison without parole. Massachusetts court decided 4-3, Nov. 18, that **gay couples had right to marry** under state constitution.

Pres. Bush signed bill Dec. 8 to overhaul **Medicare**, adding prescription drug benefit and expanding role of private insurance companies. **Saddam Hussein captured** by U.S. military forces Dec. 13, in underground hideout southeast of Tikrit.

2004 On Feb. 12, San Francisco began issuing **marriage licenses to same-sex couples**; process blocked Mar. 11 by state supreme court. Photos showing abuse of **Abu Ghraib prison inmates** in Iraq by American soldiers emerged Apr. 3. **National World War II Memorial** in Washington, DC, opened Apr. 29.

Ronald Reagan, 40th U.S. president, died June 5. U.S.-led coalition formally transferred power to **interim Iraqi government,** June 28. U.S. Supreme Court, June 28, issued decisions regarding **rights of terrorism detainees** that curtailed sweeping powers claimed by Bush as commander in chief. The **9/11 Commission Report**, released July 22, called for restructuring U.S. intelligence operations.

In Boston, July 28-29, **Democrats nominated** Sen. **John Kerry** (MA) for president and Sen. **John Edwards** (NC) for vice president. Pres. **Bush** and Vice Pres. **Cheney** renominated Sept. 1 at **Republican** convention in New York.

Four hurricanes hit Florida and surrounding states, Aug. 13-Sept. 25; blamed for over 50 deaths and more than $20 bil in damage in U.S. Number of **U.S. soldiers killed** in the Iraqi conflict reached 1,000 on Sept. 7, including 755 in combat. **Boston Red Sox** swept their last 8 games to win **World Series** Oct. 27, for first time since 1918.

Pres. **Bush** reelected Nov. 2, capturing 31 states with 286 electoral votes. Republicans gained 4 Senate seats for new 55-44 majority, won majority in House for 6th consecutive election. After weeklong campaign, U.S. forces took control of the Iraqi city of **Fallujah** from insurgents, Nov. 14. Pres. Bush signed intelligence reform bill Dec. 17, based on 9/11 Commission's findings: bill created **director of national intelligence** to oversee nation's intelligence agencies.

2005 Army Reserve Spec. Charles Graner Jr. found guilty, Jan. 14, in **Abu Ghraib prisoner abuses** in Iraq, sentenced to 10 years. Army Reserve Pfc. Lynndie England convicted Sept. 26, sentenced to 3 years.

Pres. **Bush inaugurated** for 2nd term, Jan. 20. **Condoleezza Rice** became first black woman sec. of state, Jan. 26. **Alberto Gonzales** became first Hispanic U.S. atty. gen., Feb. 3.

Supreme Court, Mar. 1, ruled that **executing** convicts for crimes committed before age 18 was unconstitutional. **Terri Schiavo**, in a persistent vegetative state since 1990, died Mar. 31, 13 days after feeding tube was removed.

Vanity Fair article revealed May 31 that former FBI official **W. Mark Felt** was **"Deep Throat"**—key source for *Washington Post* reporters Bob Woodward and Carl Bernstein probing 1972 **Watergate break-in**. ***Discovery*** blasted off from Cape Canaveral, FL, July 26, in first shuttle launch since 2003 ***Columbia*** **disaster**.

Hurricane Katrina hit Gulf coast, Aug. 29, causing devastation in Louisiana, Mississippi, and Alabama. Breech in a levee on Lake Pontchartrain, Aug. 30, flooded **New Orleans**. Relief efforts widely criticized as insufficient.

Chief Justice **William H. Rehnquist** died Sept. 3. Bush Sept. 5 nominated as successor **John G. Roberts Jr.**; on Sept. 29 he was confirmed by Senate, 78-22, and sworn in as 17th chief justice. White House counsel **Harriet Miers**, nominated Oct. 3 to Supreme Court, withdrew Oct. 27. In her place, Bush, Oct. 31, nominated **Samuel A. Alito Jr.**; confirmed Jan. 31, 2006.

House Majority Leader **Tom DeLay** (R, TX) indicted in Texas Sept. 28 for allegedly conspiring to launder illegal contributions; he stepped down from his leadership post. Civil rights icon **Rosa Parks** died Oct. 24. **Chicago White Sox**, Oct. 26, defeated Houston Astros to win their first World Series title since 1917.

New York Times, Dec. 16, reported that Pres. Bush in 2002 had secretly authorized National Security Agency to **eavesdrop** without court warrant on people in U.S. suspected of terrorist activities. Senate, Dec. 21, passed $453 bil defense appropriations bill after inclusion of **anti-torture amendment**. Tropical Storm Zeta, Dec. 29, the season's 28th ended the **most active hurricane season** on record.

2006 Former top Republican lobbyist **Jack Abramoff** pleaded guilty Jan. 3 to bribery and other charges; in plea agreement,



2005: Hurricane Katrina and subsequent failure of levees cause unprecedented destruction in New Orleans and along the Gulf coast.

promised to cooperate with investigation into his dealings with members of Congress. Former Enron CEO **Jeffrey Skilling** convicted May 25 of fraud, conspiracy, and insider trading related to Enron's 2001 bankruptcy. **Kenneth Lay**, Enron's founder and Skilling's successor as CEO, found guilty same day of fraud and conspiracy; died July 15.

U.S. Supreme Court ruled June 29 that Pres. Bush's system for trying **terrorism detainees** at **Guantánamo** Bay was unauthorized under federal law and Geneva Conventions. Bush, July 19, issued his **first veto**, rejecting bill to end federal funding constraints on human embryonic **stem cell research**.

British authorities announced Aug. 10 they had foiled **terrorist plot to use liquid explosives** on flights between Britain and U.S.; new security restrictions prohibited passengers in U.S. from transporting most liquids in carry-on luggage. In speech Sept. 6 Bush confirmed existence of **secret overseas prisons** for terrorism suspects run by CIA. Defense Dept. same day released new Army Field Manual delimiting permissible interrogation methods.

Pres. Bush signed bill Oct. 26 authorizing construction of **700-mi fence** along U.S.-Mexico border; broader immigration bill that he favored—approved by the Senate but not the House—would have given many **illegal immigrants** a chance to gain citizenship.

Democrats won control of House and Senate in **midterm congressional elections** Nov. 7. Pres. Bush announced Nov. 8 that Defense Sec. **Donald Rumsfeld**, a focus of criticism over Iraq war, had resigned. **Gerald R. Ford**, 38th U.S. president, died Dec. 26 at age 93.

2007 Rep. Nancy Pelosi (D, CA) chosen Jan. 4 as **first woman Speaker of the House**. Pres. Bush announced Jan. 10 he was sending more than 20,000 additional troops to Iraq, in troop **"surge"** backed by Lt. Gen. **David Petraeus**, new top U.S. commander in Iraq. Bush administration announced Jan. 17 that a court established under the 1978 **Foreign Intelligence Surveillance Act** (FISA) would have jurisdiction over a National Security Agency program monitoring international communications between people in the U.S. and suspected terrorists.

Reports of substandard conditions at **Walter Reed Army Medical Center** in Washington, DC, resulted in dismissals of military officials, Mar. 1-2. U.S. District Court jury found **I. Lewis "Scooter" Libby**, former chief of staff for Vice Pres. Cheney, guilty Mar. 6 of perjury and obstructing justice in the investigation into a leak exposing undercover CIA agent Valerie Plame Wilson; Bush commuted his 30-month prison sentence.

A senior at **Virginia Tech** killed 27 students and 5 faculty members on Apr. 16 before killing himself. On Apr. 18, Supreme Court upheld, 5-4, a 2003 federal law that banned so-called **partial birth abortions**.

U.S. Senate and House May 24 approved Iraq and Afghanistan **war-funding bill** without timetable for withdrawal of U.S. troops from Iraq; as part of the agreement, Congress also approved increase in **national minimum wage** from $5.15 to $7.25 per hour in 3 stages over 2 years.

Dow Jones closed over 14,000 July 19, just 59 trading days after passing 13,000. ***Harry Potter*** *and the Deathly Hallows*, final novel in J. K. Rowling's series, released July 21, earning record U.S. sales. Pres. Bush issued an executive order July 20 requiring that **imprisoned terror suspects** receive "the basic necessities of life" and barring cruel, inhuman, or degrading treatment.

A **Minneapolis highway bridge collapsed** Aug. 1, causing the deaths of 13 people. Congress, Aug. 4, cleared measure allowing **National Security Agency** to monitor communications without court warrants if believed related to terrorism. Barry Bonds tied Major League Baseball's all-time career **home-run record** at 755—set by Hank Aaron—on Aug. 4 in San Diego; hit No. 756 on Aug. 7.

Karl Rove, Bush's chief political strategist, announced Aug. 13 that he was resigning. **José Padilla** convicted of conspiracy in terrorism case, Aug. 16; later sentenced to 17 years, 4 months in prison. Atty. Gen. **Alberto Gonzales**, blamed for alleged firing of U.S. attorneys, announced his resignation Aug. 27.

Congress voted, Nov. 6 and 8, to **overturn veto** by Pres. Bush for first time; bill included projects for hurricane recovery, wetlands restoration, and flood control. Federal grand jury probing athletes' use of performance-enhancing drugs indicted slugger **Barry Bonds** Nov. 15, for allegedly lying to the grand jury in 2003 about his use. Report by former U.S. Sen. **George J. Mitchell**, released Dec. 13, presented evidence of **performance-enhancing** drug use by 86 Major League Baseball players.

On Dec. 6 Pres. Bush announced accord among mortgage lenders to impose 5-year **freeze on interest rates** for some mortgage holders and provide options for some homeowners to refinance. Under law signed Dec. 17 New Jersey became **first state to repeal the death penalty** since Supreme Court reinstated it under certain conditions in 1976. An **energy bill** mandating an increase in automobile **fuel-economy standards** to 35 miles per gallon by 2030 signed by Pres. Bush Dec. 19; also set timetable for requiring more energy-efficient bulbs and mandated greater use of biofuels.

2008 Sen. **John McCain** (AZ) won New Hampshire primary, Jan. 8, and state primaries on **Super Tuesday**, Feb. 5, clinching 2008 Republican presidential nomination by early Mar. Race for Democrats was tighter, but Sen. **Barack Obama** (IL) moved ahead of closest rival, Sen. **Hillary Rodham Clinton** (NY) in primary wins, and by early June had enough delegates to be assured of victory.

Fed **cut key interest rates** in two stages, Jan. 22 and 30, citing slow job growth and deterioration in housing and credit markets. Bush submitted fiscal 2009 budget to Congress Feb. 4 that called for expenditures of $3.1 tril, forecasting $407 bil deficit. A $168 bil **economic stimulus package**, signed Feb. 13 by Pres. Bush, provided tax rebates of up to $600 for individuals and $1,200 for couples, plus $300 per child.

New York Gov. **Eliot Spitzer** (D) left office Mar. 17, after revelations that he had been a client of a prostitution service. In Mar. 18 speech, Sen. Obama discussed America's racial divide and condemned inflammatory statements by his former longtime pastor, Rev. **Jeremiah Wright**.

Justice Dept. declassified, Apr. 1, a 2003 legal brief that had given military interrogators authority to use extreme methods when **questioning detainees** linked to al-Qaeda. **Benedict XVI** made his first papal visit to U.S., Apr. 15-20. U.S. Supreme Court held Apr. 16 that Kentucky's method of **execution by lethal injection** did not violate constitution.

On Apr. 23 Bush administration announced that Gen. **David Petraeus** would be promoted to head Central Command, overseeing military affairs in Middle East and Central Asia. U.S. Supreme Court ruled June 12 that foreign **prisoners at Guantánamo Bay** could challenge their detention by filing a writ of **habeas corpus**. The court held June 26 that individuals have a constitutional **right to own a gun**. **Oil prices spiked** above $140 per barrel in June; national average price for gallon of regular unleaded gas reached nearly $4.09 by July 1.

U.S. Sec. of State **Condoleezza Rice** signed agreement in Czech Republic, July 8, and Poland, Aug. 20, allowing U.S. to

place components of a **missile defense system** in those countries. Measure signed July 10 by Pres. Bush expanded federal government's power to spy on suspected terrorists. U.S. military deaths in Iraq dropped to 13 in July, lowest monthly total since the war began. **U.S. air strike** against reputed Taliban activity in **Afghanistan** village of Azizabad, Aug. 22, caused as many as 90 civilian deaths according to Afghan sources. The U.S., Sept. 1, transferred to Iraqi forces security responsibilities in **Anbar province**, formerly the center of a Sunni insurgency.

Meeting Aug. 25-28 in Denver, CO, Democrats **nominated** Sen. **Barack Obama** (IL) for president and Sen. Joe Biden (DE) for vice president. **Hurricane Gustav** hit Louisiana coast Sept. 1, but New Orleans levee system, strengthened since Hurricane Katrina, held up; some 2 mil people evacuated beforehand. More than 1 mil people fled Texas coast in advance of **Hurricane Ike**, which claimed 37 lives in the state. On Sept. 12, 25 people were killed when commuter train collided with freight train near Chatsworth, CA.

Meeting Sept. 3 in St. Paul, MN, Republicans **nominated McCain** for president and his pick, Alaska Gov. **Sarah Palin**, for vice president. Palin was only 2nd woman ever to run for vice president on major party ticket.

With financial system in crisis, federal government Sept. 7 took control of nation's two largest mortgage finance companies, **Fannie Mae** and **Freddie Mac**. On Wall Street a week later, investment titan **Merrill Lynch** agreed to sell itself to Bank of America for $50 bil, and **Lehman Brothers** declared bankruptcy, after failing to find a buyer. The Fed Sept. 16 took control of insurance giant **American International Group (AIG)**, taking a 79.9% equity stake and giving it a credit line that expanded to $144 bil by Oct. 31. On Sept. 20 a Treasury plan was introduced to purchase up to $700 bil of **"toxic" mortgage-backed securities** to restore confidence among investors and banks reluctant to make loans.

On Sept. 29, so-called **bailout** failed in the House; about two-thirds of Republicans rejected it. **Dow Jones closed down 778 points**, for loss in wealth estimated at $1.2 tril. Substantially revised version of **bailout plan passed** Senate Oct. 1, 74-25, and House Oct. 3, 263-171.

Las Vegas jury Oct. 3 found former football star **O. J. Simpson** and co-defendant guilty in robbery and kidnapping of two sports memorabilia dealers; Simpson sentenced Dec. 5 to at least 9 years in prison.

Fed announced Oct. 7 that it would begin lending directly to U.S. corporations. On Oct. 21 Fed pledged $540 bil to ease credit flows and bolster investor confidence.

Bush administration announced Oct. 11 it had removed **North Korea** from its list of countries that sponsor terrorism, as part of a June agreement for North Korea to begin dismantling nuclear weapons program. Federal jury found Sen. **Ted Stevens** (R, AK) guilty Oct. 27 of accepting and failing to report gifts from oil services firm; he was defeated for reelection in Nov. Stevens's conviction was later voided because of prosecutorial misconduct. Dow Jones closed Oct. 31 at 9,325.01, for one-month decline of 14.1%.



2008: Sen. Barack Obama is elected the first African American president.

Barack **Obama elected**, Nov. 4, as **first African American president** in U.S. history. Obama-Biden ticket earned 53% of popular vote, versus 46% for McCain-Palin, with electoral vote margin of 365-173. Democrats increased majorities in House and Senate; election gave them control of both White House and Congress for first time since 1995. **California** voters approved **Proposition 8**, overturning May 2008 state supreme court decision affirming constitutional right for same-sex couples to marry.

Dow Jones fell 427 points, or 5.1%, Nov. 19, going below 8,000 for first time since 2003. U.S. government Nov. 23 announced plan to provide $20 bil in cash and up to $306 bil more as backup to protect **Citigroup** from potential mortgage losses; **volatile Dow Jones** rose 397 points. Preparing to deal with economic crisis, Pres.-elect **Obama** Nov. 24 named **Timothy Geithner** as choice for **treasury sec**. (confirmed Jan. 26, 2009). **Dow dropped 680** points Dec. 1 after reports that U.S. manufacturing had hit 26-year low and that U.S economy officially fell into **recession** in Dec. 2007.

Obama named former rival **Hillary Clinton**, Dec. 1, as choice for **sec. of state** (confirmed Jan. 21, 2009). Illinois Gov. Rod **Blagojevich** (D) arrested Dec. 9, accused of seeking to sell U.S. Senate seat being vacated by Obama. Illinois legislators voted Dec. 15 to begin **impeachment process;** Blagojevich asserted innocence and made Senate appointment, Dec. 30, choosing former state Atty. Gen. **Roland Burris**.

Investment manager **Bernard Madoff** arrested Dec. 11 on charges he had defrauded clients of tens of billions of dollars in massive **Ponzi scheme**.

The Fed Dec. 16 cut **benchmark interest rate** to near zero. Bush announced plans Dec. 19 to lend **General Motors** and **Chrysler** $17.4 bil to help them survive over the next 3 months.

2009 Illinois Gov. **Blagojevich**, impeached Jan. 9, was convicted Jan. 29 by the state Senate and **removed from office**.

Barack Obama inaugurated Jan. 20 as 44th U.S. president amid economic turmoil; outlined activist agenda for **"remaking" America**. On Jan. 22 issued executive orders restricting CIA interrogation practices and calling for closing U.S. military prison at **Guantánamo Bay**, Cuba, within a year.

Treasury Sec. Geithner Feb. 10 outlined $2 tril program to **stabilize banking** and ease credit markets. It included **"stress tests,"** which were begun Feb. 25, leading regulators to require some banks to raise more capital. On Feb. 17, Obama signed **stimulus bill** providing for $212 bil in tax cuts and $575 bil in new spending; lawmakers also raised **debt ceiling** from $11.3 tril to $12.1 tril and restricted **bonuses** by financial firms receiving funds under **TARP program**. On Feb. 18, Obama introduced $275 bil program to help protect homeowners from **foreclosure** and ease terms for refinancing.

Pres. Obama announced, Feb. 17, that U.S. would send 17,000 more **troops to Afghanistan** and, Feb. 27, that most U.S. **troops would be out of Iraq** by Aug. 2010.

California legislators, ending 15-week deadlock, closed **$42 bil budget gap**, Feb. 19; after ballot measures implementing the plan were defeated, passed another budget-cutting measure, July 24. Revised data released Feb. 27 showed **GDP fell** at 6.2% annual rate in Oct.-Dec. 2008, steepest drop since 1982.

Obama, Mar. 11, signed $410 bil **omnibus spending measure** to fund government though fiscal 2009. Bailed-out **insurance giant AIG** Mar. 2 reported **record $62 bil quarterly loss** for 4th quarter 2008, and new government funding was extended; news that AIG was paying out **$165 mil in bonuses** to employees of its financial products unit evoked protests. Treasury Sec. Geithner, Mar. 23, introduced **Public-Private Investment Program** (PPIP), offering incentives to encourage investments in **"toxic assets."**

Pres. Obama Mar. 27 announced retooled U.S. strategy to **defeat al-Qaeda** in Pakistan and Afghanistan. Plan called for new aid to Pakistan and more U.S. troops to train and advise Afghan army.

Iowa's Supreme Court Apr. 3 struck down state law barring **same-sex marriage**; measures allowing it were approved in Vermont Apr. 7, Maine May 6 (repealed in Nov. 3 referendum), and New Hampshire, June 3.

New York Review of Books Apr. 6 posted confidential 2007 report by International Committee of the Red Cross, concluding the **CIA** had violated international law in its handling of 14 **"high-value detainees."** Justice Dept. Apr. 16 made public past memos offering legal rationale for CIA interrogation methods that included beatings and **waterboarding.** On Aug. 24, Atty. Gen. Eric Holder appointed a **special prosecutor** to investigate possible abuses by CIA officials or contractors.

U.S. **Navy SEALs** April 12 rescued American captain Richard Phillips, taken hostage by **pirates off Somali coast**. Obama administration Apr. 13 eased restrictions on family travel and remittances to Cuba. Outbreak of influenza A (H1N1), or **swine flu**, in Mexico and then in U.S., triggered worldwide alerts; U.S. officials declared public health emergency Apr. 26.

On Apr. 29, House (233-193) and Senate (53-43), with no GOP support, approved **$3.5 tril federal budget** for fiscal 2010, with deficit of $1.2 tril. Veteran Sen. **Arlen Specter** (R, PA) Apr. 29 said he was switching to Democratic party. **Chrysler** LLC filed for bankruptcy protection Apr. 30; **United Automobile Workers** retirement health-care fund was to gain 55% stake in reorganized company.

Gallup poll released May 15 showed majority of Americans (51%) were now **"pro-life" on abortion**. In commencement address May 17 at **Notre Dame**, Obama called for civility and compromise. On May 31, **George Tiller**, Kansas doctor known to perform **late-term abortions**, was shot and killed; Scott Roeder, an anti-abortion activist, arrested and charged.

Pres. Obama May 19 tightened **fuel efficiency standards** for vehicles sold in U.S. On May 20-22, he signed **consumer protection measures**, including one to restrict interest rates and fees by credit card companies.

General Motors filed for bankruptcy June 1 under plan providing $30.1 bil in new federal funds to support a leaner GM. On June 9, JPMorgan Chase, Goldman Sachs, Morgan Stanley, and 7 other big financial firms got permission from U.S. Treasury to **return some $68 bil** received from Troubled Asset Relief Program (TARP).

Speaking June 4 at Cairo Univ. in Egypt, Pres. Obama called for "a new beginning" in **relations with Muslim world**. U.S. military completed scheduled **withdrawal from Iraq's cities** and towns June 30; some 130,000 U.S. troops remained at forward-operating bases.

U.S. TV stations turned off analog signals June 12 and began **all-digital broadcasting**, as mandated by Congress.

On June 16, Sen. **John Ensign** (R, NV) apologized for affair with a former staffer; he then resigned as chair of Republican Policy Committee. On June 24, Gov. **Mark Sanford** (R, SC) admitted extramarital affair with woman from Argentina; repaid state for trip to Buenos Aires to visit her, and resigned chairmanship of Republican Governors Association.

Pres. Obama signed June 22 measure authorizing FDA to regulate content and marketing of **tobacco products**. In *Ricci v. DeStefano*, the Supreme Court held June 29 that a group of mostly white firefighters in New Haven, CT, suffered **reverse discrimination** when city threw out promotion exam because African American firefighters had done poorly.

Pop superstar **Michael Jackson died** suddenly June 25 at age 50; coroner attributed death to "acute propofol intoxication." Alaska Gov. **Sarah Palin** (R), July 3, announced she was **resigning** her office. Pres. Obama and Pres. Dmitri Medvedev, meeting in Russia July 6, reached agreement for reducing **nuclear arsenals** and allowing U.S. flights to Afghanistan through Russian airspace.

Senate Judiciary Committee held confirmation hearings July 13-16 on Obama's nomination of Judge **Sonia Sotomayor**, for Supreme Court vacancy left by retirement of Assoc. Justice David Souter. **Confirmed** Aug. 6 by Senate, 68-31; sworn in Aug. 8, she became first Latina and third woman to join the court.

Harvard African American scholar **Henry Louis Gates** arrested July 16 in Cambridge, MA, by Sgt. James Crowley, a white police officer, when Gates tried to open his own jammed front door. Police later dropped charges, and Obama, seeking to defuse tensions, invited both men for a beer at White House. Federal **"cash for clunkers"** program, which offered refund vouchers for trade-ins of old gas-guzzling vehicles, began July 24 with funding of $1 bil; renewed Aug. 7 with another $2 bil.

Returning to home districts during Aug. recess, lawmakers encountered angry protesters at **town hall meetings**, opposed to pending healthcare legislation. Some claimed **"Obamacare"** meant government takeover and "death panels." In speech to Congress Sept. 9, Obama criticized "**scare tactics**" and defended plan.

Federal jury found former Rep. **William Jefferson** (D, LA) guilty Aug. 5 on corruption charges. After 15-month battle with brain cancer, Sen. **Edward M. (Ted) Kennedy** (D, MA) died Aug. 25.

The community advocacy organization **ACORN** came under fire after videos, surreptitiously filmed by conservative activists, showed employees apparently counseling illegal activity. Congress, Sept. 14-17, barred federal funding for ACORN.

Obama administration Sept. 17 announced it was canceling plans for ground-based **antiballistic missile system** in Eastern Europe and would no longer seek to place ballistic missile interceptors in Poland and a radar facility in Czech Republic. Federal prosecutors Sept. 24 charged **Najibullah Zazi**, airport shuttle driver in Denver, CO, with plotting to produce bombs for **terror attacks against subways**. On Sept. 25, at meeting of Group of 20 (G-20) leaders in Pittsburgh, PA, Obama and British and French leaders accused Iran of building **secret uranium enrichment facility** near Qom.

Fugitive film director **Roman Polanski** detained by authorities Sept. 26 as he arrived in Zurich to accept film award; he was wanted by U.S. for 1977 case in which he was accused of drugging and raping 13-year-old girl. Justice Dept. Oct. 19 said federal statutes should not be enforced against people who use or provide **marijuana for medical purposes** where allowed by state law. In raids carried out in 38 U.S. cities, Oct. 21-22, federal agents arrested over 300 people connected with **La Familia**, Mexican cartel that sold drugs to U.S. buyers for cash and guns.

On Oct. 14, Obama signed legislation tripling **economic aid to Pakistan**, as Pakistani troops prepared to launch major offensive. Obama administration announced Oct. 19 it was renewing **sanctions against Sudan**, while also calling for diplomatic engagement.

Government reported Oct. 29 that **real GDP grew** at an annual rate of 3.5% during July-Sept., signaling that key sectors had **emerged from recession**. White House claimed Oct. 30 that stimulus bill passed in Feb. had created or saved some 640,000 jobs by end of Sept., including 325,000 in education and 80,000 in construction. On Oct. 30, Obama announced he would end long-standing U.S. **travel and immigration restrictions** on people infected with AIDS virus. U.S. Centers for Disease Control and Prevention (CDC) reported that by late Oct. over 12,000 Americans had been hospitalized with swine flu, with a death toll of around 500.

Republicans made election gains on Nov. 3, picking up governorships in New Jersey and Virginia. Despite signs of economic growth, Bureau of Labor Statistics reported Nov. 6 that **unemployment** in Oct. hit 10.2%, passing the 10% mark for first time since 1983. Obama Nov. 6 signed measure extending unemployment benefits in hard-pressed states and renewing $8,000 tax credit for first-time homebuyers.

On Nov. 5, 12 soldiers and a civilian were killed in a **mass shooting at Ft. Hood**, TX; Army psychiatrist Maj. Nidal Malik Hasan, a Palestinian American who reportedly had contacts with the Yemen-based radical cleric Anwar al-Awlaki, was charged with premeditated murder.

U.S. House Nov. 7 approved $1.1 tril **health care bill**, 220-215, with only 1 Republican vote in favor; Senate Dec. 24 approved $871 bil version, 60-39, with no Republican votes. Both bills required most Americans to purchase health insurance; only the House version provided for some form of "public option."

In speech Dec. 1 at West Point, Pres. Obama announced **surge** of 30,000 additional troops to **Afghanistan**, so as to peak at 100,000, with drawdown to begin within 18 months. Accepting **Nobel Peace Prize**, Dec. 10 in Oslo, Norway, Obama defended U.S.-led military action in Afghanistan as a "just war" and described U.S.-led war in Iraq as "winding down."

After unexplained accident with his car and tabloid stories portraying him as a serial adulterer, **Tiger Woods**, on his website Dec. 11, acknowledged "infidelity" and announced "an indefinite break" from pro golf. Pres. Obama brokered 5-nation **greenhouse-gas accord**, Dec. 18 in Copenhagen, establishing monitoring and reduction goals, but with no binding commitments.

On Dec. 25, passengers and crew aboard a Northwest Airlines passenger jet approaching Detroit thwarted apparent attempt by Nigerian man to ignite **explosives hidden in his underwear**; taken into custody, he acknowledged having received help from al-Qaeda in Yemen. On Dec. 30, a Jordanian CIA informant acting as a double agent set off **bomb at site of a high-level CIA intelligence meeting** near Afghan-Pakistan border, killing himself and 8 others.

While unemployment hovered at 10%, U.S. stock exchanges made **best gains since 2003**, with Dow Jones closing Dec. 31 at 10,428.05, up 18.8% since a year earlier, and 59.3% from 2009 low point in early Mar. According to year-end statistics compiled by iCasualties.org, U.S. military **fatalities in Iraq** in 2009 declined to a low of 149, with a cumulative total of 4,370 since 2003; **fatalities in Afghanistan** reached an annual high of 317 in 2009, with a cumulative total of 947 since fighting began.

Patrick Henry's Speech to the Virginia Convention

The following is an excerpt from Patrick Henry's speech to the Virginia Convention, which met at St. John's Church in Richmond, on Mar. 23, 1775, to react to British oppression.

Gentlemen may cry, peace, peace—but there is no peace. The war is actually begun! The next gale that sweeps from the north will bring to our ears the clash of resounding arms! Our brethren are already in the field! Why stand we here idle? What is it that gentlemen wish? What would they have? Is life so dear, or peace so sweet, as to be purchased at the price of chains and slavery? Forbid it, Almighty God! I know not what course others may take; but as for me, give me liberty, or give me death!

Adoption of the Declaration of Independence

On June 7, 1776, Richard Henry Lee, who had issued the first call for a congress of the colonies, introduced in the Continental Congress at Philadelphia a resolution declaring "that these United Colonies are, and of right ought to be, free and independent states, that they are absolved from all allegiance to the British Crown, and that all political connection between them and the state of Great Britain is, and ought to be, totally dissolved."

The resolution, seconded by John Adams on behalf of the Massachusetts delegation, came up again on June 11 when a committee of five, headed by Thomas Jefferson, was appointed to express the purpose of the resolution in a declaration of independence. The other four were John Adams, Benjamin Franklin, Robert R. Livingston, and Roger Sherman.

Drafting the Declaration was assigned to Jefferson, who worked on a portable desk of his own construction in a room at Market and 7th St. The committee reported the result on June 28, 1776. The members of the Congress suggested a number of changes, which Jefferson called "deplorable." They did not approve Jefferson's arraignment of the British people and King George III for encouraging and fostering the slave trade, which Jefferson called "an execrable commerce." They eliminated 630 words and added 146, leaving 1,322 words in the final draft. In its final form, capitalization was erratic. Jefferson had written that men were endowed with "inalienable" rights; in the final copy it came out as "unalienable" and has been thus ever since.

The Lee-Adams resolution of independence was adopted by 12 yeas on July 2—the actual date of the act of independence. The Declaration, which explains the act, was adopted July 4.

After the Declaration was adopted, July 4, 1776, it was turned over to printer John Dunlap to be printed on broadsides. The original copy was lost and one of his broadsides was attached to a page in the journal of the Congress. It was read aloud July 8 in Philadelphia, PA, Easton, PA, and Trenton, NJ. On July 9, it was read by order of Gen. George Washington to the troops assembled on the Common in New York City (City Hall Park).

The Continental Congress of July 19, 1776, adopted the following resolution:

"Resolved, That the Declaration passed on the 4th, be fairly engrossed on parchment with the title and stile of 'The Unanimous Declaration of the thirteen United States of America' and that the same, when engrossed, be signed by every member of Congress."

Not all delegates who signed the engrossed Declaration were present on July 4. Robert Morris (PA), William Williams (CT), and Samuel Chase (MD) signed on Aug. 2; Oliver Wolcott (CT), George Wythe (VA), Richard Henry Lee (VA), and Elbridge Gerry (MA) signed in August and September; Matthew Thornton (NH) joined the Congress Nov. 4 and signed later. Thomas McKean (DE) rejoined Washington's army before signing and said later that he signed in 1781.

Charles Carroll of Carrollton was appointed a delegate by Maryland on July 4, 1776, presented his credentials July 18, and signed the engrossed Declaration on Aug. 2. Born Sept. 19, 1737, he was 95 years old and the last surviving signer when he died on Nov. 14, 1832.

Two Pennsylvania delegates who did not support the Declaration on July 4 were replaced. The four New York delegates did not have authority from their state to vote on July 4. On July 9, the New York state convention authorized its delegates to approve the Declaration, and the Congress was so notified on July 15, 1776. The four signed the Declaration on Aug. 2.

The original engrossed Declaration is preserved at the National Archives in Washington, DC.

Declaration of Independence

The Declaration of Independence was adopted by the Continental Congress in Philadelphia on July 4, 1776. John Hancock was president of the Congress, and Charles Thomson was secretary. A copy of the Declaration, engrossed on parchment, was signed by members of Congress on and after Aug. 2, 1776. On Jan. 18, 1777, Congress ordered that "an authenticated copy, with the names of the members of Congress subscribing the same, be sent to each of the United States, and that they be desired to have the same put on record." Authenticated copies were printed in broadside form in Baltimore, where the Continental Congress was then in session. The following text is that of the original printed by John Dunlap at Philadelphia for the Continental Congress. The original is on display at the National Archives.

IN CONGRESS, July 4, 1776.
A DECLARATION
By the REPRESENTATIVES of the
UNITED STATES OF AMERICA,
In GENERAL CONGRESS assembled

When in the Course of human Events, it becomes necessary for one People to dissolve the Political Bands which have connected them with another, and to assume among the Powers of the Earth, the separate and equal Station to which the Laws of Nature and of Nature's God entitle them, a decent Respect to the Opinions of Mankind requires that they should declare the causes which impel them to the Separation.

We hold these Truths to be self-evident, that all Men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the Pursuit of Happiness—That to secure these Rights, Governments are instituted among Men, deriving their just Powers from the Consent of the Governed, that whenever any Form of Government becomes destructive of these Ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its Foundation on such Principles, and organizing its Powers in such Form, as to them shall seem most likely to effect their Safety and Happiness. Prudence, indeed, will dictate that Governments long established should not be changed for light and transient Causes; and accordingly all Experience hath shewn, that Mankind are more disposed to suffer, while Evils are sufferable, than to right themselves by abolishing the Forms to which they are accustomed. But when a long Train of Abuses and Usurpations, pursuing invariably the same Object, evinces a Design to reduce them under absolute Despotism, it is their Right, it is their Duty, to throw off such Government, and to provide new Guards for their future Security. Such has been the patient Sufferance of these Colonies; and such is now the Necessity which constrains them to alter their former Systems of Government. The History of the present King of Great-Britain is a History of repeated Injuries and Usurpations, all having in direct Object the Establishment of an absolute Tyranny over these States. To prove this, let Facts be submitted to a candid World.

He has refused his Assent to Laws, the most wholesome and necessary for the public Good.

He has forbidden his Governors to pass Laws of immediate and pressing Importance, unless suspended in their Operation till his Assent should be obtained; and when so suspended, he has utterly neglected to attend to them.

He has refused to pass other Laws for the Accommodation of large Districts of People, unless those People would relinquish the Right of Representation in the Legislature, a Right inestimable to them, and formidable to Tyrants only.

He has called together Legislative Bodies at Places unusual, uncomfortable, and distant from the Depository of their Public Records, for the sole Purpose of fatiguing them into Compliance with his Measures.

He has dissolved Representative Houses repeatedly, for opposing with manly Firmness his Invasions on the Rights of the People.

He has refused for a long Time, after such Dissolutions, to cause others to be elected; whereby the Legislative Powers, incapable of Annihilation, have returned to the People at large for their exercise; the State remaining in the mean time exposed to all the Dangers of Invasion from without, and Convulsions within.

He has endeavoured to prevent the Population of these States; for that Purpose obstructing the Laws for Naturalization of Foreigners; refusing to pass others to encourage their Migrations hither, and raising the Conditions of new Appropriations of Lands.

He has obstructed the Administration of Justice, by refusing his Assent to Laws for establishing Judiciary Powers.

He has made Judges dependent on his Will alone, for the Tenure of their Offices, and the Amount and payment of their Salaries.

He has erected a Multitude of new Offices, and sent hither Swarms of Officers to harrass our People, and eat out their Substance.

He has kept among us, in Times of Peace, Standing Armies, without the consent of our Legislatures.

He has affected to render the Military independent of, and superior to the Civil Power.

He has combined with others to subject us to a Jurisdiction foreign to our Constitution, and unacknowledged by our Laws; giving his Assent to their Acts of pretended Legislation:

For quartering large Bodies of Armed Troops among us:

For protecting them, by a mock Trial, from Punishment for any Murders which they should commit on the Inhabitants of these States:

For cutting off our Trade with all Parts of the World:

For imposing Taxes on us without our Consent:

For depriving us, in many Cases, of the Benefits of Trial by Jury:

For transporting us beyond Seas to be tried for pretended Offences:

For abolishing the free System of English Laws in a neighbouring Province, establishing therein an arbitrary Government, and enlarging its Boundaries, so as to render it at once an Example and fit Instrument for introducing the same absolute Rule into these Colonies:

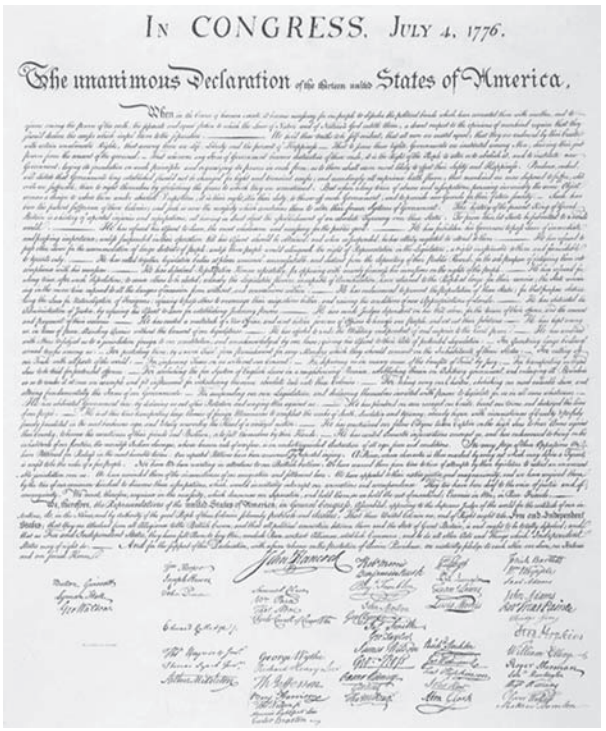
For taking away our Charters, abolishing our most valuable Laws, and altering fundamentally the Forms of our Governments:

For suspending our own Legislatures, and declaring themselves invested with Power to legislate for us in all Cases whatsoever.

He has abdicated Government here, by declaring us out of his Protection and waging War against us.

He has plundered our Seas, ravaged our Coasts, burnt our towns, and destroyed the Lives of our People.

He is, at this Time, transporting large Armies of foreign Mercenaries to complete the works of Death, Desolation, and Tyranny, already begun with circumstances of Cruelty


IN CONGRESS. JULY 4, 1776.

The unanimous Declaration of the thirteen united States of America,

and Perfidy, scarcely paralleled in the most barbarous Ages, and totally unworthy the Head of a civilized Nation.

He has constrained our fellow Citizens taken Captive on the high Seas to bear Arms against their Country, to become the Executioners of their Friends and Brethren, or to fall themselves by their Hands.

He has excited domestic Insurrections amongst us, and has endeavoured to bring on the Inhabitants of our Frontiers, the merciless Indian Savages, whose known Rule of Warfare, is an undistinguished Destruction, of all Ages, Sexes and Conditions.

In every stage of these Oppressions we have Petitioned for Redress in the most humble Terms: Our repeated Petitions have been answered only by repeated Injury. A Prince, whose Character is thus marked by every act which may define a Tyrant, is unfit to be the Ruler of a free People.

Nor have we been wanting in Attentions to our British Brethren. We have warned them from Time to Time of Attempts by their Legislature to extend an unwarrantable Jurisdiction over us. We have reminded them of the Circumstances of our Emigration and Settlement here. We have appealed to their native Justice and Magnanimity, and we have conjured them by the Ties of our common Kindred to disavow these Usurpations, which, would inevitably interrupt our Connections and Correspondence. They too have been deaf to the Voice of Justice and of Consanguinity. We must, therefore, acquiesce in the Necessity, which denounces our Separation, and hold them, as we hold the rest of Mankind, Enemies in War, in Peace, Friends.

We, therefore, the Representatives of the UNITED STATES OF AMERICA, in General Congress, Assembled, appealing to the Supreme Judge of the World for the Rectitude of our Intentions, do, in the Name, and by Authority of the good People of these Colonies, solemnly Publish and Declare, That these United Colonies are, and of Right ought to be, Free and Independent States; that they are absolved from all Allegiance to the British Crown, and that all political Connection between them and the State of Great-Britain, is and ought to be totally dissolved; and that as Free and Independent States, they have full Power to levy War, conclude Peace, contract Alliances, establish Commerce, and to do all other Acts and Things which Independent States may of right do. And for the support of this declaration, with a firm Reliance on the Protection of Divine Providence, we mutually pledge to each other our lives, our Fortunes, and our sacred Honor.

JOHN HANCOCK, President

Attest.

CHARLES THOMSON, Secretary.

Signers of the Declaration of Independence

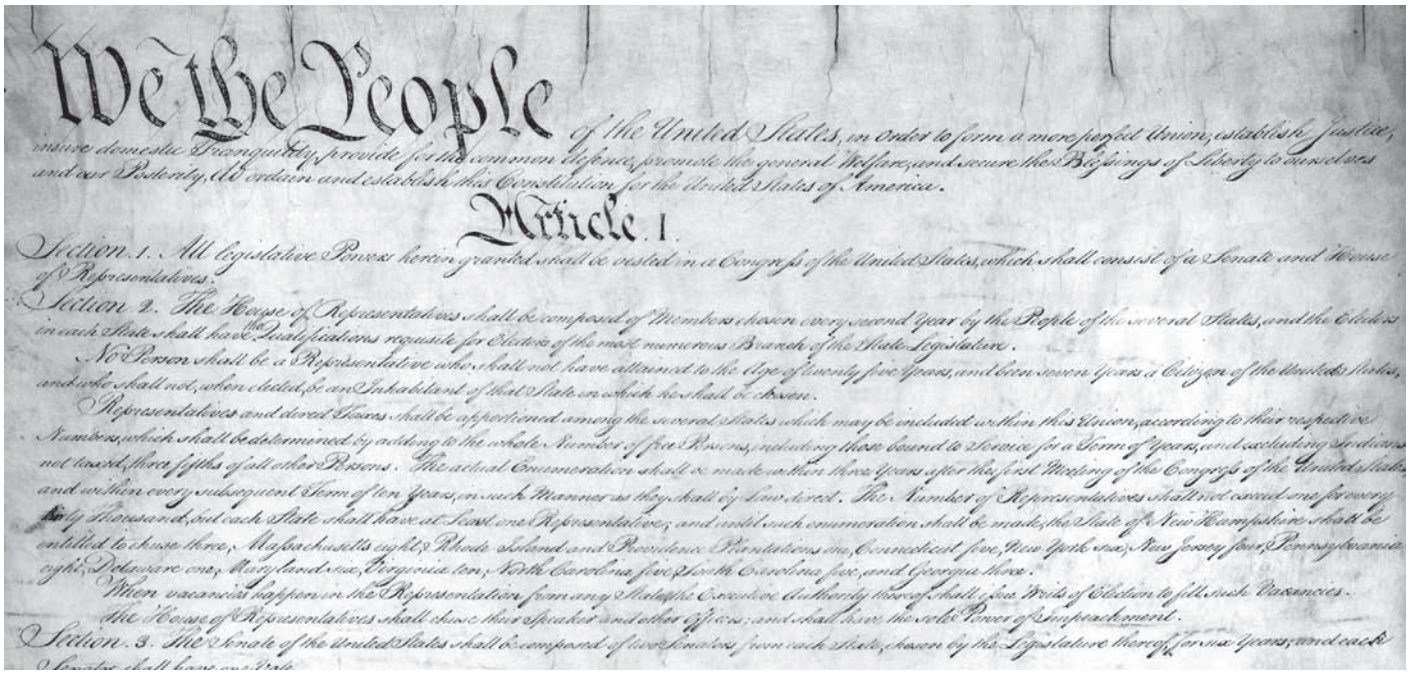
Delegate (state)	Occupation	Birthplace	Born	Died
Adams, John (MA)	Lawyer	Braintree (Quincy), MA	Oct. 30, 1735	July 4, 1826
Adams, Samuel (MA)	Political leader	Boston, MA	Sept. 27, 1722	Oct. 2, 1803
Bartlett, Josiah (NH)	Physician, judge	Amesbury, MA	Nov. 21, 1729	May 19, 1795
Braxton, Carter (VA)	Farmer	Newington Plantation, VA	Sept. 10, 1736	Oct. 10, 1797
Carroll, Charles of Carrollton (MD)	Merchant	Annapolis, MD	Sept. 19, 1737	Nov. 14, 1832
Chase, Samuel (MD)	Judge	Princess Anne, MD	Apr. 17, 1741	June 19, 1811
Clark, Abraham (NJ)	Surveyor	Elizabethtown, NJ	Feb. 15, 1726	Sept. 15, 1794
Clymer, George (PA)	Merchant	Philadelphia, PA	Mar. 16, 1739	Jan. 23, 1813
Ellery, William (RI)	Lawyer	Newport, RI	Dec. 22, 1727	Feb. 15, 1820
Floyd, William (NY)	Soldier	Brookhaven, NY	Dec. 17, 1734	Aug. 4, 1821
Franklin, Benjamin (PA)	Printer, publisher	Boston, MA	Jan. 17, 1706	Apr. 17, 1790
Gerry, Elbridge (MA)	Merchant	Marblehead, MA	July 17, 1744	Nov. 23, 1814
Gwinnett, Button (GA)	Merchant	Gloucester, England	c. 1735	May 19, 1777
Hall, Lyman (GA)	Physician	Wallingford, CT	Apr. 12, 1724	Oct. 19, 1790
Hancock, John (MA)	Merchant	Braintree (Quincy), MA	Jan. 12, 1737	Oct. 8, 1793
Harrison, Benjamin (VA)	Farmer	Charles City County, VA	Apr. 5, 1726	Apr. 24, 1791
Hart, John (NJ)	Farmer	Stonington, CT	c. 1711	May 11, 1779
Hewes, Joseph (NC)	Merchant	Kingston, NJ	Jan. 23, 1730	Nov. 10, 1779
Heyward, Thos. Jr. (SC)	Lawyer, farmer	St. Luke's Parish, SC	July 28, 1746	Mar. 6, 1809
Hooper, William (NC)	Lawyer	Boston, MA	June 17, 1742	Oct. 14, 1790
Hopkins, Stephen (RI)	Judge, educator	Providence, RI	Mar. 7, 1707	July 13, 1785
Hopkinson, Francis (NJ)	Judge, author	Philadelphia, PA	Oct. 2, 1737	May 9, 1791
Huntington, Samuel (CT)	Judge	Windham, CT	July 3, 1731	Jan. 5, 1796
Jefferson, Thomas (VA)	Lawyer	Shadwell, VA	Apr. 13, 1743	July 4, 1826
Lee, Francis Lightfoot (VA)	Farmer	Westmoreland County, VA	Oct. 14, 1734	Jan. 11, 1797
Lee, Richard Henry (VA)	Farmer	Westmoreland County, VA	Jan. 20, 1732	June 19, 1794
Lewis, Francis (NY)	Merchant	Llandaff, Wales	Mar. 21, 1713	Dec. 31, 1802
Livingston, Philip (NY)	Merchant	Albany, NY	Jan. 15, 1716	June 12, 1778
Lynch, Thomas Jr. (SC)	Farmer	Winyah, SC	Aug. 5, 1749	(at sea) 1779
McKean, Thomas (DE)	Lawyer	New London, PA	Mar. 19, 1734	June 24, 1817
Middleton, Arthur (SC)	Farmer	Charleston, SC	June 26, 1742	Jan. 1, 1787
Morris, Lewis (NY)	Farmer	Morrisania (Bronx County), NY	Apr. 8, 1726	Jan. 22, 1798
Morris, Robert (PA)	Merchant	Liverpool, England	Jan. 31, 1734	May 8, 1806
Morton, John (PA)	Judge	Ridley, PA	c. 1724	Apr. 1777
Nelson, Thos. Jr. (VA)	Farmer	Yorktown, VA	Dec. 26, 1738	Jan. 4, 1789
Paca, William (MD)	Judge	Abingdon, MD	Oct. 31, 1740	Oct. 23, 1799
Paine, Robert Treat (MA)	Judge	Boston, MA	Mar. 11, 1731	May 12, 1814
Penn, John (NC)	Lawyer	Caroline County, VA	May 17, 1741	Sept. 14, 1788
Read, George (DE)	Judge	Cecil County, MD	Sept. 18, 1733	Sept. 21, 1798
Rodney, Caesar (DE)	Judge	Dover, DE	Oct. 7, 1728	June 29, 1784
Ross, George (PA)	Judge	New Castle, DE	May 10, 1730	July 14, 1779
Rush, Benjamin (PA)	Physician	Byberry, PA (Philadelphia)	Jan. 4, 1746	Apr. 19, 1813
Rutledge, Edward (SC)	Lawyer	Charleston, SC	Nov. 23, 1749	Jan. 23, 1800
Sherman, Roger (CT)	Lawyer	Newton, MA	Apr. 19, 1721	July 23, 1793
Smith, James (PA)	Lawyer	Northern Ireland	c. 1719	July 11, 1806
Stockton, Richard (NJ)	Lawyer	Princeton, NJ	Oct. 1, 1730	Feb. 28, 1781
Stone, Thomas (MD)	Lawyer	Charles County, MD	c. 1743	Oct. 5, 1787
Taylor, George (PA)	Ironmaster	Ireland	c. 1716	Feb. 23, 1781
Thornton, Matthew (NH)	Physician	Ireland	c. 1714	June 24, 1803
Walton, George (GA)	Judge	Cumberland County, VA	c. 1741	Feb. 2, 1804
Whipple, William (NH)	Merchant, judge	Kittery, ME	Jan. 14, 1730	Nov. 28, 1785
Williams, William (CT)	Merchant	Lebanon, CT	Apr. 8, 1731	Aug. 2, 1811
Wilson, James (PA)	Judge	Carskerdo, Scotland	Sept. 14, 1742	Aug. 21, 1798
Witherspoon, John (NJ)	Clergyman, educator	Gifford, Scotland	Feb. 5, 1723	Nov. 15, 1794
Wolcott, Oliver (CT)	Judge	Windsor, CT	Nov. 20, 1726	Dec. 1, 1797
Wythe, George (VA)	Lawyer	Elizabeth City County, VA	c. 1726	June 8, 1806

Origin of the Constitution

The War of Independence was conducted by delegates from the original 13 states, who comprised the Congress of the United States of America, known as the Continental Congress. In 1777 the Congress submitted to the legislatures of the states the Articles of Confederation and Perpetual Union, which were ratified by New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Virginia, North Carolina, South Carolina, Georgia, and finally, in 1781, Maryland.

The first article read: "The stile of this confederacy shall be the United States of America." This did not signify a sovereign nation, because the states delegated only those powers they could not handle individually, such as to wage war, make treaties, and contract debts for general expenses (e.g., paying the army). Taxes for payment of such debts were levied by the individual states. The president signed himself "President of the United States in Congress assembled," but here the United States were considered in the plural, a cooperating group.

When the war was won, it became evident that a stronger federal union was needed. The Congress left the initiative to the legislatures. Virginia in Jan. 1786 appointed commissioners to meet with representatives of other states; delegates from Virginia, Delaware, New York, New Jersey, and Pennsylvania met at Annapolis. Alexander Hamilton prepared their call asking delegates from all states to meet in Philadelphia in May 1787 "to render the Constitution of the federal government adequate to the exigencies of the union." Congress endorsed the plan on Feb. 21, 1787. Delegates were appointed by all states except Rhode Island.


We the People of the United States, in order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.

Article. I.

Section. 1. All legislative Powers herein granted shall be vested in a Congress of the United States, which shall consist of a Senate and House of Representatives.

Section. 2. The House of Representatives shall be composed of Members chosen every second Year by the People of the several States, and the Electors in each State shall have the Qualifications requisite for Electors of the most numerous Branch of the State Legislature.

No Person shall be a Representative who shall not have attained to the Age of twenty five Years, and been seven Years a Citizen of the United States, and who shall not, when elected, be an Inhabitant of that State in which he shall be chosen.

Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers, which shall be determined by adding to the whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other Persons. The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct. The Number of Representatives shall not exceed one for every thirty Thousand, but each State shall have at Least one Representative; and until such enumeration shall be made, the State of New Hampshire shall be entitled to chuse three, Massachusetts eight, Rhode-Island and Providence Plantations one, Connecticut five, New-York six, New Jersey four, Pennsylvania eight, Delaware one, Maryland six, Virginia ten, North Carolina five, South Carolina five, and Georgia three.

The convention was called for May 14, 1787, but a quorum was not present until May 25. George Washington was chosen president (presiding officer). The states certified 65 delegates, but 10 did not attend. The work was done by 55, not all of whom were present at all sessions. Of the 55 attending delegates, 16 failed to sign, and 39 actually signed Sept. 17, 1787, some with reservations. Some historians have said 74 delegates (9 more than the 65 actually certified) were named, and 19 failed to attend. These 9 additional persons refused the appointment, were never delegates, and were never counted as absentees. Washington sent the Constitution to Congress, and that body, Sept. 28, 1787, ordered it sent to the legislatures, "in order to be submitted to a convention of delegates chosen in each state by the people thereof."

The Constitution was ratified by votes of state conventions as follows: Delaware, Dec. 7, 1787, unanimous; Pennsylvania, Dec. 12, 1787, 46 to 23; New Jersey, Dec. 18, 1787, unanimous; Georgia, Jan. 2, 1788, unanimous; Connecticut, Jan. 9, 1788, 128 to 40; Massachusetts, Feb. 6, 1788, 187 to 168; Maryland, Apr. 28, 1788, 63 to 11; South Carolina, May 23, 1788, 149 to 73; New Hampshire, June 21, 1788, 57 to 46; Virginia, June 25, 1788, 89 to 79; New York, July 26, 1788, 30 to 27. Nine states were needed to establish the operation of the Constitution "between the states so ratifying the same," and New Hampshire was the 9th state. The government did not declare the Constitution in effect until the first Wednesday in Mar. 1789, which was Mar. 4. After that, North Carolina ratified it on Nov. 21, 1789, 194 to 77; and Rhode Island, May 29, 1790, 34 to 32. Vermont in convention ratified it on Jan. 10, 1791, and by act of Congress approved on Feb. 18, 1791, was admitted into the Union as the 14th state, Mar. 4, 1791.

Constitution of the United States

The Original 7 Articles

The text of the Constitution given here (except for Amendment XXVII) is from the pocket-size edition of the Constitution published by the U.S. Government Printing Office as a result of a congressional resolution to print the Constitution in its original form as amended through July 5, 1971. *Text in brackets* indicates that an item has been superseded or amended, or provides background information. **Boldface text preceding** an article, section, or amendment is a brief summary, added by *The World Almanac*.

PREAMBLE

We, the People of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.

ARTICLE I.

Section 1—Legislative powers; in whom vested.

All legislative Powers herein granted shall be vested in a Congress of the United States, which shall consist of a Senate and House of Representatives.

Section 2—House of Representatives, how and by whom chosen. Qualifications of a Representative. Representatives and direct taxes, how apportioned. Enumeration. Vacancies to be filled. Power of choosing officers, and of impeachment.

The House of Representatives shall be composed of Members chosen every second Year by the People of the several States, and the Electors in each State shall have the Qualifications requisite for Electors of the most numerous Branch of the State Legislature.

No person shall be a Representative who shall not have attained to the Age of twenty-five Years, and been seven Years a Citizen of the United States, and who shall not, when elected, be an Inhabitant of that State in which he shall be chosen.

[Representatives and direct taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers, which shall be determined by adding to the whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three-fifths of all other persons.] [The previous sentence was superseded by Amendment XIV, section 2.] The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct. The Number of Representatives shall not exceed one for every thirty Thousand, but each State shall have at Least one Representative; and until such enumeration shall be made, the State of New Hampshire shall be entitled to chuse three, Massachusetts eight, Rhode-Island and Providence Plantations one, Connecticut five, New-York six, New Jersey four, Pennsylvania eight, Delaware one, Maryland six, Virginia ten, North Carolina five, South Carolina five, and Georgia three.

When vacancies happen in the Representation from any State, the Executive Authority thereof shall issue Writs of Election to fill such Vacancies.

The House of Representatives shall chuse their Speaker and other Officers; and shall have the sole Power of Impeachment.

Section 3—Senators, how and by whom chosen. How classified. Qualifications of a Senator. President of the Senate, his right to vote. President pro tem., and other officers of the Senate, how chosen. Power to try impeachments. When President is tried, Chief Justice to preside. Sentence.

The Senate of the United States shall be composed of two Senators from each State, *[chosen by the Legislature thereof] [The preceding five words were superseded by Amendment XVII.]* for six Years; and each Senator shall have one Vote.

Immediately after they shall be assembled in Consequence of the first Election, they shall be divided as equally as may be into three Classes. The Seats of the Senators of the first Class shall be vacated at the Expiration of the second Year, of the second Class at the Expiration of the fourth Year, and of the third Class at the Expiration of the Sixth year, so that one-third may be chosen every second Year; *[and if Vacancies happen by Resignation, or otherwise, during the Recess of the Legislature of any State, the Executive thereof may make temporary Appointments until the next Meeting of the Legislature, which shall then fill such Vacancies.] [The words in brackets were superseded by Amendment XVII.]*

No person shall be a Senator who shall not have attained to the Age of thirty Years, and been nine Years a Citizen of the United States, and who shall not, when elected, be an Inhabitant of that State for which he shall be chosen.

The Vice President of the United States shall be President of the Senate, but shall have no Vote, unless they be equally divided.

The Senate shall chuse their other Officers, and also a President pro tempore, in the absence of the Vice President, or when he shall exercise the Office of President of the United States.

The Senate shall have the sole Power to try all Impeachments. When sitting for that Purpose, they shall be on Oath or Affirmation. When the President of the United States is tried, the Chief Justice shall preside: And no Person shall be convicted without the Concurrence of two thirds of the Members present.

Judgment in Cases of Impeachment shall not extend further than to removal from Office, and disqualification to hold and enjoy any Office of honor, Trust or Profit under the United States: but the Party convicted shall nevertheless be liable and subject to Indictment, Trial, Judgment and Punishment, according to Law.

Section 4—Times, etc., of holding elections, how prescribed. One session each year.

The Times, Places and Manner of holding Elections for Senators and Representatives, shall be prescribed in each State by the Legislature thereof; but the Congress may at any time by Law make or alter such Regulations, except as to the Place of Chusing Senators.

The Congress shall assemble at least once in every Year, and such Meeting shall be *[on the first Monday in December,] [The words in brackets were superseded by Amendment XX, section 2.]* unless they shall by Law appoint a different Day.

Section 5—Membership, quorum, adjournments, rules. Power to punish or expel. Journal. Time of adjournments, how limited, etc.

Each House shall be the Judge of the Elections, Returns and Qualifications of its own Members, and a Majority of each shall constitute a Quorum to do Business; but a smaller number may adjourn from day to day, and may be authorized to compel the Attendance of absent Members, in such manner, and under such Penalties as each House may provide.

Each House may determine the Rules of its Proceedings, punish its members for disorderly Behavior, and, with the Concurrence of two thirds, expel a Member.

Each House shall keep a Journal of its Proceedings, and from time to time publish the same, excepting such Parts as may in their Judgment require Secrecy; and the Yeas and Nays of the Members of either House on any question shall, at the Desire of one fifth of those Present, be entered on the Journal.

Neither House, during the Session of Congress, shall, without the Consent of the other, adjourn for more than three days, nor to any other Place than that in which the two Houses shall be sitting.

Section 6—Compensation, privileges, disqualifications in certain cases.

The Senators and Representatives shall receive a Compensation for their Services, to be ascertained by Law, and paid out of the Treasury of the United States. They shall in all Cases, except Treason, Felony and Breach of the Peace, be privileged from Arrest during their Attendance at the Session of their respective Houses, and in going to and returning from the same; and for any Speech or Debate in either House, they shall not be questioned in any other Place.

No Senator or Representative shall, during the Time for which he was elected, be appointed to any civil Office under the Authority of the United States, which shall have been created, or the Emoluments whereof shall have been encreased during such time; and no Person holding any Office under the United States, shall be a Member of either House during his Continuance in Office.

Section 7—House to originate all revenue bills. Veto. Bill may be passed by two-thirds of each House, notwithstanding, etc. Bill, not returned in ten days, to become a law. Provisions as to orders, concurrent resolutions, etc.

All bills for raising Revenue shall originate in the House of Representatives; but the Senate may propose or concur with Amendments as on other Bills.

Every Bill which shall have passed the House of Representatives and the Senate, shall, before it become a Law, be presented to the President of the United States; If he approve he shall sign it, but if not he shall return it, with his Objections to that House in which it shall have originated, who shall enter the Objections at large on their Journal, and proceed to reconsider it. If after such Reconsideration two thirds of that House shall agree to pass the Bill, it shall be sent, together with the Objections, to the other House, by which it shall likewise be reconsidered, and if approved by two thirds of that House, it shall become a Law. But in all such Cases the Votes of both Houses shall be determined by Yeas and Nays, and the Names of the Persons voting for and against the Bill shall be entered on the Journal of each House respectively. If any Bill shall not be returned by the President within ten Days (Sundays excepted) after it shall have been presented to him, the Same shall be a Law, in like Manner as if he had signed it, unless the Congress by their Adjournment prevent its Return, in which Case it shall not be a Law.

Every order, Resolution, or Vote to which the Concurrence of the Senate and House of Representatives may be necessary (except on a question of Adjournment) shall be presented to the President of the United States; and before the Same shall take Effect, shall be approved by him, or being disapproved by him, shall be repassed by two thirds of the Senate and House of Representatives, according to the Rules and Limitations prescribed in the Case of a Bill.

Section 8—Powers of Congress.

The Congress shall have Power To lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defence and general Welfare of the United States; but all Duties, Imposts and Excises shall be uniform throughout the United States;

To borrow money on the credit of the United States;

To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes;

To establish an uniform Rule of Naturalization, and uniform Laws on the subject of Bankruptcies throughout the United States;

To coin Money, regulate the Value thereof, and of foreign Coin, and fix the Standard of Weights and Measures;

To provide for the Punishment of counterfeiting the Securities and current Coin of the United States;

To establish Post Offices and post Roads;

To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries;

To constitute Tribunals inferior to the supreme Court;

To define and punish Piracies and Felonies committed on the high Seas, and Offenses against the Law of Nations;

To declare War, grant Letters of Marque and Reprisal, and make Rules concerning Captures on Land and Water;

To raise and support Armies, but no Appropriation of Money to that Use shall be for a longer Term than two Years;

To provide and maintain a Navy;

To make Rules for the Government and Regulation of the land and naval Forces;

To provide for calling forth the Militia to execute the Laws of the Union, suppress Insurrections and repel Invasions;

To provide for organizing, arming, and disciplining the Militia, and for governing such Part of them as may be employed in the Service of the United States, reserving to the States respectively, the Appointment of the Officers, and the Authority of training the Militia according to the discipline prescribed by Congress;

To exercise exclusive Legislation in all Cases whatsoever, over such District (not exceeding ten Miles square) as may, by Cession of particular States, and the acceptance of Congress, become the Seat of the Government of the United States, and to exercise like Authority over all Places purchased by the Consent of the Legislature of the State in which the Same shall be, for the Erection of Forts, Magazines, Arsenals, dock-Yards, and other needful Buildings;—And

To make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the Government of the United States, or in any Department or Officer thereof.

Section 9—Provision as to migration or importation of certain persons. Habeas corpus, bills of attainder, etc. Taxes, how apportioned. No export duty. No commercial preference. Money, how drawn from Treasury, etc. No titular nobility. Officers not to receive presents, etc.

The Migration or Importation of such Persons as any of the States now existing shall think proper to admit, shall not be prohibited by the Congress prior to the Year one thousand eight hundred and eight, but a tax or duty may be imposed on such Importation, not exceeding ten dollars for each Person.

The privilege of the Writ of Habeas Corpus shall not be suspended, unless when in Cases of Rebellion or Invasion the public Safety may require it.

No Bill of Attainder or ex post facto Law shall be passed.

[No capitation, or other direct, Tax shall be laid, unless in Proportion to the Census or Enumeration herein before directed to be taken.] [Words in brackets modified by Amendment XVI.]

No Tax or Duty shall be laid on Articles exported from any State.

No Preference shall be given by any Regulation of Commerce or Revenue to the Ports of one State over those of another: nor shall Vessels bound to, or from, one State, be obliged to enter, clear, or pay Duties in another.

No Money shall be drawn from the Treasury, but in Consequence of Appropriations made by Law; and a regular Statement and Account of the Receipts and Expenditures of all public Money shall be published from time to time.

No Title of Nobility shall be granted by the United States: and no Person holding any Office of Profit or Trust under them, shall, without the Consent of the Congress, accept of any present, Emolument, Office, or Title, of any kind whatever, from any King, Prince, or foreign State.

Section 10—States prohibited from the exercise of certain powers.

No State shall enter into any Treaty, Alliance, or Confederation; grant Letters of Marque and Reprisal; coin Money; emit Bills of Credit; make any Thing but gold and silver Coin a Tender in Payment of Debts; pass any Bill of Attainder, ex post facto Law, or Law impairing the Obligation of Contracts, or grant any Title of Nobility.

No State shall, without the Consent of the Congress, lay any Imposts or Duties on Imports or Exports, except what may be absolutely necessary for executing its inspection Laws: and the net Produce of all Duties and Imposts, laid by any State on Imports or Exports, shall be for the Use of the Treasury of the United States; and all such Laws shall be subject to the Revision and Control of the Congress.

No State shall, without the Consent of Congress, lay any duty of Tonnage, keep Troops, or Ships of War in time of Peace, enter into any Agreement or Compact with another State, or with a foreign Power, or engage in War, unless actually invaded, or in such imminent Danger as will not admit of delay.

ARTICLE II.

Section 1—President: his term of office. Electors of President; number and how appointed. Electors to vote on same day. Qualification of President. On whom his duties devolve in case of his removal, death, etc. President's compensation. His oath of office.

The executive Power shall be vested in a President of the United States of America. He shall hold his Office during the Term of four Years, and, together with the Vice President, chosen for the same Term, be elected, as follows.

Each State shall appoint, in such Manner as the Legislature thereof may direct, a Number of Electors, equal to the whole Number of Senators and Representatives to which the State may be entitled in the Congress: but no Senator or Representative, or Person holding an Office of Trust or Profit under the United States, shall be appointed an Elector.

[The Electors shall meet in their respective States, and vote by Ballot for two persons, of whom one at least shall not be an Inhabitant of the same State with themselves. And they shall make a List of all the Persons voted for, and of the Number of Votes for each; which List they shall sign and certify, and transmit sealed to the Seat of the Government of the United States, directed to the President of the Senate. The President of the Senate shall, in the Presence of the Senate and House of Representatives, open all the Certificates, and the Votes shall then be counted. The Person having the greatest Number of Votes shall be the President, if such Number be a Majority of the whole Number of Electors appointed; and if there be more than one who have such Majority, and have an equal Number of Votes, then the House of Representatives shall immediately chuse by Ballot one of them for President; and if no Person have a Majority, then from the five highest on the List the said House shall in like Manner chuse the President. But in chusing the President,

the Votes shall be taken by States, the Representation from each State having one Vote; a quorum for this Purpose shall consist of a Member or Members from two thirds of the States, and a Majority of all the States shall be necessary to a Choice. In every Case, after the Choice of the President, the Person having the greatest Number of Votes of the Electors shall be the Vice President. But if there should remain two or more who have equal Votes, the Senate shall chuse from them by Ballot the Vice-President.] [This clause was superseded by Amendment XII.]

The Congress may determine the Time of chusing the Electors, and the Day on which they shall give their Votes; which Day shall be the same throughout the United States.

No person except a natural born Citizen, or a Citizen of the United States, at the time of the Adoption of this Constitution, shall be eligible to the Office of President; neither shall any Person be eligible to that Office who shall not have attained to the Age of thirty-five Years, and been fourteen Years a Resident within the United States. *[For qualification of the Vice President, see Amendment XII.]*

[In Case of the Removal of the President from Office, or of his Death, Resignation, or Inability to discharge the Powers and Duties of the said Office, the same shall devolve on the Vice President, and the Congress may by Law, provide for the Case of Removal, Death, Resignation or Inability, both of the President and Vice President, declaring what Officer shall then act as President, and such Officer shall act accordingly, until the Disability be removed, or a President shall be elected.] [This clause was superseded by Amendments XXV.]

The President shall, at stated Times, receive for his Services, a Compensation, which shall neither be encreased nor diminished during the Period for which he shall have been elected, and he shall not receive within that Period any other Emolument from the United States, or any of them.

Before he enter on the Execution of his Office, he shall take the following Oath or Affirmation:–"I do solemnly swear (or affirm) that I will faithfully execute the Office of President of the United States, and will to the best of my Ability, preserve, protect and defend the Constitution of the United States."

Section 2—President to be Commander-in-Chief. He may require opinions of cabinet officers, etc., may pardon. Treaty-making power. Nomination of certain officers. When President may fill vacancies.

The President shall be Commander in Chief of the Army and Navy of the United States, and of the Militia of the several States, when called into the actual Service of the United States; he may require the Opinion in writing, of the principal Officer in each of the executive Departments, upon any subject relating to the Duties of their respective Offices, and he shall have Power to Grant Reprieves and Pardons for Offenses against the United States, except in Cases of Impeachment.

He shall have Power, by and with the Advice and Consent of the Senate, to make Treaties, provided two-thirds of the Senators present concur; and he shall nominate, and by and with the Advice and Consent of the Senate, shall appoint Ambassadors, other public Ministers and Consuls, Judges of the supreme Court, and all other Officers of the United States, whose Appointments are not herein otherwise provided for, and which shall be established by Law: but the Congress may by Law vest the Appointment of such inferior Officers, as they think proper, in the President alone, in the Courts of Law, or in the Heads of Departments.

The President shall have Power to fill up all Vacancies that may happen during the Recess of the Senate, by granting Commissions which shall expire at the End of their next Session.

Section 3—President shall communicate to Congress. He may convene and adjourn Congress, in case of disagreement, etc. Shall receive ambassadors, execute laws, and commission officers.

He shall from time to time give to the Congress Information of the State of the Union, and recommend to their Consideration such Measures as he shall judge necessary and expedient; he may, on extraordinary Occasions, convene both Houses, or either of them, and in Case of Disagreement between them, with Respect to the Time of Adjournment, he may adjourn them to such Time as he shall think proper; he shall receive Ambassadors and other public Ministers; he shall take Care that the Laws be faithfully executed, and shall Commission all the Officers of the United States.

Section 4—All civil offices forfeited for certain crimes.

The President, Vice President and all civil Officers of the United States, shall be removed from Office on Impeachment for, and Conviction of, Treason, Bribery, or other high Crimes and Misdemeanors.

ARTICLE III.

Section 1—Judicial powers, tenure. Compensation.

The judicial Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish. The Judges, both of the supreme and inferior Courts, shall hold their Offices during good Behaviour, and shall, at stated Times, receive for their Services, a Compensation, which shall not be diminished during their Continuance in Office.

Section 2—Judicial power; to what cases it extends. Original jurisdiction of Supreme Court; appellate jurisdiction. Trial by jury, etc. Trial, where.

The judicial Power shall extend to all Cases, in Law and Equity, arising under this Constitution, the Laws of the United States, and Treaties made, or which shall be made, under their Authority;–to all Cases affecting Ambassadors, other public Ministers and Consuls;–to all Cases of admiralty and maritime Jurisdiction;–to Controversies to which the United States shall be a Party;–to Controversies between two or more States; *[–between a State and Citizens of another State;–]* between Citizens of different States; –between Citizens of the same State claiming Lands under Grants of different States, *[and between a State, or the Citizens thereof, and foreign States, Citizens or Subjects.] [This section is modified by Amendment XI.]*

In all Cases affecting Ambassadors, other public Ministers and Consuls, and those in which a State shall be Party, the supreme Court shall have original Jurisdiction. In all the other Cases before mentioned, the supreme Court shall have appellate Jurisdiction, both as to Law and Fact, with such Exceptions, and under such Regulations as the Congress shall make.

The trial of all Crimes, except in Cases of Impeachment, shall be by Jury; and such Trial shall be held in the State where the said Crimes shall have been committed; but when not committed within any State, the Trial shall be at such Place or Places as the Congress may by Law have directed.

Section 3—Treason Defined. Proof of. Punishment of.

Treason against the United States, shall consist only in levying War against them, or in adhering to their Enemies, giving them Aid and Comfort. No Person shall be convicted of Treason unless on the Testimony of two Witnesses to the same overt Act, or on Confession in open Court.

The Congress shall have Power to declare the Punishment of Treason, but no Attainder of Treason shall work Corruption of Blood, or Forfeiture except during the Life of the Person attainted.

ARTICLE IV.

Section 1—Each State to give credit to the public acts, etc., of every other State.

Full Faith and Credit shall be given in each State to the public Acts, Records, and judicial Proceedings of every other State. And the Congress may by general Laws prescribe the Manner in which such Acts, Records and Proceedings shall be proved, and the Effect thereof.

Section 2—Privileges of citizens of each State. Fugitives from justice to be delivered up. Persons held to service having escaped, to be delivered up.

The Citizens of each State shall be entitled to all Privileges and Immunities of Citizens in the several States.

A Person charged in any State with Treason, Felony, or other Crime, who shall flee from Justice, and be found in another State, shall on demand of the executive Authority of the State from which he fled, be delivered up, to be removed to the State having Jurisdiction of the Crime.

[No Person held to Service or Labour in one State, under the Laws thereof, escaping into another, shall, in Consequence of any Law or Regulation therein, be discharged from such Service or Labour, but shall be delivered up on Claim of the Party to whom such Service or Labour may be due.] [This clause was superseded by Amendment XIII.]

Section 3—Admission of new States. Power of Congress over territory and other property.

New States may be admitted by the Congress into this Union; but no new State shall be formed or erected within the Jurisdiction of any other State; nor any State be formed by the Junction of two or more States, or parts of States, without the Consent of the Legislatures of the States concerned as well as of the Congress.

The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States; and nothing in this Constitution shall be so construed as to Prejudice any Claims of the United States, or of any particular State.

Section 4—Republican form of government guaranteed. Each State to be protected.

The United States shall guarantee to every State in this Union a Republican Form of Government, and shall protect each of them against Invasion; and on Application of the Legislature, or of the Executive (when the Legislature cannot be convened) against domestic Violence.

ARTICLE V.

Constitution: how amended; proviso.

The Congress, whenever two-thirds of both Houses shall deem it necessary, shall propose Amendments to this Constitution, or, on the Application of the Legislatures of two-thirds of the several States, shall call a Convention for proposing Amendments, which, in either Case, shall be valid to all Intents and Purposes, as part of this Constitution, when ratified by the Legislatures of three-fourths of the several States, or by Conventions in three-fourths thereof, as the one or the other Mode of Ratification may be proposed by the Congress: Provided that no Amendment which may be made prior to the Year One thousand eight hundred and eight shall in any Manner affect the first and fourth Clauses in the Ninth Section of the first Article; and that no State, without its Consent, shall be deprived of its equal Suffrage in the Senate.

ARTICLE VI.

Certain debts, etc., declared valid. Supremacy of Constitution, treaties, and laws of the United States. Oath to support Constitution, by whom taken. No religious test.

All Debts contracted and Engagements entered into, before the Adoption of this Constitution, shall be as valid against the United States under this Constitution, as under the Confederation.

This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.

The Senators and Representatives before mentioned, and the Members of the several State Legislatures, and all executive and judicial Officers, both of the United States and of the several States, shall be bound by Oath or Affirmation, to support this Constitution; but no religious Test shall ever be required as a Qualification to any Office or public Trust under the United States.

ARTICLE VII.

What ratification shall establish Constitution.

The Ratification of the Conventions of nine States shall be sufficient for the Establishment of this Constitution between the States so ratifying the Same.

Done in Convention by the Unanimous Consent of the States present the Seventeenth Day of September in the Year of our Lord one thousand seven hundred and Eighty seven and of the Independence of the United States of America the Twelfth.

In Witness whereof We have hereunto subscribed our Names.

Gº. Washington, Presidt and deputy from Virginia

New Hampshire—John Langdon, Nicholas Gilman

Massachusetts—Nathaniel Gorham, Rufus King

Connecticut—Wm. Saml. Johnson, Roger Sherman

New York—Alexander Hamilton

New Jersey—Wil: Livingston, David Brearley, Wm. Paterson, Jona: Dayton

Pennsylvania—B Franklin, Thomas Mifflin, Robt. Morris, Geo. Clymer, Thos. FitzSimons, Jared Ingersoll, James Wilson, Gouv Morris

Delaware—Geo: Read, Gunning Bedford jun, John Dickinson, Richard Bassett, Jaco: Broom

Maryland—James McHenry, Dan of St Thos. Jenifer, Danl Carroll

Virginia—John Blair, James Madison Jr.

North Carolina—Wm. Blount, Rich'd Dobbs Spaight, Hu Williamson

South Carolina—J. Rutledge, Charles Cotesworth Pinckney, Charles Pinckney, Pierce Butler

Georgia—William Few, Abr Baldwin

Attest: William Jackson, Secretary.

Ten Original Amendments: The Bill of Rights

In force Dec. 15, 1791

[The First Congress, at its first session in the City of New York, Sept. 25, 1789, submitted to the states 12 amendments to clarify certain individual and state rights not named in the Constitution. They are generally called the Bill of Rights.

Influential in framing these amendments was the Declaration of Rights of Virginia, written by George Mason (1725-92) in 1776. Mason, a Virginia delegate to the Constitutional Convention, did not sign the Constitution and opposed its ratification on the ground that it did not sufficiently oppose slavery or safeguard individual rights.

In the preamble to the resolution offering the proposed amendments, Congress said: "The conventions of a number of the States having at the time of their adopting the Constitution, expressed a desire, in order to prevent misconstruction or abuse of its powers, that further declaratory and restrictive clauses should be added, and as extending the ground of public confidence in the government will best insure the beneficent ends of its institution, be it resolved," etc.

Ten of these amendments, now commonly known as one to 10 inclusive, but originally 3 to 12 inclusive, were ratified by the states as follows: New Jersey, Nov. 20, 1789; Maryland, Dec. 19, 1789; North Carolina, Dec. 22, 1789; South Carolina, Jan. 19, 1790; New Hampshire, Jan. 25, 1790; Delaware, Jan. 28, 1790; New York, Feb. 27, 1790; Pennsylvania, Mar. 10, 1790; Rhode Island, June 7, 1790; Vermont, Nov. 3, 1791; Virginia, Dec. 15, 1791; Massachusetts, Mar. 2, 1939; Georgia, Mar. 18, 1939; Connecticut, Apr. 19, 1939. These original 10 ratified amendments follow as Amendments I to X inclusive.

Of the two original proposed amendments that were not ratified promptly by the necessary number of states, the first related to apportionment of Representatives; the second, relating to compensation of members of Congress, was ratified in 1992 and became Amendment 27.]

AMENDMENT I.

Religious establishment prohibited. Freedom of speech, of press, right to assemble and to petition.

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

AMENDMENT II.

Right to keep and bear arms.

A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.

AMENDMENT III.

Conditions for quarters for soldiers.

No Soldier shall, in time of peace be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law.

AMENDMENT IV.

Protection from unreasonable search and seizure.

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

AMENDMENT V.

Provisions concerning prosecution and due process of law. Double jeopardy restriction. Private property not to be taken without compensation.

No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land or naval forces, or in the Militia, when in actual service in time of War or public danger; nor shall any person be subject for the same offence to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.

AMENDMENT VI.

Right to speedy trial, witnesses, etc.

In all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury of the State and district wherein the crime shall have been committed, which district shall have been previously ascertained by law, and to be informed of the nature and cause of the accusation; to be confronted with the witnesses against him; to have compulsory process for obtaining witnesses in his favor, and to have the Assistance of Counsel for his defence.

AMENDMENT VII.

Right of trial by jury.

In suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise reexamined in any Court of the United States, than according to the rules of the common law.

AMENDMENT VIII.

Excessive bail or fines; cruel and unusual punishment.

Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.

AMENDMENT IX.

Rule of construction of Constitution.

The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.

AMENDMENT X.

Rights of States under Constitution.

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

Amendments Since the Bill of Rights

AMENDMENT XI.

Judicial powers construed.

The Judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or Subjects of any Foreign State.

[This amendment was proposed to the Legislatures of the several States by the Third Congress on March 4, 1794, and was declared to have been ratified in a message from the President to Congress, dated Jan. 8, 1798.]

[It was on Jan. 5, 1798, that Secretary of State Pickering received from 12 of the States authenticated ratifications, and informed President John Adams of that fact.]

[As a result of later research in the Department of State, it is now established that Amendment XI became part of the Constitution on Feb. 7, 1795, for on that date it had been ratified by 12 States as follows.]

[1. New York, Mar. 27, 1794. 2. Rhode Island, Mar. 31, 1794. 3. Connecticut, May 8, 1794. 4. New Hampshire, June 16, 1794. 5. Massachusetts, June 26, 1794. 6. Vermont, between Oct. 9, 1794, and Nov. 9, 1794. 7. Virginia, Nov. 18, 1794. 8. Georgia, Nov. 29, 1794. 9. Kentucky, Dec. 7, 1794. 10. Maryland, Dec. 26, 1794. 11. Delaware, Jan. 23, 1795. 12. North Carolina, Feb. 7, 1795]

[On June 1, 1796, more than a year after Amendment XI had become a part of the Constitution—but before anyone was officially aware of this—Tennessee had been admitted as a State; but not until Oct. 16, 1797, was a certified copy of the resolution of Congress proposing the amendment sent to the Governor of Tennessee, John Sevier, by Secretary of State Pickering, whose office was then at Trenton, New Jersey, because of the epidemic of yellow fever at Philadelphia; it seems, however, that the Legislature of Tennessee took no action on Amendment XI, owing doubtless to the fact that public announcement of its adoption was made soon thereafter.]

[Besides the necessary 12 States, one other, South Carolina, ratified Amendment XI, but this action was not taken until Dec. 4, 1797; the two remaining States, New Jersey and Pennsylvania, failed to ratify.]

AMENDMENT XII.

Manner of choosing President and Vice-President.

[Proposed by Congress Dec. 9, 1803; ratified June 15, 1804.]

The Electors shall meet in their respective states and vote by ballot for President and Vice-President, one of whom, at least, shall not be an inhabitant of the same state with themselves; they shall name in their ballots the person voted for as President, and in distinct ballots the person voted for as Vice-President, and they shall make distinct lists of all persons voted for as President, and of all persons voted for as Vice-President, and of the number of votes for each, which lists they shall sign and certify, and transmit sealed to the seat of the government of the United States, directed to the President of the Senate;—the President of the Senate shall, in presence of the Senate and House of Representatives, open all the certificates and the votes shall then be counted;—The person having the greatest number of votes for President, shall be the President, if such number be a majority of the whole number of Electors appointed; and if no person have such majority, then from the persons having the highest numbers not exceeding three on the list of those voted for as President, the House of Representatives shall choose immediately, by ballot, the President. But in choosing the President, the votes shall be taken by states, the representation from each state having one vote; a quorum for this purpose shall consist of a member or members from two-thirds of the states, and a majority of all the states shall be necessary to a choice. *[And if the House of Representatives shall not choose a President whenever the right of choice shall devolve upon them, before the fourth day of March next following, then the Vice-President shall act as President, as in the case of the death or other constitutional disability of the President.] [The words in brackets were superseded by Amendment XX, section 3.]* The person having the greatest number of votes as Vice-President, shall be the Vice-President, if such number be a majority of the whole number of Electors appointed, and if no person have a majority, then from the two highest numbers on the list, the Senate shall choose the Vice-President; a quorum for the purpose shall consist of two-thirds of the whole number of Senators, and a majority of the whole number shall be necessary to a choice. But no person constitutionally ineligible to the office of President shall be eligible to that of Vice-President of the United States.

THE RECONSTRUCTION AMENDMENTS

[Amendments XIII, XIV, and XV are commonly known as the Reconstruction Amendments, inasmuch as they followed the Civil War, and were drafted by Republicans who were bent on imposing their own policy of reconstruction on the South. Postbellum legislatures there—Mississippi, South Carolina, Georgia, for example—had set up laws which, it was charged, were contrived to perpetuate Negro slavery under other names.]

AMENDMENT XIII.

Slavery abolished.

[Proposed by Congress Jan. 31, 1865; ratified Dec. 6, 1865. The amendment, when first proposed by a resolution in Congress, was passed by the Senate, 38 to 6, on Apr. 8, 1864, but was defeated in the House, 95 to 66 on June 15, 1864. On reconsideration by the House, on Jan. 31, 1865, the resolution passed, 119 to 56. It was approved by President Lincoln on Feb. 1, 1865, although the Supreme Court had decided in 1798 that the President has nothing to do with the proposing of amendments to the Constitution, or their adoption.]

1. Neither slavery nor involuntary servitude, except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction.

2. Congress shall have power to enforce this article by appropriate legislation.

AMENDMENT XIV.

Citizenship rights not to be abridged.

[The following amendment was proposed to the Legislatures of the several states by the 39th Congress, June 13, 1866, ratified July 9, 1868, and declared to have been ratified in a proclamation by the Secretary of State, July 28, 1868.]

[The 14th amendment was adopted only by virtue of ratification subsequent to earlier rejections. Newly constituted legislatures in both North Carolina and South Carolina (respectively July 4 and 9, 1868), ratified the proposed amendment, although earlier legislatures had rejected the proposal. The Secretary of State issued a proclamation, which, though doubtful as to the effect of attempted withdrawals by Ohio and New Jersey, entertained no doubt as to the validity of the ratification by North and South Carolina. The following day (July 21, 1868), Congress passed a resolution which declared the 14th Amendment to be a part of the Constitution and directed the Secretary of State so to promulgate it. The Secretary waited, however, until the newly constituted Legislature of Georgia had ratified the amendment, subsequent to an earlier rejection, before the promulgation of the ratification of the new amendment.]

1. All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.

2. Representatives shall be apportioned among the several States according to their respective numbers, counting the whole number of persons in each State, excluding Indians not taxed. But when the right to vote at any election for the choice of electors for President and Vice-President of the United States, Representatives in Congress, the Executive and Judicial officers of a State, or the members of the Legislature thereof, is denied to any of the male inhabitants of such State, being *[twenty-one] [The words in brackets were changed by Amendment XXVI.]* years of age, and citizens of the United States, or in any way abridged, except

for participation in rebellion, or other crime, the basis of representation therein shall be reduced in the proportion which the number of such male citizens shall bear to the whole number of male citizens twenty-one years of age in such State.

3. No person shall be a Senator or Representative in Congress, or elector of President and Vice-President, or hold any office, civil or military, under the United States, or under any State, who, having previously taken an oath, as a member of Congress, or as an officer of the United States, or as a member of any State legislature, or as an executive or judicial officer of any State, to support the Constitution of the United States, shall have engaged in insurrection or rebellion against the same, or given aid or comfort to the enemies thereof. But Congress may by a vote of two-thirds of each House, remove such disability.

4. The validity of the public debt of the United States, authorized by law, including debts incurred for payment of pensions and bounties for services in suppressing insurrection or rebellion, shall not be questioned. But neither the United States nor any State shall assume or pay any debt or obligation incurred in aid of insurrection or rebellion against the United States, or any claim for the loss or emancipation of any slave; but all such debts, obligations and claims shall be held illegal and void.

5. The Congress shall have power to enforce, by appropriate legislation, the provisions of this article.

AMENDMENT XV.

Race no bar to voting rights.

[The following amendment was proposed to the legislatures of the several States by the 40th Congress, Feb. 26, 1869, and ratified Feb. 3, 1870.]

1. The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color, or previous condition of servitude–

2. The Congress shall have power to enforce this article by appropriate legislation.

AMENDMENT XVI.

Income taxes authorized.

[Proposed by Congress July 12, 1909; ratified Feb. 3, 1913.]

The Congress shall have power to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several States, and without regard to any census or enumeration.

AMENDMENT XVII.

United States Senators to be elected by direct popular vote.

[Proposed by Congress May 13, 1912; ratified Apr. 8, 1913.]

The Senate of the United States shall be composed of two Senators from each State, elected by the people thereof, for six years; and each Senator shall have one vote. The electors in each State shall have the qualifications requisite for electors of the most numerous branch of the State legislatures.

When vacancies happen in the representation of any State in the Senate, the executive authority of such State shall issue writs of election to fill such vacancies: *Provided,* That the legislature of any State may empower the executive thereof to make temporary appointments until the people fill the vacancies by election as the legislature may direct.

This amendment shall not be so construed as to affect the election or term of any Senator chosen before it becomes valid as part of the Constitution.

AMENDMENT XVIII.

Liquor prohibition amendment.

[Proposed by Congress Dec. 18, 1917; ratified Jan. 16, 1919. Repealed by Amendment XXI, effective Dec. 5, 1933.]

1. After one year from the ratification of this article the manufacture, sale, or transportation of intoxicating liquors within, the importation thereof into, or the exportation thereof from the United States and all territory subject to the jurisdiction thereof for beverage purposes is hereby prohibited.

2. The Congress and the several States shall have concurrent power to enforce this article by appropriate legislation.

3. This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the legislatures of the several States as provided in the Constitution, within seven years from the date of the submission hereof to the States by the Congress.

[The total vote in the Senates of the various States was 1,310 for, 237 against—84.6% dry. In the lower houses of the States the vote was 3,782 for, 1,035 against—78.5% dry.

[The amendment ultimately was adopted by all the States except Rhode Island.]

AMENDMENT XIX.

Giving nationwide suffrage to women.

[Proposed by Congress June 4, 1919; ratified Aug. 18, 1920.]

The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of sex.

Congress shall have power to enforce this Article by appropriate legislation.

AMENDMENT XX.

Terms of President and Vice President to begin on Jan. 20; those of Senators, Representatives, Jan. 3.

[Proposed by Congress Mar. 2, 1932; ratified Jan. 23, 1933.]

1. The terms of the President and Vice President shall end at noon on the 20th day of January, and the terms of Senators and Representatives at noon on the 3d day of January, of the years in which such terms would have ended if this article had not been ratified; and the terms of their successors shall then begin.

2. The Congress shall assemble at least once in every year, and such meeting shall begin at noon on the 3d day of January, unless they shall by law appoint a different day.

3. If, at the time fixed for the beginning of the term of the President, the President elect shall have died, the Vice President elect shall become President. If a President shall not have been chosen before the time fixed for the beginning of his term, or if the President elect shall have failed to qualify, then the Vice President elect shall act as President until a President shall have qualified; and the Congress may by law provide for the case wherein neither a President elect nor a Vice President elect shall have qualified, declaring who shall then act as President, or the manner in which one who is to act shall be selected, and such person shall act accordingly until a President or Vice President shall have qualified.

4. The Congress may by law provide for the case of the death of any of the persons from whom the House of Representatives may choose a President whenever the right of choice shall have devolved upon them, and for the case of the death of any of the persons from whom the Senate may choose a Vice President whenever the right of choice shall have devolved upon them.

5. Sections 1 and 2 shall take effect on the 15th day of October following the ratification of this article. *[Oct. 1933]*

6. This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the legislatures of three-fourths of the several States within seven years from the date of its submission.

AMENDMENT XXI.

Repeal of Amendment XVIII.

[Proposed by Congress Feb. 20, 1933; ratified Dec. 5, 1933.]

1. The eighteenth article of amendment to the Constitution of the United States is hereby repealed.

2. The transportation or importation into any State, Territory, or possession of the United States for delivery or use therein of intoxicating liquors, in violation of the laws thereof, is hereby prohibited.

3. This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by conventions in the several States, as provided in the Constitution, within seven years from the date of the submission hereof to the States by the Congress.

AMENDMENT XXII.

Limiting Presidential terms of office.

[Proposed by Congress Mar. 24, 1947; ratified Feb. 27, 1951.]

1. No person shall be elected to the office of the President more than twice, and no person who has held the office of President, or acted as President, for more than two years of a term to which some other person was elected President shall be elected to the office of the President more than once. But this Article shall not apply to any person holding the office of President when this Article was proposed by the Congress, and shall not prevent any person who may be holding the office of President, or acting as President, during the term within which this Article becomes operative from holding the office of President or acting as President during the remainder of such term.

2. This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the legislatures of three-fourths of the several States within seven years from the date of its submission to the States by the Congress.

AMENDMENT XXIII.

Presidential vote for District of Columbia.

[Proposed by Congress June 16, 1960; ratified Mar. 29, 1961.]

1. The District constituting the seat of Government of the United States shall appoint in such manner as the Congress may direct:

A number of electors of President and Vice President equal to the whole number of Senators and Representatives in Congress to which the District would be entitled if it were a State, but in no event more than the least populous State; they shall be in addition to those appointed by the States, but they shall be considered, for the purposes of the election of President and Vice President, to be electors appointed by a State; and they shall meet in the District and perform such duties as provided by the twelfth article of amendment.

2. The Congress shall have power to enforce this article by appropriate legislation.

AMENDMENT XXIV.

Barring poll tax in federal elections.

[Proposed by Congress Sept. 14, 1962; ratified Jan. 23, 1964.]

1. The right of citizens of the United States to vote in any primary or other election for President or Vice President, for electors for President or Vice President, or for Senator or Representative in Congress, shall not be denied or abridged by the United States or any State by reason of failure to pay any poll tax or other tax.

2. The Congress shall have power to enforce this article by appropriate legislation.

AMENDMENT XXV.

Presidential disability and succession.

[Proposed by Congress July 6, 1965; ratified Feb. 10, 1967.]

1. In case of the removal of the President from office or of his death or resignation, the Vice President shall become President.

2. Whenever there is a vacancy in the office of the Vice President, the President shall nominate a Vice President who shall take office upon confirmation by a majority vote of both houses of Congress.

3. Whenever the President transmits to the President pro tempore of the Senate and the Speaker of the House of Representatives his written declaration that he is unable to discharge the powers and duties of his office, and until he transmits to them a written declaration to the contrary, such powers and duties shall be discharged by the Vice President as Acting President.

4. Whenever the Vice President and a majority of either the principal officers of the executive departments or of such other body as Congress may by law provide, transmit to the President pro tempore of the Senate and the Speaker of the House of Representatives their written declaration that the President is unable to discharge the powers and duties of his office, the Vice President shall immediately assume the powers and duties of the office as Acting President.

Thereafter, when the President transmits to the President pro tempore of the Senate and the Speaker of the House of Representatives his written declaration that no inability exists, he shall resume the powers and duties of his office unless the Vice President and a majority of either the principal officers of the executive department or of such other body as Congress may by law provide, transmit within four days to the President pro tempore of the Senate and the Speaker of the House of Representatives their written declaration that the President is unable to discharge the powers and duties of his office. Thereupon Congress shall decide the issue, assembling within forty-eight hours for that purpose if not in session. If the Congress, within twenty-one days after receipt of the latter written declaration, or, if Congress is not in session, within twenty-one days after Congress is required to assemble, determines by two-thirds vote of both Houses that the President is unable to discharge the powers and duties of his office, the Vice President shall continue to discharge the same as Acting President; otherwise, the President shall resume the powers and duties of his office.

AMENDMENT XXVI.

Lowering voting age to 18 years.

[Proposed by Congress Mar. 23, 1971; ratified July 1, 1971.]

1. The right of citizens of the United States, who are eighteen years of age or older, to vote shall not be denied or abridged by the United States or by any State on account of age.

2. The Congress shall have the power to enforce this article by appropriate legislation.

AMENDMENT XXVII.

Congressional pay.

[Proposed by Congress Sept. 25, 1789; ratified May 7, 1992.]

No law, varying the compensation for the services of the Senators and Representatives, shall take effect, until an election of Representatives shall have intervened.

How a Bill Becomes a Law

A senator or representative introduces a bill in Congress by sending it to the clerk of the Senate or the House, who assigns it a number and title. This procedure is termed the first reading. The clerk then refers the bill to the appropriate committee of the Senate or House.

If the committee does not wish to consider the bill, it will table, or kill, it. Otherwise, the committee holds hearings to listen to opinions and facts offered by members and other interested parties. The committee then debates the bill and may offer amendments. A vote is taken, and if favorable, the bill is sent back to the clerk of the Senate or House.

The clerk reads the bill to the house—the second reading. Members may then debate the bill and suggest amendments.

After debate and any amendments, the bill is given a third reading, simply of the title, and put to a voice or roll-call vote.

If passed, the bill goes to the other house, where it may be defeated or passed, with or without amendments. If defeated, the bill dies. If passed with amendments, a conference committee made up of members of both houses works out the differences and arrives at a compromise.

After passage of the final version by both houses, the bill is sent to the president. If the president signs it, the bill becomes a law. The president may, however, veto the bill by refusing to sign it and sending it back to the house where it originated, with reasons for the veto.

The president's objections are then read and debated, and a roll-call vote is taken. If the bill receives less than a two-thirds majority, it is defeated. If it receives at least two-thirds, it is sent to the other house. If that house also passes it by at least a two-thirds majority, the one veto is overridden, and the bill becomes a law.

If the president neither signs nor vetoes the bill within 10 days—not including Sundays—it automatically becomes a law even without the president's signature. However, if Congress has adjourned within those 10 days, the bill is automatically killed; this indirect rejection is termed a pocket veto.

Note: Under the Line Item Veto Act, effective Jan. 1, 1997, the president was authorized, under certain circumstances, to veto a bill in part, but the legislation was found unconstitutional by the Supreme Court, June 25, 1998.

Confederate States and Secession

The American Civil War (1861-65) grew out of sectional disputes over the continued existence of slavery in the South and the contention of Southern legislators that the states retained many rights, including the right to secede.

The war was not fought by state against state but by one federal regime against another, the Confederate government in Richmond assuming control over the economic, political, and military life of the South, under protest from Georgia and South Carolina.

South Carolina voted an ordinance of secession from the Union, repealing its 1788 ratification of the U.S. Constitution on Dec. 20, 1860, to take effect on Dec. 24. Other states seceded in 1861. Their votes in conventions were: Mississippi, Jan. 9, 84-15; Florida, Jan. 10, 62-7; Alabama, Jan. 11, 61-39; Georgia, Jan. 19, 208-89; Louisiana, Jan. 26, 113-17; Texas, Feb. 1, 166-7, ratified by popular vote on Feb. 23 (for 34,794, against 11,325); Virginia, Apr. 17, 88-55, ratified by popular vote on May 23 (for 128,884; against 32,134); Arkansas, May 6, 69-1; Tennessee, May 7, ratified by popular vote on June 8 (for 104,019, against 47,238); North Carolina, May 20.

Missouri Unionists stopped secession in conventions Feb. 28 and Mar. 9. The legislature condemned secession Mar. 7. Under the protection of Confederate troops, secessionist members of the legislature adopted a resolution of secession at Neosho, Oct. 31. The Confederate Congress seated the secessionists' representatives.

Kentucky did not secede, and its government remained Unionist. In a part of the state occupied by Confederate troops, Kentuckians approved secession, and the Confederate Congress admitted their representatives.

The Maryland legislature voted against secession Apr. 27, 53-13. Delaware did not secede. Western Virginia held conventions at Wheeling, named a pro-Union governor on June 11, 1861, and was admitted to the Union as West Virginia on June 20, 1863. Its constitution provided for gradual abolition of slavery.

Confederate Government

Forty-two delegates from South Carolina, Georgia, Alabama, Mississippi, Louisiana, and Florida met in convention at Montgomery, AL, on Feb. 4, 1861. They adopted a provisional constitution of the Confederate States of America and elected Jefferson Davis (MS) as provisional president and Alexander H. Stephens (GA) as provisional vice president.

A permanent constitution was adopted Mar. 11. It abolished the African slave trade, but it did not bar interstate commerce in slaves. On July 20 the Congress moved to Richmond, VA. Davis was elected president in November and was inaugurated on Feb. 22, 1862.

The Congress adopted a flag, consisting of a red field with a white stripe, and a blue jack with a circle of white stars. Later the more popular flag was the red field with blue diagonal crossbars that held 13 white stars, for the 11 states in the Confederacy plus Kentucky and Missouri.

The Gettysburg Address

Delivered by Pres. Abraham Lincoln at Gettysburg, PA, on Nov. 19, 1863.

Fourscore and seven years ago our fathers brought forth on this continent a new nation, conceived in liberty and dedicated to the proposition that all men are created equal.

Now we are engaged in a great civil war, testing whether that nation or any nation so conceived and so dedicated can long endure. We are met on a great battle field of that war. We have come to dedicate a portion of that field, as a final resting-place for those who here gave their lives that this nation might live. It is altogether fitting and proper that we should do this.

But, in a larger sense, we can not dedicate—we can not consecrate—we can not hallow—this ground. The brave men, living and dead, who struggled here, have consecrated it, far above our poor power to add or detract. The world will little note, nor long remember, what we say here, but it can never forget what they did here. It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion—that we here highly resolve that these dead shall not have died in vain—that this nation, under God, shall have a new birth of freedom—and that government of the people, by the people, for the people, shall not perish from the earth.

Presidential Oath of Office

The Constitution (Article II) directs that the president-elect shall take the following oath or affirmation to be inaugurated as president: "I do solemnly swear [affirm] that I will faithfully execute the office of President of the United States, and will, to the best of my ability, preserve, protect, and defend the Constitution of the United States." (Custom decrees the addition of the words "So help me God" at the end of the oath when taken by the president-elect, with the left hand on the Bible for the duration of the oath, and the right hand slightly raised.)

Law on Succession to the Presidency

If by reason of death, resignation, removal from office, inability, or failure to qualify there is neither a president nor vice president to discharge the powers and duties of the office of president, then the speaker of the House of Representatives shall upon his resignation as speaker and as representative, act as president. The same rule shall apply in the case of the death, resignation, removal from office, or inability of an individual acting as president.

If at the time when a speaker is to begin the discharge of the powers and duties of the office of president there is no speaker, or the speaker fails to qualify as acting president, then the president pro tempore of the Senate, upon his resignation as president pro tempore and as senator, shall act as president.

An individual acting as president shall continue to act until the expiration of the then current presidential term, except that (1) if his discharge of the powers and duties of the office is founded in whole or in part in the failure of both the president-elect and the vice president-elect to qualify, then he shall act only until a president or vice president qualifies, and (2) if his discharge of the powers and duties of the office is founded in whole or in part on the inability of the president or vice president, then he shall act only until the removal of the disability of one of such individuals.

If, by reason of death, resignation, removal from office, or failure to qualify, there is no president pro tempore to act as president, then the officer of the United States who is highest on the following list, and who is not under any disability to discharge the powers and duties of president shall act as president: the secretaries of state, treasury, defense, attorney general, secretaries of interior, agriculture, commerce, labor, health and human services, housing and urban development, transportation, energy, education, veterans affairs, homeland security.

[Legislation approved July 18, 1947; amended Sept. 9, 1965, Oct. 15, 1966, Aug. 4, 1977, and Sept. 27, 1979. See also Constitutional Amendment XXV.]

Origin of the United States National Motto

In God We Trust, designated as the U.S. National Motto by Congress in 1956, originated during the Civil War as an inscription for U.S. coins, although it was used by Francis Scott Key in a slightly different form when he wrote "The Star-Spangled Banner" in 1814. On Nov. 13, 1861, when Union morale had been shaken by battlefield defeats, the Rev. M. R. Watkinson, of Ridleyville, PA, wrote to Sec. of the Treasury Salmon P. Chase. "From my heart I have felt our national shame in disowning God as not the least of our present national disasters," the minister wrote, suggesting "recognition of the Almighty God in some form on our coins." Sec. Chase ordered designs prepared with the inscription *In God We Trust* and backed coinage legislation that authorized use of this slogan. The motto first appeared on some U.S. coins in 1864, and disappeared and reappeared on various coins until 1955, when Congress ordered it placed on all paper money and all coins.



The Great Seal of the U.S.

On July 4, 1776, the Continental Congress appointed a committee consisting of Benjamin Franklin, John Adams, and Thomas Jefferson "to bring in a device for a seal of the United States of America." The designs submitted by this and a subsequent committee were considered unacceptable. After many delays, a third committee, appointed early in 1782, presented a design prepared by lawyer William Barton. Charles Thomson, the secretary of Congress, suggested certain changes, and Congress finally approved the design on June 20, 1782. The obverse side of the seal shows an American bald eagle. In its mouth is a ribbon bearing the motto *E Pluribus Unum* (out of many, one). In the eagle's talons are 13 arrows of war and an olive branch of peace. The reverse side shows an unfinished pyramid with an eye (Eye of Providence) above it.

The Flag of the U.S.—The Stars and Stripes

The 50-star flag of the United States was raised for the first time officially at 12:01 AM on July 4, 1960, at Fort McHenry National Monument in Baltimore, MD. The 50th star had been added for Hawaii; a year earlier the 49th, for Alaska. Before that, no star had been added since 1912, when New Mexico and Arizona were admitted to the Union.

The true history of the Stars and Stripes has become so cluttered by myth and tradition that the facts are difficult, and in some cases impossible, to establish. For example, it is not certain who designed the Stars and Stripes, who made the first such flag, or even whether it ever flew in any sea fight or land battle of the American Revolution.

All agree, however, that the Stars and Stripes originated as the result of a resolution offered by the Marine Committee of the Second Continental Congress at Philadelphia and adopted on June 14, 1777. It read:

"Resolved: that the flag of the United States be thirteen stripes, alternate red and white; that the union be thirteen stars, white in a blue field, representing a new constellation."

Congress gave no hint as to the designer of the flag, no instructions as to the arrangement of the stars, and no information on its appropriate uses. Historians have been unable to find the original flag law.

The resolution establishing the flag was not even published until Sept. 2, 1777. Despite repeated requests, Washington did not get the flags until 1783, after the American Revolution was over. And there is no certainty that they were the Stars and Stripes.

Early Flags

Many historians consider the first flag of the U.S. to have been the Grand Union (sometimes called Great Union) flag, although the Continental Congress never officially adopted it. This flag was a modification of the British Meteor flag, which had the red cross of St. George and the white cross of St. Andrew combined in the blue canton. For the Grand Union flag, 6 horizontal stripes were imposed on the red field, dividing it into 13 alternating red and white stripes. On

Jan. 1, 1776, when the Continental Army came into formal existence, this flag was unfurled on Prospect Hill, Somerville, MA. Washington wrote that "we hoisted the Union Flag in compliment to the United Colonies."

One of several flags about which controversy has raged for years is at Easton, PA. Containing the devices of the national flag in reversed order, this flag has been in the public library at Easton for more than 150 years. Some contend that this flag was actually the first Stars and Stripes, first displayed on July 8, 1776. This flag has 13 red and white stripes in the canton, 13 white stars centered in a blue field.

A flag was hastily improvised from garments by the defenders of Ft. Schuyler at Rome, NY, Aug. 3-22, 1777. Historians believe it was the Grand Union Flag.

The Sons of Liberty had a flag of 9 red and white stripes, to signify 9 colonies, when they met in New York in 1765 to oppose the Stamp Tax. By 1775, the flag had grown to 13 red and white stripes, with a rattlesnake on it.

At Concord, Apr. 19, 1775, the minutemen from Bedford, MA, are said to have carried a flag having a silver arm with sword on a red field. At Cambridge, MA, the Sons of Liberty used a plain red flag with a green pine tree on it.

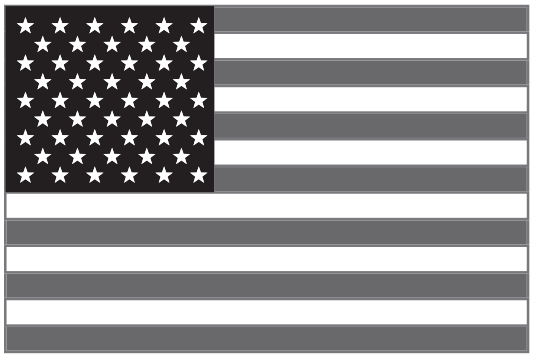
In June 1775, Washington went from Philadelphia to Boston to take command of the army, escorted to New York by the Philadelphia Light Horse Troop. It carried a yellow flag that had an elaborate coat of arms—the shield charged with 13 knots, the motto "For These We Strive"—and a canton of 13 blue and silver stripes.

In Feb. 1776, Col. Christopher Gadsden, a member of the Continental Congress, gave the South Carolina Provincial Congress a flag "such as is to be used by the commander-in-chief of the American Navy." It had a yellow field, with a rattlesnake about to strike and the words "Don't Tread on Me."

At the Battle of Bennington, Aug. 16, 1777, patriots used a flag of 7 white and 6 red stripes with a blue canton extending down 9 stripes and showing an arch of 11 white stars over the figure 76 and a star in each of the upper corners. The stars are 7-pointed. This flag is preserved in the historical museum in Bennington, VT.

At the Battle of Cowpens, Jan. 17, 1781, the 3d Maryland Regiment is said to have carried a flag of 13 red and white stripes, with a blue canton containing 12 stars in a circle around one star.

Who Designed the Flag? No one knows for certain. Francis Hopkinson, designer of a naval flag, declared he also had designed the flag and in 1781 asked Congress to reimburse him for his services. Congress did not do so. Dumas Malone of Columbia University wrote: "This talented man . . . designed the American flag."



Who Called the Flag "Old Glory"? The flag is said to have been named Old Glory by William Driver, a sea captain of Salem, MA. One legend has it that when he raised the flag on his brig, the *Charles Doggett*, in 1824, he said: "I name thee Old Glory." But his daughter, who presented the flag to the Smithsonian Institution, said he named it at his 21st birthday celebration on Mar. 17, 1824, when his mother presented the homemade flag to him.

The Betsy Ross Legend. The widely publicized legend that Betsy Ross made the first Stars and Stripes in June 1776, at the request of a committee composed of George Washington, Robert Morris, and George Ross, an uncle, was first made public in 1870, by a grandson of Ross. Historians have been unable to find a historical record of such a meeting or committee.

Adding New Stars

The flag of 1777 was used until 1795. Then, on the admission of Vermont and Kentucky to the Union, Congress passed and Pres. Washington signed an act that after May 1, 1795, the flag should have 15 stripes, alternating red and white, and 15 white stars on a blue field.

When new states were admitted, it became evident that the flag would become burdened with stripes. Congress thereupon ordered that after July 4, 1818, the flag should have 13 stripes, symbolizing the 13 original states; that the union have 20 stars, and that whenever a new state was admitted a new star should be added on the July 4 following admission.

No law designates the permanent arrangement of the stars. However, since 1912, when a new state has been admitted, the new design has been announced by executive order. No star is specifically identified with any state.

Code of Etiquette for Display and Use of the U.S. Flag

Reviewed by National Flag Foundation

Although the Stars and Stripes originated in 1777, it was not until 146 years later that there was a serious attempt to establish a uniform code of etiquette for the U.S. flag. On Feb. 15, 1923, the War Department issued a circular on the rules of flag usage. These rules were adopted almost in their entirety June 14, 1923, by a conference of 68 patriotic organizations in Washington, DC. Finally, on June 22, 1942, a joint resolution of Congress, amended by Public Law 94-344, July 7, 1976, codified "existing rules and customs pertaining to the display and use of the flag."

When to Display the Flag—The flag should be displayed on all days, especially on legal holidays and other special occasions, on official buildings when in use, in or near polling places on election days, and in or near schools when in session. Citizens may fly the flag at any time. It is customary to display it only from sunrise to sunset on buildings and on stationary flagstaffs in the open. It may be displayed at night, however, on special occasions, preferably lighted. The flag now flies over the White House both day and night. It flies over the Senate wing of the Capitol when the Senate is in session and over the House wing when that body is in session. It flies day and night over the east and west fronts of the Capitol, without floodlights at night but receiving illumination from the Capitol Dome. It flies 24 hours a day at several other places, including the Ft. McHenry National Monument in Baltimore, where it inspired Francis Scott Key to write "The Star Spangled Banner." The flag also flies 24 hours a day, properly illuminated, at U.S. Customs ports of entry.

Flying the Flag at Half-Staff—Flying the flag at half-staff, that is, halfway up the staff, is a signal of mourning. The flag should be hoisted to the top of the staff for an instant before being lowered to half-staff. It should be hoisted to the peak again before being lowered for the day or night.

As provided by presidential proclamation, the flag should fly at half-staff for 30 days from the day of death of a president or former president; for 10 days from the day of death of a vice president, chief justice or retired chief justice of the U.S., or speaker of the House of Representatives; from day

of death until burial of an associate justice of the Supreme Court, cabinet member, former vice president, Senate president pro tempore, or majority or minority Senate or House leader; for a U.S. senator, representative, territorial delegate, or the resident commissioner of Puerto Rico, on day of death and the following day within the metropolitan area of the District of Columbia and from day of death until burial within the decedent's state, congressional district, territory or commonwealth; and for the death of the governor of a state, territory, or possession of the U.S., from day of death until burial.

On Memorial Day, the flag should fly at half-staff until noon and then be raised to the peak. The flag should also fly at half-staff on Korean War Veterans Armistice Day (July 27), National Pearl Harbor Remembrance Day (Dec. 7), and Peace Officers Memorial Day (May 15).

How to Fly the Flag—The flag should be hoisted briskly and lowered ceremoniously and should never be allowed to touch the ground or the floor. When the flag is hung over a sidewalk from a rope extending from a building to a pole, the union should be away from the building. When the flag is hung over the center of a street the union should be to the north in an east-west street and to the east in a north-south street. No other flag may be flown above or, if on the same level, to the right of the U.S. flag, except that at the United Nations Headquarters the UN flag may be placed above flags of all member nations and other national flags may be flown with equal prominence or honor with the flag of the U.S. At services by Navy chaplains at sea, the church pennant may be flown above the flag.

When two flags are placed against a wall with crossed staffs, the U.S. flag should be at right—its own right, and its staff should be in front of the staff of the other flag; when a number of flags are grouped and displayed from staffs, it should be at the center and highest point of the group.

Church and Platform Use—In an auditorium, the flag may be displayed flat, above and behind the speaker. When displayed from a staff in a church or in a public auditorium, the flag should hold the position of superior prominence, in advance of the audience, and in the position of honor at the speaker's right as she or he faces the audience. Any other flag so displayed should be placed on the left of the speaker or to the right of the audience.

When the flag is displayed horizontally or vertically against a wall, the stars should be uppermost and at the observer's left.

When used to cover a casket, the flag should be placed so that the union is at the head and over the left shoulder. It should not be lowered into the grave nor touch the ground.

How to Dispose of Worn Flags—When the flag is in such condition that it is no longer a fitting emblem for display, it should be destroyed in a dignified way, preferably by burning.

When to Salute the Flag—All persons present should face the flag, stand at attention, and salute on the following occasions: (1) when the flag is passing in a parade or in a review, (2) during the ceremony of hoisting or lowering, (3) when the national anthem is played, and (4) during the Pledge of Allegiance. Those present in uniform should render the military salute. Those not in uniform should place the right hand over the heart. A man wearing a hat should remove it with his right hand and hold it to his left shoulder during the salute.

Prohibited Uses of the Flag—The flag should not be dipped to any person or thing. (An exception—customarily, ships salute by dipping their colors.) It should never be displayed with the union down save as a distress signal. It should never be carried flat or horizontally, but always aloft and free.

It should not be displayed on a float, an automobile, or a boat except from a staff. It should never be used as a covering for a ceiling, nor have placed on it any word, design, or drawing. It should never be used as a receptacle for carrying anything. It should not be used to cover a statue or a monument.

The flag should never be used for advertising purposes, nor be embroidered on such articles as cushions or handkerchiefs, printed or otherwise impressed on boxes or anything that is designed for temporary use and discard; or used as a costume or athletic uniform. Advertising signs should not be fastened to its staff or halyard.

The flag should never be used as drapery of any sort, never festooned, drawn back, nor up, in folds, but always allowed to fall free. Bunting of blue, white, and red, always arranged with the blue above and the white in the middle, should be used for covering a speaker's desk, draping the front of a platform, and for decoration in general.

An act of Congress approved on Feb. 8, 1917, provided certain penalties for the desecration, mutilation, or improper use of the flag within the District of Columbia. A 1968 federal law provided penalties of as much as a year's imprisonment or a $1,000 fine or both for publicly burning or otherwise desecrating any U.S. flag. In addition, many states have laws against flag desecration. In 1989, the Supreme Court ruled that no laws could prohibit political protesters from burning the flag. The decision had the effect of declaring unconstitutional the flag desecration laws of 48 states, as well as a similar federal statute, in cases of peaceful political expression.

The Supreme Court, in June 1990, declared that a new federal law making it a crime to burn or deface the American flag violated the free-speech guarantee of the First Amendment. The 5-4 Court decision led to renewed calls in Congress for a constitutional amendment to make it possible to prosecute flag burners.

Pledge of Allegiance to the Flag

I pledge allegiance to the flag of the United States of America and to the republic for which it stands, one nation under God, indivisible, with liberty and justice for all.

This, the current official version of the Pledge of Allegiance, has developed from the original pledge, which was first published in the Sept. 8, 1892, issue of *Youth's Companion*, a weekly magazine then published in Boston. The original pledge contained the phrase "my flag," which was changed more than 30 years later to "flag of the United States of America." A 1954 act of Congress added the words "under God." (In 2002, the 9th Circuit U.S. Court of Appeals ruled that recitation of the pledge in public schools could not include that phrase. In 2004, however, the U.S. Supreme Court voted to decline to decide the case on a technicality. The lower court's decision was thus overturned.)

The authorship of the pledge was in dispute for many years. The *Youth's Companion* stated in 1917 that the original draft was written by James B. Upham, an executive of the magazine who died in 1910. A leaflet circulated by the magazine later named Upham as the originator of the draft "afterwards condensed and perfected by him and his associates of the Companion force."

Francis Bellamy, a former member of *Youth's Companion* editorial staff, publicly claimed authorship of the pledge in 1923. In 1939, the United States Flag Association, acting on the advice of a committee named to study the controversy, upheld the claim of Bellamy, who had died 8 years earlier. In 1957 the Library of Congress issued a report attributing the authorship to Bellamy.

The History of the National Anthem

"The Star-Spangled Banner" was ordered played by the military and naval services by Pres. Woodrow Wilson in 1916. It was designated the national anthem by Act of Congress, Mar. 3, 1931. The words were written by Francis Scott Key, of Georgetown, MD, during the bombardment of Fort McHenry, Baltimore, Sept. 13-14, 1814. Key was a lawyer, a graduate of St. John's College, Annapolis, and a volunteer in a light artillery company. When a friend, Dr. Beanes, a Maryland physician, was taken aboard Admiral Cockburn's British squadron for interfering with ground troops, Key and J. S. Skinner, carrying a note from Pres. Madison, went to the fleet under a flag of truce on a cartel ship to ask Beanes's release. Cockburn consented, but as the fleet was about to sail up the Patapsco to bombard Fort McHenry, he detained them, first on HMS *Surprise* and then on a supply ship.

Key witnessed the bombardment from his own vessel. It began at 7 AM, Sept. 13, 1814, and lasted, with intermissions, for 25 hrs. The British fired more than 1,500 shells, each weighing as much as 220 lbs. They were unable to approach closely because the U.S. had sunk 22 vessels. Only 4 Americans were killed and 24 wounded. A British bombship was disabled.

During the event, Key wrote a stanza on the back of an envelope. Next day at Indian Queen Inn, Baltimore, he wrote out the poem and gave it to his brother-in-law, Judge J. H. Nicholson. Nicholson suggested use of the tune, "Anacreon in Heaven" (attributed to a British composer named John Stafford Smith), and had the poem printed on broadsides, of which 2 survive. On Sept. 20 it appeared in the *Baltimore American*. Later Key made 3 copies; one is in the Library of Congress, and one in the Pennsylvania Historical Society. The copy Key wrote on Sept. 14 remained in the Nicholson family for 93 years. In 1907 it was sold to Henry Walters of Baltimore. In 1934 it was bought at auction by the Walters Art Gallery, Baltimore, for $26,400. In 1953 it was sold to the Maryland Historical Society for the same price.

The flag that Key saw during the bombardment is preserved in the Smithsonian Institution, Washington, DC. It measures 30 by 42 ft and has 15 alternating red and white stripes and 15 stars, for the original 13 states plus Kentucky and Vermont. It was made by Mary Young Pickersgill. The Baltimore Flag House, a museum, occupies her premises, which were restored in 1953.

The Star-Spangled Banner

Note: The 2nd and 3rd stanzas are commonly omitted as a courtesy to the British.

I

Oh, say can you see by the dawn's early light
What so proudly we hailed at the twilight's last gleaming?
Whose broad stripes and bright stars thru the perilous fight,
O'er the ramparts we watched were so gallantly streaming?
And the rocket's red glare, the bombs bursting in air,
Gave proof through the night that our flag was still there.
Oh, say does that star-spangled banner yet wave
O'er the land of the free and the home of the brave?

II

On the shore, dimly seen through the mists of the deep,
Where the foe's haughty host in dread silence reposes,
What is that which the breeze, o'er the towering steep,
As it fitfully blows, half conceals, half discloses?
Now it catches the gleam of the morning's first beam,
In full glory reflected now shines in the stream:
'Tis the star-spangled banner! Oh long may it wave
O'er the land of the free and the home of the brave!

III

And where is that band who so vauntingly swore
That the havoc of war and the battle's confusion,
A home and a country should leave us no more!
Their blood has washed out their foul footsteps' pollution.
No refuge could save the hireling and slave
From the terror of flight, or the gloom of the grave:
And the star-spangled banner in triumph doth wave
O'er the land of the free and the home of the brave!

IV

Oh! thus be it ever, when freemen shall stand
Between their loved home and the war's desolation!
Blest with victory and peace, may the heav'n rescued land
Praise the Power that hath made and preserved us a nation.
Then conquer we must, when our cause it is just,
And this be our motto: "In God is our trust."
And the star-spangled banner in triumph shall wave
O'er the land of the free and the home of the brave!

America (My Country 'Tis of Thee)

First sung in public on July 4, 1831, at a service in the Park Street Church, Boston, the words were written by Rev. Samuel Francis Smith, a Baptist clergyman, who set them to a melody he found in a German songbook, unaware that it was the tune for the British anthem "God Save the King/Queen."

My country, 'tis of thee,
Sweet land of liberty,
Of thee I sing.
Land where my fathers died!
Land of the Pilgrims' pride!
From ev'ry mountainside,
Let freedom ring!

My native country, thee,
Land of the noble free,
Thy name I love.
I love thy rocks and rills,
Thy woods and templed hills;
My heart with rapture thrills
Like that above.

Let music swell the breeze,
And ring from all the trees
Sweet freedom's song.
Let mortal tongues awake;
Let all that breathe partake;
Let rocks their silence break,
The sound prolong.

Our fathers' God, to Thee,
Author of liberty,
To Thee we sing.
Long may our land be bright
With freedom's holy light;
Protect us by Thy might,
Great God, our King!