Fact Sheet

David H. Koch Hall of Human Origins

Milestones in Human Evolution

By 6 million years ago  Early humans had evolved upright posture and the ability to walk upright on short legs.

By 6 million years ago  Male canine teeth were about equal in size to females’, which indicates a significant shift in social life.

By 4.1 million years ago  Broad knee joints indicate clear adaptation to regular bipedal walking.

By 3.6 million years ago  Oldest definite early human footprint trails, with footprints of other animals and environmental evidence.

By 2.6 million years ago  Early humans made basic tools and ate meat obtained from large animals.

By 2.5 million years ago  Clear evidence of a double-curved spine, which indicates a shock-absorbing system associated with bipedal walking.

By 1.9 million years ago  Robust hip bone and lengthened thigh bone indicate that human ancestors could walk farther, faster and more easily.

By 1.8 million years ago  Early humans dispersed from Africa to Asia.

By 1.6 million years ago  First major technological innovation. Hand axes are made. Hand-axe technology persists for more than 1.2 million years.

By 800,000 years ago  Early humans had control of fire and created hearths.

At 800,000 years ago  Beginning of the most rapid increase in early human brain size (relative to body size). The fastest pace of brain enlargement took place between 800,000 and 200,000 years ago.
By 500,000 years ago  Evidence of brain enlargement implies considerably prolonged maturation of the young.

By 500,000 years ago  Early humans hunted large animals.

By 400,000 years ago  Early humans made shelter.

By 400,000 years ago  Early humans invented wooden thrusting spears.

250,000 years ago  Early humans began to communicate with symbols—with evidence of the oldest known “crayons” (faceted sticks and chunks of pigment).

200,000 years ago  Modern humans (*Homo sapiens*) evolved in Africa; they gathered and hunted food, like earlier human species. The date of 200,000 years is based on the oldest known *H. sapiens* crania and the estimated age of convergence (back in time) of all the mitochondrial DNA diversity recorded in living human populations. Three species of early humans overlapped in time with *H. sapiens*. The other three species became extinct between about 70,000 and 17,000 years ago.

By 164,000 years ago  Modern humans collected and cooked shellfish.

By 160,000 years ago  Modern humans had evolved prolonged periods of childhood growth, as found in people today.

Between 135,000-100,000 years ago  Modern humans temporarily spread beyond Africa.

Between 135,000-100,000 years ago  Modern humans made shell beads, the oldest known jewelry.

By 130,000 years ago  Modern humans exchanged resources over long distances.

By 104,000 years ago  Modern humans became capable of capturing fast and dangerous prey.

By 100,000 years ago  Earliest recorded purposeful burial.

Between 100,000-32,000 years ago  Neanderthals (*H. neanderthalensis*) created rare carved plaques and pendants.

By 90,000 years ago  Modern humans made special tools for fishing.

By 77,000 years ago  Modern humans recorded information on objects.

By 77,000 years ago  Modern humans became capable of making clothing by perforating hide.

About 74,000 years ago  Near-extinction of *H. sapiens*. Greatly reduced population, with numbers estimated at about 10,000 adults of reproductive age to as few as 600. Timing correlates with repeated, large-scale droughts in portions of Africa.
By 70,000 years ago  
*Homo erectus* became extinct.

By 60,000 years ago  
Modern humans began a series of permanent worldwide migrations.

By 60,000–40,000 years ago  
Modern humans created permanent drawings.

By 50,000 years ago  
Modern humans reached Australia.

By 40,000 years ago  
Modern humans reached Europe.

By 40,000–35,000 years ago  
Modern humans created paintings and figurines.

By 35,000 years ago  
Modern humans created musical instruments.

By 30,000–24,000 years ago  
Modern humans became capable of making well-fitted clothing using bone needles.

By 28,000 years ago  
Neanderthals (*H. neanderthalensis*) became extinct.

By 26,000 years ago  
Modern humans made baskets.

By 17,000 years ago  
*H. floresiensis* became extinct, leaving modern humans (*H. sapiens*) as the sole survivors of the once diverse human evolutionary tree.

By 15,000 years ago  
Modern humans reached the Americas (by at least this date).

Beginning 12,000 years ago  
Humans become a “turning point” in the history of life as they control the growth and breeding of certain plants and animals. Farming and herding ensue, which transformed natural landscapes—first locally, then globally. Food production led to settlement (villages, towns, cities) and population growth.

By 10,500 years ago  
First domestication of plants and animals.

By 8,000 years ago  
Modern humans use symbols to represent words and concepts.

Between 1959 and 1999  
Human population doubled from 3 billion to 6 billion people in just 40 years.

By 1995  
At least 83 percent of Earth’s land surface had been directly affected by humans.

By 2007  
More humans live in cities than in rural areas.

In 2012  
Human population is expected to reach about 7 billion.
About the Smithsonian’s National Museum of Natural History

The Smithsonian’s National Museum of Natural History, located at 10th Street and Constitution Avenue N.W. in Washington, D.C., welcomed more than 7.4 million visitors in 2009, making it the most visited museum in the United States. The museum is open daily from 10 a.m. to 5:30 p.m. Admission is free. More information about the museum is available at www.mnh.si.edu or by calling (202) 633-1000, TTY (202) 633-5285. In addition to the Web site, learn more about public programs and get the latest updates and access to insider videos and images via Facebook, Flickr, Twitter, and YouTube.

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