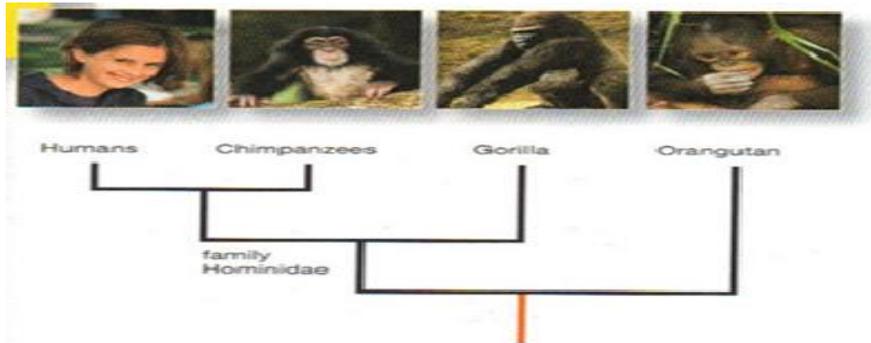


HUMAN EVOLUTION

Humans are mammals and that belong to the order of primates. All primates have a grasping hand, bicuspid teeth, short nose and well developed eyes and brain. Humans are also in the same family as the great apes which all lack a tail and all have similar skeletal and skull features



MOLECULAR EVIDENCE

The entire mitochondrial DNA, about 15,000 nucleotide bases, has now been sequenced for humans and apes. The sequence data show that African apes (gorillas and chimpanzees) and humans share a common ancestor about five to seven million years ago. What this common ancestor looked like is not known. The data also shows that the chimpanzees are our closest living relatives. The gorilla and orang-utan diverged earlier.

BEING HUMAN

Humans, as *Homo sapiens*, are a species that:

- Is bipedal (walking upright on two legs)
- Has shorter jaws with smaller teeth
- Has a flat face and lacks heavy brow ridges
- Larger brain size
- increasingly complex forms of technology

HOMINID ("HUMAN-LIKE") EVOLUTION

Four genera are recognised:

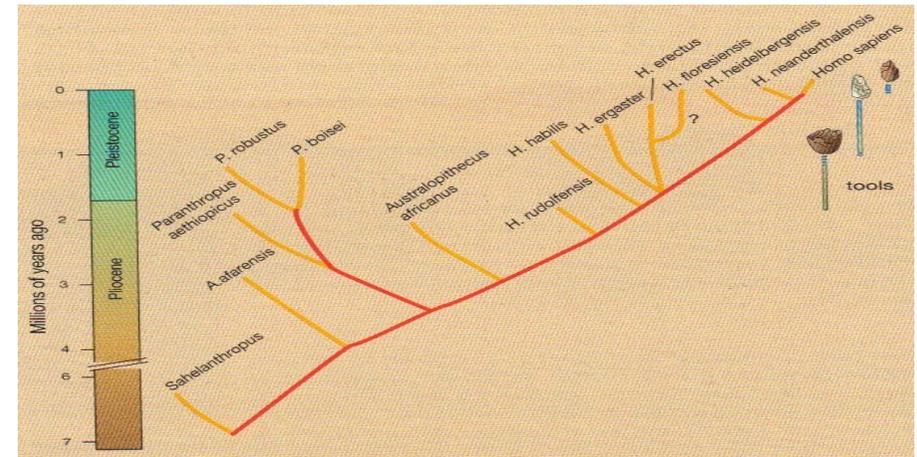
1. *Sahelanthropus*
2. *Australopithecus*
3. *Paranthropus*
4. *Homo*

None of these genera are considered direct ancestors and are best described as extinct relatives.

HOMO GENUS

Eight species are recognised by scientists today:

1. *Homo rudolfensis*
2. *Homo habilis*
3. *Homo erectus*
4. *Homo floresiensis*
5. *Homo heidelbergensis*
6. *Homo ergaster*
7. *Homo neanderthalensis*
8. *Homo sapiens*



ACTIVITY

Go to: <http://humanorigins.si.edu/evidence/human-evolution-timeline-Interactive>

Use the interactive timeline to answer the following questions:

1. Which species provided evidence that demonstrated that upright walking did not evolve in an open savannah environment?
2. Which species did the 'Lucy' and 'Ardi' skeletons belong to?
3. Which species lived alongside the *Homo erectus* species in East Africa?
4. At what stage of the timeline did hominids commence bipedalism and then become fully bipedal?
5. When did hominids begin to control fire and what changes did this involve?
6. Which species was the first to venture into the cold latitudes of Europe?
7. Which species was the longest-lived species on the hominid family tree?
8. When was the dawn of technology and what was the earliest tools?
9. Describe the climate trend for the past 8 million years.
10. From where did the *Homo sapiens* species evolve from and how long ago?
11. Which species was nicknamed 'the hobbit'?
12. Which species fossils were discovered as Olduvai Gorge in the 1960s?
13. Summarise the time periods that each of the four hominid genera lived.