

Student Worksheet: Hall of Human Origins Virtual Tour

1. Locate the three skeletons at the entrance to the hall (**Page 5**). On the far left is a chimpanzee (*Pan troglodytes*), in the center is a modern human (*Homo sapiens*), and on the far right is an extinct species called Neanderthals (*Homo neanderthalensis*). The human and the Neanderthal share many features related to bipedalism (walking on two legs).

a. Compare the **human** and the **chimpanzee**. What similarities do you see? What differences do you see?

Similarities:

Differences:

b. Compare the **human** and the **Neanderthal**. What similarities do you see? What differences do you see?

Similarities:

Differences:

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2. Based on your observations, which species do you think is more closely related to modern humans (*Homo sapiens*)? Explain your answer.

3. Observe the **Family Tree (Page 6)** . You should see several skulls organized from oldest (bottom) to most recent (top). This type of tree allows scientists to demonstrate evolutionary relationships among species. Displayed here are several species of early humans (also called **hominins**). On the top right is the skull of a modern human (*Homo sapiens*). As you look from the oldest species (bottom) to the most recent species (top) what changes do you notice in the shape of the skull?

4. Observe the diorama of *Australopithecus afarensis*. (**Page 7**) You should see a male and a female walking arm in arm. This is a hominin species that existed between 4 million and 3 million years ago. The most famous fossil of this species is named Lucy. In what ways are they similar to our own species? In what ways do they differ from our species?

Similarities:

Differences:

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5. Observe the diorama of *Homo erectus/ ergaster* (Page 8). You should see two individuals, a male and female, standing over an antelope carcass. This species existed between 1.9 million and 110 thousand years ago.

a. Describe the scene.

b. In what ways are they more similar to modern humans (*Homo sapiens*) than to Lucy's species (*Australopithecus afarensis*)?

6. Observe the diorama of the neanderthals (*Homo neanderthalensis*) (Page 9). You should see three individuals draped in fur, a young male, a young female, and an older female. This species coexisted with modern humans (*Homo sapiens*) and lived between 400,000 thousand and 40,000 years ago.

a. Describe the scene.

b. How does the environment differ from that of *Homo erectus/ ergaster*?

c. In what ways do the Neanderthals differ physically and behaviorally from *Homo erectus/ ergaster* and *Australopithecus afarensis*?

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7. Observe the diorama of the early European *Homo sapiens*. (Page 10) You should see a male in fur clothing carrying a bundle of sticks on his shoulders. Our species has existed from approximately 300,000 years ago to the present.

a. Describe the scene.

b. How does this scene differ from what you saw with the Neanderthals (*Homo neanderthalensis*) ?

8. Based on your observations, what are some ways that the human lineage (hominins) have changed over time?



FROM THE HUMAN BODY

OUR FAMILY TREE

RECONSTRUCTIONS: FACES FROM FOSSILS

DISCOVER

OUR FAMILY TREE

Humans are the only remaining descendants of a once-varied family of primates called hominidae. In different places over the past six or seven million years, groups of early hominids adapted to their habitats and many distinct species emerged—including some that lived simultaneously. Most of these species became extinct, and only one—modern humans, *Homo sapiens*—ultimately survived and flourished.

Since the first hominid fossil was recognized in 1856, thousands of others representing many distinct species have been discovered. Using an array of techniques to analyze these fossils, paleoanthropologists continually develop a better understanding of the history of human evolution, represented here as a “family tree.” New fossil finds and new technologies promise to refine the tree even further.



Orange bars, each associated with a particular species, correspond to the vertical timeline to the right. The length of the bar represents the time that a species is known to have existed based on fossil evidence.

Dashed lines connect ancestral species to their possible descendants.

READING THE TREE

The diagram in front of you depicts one hypothesis of nearly seven million years of hominid evolution. Each skull or skull fragment represents a distinct species.







