

Name _____

Day 1

Weekly Question

Would humans survive if there was another ice age?

The origins of the human race can be traced back as far as 6 million years. This may seem like a long time, but in terms of Earth's history, **hominid** species are relatively new to the planet. The earliest members of the genus *Homo* appeared in Africa a mere 2.5 million years ago, around the start of the Ice Age. And our own species, *Homo sapiens* (SAYP-ee-enz), evolved less than 200,000 years ago. "Human" is the common name for *Homo sapiens*.

Humans have shown that we are the most adaptable species on Earth. We have a diet that is very flexible. And we can survive in all types of climates and habitats, from the arctic tundra to hot, dry deserts. Today, our **distribution** is worldwide.

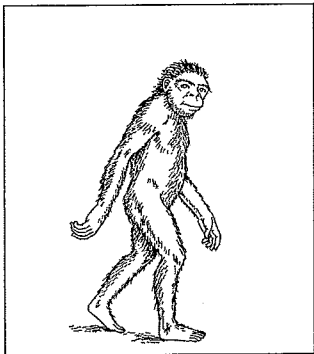
Vocabulary

distribution

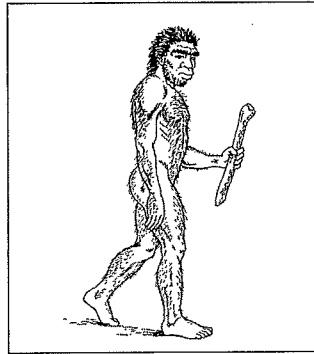
DIS-trih-BEW-shun
the natural geographic range of an organism

hominid

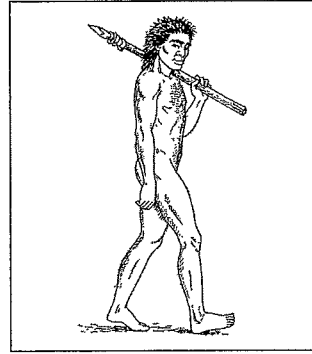
HAHM-uh-nid
any member of the group that includes humans and their ancestors



Genus: *Australopithecus*
Species: *afarensis*
Lived 3.2 million years ago



Genus: *Homo*
Species: *erectus*
Lived 1.8 million years ago



Genus: *Homo*
Species: *sapiens*
Lived 200,000 years ago

A. Based on the pictures above, list three physical traits of hominids that have changed over time.

1. _____ 2. _____ 3. _____

B. The distribution of the human population may be worldwide, but we favor certain climates. In which climates do you think most people live and why?

Name _____

**Day
2**

Weekly Question

Would humans survive if there was another ice age?

We humans are **omnivores**, so our diet is broad. Because we don't depend on a specific type of food, we are not restricted to one area for finding food. We are able to seek out new habitats where there is less competition or more plentiful resources.

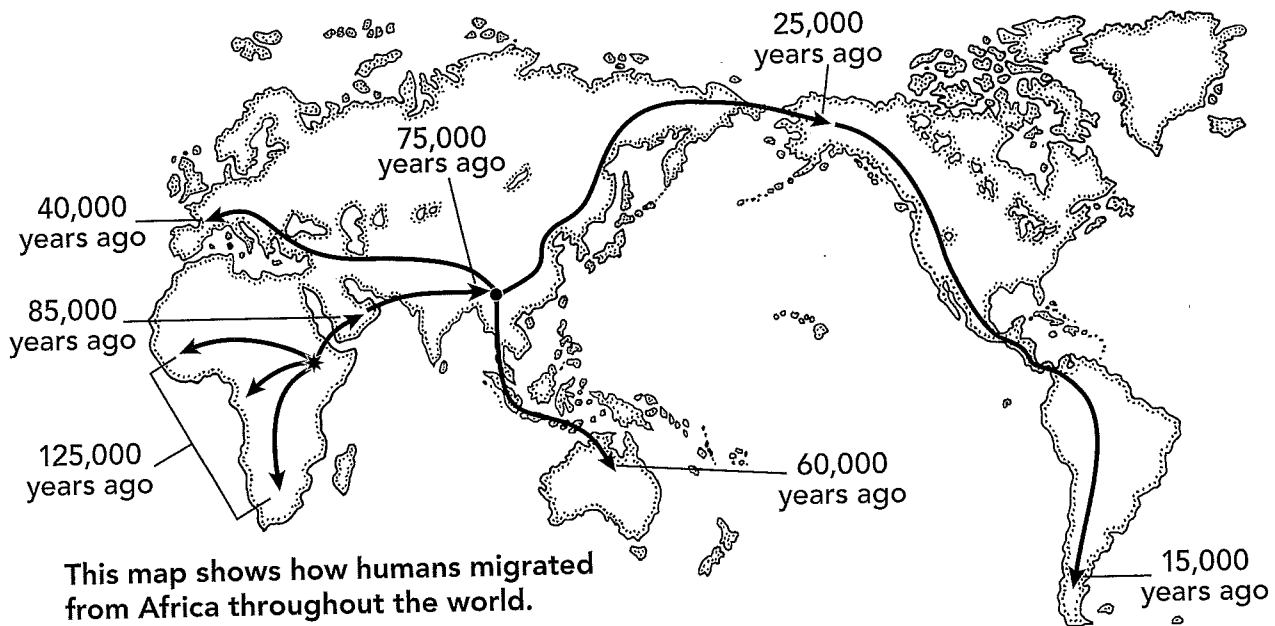
The earliest hominids lived in the forests of Africa and ate mostly leaves and fruit. When climate change altered their habitat from forest to savanna, they were able to adapt their diet. In the grasslands, hominids learned how to hunt big game animals.

However, around 125,000 years ago, the savanna began drying up. Humans competed with other hominid species for scarce food resources. Groups of humans made their way to the coast, where they learned how to eat shellfish. And from the coast, humans were able to migrate out of Africa and throughout the world.

Vocabulary

omnivores

AHM-nih-vorz
animals that eat both plants and animals



A. What are two factors that caused humans to migrate?

1. _____ 2. _____

B. Why do omnivores have an advantage over organisms with a specialized diet?

Name _____

Day 3 **Weekly Question**
Would humans survive if there was another ice age?

The first and most important adaptation of the earliest human ancestors was **bipedalism**. The ability to walk upright freed early hominids' hands for uses other than helping them move. Hominids began to make tools, and **technology** was born. Using tools stimulated the brain, which grew over time. This, in turn, allowed for the development of more complex technology. Hominids learned how to control fire, and later, humans created the wheel.

The use of technology continues to help humans survive. Compared to other mammals, we move very slowly, which makes us easy prey. We have no fur to keep us warm. And we have small teeth and jaws, which makes it hard to process food. But tools such as weapons keep us safe from predators. Shelter, fire, and clothing keep us warm. Fire and utensils also enable us to cook and cut our food, which makes it easier to digest. Today, we are so reliant on even simple technology that we would be unlikely to survive without it.

Vocabulary

bipedalism

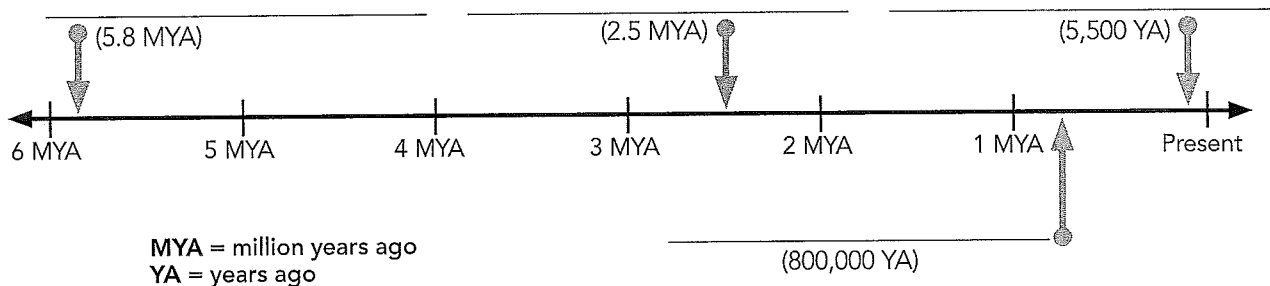
by-PED-ul-izm
the ability to walk on two legs

technology

tek-NAWL-uh-jee
knowledge and usage of tools to control and adapt to one's environment

A. Write each hominid adaptation or achievement from the box in its correct position on the timeline.

invention of wheel use of fire bipedalism use of tools



B. Describe three ways that technology helps humans survive, even though we lack other important adaptations.

Name _____

Daily Science

**Big
Idea 2**

WEEK 4

**Day
4**

Weekly Question

Would humans survive if there was another ice age?

About 2.5 million years ago, Earth entered the Ice Age, a period that lasted until 10,000 years ago. Numerous **glaciations** occurred during this time. The glaciers alternately advanced and retreated, and Earth's temperature changed constantly. Because humans evolved during this time, they were continually adjusting to shifting climates. And the unstable environment meant that our ancestors did not have a chance to specialize. This contributed greatly to our adaptability.

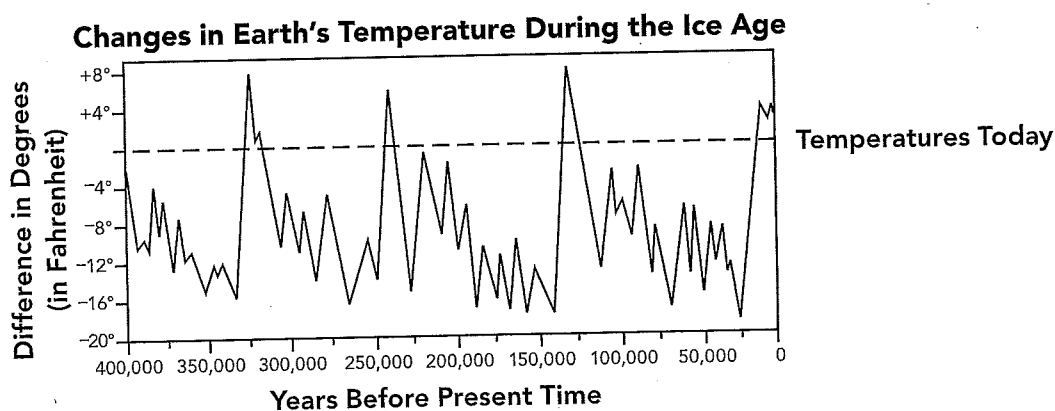
Humans would likely survive another natural ice age because the decrease in temperatures would happen slowly enough for us to adapt. However, a sudden ice age that results from a large volcanic eruption or other event that instantly affects our climate would pose a much greater threat. If another ice age does occur, continued access to food and technology would be key to our survival.

Vocabulary

glaciations

GLAY-shee-AY-shunz
geologic events during which large portions of Earth were covered with slowly moving masses of ice

This graph shows the differences in temperatures during the Ice Age compared to temperatures today. Use the graph to answer the questions.



1. The term "Ice Age" is not an entirely accurate description for that time period. Why do you think this is so? Use the word *glaciations* in your answer.

2. When was it colder on Earth, 250,000 or 375,000 years ago? _____
3. About how much warmer than today's temperatures was the warmest temperature of the last 300,000 years? Approximately when did it occur?

Name _____



**Day
5**

Weekly Question

Would humans survive if there was another ice age?

A. Use the words in the box to complete the paragraph.

bipedalism glaciations distribution
omnivores technology hominids

Much of human evolution occurred during the Ice Age. Early _____ were _____, so they were able to eat a wide variety of foods and adapt to changing environmental conditions that were caused by repeated _____. Another adaptation that contributed greatly to the success of the human species was _____, or the ability to walk on two legs. This adaptation led to the development of _____, which, along with our overall adaptability, has allowed humans to grow in population and achieve worldwide _____.

B. For a while, *Homo sapiens* lived in the same place and at the same time as other hominid species. Why do you think our species survived while other hominids went extinct?

C. Explain how the rise of technology contributed to the adaptability of humans.

