

The Study of Early Human Beings

What does it mean to be a human being? Why do people act like they do? How are we connected to our ancient ancestors? These are just a few of the questions that some scientists ask today.

Archaeologists are scientists who study past human life based on items called **artifacts** that people leave behind. These artifacts may be items such as tools, fire hearths, arrowheads, pottery, or the remains of shelters.

Anthropologists study human beings and their ancestors. They examine artifacts and human bones, called **fossils**, to better understand past human societies. Determining the age of the artifacts and fossils they study allows scientists to tell how societies developed in different stages over time.

Anthropologists and archaeologists use scientific methods to determine the age of artifacts and fossils. One scientific method of doing this is a process called **radiocarbon dating**. Scientists also study **deoxyribonucleic acid (DNA)** from ancient fossils. DNA contains the genetic code for all human life.



Map 1



Archaeologists set up a site grid at an excavation.

When archaeologists find a new area in which to dig, they first create a **site grid**. This grid of stakes and string works like a piece of graph paper in dividing up the **excavation**, or area where they dig. Using the site grid allows archaeologists to record every artifact that is found at the site and know the exact spot where it was found. It also allows them to keep track of the different levels in the earth where artifacts were found. This is important because artifacts at a higher level within the ground are usually more recent than those at a lower level.

Archaeologists and anthropologists use many different tools when digging for artifacts and fossils. These include shovels, trowels, wooden picks, and brushes. They sift soil through fine screens to find small bits of broken pottery or bone.

Each item that an archaeologist finds at a site tells something about the people who lived there. For example, the way that ancient people made their tools could explain something about their **technology** or level of knowledge. The bones of animals indicate the types of food eaten by ancient people. Plant remains such as seeds may also be a clue to their diet.

Scientists work hard to determine the environment, or climate, in which ancient people lived. They do this by studying samples of the soil and the remains of ancient plant life. For example, if ancient people lived during a time of plentiful rain and mild temperatures, this might have meant it was easy for them to grow crops. A time of drought might have forced them to move to a different area or find a new way of life.

Build Your Map Skills

The Migration of Early Human Beings

From the information they have gathered at archaeological sites, archaeologists have developed theories about how early human beings developed and populated Earth. A **theory** is an idea of how something may have happened. Scientists often change their theories as they discover new information.

Scientists think that early human beings, called ***Homo sapiens***, first lived in central east Africa about 100,000 to 200,000 years ago. These were the first people that had a similar appearance to modern human beings.

About 100,000 years ago, *Homo sapiens* began to **migrate**, or move, throughout the rest of Africa and into southwest Asia. *Homo sapiens* then moved to Australia, Europe, and Siberia.

Scientists think that two other kinds of human beings lived at about the time *Homo sapiens* developed. They are called ***Homo erectus*** and ***Homo sapiens neanderthalensis* (Neanderthals)**. These people also migrated out of Africa. However, *Neanderthals* eventually died out. *Homo erectus* may have eventually evolved (or changed over time) to become part of *Homo sapiens*.

Eventually *Homo sapiens* crossed a land bridge at Beringia, the point where Asia and North America met. From there, these people migrated throughout North and South America. This slow movement to populate the world took many thousands of years.

Map 2 shows the migration of *Homo sapiens* out of Africa into the rest of the world. Refer to the map to answer the following questions.

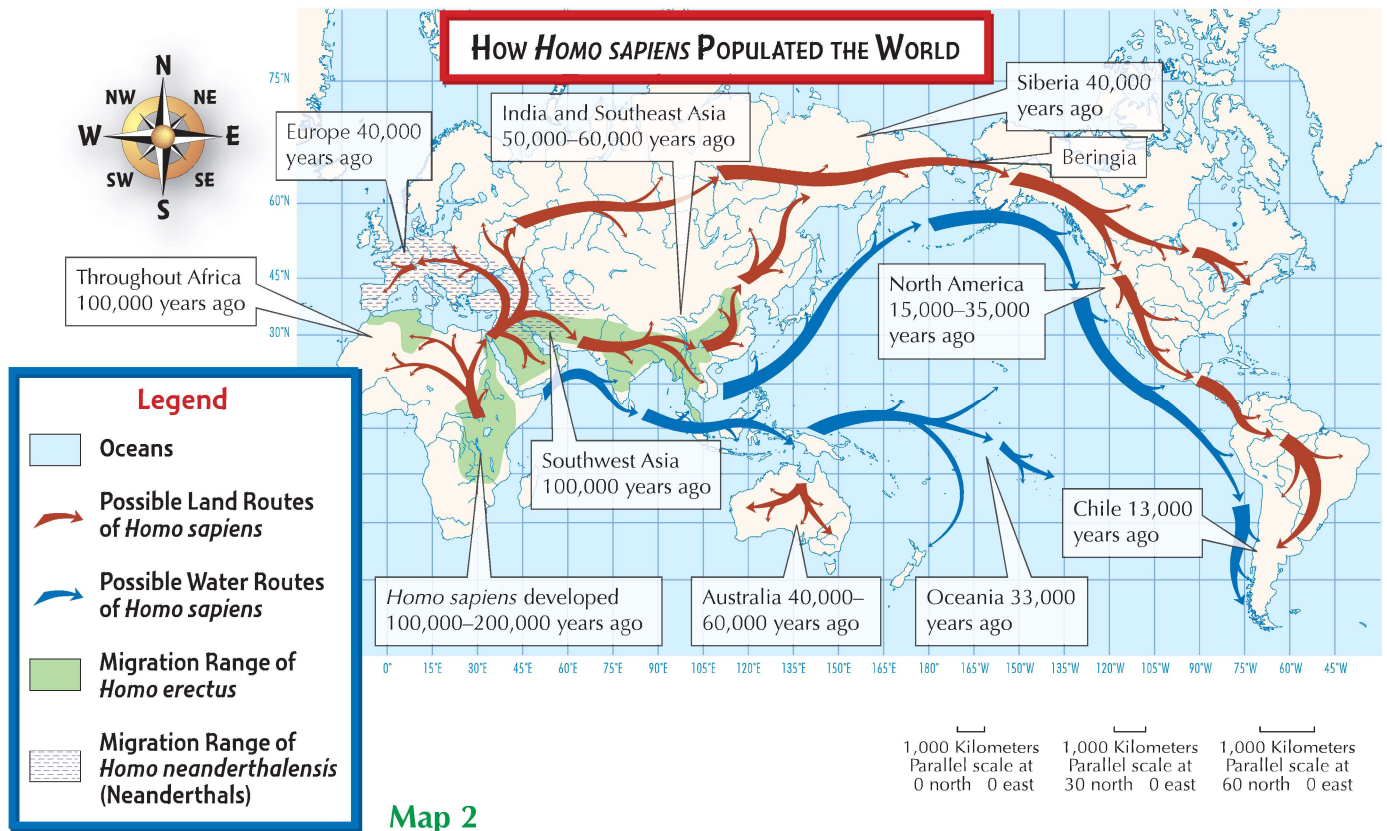
1. On which continent did *Homo sapiens* first develop?
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2. Which parts of North and South America were populated by water routes? Land routes?

3. Which region on the map was the first to be populated by *Homo sapiens* after they left Africa? Which was the last? Explain when *Homo sapiens* first migrated into these areas.

4. Use the compass rose to describe the migration range of *Homo erectus*.

5. Which regions on the map were home to *Homo sapiens neanderthalensis*?



More about Early Human Beings

Something to
Think
About

Why is it important to learn about early human beings?

Use the information from pages 2–3 and the map on page 5 to answer questions 1–6. For question 7, you will need to do some library research on your own.

1. Use Map 2 on page 5 to create a timeline showing which continents were populated by *Homo sapiens* and when.

2. Name one important archaeological site of early human beings found in Africa, one in Asia, and one in Europe. Which of these do you suspect is the most recent site? Why?

3. North and South America are separated by water from the other continents. How did *Homo sapiens* migrate to the Americas?

4. Name two other kinds of human beings that lived at about the same time that *Homo sapiens* began to develop. What happened to these groups?

5. Why is it important for scientists to keep track of the different levels in the ground where artifacts at archaeological sites are found?

6. How can scientists determine the kinds of foods *Homo sapiens* ate?

7. Do some library research to form a theory about why *Homo sapiens* were able to be so successful. Write your ideas on the lines below. Provide evidence for your theory.
