



UNIT

1

The First Civilizations and Empires

Prehistory—A.D. 500

► Why It Matters

For hundreds of thousands of years, human beings survived by hunting, fishing, and gathering food and supplies in an often hostile environment. In the space of a few thousand years, human beings began to master the art of growing food crops. As more food was produced, the population grew, and people began to live in cities, form governments, and develop writing and art. Historians call this process the beginning of civilization.

- CHAPTER 1** THE FIRST HUMANS
Prehistory–3500 B.C.
- CHAPTER 2** WESTERN ASIA AND EGYPT
3500–500 B.C.
- CHAPTER 3** INDIA AND CHINA
3000 B.C.–A.D. 500
- CHAPTER 4** ANCIENT GREECE
1900–133 B.C.
- CHAPTER 5** ROME AND THE RISE OF CHRISTIANITY
600 B.C.–A.D. 500

The “Maiden Porch” of the Erechtheion, overlooking the city of Athens, Greece, is an example of Greek architecture from the fifth century B.C.







CHAPTER

1

The First Humans

Prehistory–3500 B.C.

Section 1 Early Humans

Section 2 The Neolithic Revolution and the Rise of Civilization

MAKING CONNECTIONS

What is civilization?

These cave paintings in Lascaux, France, illustrate the animals early people hunted 17,000 years ago during the Ice Age. Images like these give us glimpses into the life of early humans. In this chapter you will learn how humans gradually shifted from temporary to permanent settlements and began establishing civilizations.

- How do you think the first humans got their food?
- How would you define civilization?



THE WORLD ►

c. 3,000,000 B.C.
Australopithecines flourish in Africa

c. 1,500,000 B.C.
Homo erectus appears



3,500,000 B.C.

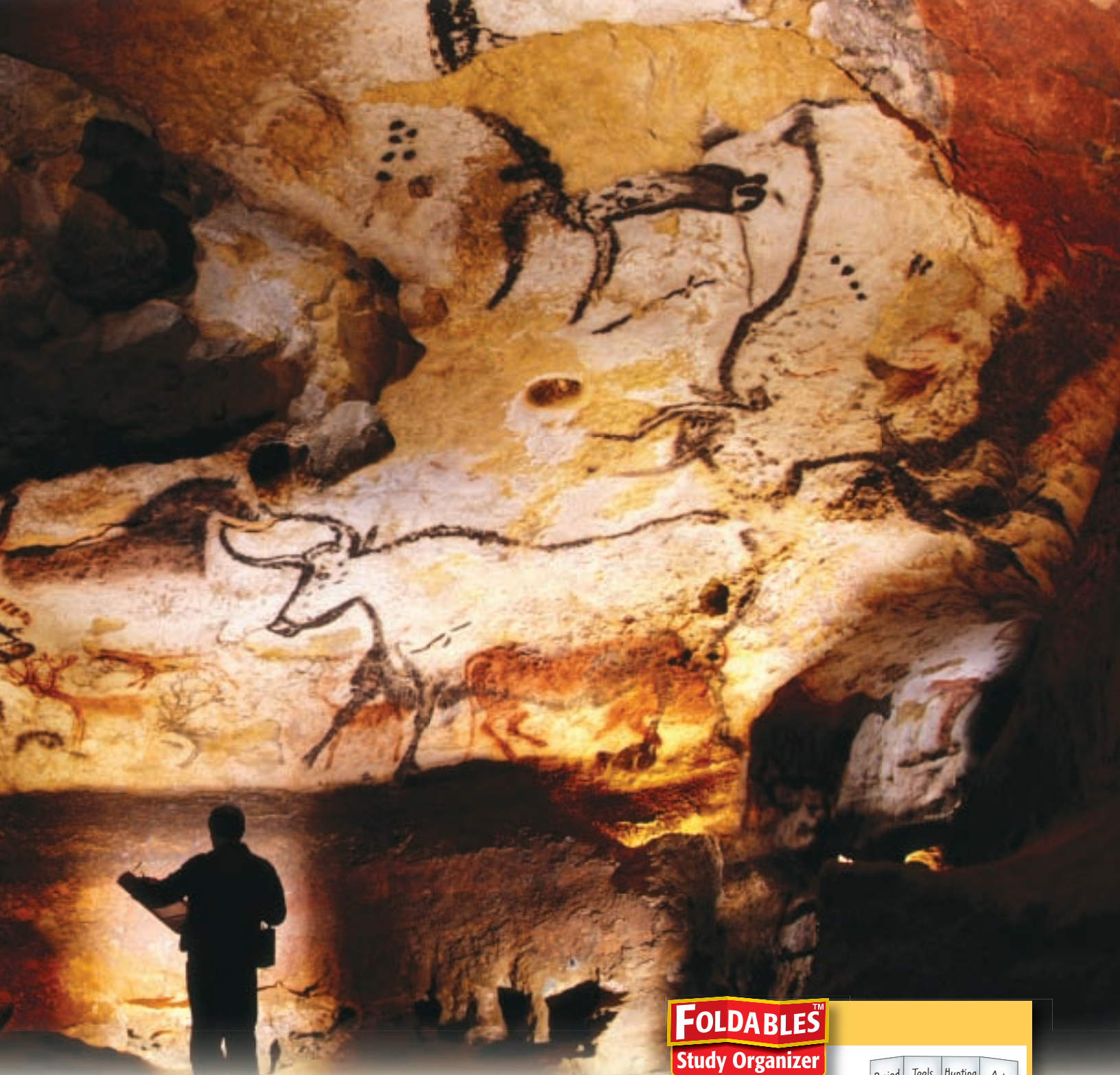
2,000,000 B.C.

200,000 B.C.

c. 2,500,000 B.C.
Paleolithic humans carve with stone tools

c. 250,000 B.C.
Homo sapiens species develops





c. 100,000 B.C.
Neanderthals living
in Germany

c. 8000 B.C.
Systematic agriculture
develops

150,000 B.C.

10,000 B.C.

3500 B.C.

c. 8000 B.C.
Neolithic humans
practice burial rituals

3000 B.C.
Bronze Age
begins

FOLDABLES™
Study Organizer

Period	Tools	Hunting	Art
Neolithic Age			
Bronze Age			

Describing Create a Three-Tab Book to record aspects of tools, hunting, and art that occurred during the Neolithic Age and the Bronze Age. Conduct additional research to add facts, illustrations, or maps to your Foldable.

History ONLINE

Chapter Overview—Visit glencoe.com to preview Chapter 1.

Early Humans

GUIDE TO READING

The BIG Idea

Physical Geography Human life developed in different stages over millions of years and by 10,000 B.C., *Homo sapiens sapiens* had spread throughout the world.

Content Vocabulary

- prehistory (p. 4)
- *Australopithecus* (p. 7)
- archaeology (p. 4)
- *Homo sapiens sapiens* (p. 7)
- artifact (p. 4)
- “out-of-Africa” theory (p. 7)
- anthropology (p. 4)
- fossil (p. 4)
- hominid (p. 6)

Academic Vocabulary

- theory (p. 4)
- survive (p. 8)

People and Places

- Olduvai Gorge (p. 6)
- Paleolithic Age (p. 8)

Reading Strategy

Summarizing Information As you read, create a chart like the one below to help you study.

Tool	Effect

Where did early humans live? How did they live, and what happened to them? To answer these questions, scientists study the evidence left by prehistoric people. Although researchers have new and better ways of studying the past, there is much we still do not know.

Before History

MAIN IDEA Scientists use fossils and artifacts as clues to how early humans lived.

HISTORY & YOU What would people in the future think of American culture based on what we leave behind?

Historians rely mostly on documents, or written records, to create their pictures of the past. However, no written records exist for the prehistory of humankind. In fact, **prehistory** means the time before writing was developed. The story of prehistoric humans depends on archaeological and, more recently, biological evidence. Archaeologists and anthropologists use this information to create **theories** about our early past.

Archaeology and Anthropology

Archaeology is the study of past societies through analysis of what people left behind. Archeologists dig up and examine **artifacts**—objects made by humans. Artifacts may be tools, weapons, art, and even buildings made by early humans.

Anthropology is the study of human life and culture. Culture includes what people wear, how they organize their society, and what they value. Anthropologists use artifacts and human **fossils** to create a picture of peoples’ everyday lives. Fossils are rocklike remains of biological organisms—a leaf imprint or a skeleton.

Archaeologists and anthropologists have developed scientific methods to carry out their work. They excavate, or dig up land, at sites around the globe to uncover fossil remains of early humans, ancient cities, burial grounds, and other objects. The examination and analysis of these remains give archaeologists a better understanding of ancient societies. By examining artifacts such as pottery, tools, and weapons, for example, these scientists learn about the social and military structures of a society. By analyzing bones, skins, and plant seeds, they are able to piece together the diet and activities of early people. One of the most important and difficult jobs of both archaeologists and anthropologists is dating their finds.



Geography SKILLS

- 1. Location** On which continent were most of the hominid bones found?
- 2. Place** The “out-of-Africa” theory states that hominids did not spread outside of Africa until they were capable of tool use. How do the sites depicted in Europe support this theory?

Maps in Motion See StudentWorks™ Plus or glencoe.com.

Dating Artifacts and Fossils

Dating human fossils and artifacts helps scientists understand when and where the first humans lived.

One method used to determine age is radiocarbon dating. All living things absorb a small amount of radioactive carbon, or C-14, from the atmosphere. After a living thing dies, it slowly loses C-14. By measuring the amount left in an object, a scientist can figure its age. This method is accurate for objects no more than about 50,000 years old.

For objects dating back to 200,000 years ago, scientists can make relatively precise measurements using thermo-luminescence. This measures the light given off by electrons trapped in the soil surrounding fossils and artifacts.

Microscopic and biological analyses of organic remains—such as blood, hairs, and plant tissues left on tools and weapons—give scientists still more information. Such analyses have shown that blood molecules may survive millions of years. This recent scientific discovery is especially useful in telling us more about humans, their use of tools, and the animals they killed. Ancient deoxyribonucleic acid (DNA) is providing new information on human evolution. The analysis of plant remains on stone tools yields evidence on the history of farming. All of these techniques give us insight into the lives of early peoples.

✓ Reading Check **Describing** How do archaeologists and anthropologists determine the ages of fossils and artifacts?



Early Development

MAIN IDEA Using remains and technology, scientists identify important stages in human development.

HISTORY & YOU How did humans change? Read about the early stages of human development.

In recent decades, modern science has produced a clearer picture of how early humans developed. Pieces of the puzzle are still missing, however. When a new skull or skeleton is unearthed, scientists may find that they have to revise their ideas about prehistoric human life.

Hominids to *Homo Sapiens*

What is a **hominid**? A hominid was a humanlike creature that walked upright. The earliest hominids lived in Africa four million years ago. They existed for millions of years, slowly changing over time.

Louis and Mary Leakey spent most of their lives searching for clues about early human life. They made a dramatic discovery of a skeleton at **Olduvai Gorge** in East Africa. According to their son:

PRIMARY SOURCE

"My father was ill that morning, so my mother set out alone . . . but found very little until just before noon, when she noticed a scrap of enormously thick bone protruding from beneath the surface. She instantly realized that it was part of a hominid skull—and that two teeth were embedded in the rock just above it. Elated, she drove back to camp to tell my father Louis. As he remembered it, she rushed in crying, 'I've got him! I've got him! I've got him!'"

—Richard Leakey, *TIME*, July 17, 1959

Leakey's discovery of a hominid in 1959 was the oldest at that time—about 1.8 million years old.

PEOPLE *in* HISTORY

Louis Leakey
1903–1972

Mary Leakey
1913–1996 Paleanthropologists

Paleoanthropologists study early human society. For three generations, beginning with the husband and wife team of Louis and Mary, the Leakeys have searched for early human remains in Africa.

Born in Kenya, Louis discovered some stone tools and an interest in prehistory. In the 1930's, Louis and Mary began looking for evidence of early humans at Olduvai Gorge. Mary is credited with discovering *Proconsul africanus* in 1948, *Australopithecus boisei* in 1959, *Homo habilis* in 1960, and an 89-foot-long trail of early human footprints called the "Laetoli footprints" in 1979. **What do the Leakeys' finds illustrate about where early human life began?**



Richard Leakey
1942–present

Louise Leakey
1972–present

Meave Leakey
1942–present Paleanthropologists

Richard, a son of Louis and Mary, found his first fossil at age six. Meave, a zoologist, joined Richard's expedition in 1969. Richard and Meave focused their search at Koobi Fora, near Lake Turkana in Kenya. Over a thirty-year period, this Leakey team made 200 significant fossil finds.

Meave and Louise Leakey were named National Geographic Society's explorers-in-residence in 2002. The Leakey mother and daughter paleontologists found a 3.5 million-year-old skull near Turkana. **Why were the Leakeys' fossil finds significant?**





For decades, scientists assumed these earliest of upright creatures must also have used tools. In 1974, Donald Johanson challenged this theory when his team found a new skeleton in Ethiopia. Johanson nicknamed the female skeleton “Lucy” and suggested that she was the common ancestor for several types of early human life. Scientists called this type of hominid **Australopithecus** (aw•STRAY•loh•PIH•thuh•CUS), or “southern ape.” It flourished in eastern and southern Africa.

In a 1991 interview, Johanson explained why “Lucy” changed the ideas of many scientists about hominids that walked upright:

PRIMARY SOURCE

“People felt that there were a number of evolutionary changes, which all went together. That our ancestors stood up to free their hands so that they could make and use stone tools. In order to make and use stone tools, they had to have large brains . . . Here comes Lucy, about 3.5 million years old . . . very small brain, . . . and we have never found any stone tool, stone artifacts, associated with her species. Yet she is walking upright. So it appears that . . . walking on two legs, precedes by perhaps as much as a million and a half years, the manufacture of stone tools and the expansion of the brain.”

—Donald Johanson, 1991 interview

From 2.5 to 1.6 million years ago, a more advanced hominid developed with a somewhat larger brain. This hominid was named *Homo habilis*, meaning “handy human.” *Homo habilis* may have used stone tools. The earliest remains of this hominid were discovered near Olduvai Gorge. Another hominid, *Homo erectus*, “upright human,” existed from 1.8 million to 100,000 years ago. Although other hominids walked on two legs, *Homo erectus* had arms and legs in modern human proportion. Remains in Asia show that *Homo erectus* was probably the first hominid to leave Africa.

Around 200,000 years ago, *Homo sapiens* emerged. *Homo sapiens*, “wise human,” showed rapid brain growth and mastered fire. Two kinds of early humans descended from *Homo sapiens*: Neanderthals and *Homo sapiens sapiens*. In the Neanderthal, a valley


in Germany, the earliest remains of Neanderthals, or Neandertals, were found. They probably lived between 100,000 B.C. and 30,000 B.C. Other Neanderthal remains have been found in Europe and Turkey. Besides using many kinds of stone tools, European Neanderthals made their clothes from animal skins. Neanderthals seem to be the first early people to bury their dead. According to some scholars, burying the dead indicates a belief in an afterlife.

Homo Sapiens Sapiens

The second group descended from *Homo sapiens* is **Homo sapiens sapiens**, meaning “wise, wise human.” These are the first to have an anatomy similar to people today. Physical evidence suggests that *Homo sapiens sapiens* appeared in Africa between 150,000 and 200,000 years ago. They probably spread out of Africa to other parts of the world about 100,000 years ago, replacing populations of earlier hominids in Europe and Asia. This is referred to as the “**out-of-Africa**” theory (or replacement theory).

Another theory, the multiregional model, states that the development from earlier hominids to anatomically modern humans occurred in different locations in Africa, Asia, and Europe. The timing and reasons for early human migrations are still debated among scholars.

By 30,000 B.C., *Homo sapiens sapiens* had replaced the Neanderthals. The Neanderthals died out, possibly as a result of conflicts with *Homo sapiens sapiens*. The spread of these first modern humans was a slow process. Over many thousands of years, *Homo sapiens sapiens* spread over the globe as they searched for food and new hunting grounds. In a whole generation, they may have moved only two to three miles. Over hundreds of thousands of years, this was enough to populate the world. Today, all humans, whether they are Europeans, Australian Aborigines (A•buh•RIJ•NEES), or Africans, belong to the same subgroup of human beings.

 **Reading Check** **Summarizing** Identify and describe all the important stages in early human development.



The Paleolithic Age

MAIN IDEA Early humans used fire, made tools, and adapted to survive.

HISTORY & YOU Could you live in the wild with only tools you made? Read how early humans managed to survive.

One of the basic distinguishing features of the human species is the ability to make tools. The term **Paleolithic Age** is used to designate the early period of human history (approximately 2,500,000 to 10,000 B.C.) in which humans used simple stone tools. Paleolithic is Greek for “old stone,” and the Paleolithic Age is sometimes called the Old Stone Age.

Hunting and Gathering

For hundreds of thousands of years, humans relied on hunting and gathering for their daily food. Paleolithic peoples had a close relationship with their environment. They came to know what animals to hunt and what plants to eat. They gathered wild nuts, berries, fruits, wild grains, and green plants. Around the world, they hunted and ate various animals, including buffalo, horses, bison, and reindeer. In coastal areas, fish and shellfish provided a rich source of food.

The Paleolithic Way of Life

Early humans were able to sustain themselves through the use of stone tools. To make such tools, early people used very hard stones, such as flint. They used one stone to chip away parts of another, creating an edge. Hand axes of various kinds—pointed tools with one or more cutting edges—were the most common. Hand axes eventually were set in wooden handles, making them easier to use. By attaching wooden poles to spear points and hardening the tips in fire, humans created spears to kill large animals.

Over the years, Paleolithic hunters developed better tools. The invention of the spear, and later the bow and arrow, made hunting much easier. Harpoons and fishhooks made of bone increased the catch of fish.

Early humans used sharp-edged tools to cut up plants, dig up roots, and cut branches to build simple shelters. Scraping tools were used to clean animal hides for clothing and shelter. By the end of the Paleolithic period, there is evidence of such refined tools as bone needles. These needles could be used for making nets and baskets and even sewing hides together for clothing.

Because Paleolithic people were hunters and gatherers, they had to follow animal migrations and vegetation cycles. Paleolithic humans were nomads—people who move from place to place to **survive**. Archaeologists and anthropologists think these nomads probably lived in small groups of twenty or thirty. Hunting depended on careful observation of animal behavior patterns and demanded group cooperation for success.

The Roles of Men and Women

The main job of Paleolithic peoples was finding enough to eat. Both men and women were responsible for finding the food needed for survival. Paleolithic parents passed on their practices, skills, and tools to their children to ensure the survival of later generations.

Since women bore and raised children, they probably stayed closer to camp. They played an important role in acquiring food by gathering berries, nuts, roots, and grains. Women taught the children which foods were edible. They trapped small animals and kept the camp safe.

In the constant search for food, men had to travel far from camp to hunt herds of large animals. What the women caught and gathered had to feed the group if there was no game. Because both men and women were responsible for finding and acquiring the food needed to sustain life, many scientists believe there was equality between them. It is likely that both men and women made decisions that affected the activities of the Paleolithic group.

Adapting to Survive

Groups of Paleolithic people, especially those groups who lived in cold climates, found shelter in natural caves. Over a



period of time, people created new types of shelter as well. Perhaps most common was a simple structure made of wood poles or sticks covered with animal hides. In places where wood was scarce, they might use the large bones of mammoths to build frames that were then covered by animal hides. The systematic use of fire made it possible to provide a source of both light and heat within both the caves and the handmade structures in which they lived.

Use of Fire

Another important result from the migration of early hominids was the use of fire. As early hominids moved from the tropics into colder regions, they needed to adjust to new climate conditions. In response, *Homo erectus* first learned to make fires. Archaeologists have discovered the piled remains of ashes in caves that prove that Paleolithic people used fire systematically as long ago as 500,000 years.

SCIENCE, TECHNOLOGY, & SOCIETY

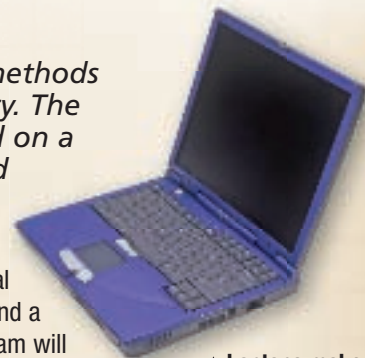
Field Archaeology: How We Learn about the Spread of Early Humans



Archaeologists use scientific methods to learn more about prehistory. The techniques and materials used on a "dig" combine older tools and modern technology.

First archaeologists search computer databases, maps, aerial photos, and satellite images to find a promising site. At the site, the team will record the exact location with a global positioning device. Then using survey equipment, they map the area and set up a grid to pinpoint the location and depths of the finds. Workers still use trowels and brushes to unearth artifacts.

Once an object is found, archaeologists record it in their field notes. Then they clean, label, photograph, and enter the find on a database. A rough "dating" is made using stratigraphy, indicating age by the soil layer it was found in. Other tests—radiocarbon dating, potassium-argon dating, DNA, thermoluminescence, and dendrochronology—are done in a lab.



▲ Laptops make the dig easier.



▲ Hand-held GPS (Global Positioning System)

CRITICAL THINKING SKILLS

1. **Explaining** Why does it take archaeologists many years to excavate a site?
2. **Drawing Conclusions** How does archaeology provide information for maps like the one on page 5?

▲ At an excavation of an Inca cemetery near Lima, Peru, a man brushes dirt from a skull with hair still intact.



Chauvet Cave

Paleolithic artists drew dangerous mammoths, rhinos, cave bears, and cave lions, but rarely depicted themselves.

Chauvet's constant temperature of 56° F with 99 percent humidity helped preserve the paintings.



Although people never lived there, Chauvet contains remnants of fires, used to produce charcoal for drawing.

DOCUMENT-BASED QUESTIONS

Around 35,000 years ago, Ice Age artists painted images in caves. This 20-foot (6-m)-long “Panel of Horses” was found in Chauvet Cave in southern France.

1. **Analyzing** What does the “Panel of Horses” depict?
2. **Comparing** What similarities do you see between animals in the cave art and those of today?

At a *Homo erectus* site in northern China, remnants of hearths, ashes, charcoal, and charred bones have been dated to 400,000 years ago.

Fire not only gave warmth, but kept wild animals away from the campsite. Armed with spears, hunters used fire to flush out wild pigs for the kill. People gathered around the fire to trade stories and to cook. Cooked food tasted better, lasted longer, and was easier to chew and digest (in the case of some plants, such as wild grains), so it seems likely that nutrition improved.

Scholars believe that the discovery of a means for starting fires occurred

independently throughout the world, in different places at different times. Archaeologists lack concrete evidence on how early peoples started fires. They have been able to examine the methods used by traditional peoples. On that basis, archaeologists deduce that the earliest humans used friction to start fires.

Eventually, some Paleolithic peoples developed sturdy, drill-like wooden devices to start fires. Other early humans discovered that a certain stone, iron pyrites, gave off a spark when struck against a rock and that spark could ignite dry grass or leaves.

The Ice Ages

Having fire to create a source of heat was especially important when Ice Age conditions descended on the Paleolithic world. The most recent Ice Age began about 100,000 B.C. and ended in about 8000 B.C. During this time, sheets of thick ice covered large parts of Europe, Asia, and North America. As sea levels went down, people migrated across land bridges that had not existed before.

Ice Age conditions posed a serious threat to human life, and the ability to adapt was crucial to human survival. The use of fire, for example, reminds us that early humans sometimes adapted not by changing themselves to better fit their environment but by changing the environment.

Creating Art

The importance of art to human life is basic. Art existed even in prehistory among the hunters and gatherers of the Paleolithic Age. In 1940, a bad storm near Lascaux (la•SKOH) in southern France uprooted a large tree, revealing a cave. French children playing nearby soon found the cave and the paintings inside. Many of these paintings had deteriorated, but scientists used special tools to determine what is being depicted, such as horses, bulls, and stags.

Another famous discovery was made in Spain in 1879 when a little girl wandered into a cave on her grandfather's farm near Altamira. Like many other caves covered with Paleolithic art, the cave near Altamira shows evidence that the paintings may have been created over a span of time, not all at once. Scientists can date the art based on pigments from the paintings.

In 1994, Jean-Marie Chauvet and his friends discovered paintings in southern France. Carbon dating showed works at Chauvet Cave were nearly twice as old as those at Lascaux and Altamira, but the drawings were more advanced. Scholars had assumed the opposite—that the earliest art would be crude and gradually would become more detailed.

Using stone lamps filled with animal fat to light the caves, early artists painted with fingers, twigs, and even blew paint through hollow reeds. They mixed mineral ores with animal fat to make red, yellow, and black paint. A variety of realistically painted animals cover the caves. Few humans appear in these paintings, and when they do appear, they are drawn as sticklike figures. This has led some scholars to think the work was done for a magical or religious ritual to bring success in hunting. Others believe the paintings were made simply to please the eye. Recent discoveries of art by early humans show that prehistoric art existed in other areas of the world.

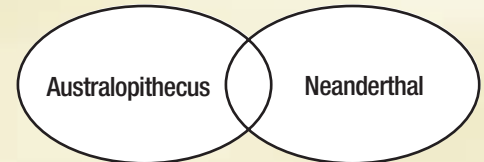
✓ Reading Check Identifying What are two important innovations of Paleolithic peoples?

Vocabulary

1. **Explain** the significance of: prehistory, archaeology, artifact, anthropology, fossil, hominid, Olduvai Gorge, *Australopithecus*, *Homo sapiens sapiens*, “out-of-Africa” theory, Paleolithic Age.

Main Ideas

2. **Discuss** what kinds of materials archaeologists use to study prehistory.
3. **Explain** what the caves of Lascaux suggest about early human society.
4. **Create** a diagram like the one shown below to compare and contrast *australopithecus* and Neanderthal.



Critical Thinking

5. **The BIG Idea Explaining** Explain the difference between the “out-of-Africa” and multiregional theories.
6. **Comparing** Discuss the difference between the roles of Paleolithic men and women.
7. **Analyzing Visuals** Examine the cave paintings shown on page 10. What do they tell you about human/animal interactions during the Paleolithic Age?

Writing About History

8. **Descriptive Writing** Imagine you are part of an archaeological team at a recently discovered site, keeping a daily journal. Describe the conditions of the site, the sorts of artifacts you are finding, and what you hope to find based on the evidence so far. Read magazine articles or books in a library or on the Web to help you with this project.

History ONLINE

For help with the concepts in this section of *Glencoe World History*, go to glencoe.com and click Study Central.

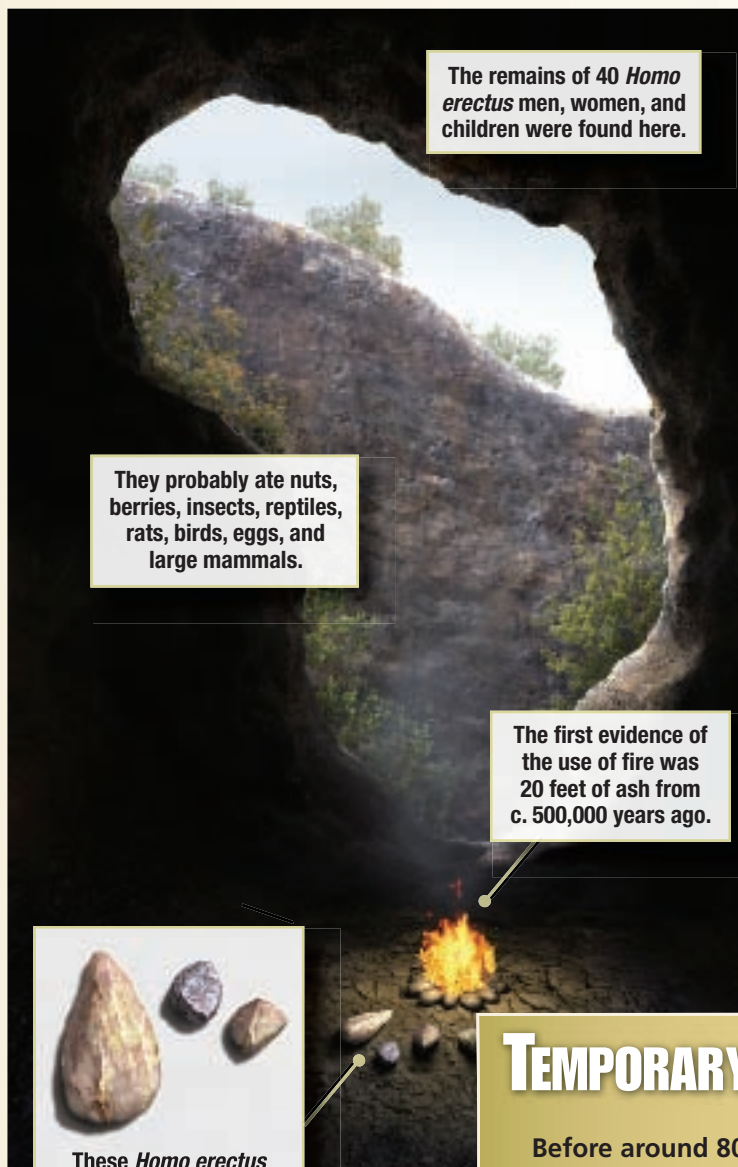


Social History

Early Housing

What a house looks like has much to do with where it is located, when it was built, and what materials were available. Zhoukoudianzhen Cave, in China, shows evidence of use from around 700,000 to around 200,000 years ago. Pincevent, in modern-day France, shows how early humans lived in northern Europe at the end of the Ice Age, around 13,000 years ago. And Çatalhöyük, in modern-day Turkey, was an early farming village from 6700 to 5700 B.C.

ZHOUKOUDIANZHEN CAVE



The remains of 40 *Homo erectus* men, women, and children were found here.

They probably ate nuts, berries, insects, reptiles, rats, birds, eggs, and large mammals.

The first evidence of the use of fire was 20 feet of ash from c. 500,000 years ago.



These *Homo erectus* used wood, bamboo, and stone tools to scrape, chop, and cut.

PINCEVENT SITE



Pincevent was a summer camp near water and food sources, such as reindeer and horses.

These early humans lived in round tents made of animal skins held up by wooden poles.

Rings of stone were used to hold the tent edges down. Hearthstones, animal bones, and flint tools show where the tents were located.

TEMPORARY SETTLEMENTS

Before around 8000 B.C., early humans were nomads who lived in temporary settlements. They moved every season, migrating with the animals they hunted. Early humans used caves for shelter. If they lived in a place without rock outcroppings, they made their homes out of available materials. Tents made of animal bones or wood were covered with animal hides or turf.



ÇATALHÜYÜK



The villagers buried their dead beneath platforms in their houses.

Some houses had yards—probably for domesticated animals like cattle and dogs.

Because there were no streets and the houses were connected, people used ladders to enter their homes from the rooftops. This construction style made the village easier to defend.

When the mud-brick homes were damaged, villagers knocked them down and rebuilt on top. The layers of homes created a mound, or *hüyük*.

PERMANENT SETTLEMENTS

After 8000 B.C., people began settling in one place, planting crops and raising livestock. These farming settlements began in river valleys in the Fertile Crescent and in Turkey. Rivers provided water for irrigation and transportation. Permanent walls provided protection from the weather, as well as from other humans—many of whom were still nomads—and animals.

ANALYZING VISUALS

1. **Comparing** Why are there similarities between the homes despite the differences in era and location?
2. **Analyzing** What are three major differences between temporary and permanent settlements?

The Neolithic Revolution

GUIDE TO READING

The BIG Idea

Ideas, Beliefs, and Values

Systematic agriculture brought huge economic, political, and social changes for early humans.

Content Vocabulary

- systematic
- agriculture (p. 14)
- domestication (p. 14)
- artisan (p. 16)
- culture (p. 18)
- civilization (p. 18)
- monarch (p. 18)
- priest (p. 19)

Academic Vocabulary

- revolution (p. 14)
- role (p. 16)

People and Places

- Neolithic Revolution (p. 14)
- Mesoamericans (p. 15)
- Çatalhöyük (p. 16)
- Bronze Age (p. 16)
- Iron Age (p. 16)

Reading Strategy

Comparing and Contrasting As you read, create a chart like the one below to help you study.

1.	4.
2.	5.
3.	6.

The transition of humans from nomadic hunters to city dwellers is a major turning point in history. Although the development of civilization was gradual, historians can pinpoint the beginning of this change. Because change is revolutionary when it requires a dramatic effort, this Neolithic Revolution was a revolutionary change.

The Neolithic Revolution

MAIN IDEA Civilization developed from the agricultural revolution of the Neolithic Age.

HISTORY & YOU How did early American pioneers meet their basic needs? Read how the Neolithic farmers affected human progress.

The end of the last Ice Age, around 8000 B.C., was followed by what is called the **Neolithic Revolution**—that is, the **revolution** that occurred in the Neolithic Age, the period of human history from 8000 to 4000 B.C. The word *Neolithic* is Greek for “new stone.” The name *New Stone Age*, however, is somewhat misleading. The real change in the Neolithic Revolution was the shift from the hunting of animals and the gathering of food to the keeping of animals and the growing of food on a regular basis—what we call **systematic agriculture**.

Early humans had to move from place to place, following the herds and finding plants. During the Neolithic Age, humans began planting crops, providing a regular food source. **Domestication** of animals, adapting them for human use, added a reliable source of meat, milk, and wool. Animals could also be used to do work. Growing crops and taming food-producing animals caused an agricultural revolution. Because there was enough food, humans had more control over their lives. It also meant they could give up their nomadic ways of life and begin to live in settled communities. Some historians believe this revolution was the single most important development in human history.

This shift to food producing from hunting and gathering was not as sudden as was once believed. During the Mesolithic Age (“Middle Stone Age,” about 10,000 to 7000 B.C.) there was a gradual shift from the old food-gathering and hunting economy to a food-producing one. There was also a gradual taming of animals. Moreover, throughout the Neolithic period, hunting and gathering remained a way of life for many people around the world.

CONNECTING TO THE UNITED STATES

TODAY'S AGRICULTURAL REVOLUTION

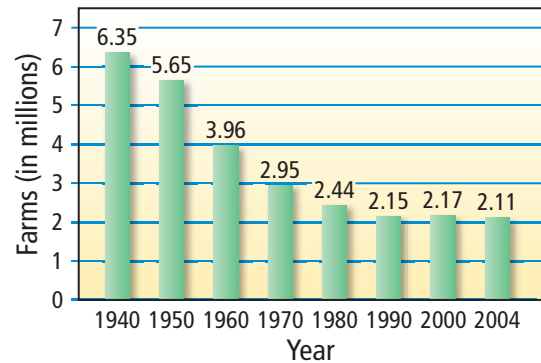
The Neolithic Agricultural Revolution made the first cities possible. In the United States and other developed countries, the agricultural revolution continues. American farmers produce more food than ever before to support most Americans, who live in cities or suburbs. Cities continue to spread as farmland shrinks. Until now, most Americans have never raised their own food or faced food shortages.

Large crops are harvested more quickly due to modern machinery. ▼



- Productivity means high crop yields produced on less land by fewer people.
- High productivity creates surpluses, which may be stored or traded.
- The United States exports billions of dollars worth of agricultural products annually.

Number of Farms in the U.S., 1940–2004



Source: National Agricultural Statistics Service, U.S. Dept. of Agriculture; The World Almanac and Book of Facts 2006.

CONNECTING TO TODAY

1. **Examining** Which period shows the largest decrease in farms?
2. **Drawing Conclusions** What is the impact of urbanization on farming?

The Growing of Crops

Between 8000 and 5000 B.C., systematic agriculture developed in various parts of the world. In Southwest Asia, people began growing wheat and barley and domesticating pigs, cows, goats, and sheep by 8000 B.C. From there, farming spread into Southeastern Europe. By 4000 B.C., farming was well established in central Europe and the coastal regions of the Mediterranean Sea.

By 6000 B.C., the cultivation of wheat and barley had spread into the Nile Valley of Egypt. These crops soon spread up the Nile to other areas of Africa—Sudan and Ethiopia. In central Africa, a separate farming

system emerged. There, people grew root crops called tubers, such as yams, and tree crops, such as bananas. Farming wheat and barley also moved eastward into India between 7000 and 5000 B.C.

By 5000 B.C., farmers in Southeast Asia were growing rice. From there, rice farming spread into southern China. By 6000 B.C., farming millet and domesticating dogs and pigs seem to have been established in northern China. In the Western Hemisphere, **Mesoamericans**—inhabitants of present-day Mexico and Central America—grew beans, squash, and maize. They also domesticated dogs and fowl in this period between 7000 and 5000 B.C.



Neolithic Farming Villages

Growing crops on a regular basis gave rise to more permanent settlements called Neolithic farming villages. These villages appeared in Europe, India, Egypt, China, and Mesoamerica. The oldest and biggest of these, however, were located in Southwest Asia. Jericho, in Palestine, near the Dead Sea, was in existence by 8000 B.C.

Çatalhüyük (CHAH•tuhl hoo•YOOK) in modern Turkey was an even larger community covering 32 acres. Between 6700 and 5700 B.C., the city probably had about 6,000 inhabitants. Their simple mud brick houses were built so close together that there were few streets. People walked on the roofs and entered their homes through holes in the rooftops.

Archaeologists have found a dozen products that were grown outside the city walls, including fruits, nuts, and three kinds of wheat. Domesticated animals provided meat, milk, and hides. Scenes on the walls of the city's ruins show that the people also hunted.

As a result of the steady food supply, people in Çatalhüyük had a food surplus. This meant people could enter other occupations than farming. Some people became **artisans**. These skilled workers made products such as weapons and jewelry and traded them with neighboring peoples. This exposed the people of Çatalhüyük to the wider world.

Besides homes, Çatalhüyük had special buildings that were shrines containing figures of gods and goddesses. Statues of women giving birth or nursing a child have also been found there. Both the shrines and the statues point to the growing **role** of religion in the lives of Neolithic peoples.

Neolithic Revolution—Effects

The Neolithic agricultural revolution caused dramatic changes that affected how people would live to the present day. Once people began settling in villages or towns, they saw the need to build walls for protection and storehouses for goods. Storing surplus products encouraged trade. Trading encouraged more people to learn crafts. This led to the division of labor.

As artisans became more skilled, they made more refined tools. Flint blades were

used to make sickles and hoes for farming. Eventually, many of the food plants still in use today began to be cultivated. Some plants, such as flax and cotton, were used to make yarn and cloth.

The change to systematic agriculture also had consequences for how men and women related to one another. Men became more active in farming and herding animals, jobs that took them away from the settlement. Instead of the whole family moving as in earlier times, women remained behind. They cared for children, wove cloth for clothes, and did other tasks that kept them in one place. As men took on more and more responsibility for obtaining food and protecting the settlement, they began to play a more dominant role in society.

The End of the Neolithic Age

Between 4000 and 3000 B.C., new developments began to affect some Neolithic towns. Even before 4000 B.C., craftspeople discovered that by heating metal-bearing rocks they could turn the metal to liquid. The liquid metal could then be poured into molds, or casts, to make tools and weapons. The use of metals marked a new level of control over the environment.

Copper was the first metal to be used in making tools. After 4000 B.C., artisans in western Asia discovered that combining copper and tin created bronze—a metal harder and more durable than copper.

The widespread use of bronze led to the **Bronze Age** from around 3000 to 1200 B.C. After about 1000 B.C., the use of iron tools and weapons became common, an era known as the **Iron Age**.

The Neolithic Age set the stage for major changes to come. As people mastered farming, some villages developed more complex and wealthier societies. To protect their wealth they built armies and city walls. By the beginning of the Bronze Age, large numbers of people were concentrated in the river valleys of Mesopotamia, Egypt, India, and China. These farming villages led to the development of cities.

✓ Reading Check **Identifying** What was the result of systematic agriculture?



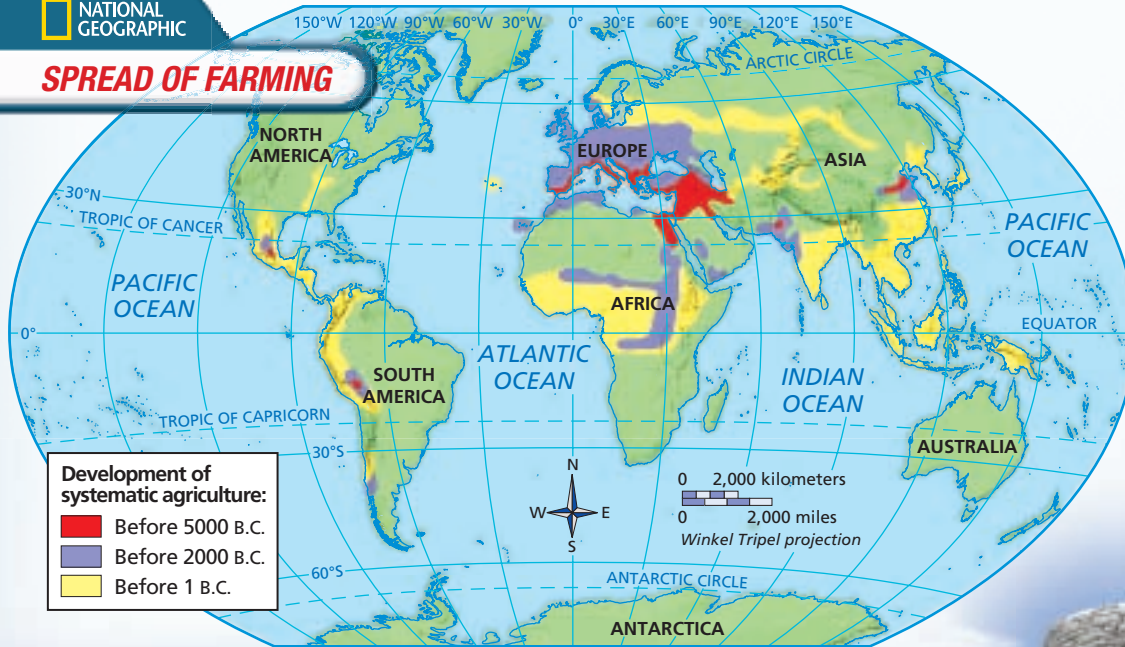
TURNING POINT

NEOLITHIC REVOLUTION

The Neolithic Revolution was the beginning of systematic agriculture. This revolution was marked by the establishment and growth of farming villages such as Jericho. Located near a spring, which made the land especially fertile, Jericho was established by 8000 B.C. It was one of the largest Neolithic farming villages, with an estimated population over 1,000.

NATIONAL GEOGRAPHIC

SPREAD OF FARMING



Jericho's tower might have been used for storage or as a watchtower to protect the crops and animals.

Walls protected Jericho's inhabitants.

Domesticated animals provided meat, wool, and milk.

Farmers used tools made out of stone and wood to harvest the crops they planted by hand.

DOCUMENT-BASED QUESTIONS

- Drawing Conclusions** Based on the map, what patterns do you see with the spread of systematic agriculture?
- Making Connections** How did farming improve early human life?

Maps in Motion See StudentWorks™ Plus or glencoe.com.



Civilization Emerges

MAIN IDEA Some villages grew into cities and became early civilizations.

HISTORY & YOU What characteristics make our society a civilization? Learn which features defined early civilizations.

Whether analyzing societies of the past or present, anthropologists describe the **culture**—the way of life—of a people in a certain time and place. From earliest times, humans lived in small nomadic groups with simple cultures that helped them survive. When humans settled in permanent villages, their cultures became more complex. Gradually, more complex cultures developed into a new form of human society called civilization.

A **civilization** is a complex culture in which large numbers of human beings who share a number of common elements. Historians have identified the basic characteristics of civilizations. Six of the most important characteristics are cities, government, religion, social structure, writing, and art.

Cities

The first civilizations developed in river valleys where people could carry on the large-scale farming that was needed to feed a large population. As farming became abundant, more people would live in the city. New patterns of living soon emerged.

Government

Growing numbers of people, the need to maintain the food supply, and the need for defense soon led to the growth of governments. Governments organize and regulate human activity. They also provide for smooth interaction between individuals and groups. In the first civilizations, governments usually were led by **monarchs**—kings or queens who rule a kingdom—who organized armies to protect their populations and made laws to regulate their subjects' lives.

Religion

Important religious developments also characterized the new urban civilizations.

HISTORY & ARTS

PRIMARY SOURCE

Bronze Age Artifacts

Although these three artifacts were made during the same period, the Bronze Age, each is unique. They are different in origin, material, and subject. Each reveals valuable information about the civilization that created it.

The Phaestos Disc, from around 1600 B.C., probably came from the Minoan civilization on Crete. The terra-cotta disc proves the existence of a written Minoan language, but no one has been able to translate the hieroglyphs.



This terra-cotta jug, from around 1800 B.C., was in a tomb near the settlement of Jericho. Shaped like a bird, the jug is both functional and decorative.

During China's Shang dynasty, rulers had a monopoly on bronze work. This gilded bronze head could be the image of a king or a god. Created about 1200 B.C., the head was found in a pit with more than 50 similar artifacts.



DOCUMENT-BASED QUESTIONS

1. **Concluding** What does the presence of artwork say about a culture?
2. **Theorizing** Why might the jug and bronze head have been buried in tombs or pits?



All of them developed religions to explain the forces of nature and their roles in the world.

They believed that gods and goddesses were important to the community's success. To win their favor, **priests** supervised rituals aimed at pleasing them. This gave the priests special power and made them very important people. Rulers also claimed that their power was based on divine approval, and some rulers claimed to be divine.

Social Structure

A new social structure based on economic power also arose. Rulers and an upper class of priests, government officials, and warriors dominated society. Below this class was a large group of free people—farmers, artisans, and craftspeople. At the bottom was a slave class.

The demand of the upper class for luxury items, such as jewelry and pottery, encouraged artisans and craftspeople to create new products. As urban populations exported finished goods to neighboring populations in exchange for raw materials, organized trade began to grow. Because trade brought new civilizations into contact with one another, it often led to the transfer of new technology, such as metals for tools and new farming techniques, from one region to another.

By and large, however, the early river valley civilizations developed independently. Each one was based on developments connected to the agricultural revolution of the Neolithic Age and the cities that this revolution helped to produce. Taken together, the civilizations of Mesopotamia, Egypt, India, and China constituted nothing less than a revolutionary stage in the growth of human society.

Writing

Writing was an important feature in the life of these new civilizations. Above all, rulers, priests, merchants, and artisans used writing to keep accurate records. Of course, not all civilizations depended on writing to keep records. The Inca in Peru (see Chapter 11), for example, relied on well-trained memory experts to keep track of their important matters. Eventually, the earliest civilizations used writing for creative expression as well as for record keeping. This produced the world's first works of literature.

Art

Significant artistic activity was another feature of the new civilizations. Architects built temples and pyramids as places for worship or sacrifice, or for the burial of kings and other important people. Painters and sculptors portrayed stories of nature. They also provided depictions of the rulers and gods they worshiped.

✓ Reading Check **Describing** Describe the new social structure that arose in Neolithic cities.

Vocabulary

1. **Explain** the significance of: systematic agriculture, Neolithic Revolution, domestication, Mesoamericans, Çatalhüyük, artisan, Bronze Age, Iron Age, culture, civilization, monarch, priest.

Main Ideas

2. **Identify** what are three of the six institutions or customs that people can share in a distinct culture.
3. **Label** in geographic terms where the earliest civilizations developed.
4. **Create** a diagram like the one below to show how changes during the Neolithic Revolution led to the emergence of civilization.



Critical Thinking

5. **The BIG Idea Explaining** Why did settled farming make it possible for cities to develop?
6. **Describing** What was the relationship between artistic activities, religion, and government during the rise of civilization?
7. **Analyzing Visuals** Look at the image of the gilded bronze head on page 18. What does this piece of art reveal about what the Shang Dynasty valued?

Writing About History

8. **Expository Writing** Conduct research on Çatalhüyük or another early site of the Neolithic period. Then write a short essay explaining how people may have lived in that city in its early history. You should include a description of the daily lives of different groups in the city—adults and children, farmers and artisans, leaders and ordinary people.

History ONLINE

For help with the concepts in this section of *Glencoe World History*, go to glencoe.com and click Study Central.

CHAPTER 1 Visual Summary



You can study anywhere, anytime by downloading quizzes and flash cards to your PDA from glencoe.com.

CAUSE

Early humans learn to make tools and fire.



EFFECTS

- Tools make hunting easier.
- Early humans become more efficient hunters.
- Cooking food over fire improves nutrition.
- Fire keeps humans warm in cooler climates.

CAUSE

After the Ice Age ends, temperatures rise and humans begin to practice systematic agriculture—the keeping of animals and the growing of food on a regular basis.



EFFECTS

- A steady food supply leads humans to settle in farming villages.
- Surplus food is stored.
- The villagers and food supply must be protected.

CAUSE

Civilizations begin to develop in river valleys in Mesopotamia, Egypt, India, and China.



EFFECTS

- Governments develop to organize and protect the cities.
- Not all villagers are needed for farming, so some become artisans, government workers, priests, artists, and scribes.
- Division of labor leads to a social structure.
- Surplus food and products are traded with other settlements.

STANDARDIZED TEST PRACTICE

TEST-TAKING TIP

Make sure to read the entire question and each possible answer before deciding on the correct answer.

Reviewing Vocabulary

Directions: Choose the word or words that best complete the sentence.

- Archeologists study _____, or objects made by humans.
 - rivers
 - animals
 - artifacts
 - oceans
- Donald Johanson and his team found an example of a/an _____ in Ethiopia.
 - Homo habilis*
 - Australopithecus*
 - Homo erectus*
 - Neanderthal
- The keeping of animals and the growing of food on a regular basis is known as _____.
 - systematic agriculture
 - domesticated agriculture
 - Neolithic agriculture
 - Paleolithic agriculture
- _____ were skilled workers who made products such as weapons and jewelry.
 - Farmers
 - Anthropologists
 - Artisans
 - Priests

Reviewing Main Ideas

Directions: Choose the best answers to the following questions.

Section 1 (pp. 4–11)

- Which type of scientist uses fossils and artifacts to study early humans?
 - Chemists
 - Physicists
 - Anthropologists
 - Geologists
- Which hominids do scientists believe were probably the first to leave Africa?
 - Homo erectus*
 - Australopithecus*
 - Homo sapiens sapiens*
 - Neanderthals
- How did early humans adapt in order to survive?
 - Following animal migrations
 - Painting cave art
 - Living in isolation
 - Keeping records
- Which invention made hunting easier for early humans?
 - Cave art
 - Fire
 - The spear
 - Farming

Need Extra Help?

If You Missed Questions . . .	1	2	3	4	5	6	7	8
Go to Page . . .	4	7	14	16	4	7	7	8

GO ON 

Section 2 (pp. 14–19)

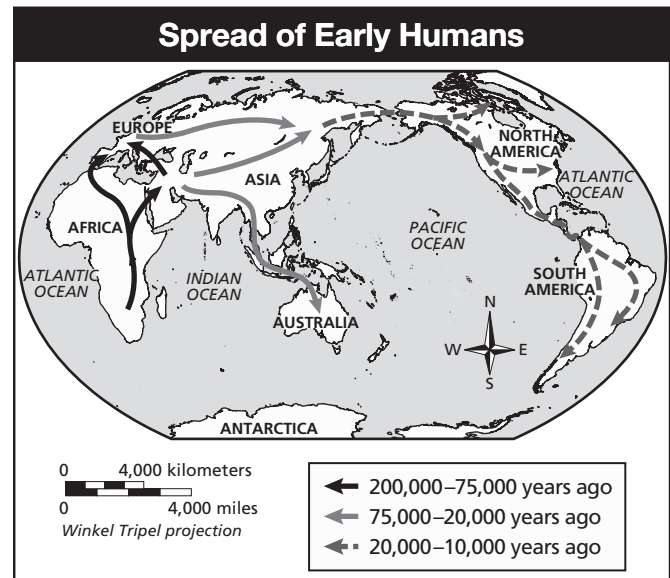
9. During which age did the agricultural revolution lead to the development of civilization?
- A Paleolithic
 - B Ice
 - C Neolithic
 - D Bronze
10. What was one indicator of civilization?
- A Eating cooked food
 - B Hunting
 - C Creating paintings in caves
 - D Domestication of animals
11. Where were many villages located that grew into cities and became early civilizations?
- A Deserts
 - B River valleys
 - C Mountain valleys
 - D Forests
12. Who led governments in early civilizations?
- A Monarchs
 - B Priests
 - C Warriors
 - D Artisans
13. Who was farming in the Western Hemisphere by 7000 B.C.?
- A Mesopotamians
 - B Mesoamericans
 - C Egyptians
 - D The Chinese

Critical Thinking

Directions: Choose the best answers to the following questions.

14. Why were Paleolithic peoples nomads?
- A Fear of enemies kept them moving.
 - B Rival groups drove each other out of settled areas.
 - C They had to follow animal migrations.
 - D They had to look for more habitable climates.

Base your answer to questions 15 and 16 on the map below.



15. In which areas of Africa did human life begin?
- A Eastern and southern
 - B Eastern and northern
 - C Western and southern
 - D Western and northern
16. Into which areas did early humans spread most recently?
- A Asia
 - B Europe
 - C Australia
 - D North and South America

Need Extra Help?

If You Missed Questions . . .	9	10	11	12	13	14	15	16
Go to Page . . .	14	14	18	19	15	8	6	7

GO ON

17. Why was writing necessary to early governments?

- A To describe court life
- B To express individual beliefs
- C To keep records
- D To write songs

Analyze the chart and answer the question that follows. Base your answer on the chart and on your knowledge of world history.

Before great civilizations could develop, early humans had to go through many cultural changes, movements, and technological innovations.

Changes, Prehistory–3500 B.C.

Event	Cultural Change	Move-ment	Technological Innovation
• Early humans migrate to warmer climates during the ice ages.		X	
• Early humans learn how to control fire and make tools.	X		X
• Caves are painted with religious and decorative art.	X		
• Neanderthals inhabit Europe and Asia.		X	
• Neolithic people domesticate animals.	X		X

18. What technological innovations were made by early humans?

- A Neolithic peoples migrate to warmer climates and control fire.
- B Neolithic peoples create cave paintings and domesticate animals.
- C Neolithic peoples control fire, make tools, and domesticate animals.
- D Neolithic peoples are first to bury their dead.

Document-Based Questions

Directions: Analyze the document and answer the short answer questions that follow the document.

The anthropologist Donald Johanson, along with his team, found a new type of hominid in Ethiopia. Johanson discusses how this *Australopithecus*, or Lucy, as she was nicknamed, presented a new view about the development of hominids:

“People felt that there were a number of evolutionary changes, which all went together. That our ancestors stood up to free their hands so that they could make and use stone tools. In order to make and use stone tools, they had to have large brains . . . Here comes Lucy, about 3.5 million years old . . . very small brain, . . . and we have never found any stone tool, stone artifacts, associated with her species. Yet she is walking upright. So it appears that . . . walking on two legs, precedes by perhaps as much as a million and a half years, the manufacture of stone tools and the expansion of the brain.”

- 19. According to Johanson, what did scientists believe about early hominids before the discovery of Lucy?
- 20. What does the discovery of Lucy reveal to anthropologists?
- 21. What is the time frame Johanson discusses? What does this reveal about the development of hominids?

Extended Response

- 22. Early humans went through many stages before civilizations developed. Explain how the Neolithic revolution influenced the shift from a nomadic existence, to life in a village, and ultimately to a civilization. Be sure to explore the six basic characteristics of civilization.

History ONLINE

For additional test practice, use Self-Check Quizzes—Chapter 1 at glencoe.com.

Need Extra Help?

If You Missed Questions . . .	17	18	19	20	21	22
Go to Page . . .	19	14	7	7	7	14

STOP