

The Dawn of Civilization

Prehistory–AD 300

This photograph shows the Chephren and Mycerinus pyramids in Egypt at sunrise.

CHAPTER 1
The Beginnings of Civilization
Prehistory–1000 BC

CHAPTER 2
The Ancient Near East
4000 BC–550 BC

CHAPTER 3
Nile Civilizations
5000 BC–AD 300

CHAPTER 4
Ancient India and China
2500 BC–250 BC

Themes

GEOGRAPHY AND ENVIRONMENT

Unique environmental and geographic features led to the development of civilizations with common characteristics in different parts of the world.

MIGRATION AND DIFFUSION

The migration of peoples spread ideas and goods from one part of the world to another. Migrating peoples also adopted and adapted the ideas and goods of the people they encountered.

BELIEF SYSTEMS

The belief systems of these early civilizations varied widely, and they helped shape the societies in which they arose.

The Beginnings of Civilization

THE BIG PICTURE

Early humans slowly spread from Africa to other parts of the world. These early people struggled to survive by using basic stone tools and weapons to hunt animals, catch fish, and gather plants and nuts. For hundreds of thousands of years, early people lived in this way. Then, as the last Ice Age ended, some people learned to farm. This breakthrough gave rise to villages and cities—and in time, to the first civilizations.



North Carolina Standards

Social Studies Objectives

1.05 Trace major themes in the development of the world from its origins to the rise of early civilizations

Language Arts Objective

2.01.3 Demonstrate the ability to read, listen to and view a variety of increasingly complex print and non-print information texts appropriate to grade level and course by providing textual evidence to support understanding of and reader's response to text.

TIME LINE

5 million BC

4–5 million years ago

Early humanlike beings called hominids develop in Africa.

2.6 million years ago

Hominids begin to make stone tools.

1.6 million years ago

The ice ages begin.

500,000 BC

Hominids live across Europe by this time.

500,000 BC

2–1.5 million years ago

Homo erectus appears.

200,000 BC

Homo sapiens, or modern humans, appear in Africa.





History's Impact video program

Watch the video to understand the impact of archaeology.



Reading like a Historian

This early rock painting shows African herders driving cattle in the Sahara. The rock painting was made between 5500 and 2000 BC in a region that borders what is now Algeria and Libya. The early art reveals that the Sahara was once more fertile than it is today.

Analyzing Visuals Based on the style of the art and the images shown, what might scientists be able to learn about early Africa from this painting?

See **Skills Handbook**, p. H26

9000 BC

Modern humans have spread to all of the continents except Antarctica.

7000 BC

Cattle herding begins in the Sahara in Africa.

3500 BC

The Bronze Age begins in some places.

11,000 BC

8000 BC

The Neolithic Era begins as agriculture develops.

6500 BC

More than 5,000 people live in Çatal Hüyük, in what is now Turkey.

1000 BC

GEOGRAPHY Starting Points



Interactive

EARLY PEOPLE AND AGRICULTURE, 200,000–3000 BC



Starting Points Bones and the ruins of early human settlements provide scientists with clues about the distant past. The oldest bones of early humanlike beings and of humans have been found in East Africa. Scientists have discovered that as people spread across the world, a key development was agriculture. The oldest farming sites are in the Middle East.

- 1. Identify** What are the names of two of the early hominid fossil sites in Africa? What are the names of two of the early agricultural sites in the Middle East?
- 2. Predict** Based on the map above, what routes do you think early humans might have taken as they migrated out of Africa?



Listen to History

Go online to listen to an explanation of the starting points for this chapter.

go.hrw.com

Keyword: SHL BEG

SECTION

1

The First People

BEFORE YOU READ

MAIN IDEA

Scientific evidence suggests that modern humans spread from Africa to other lands and gradually developed ways to adapt to their environment.

READING FOCUS

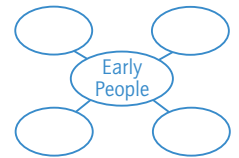
1. What methods are used to study the distant past?
2. What does evidence suggest about human origins?
3. How did early people spread around the world?
4. How did early people adapt to life in the Stone Age?

KEY TERMS AND PEOPLE

culture
artifacts
Mary Leakey
hominid
Donald Johanson
Louis Leakey
Paleolithic Era
nomads
hunter-gatherers
animism

TAKING NOTES

As you read, take notes in a graphic organizer like this one. In the outer circles, record details about studying the past, human origins, early migration, and the Stone Age.



THE INSIDE STORY

How can footprints reveal facts about human history?

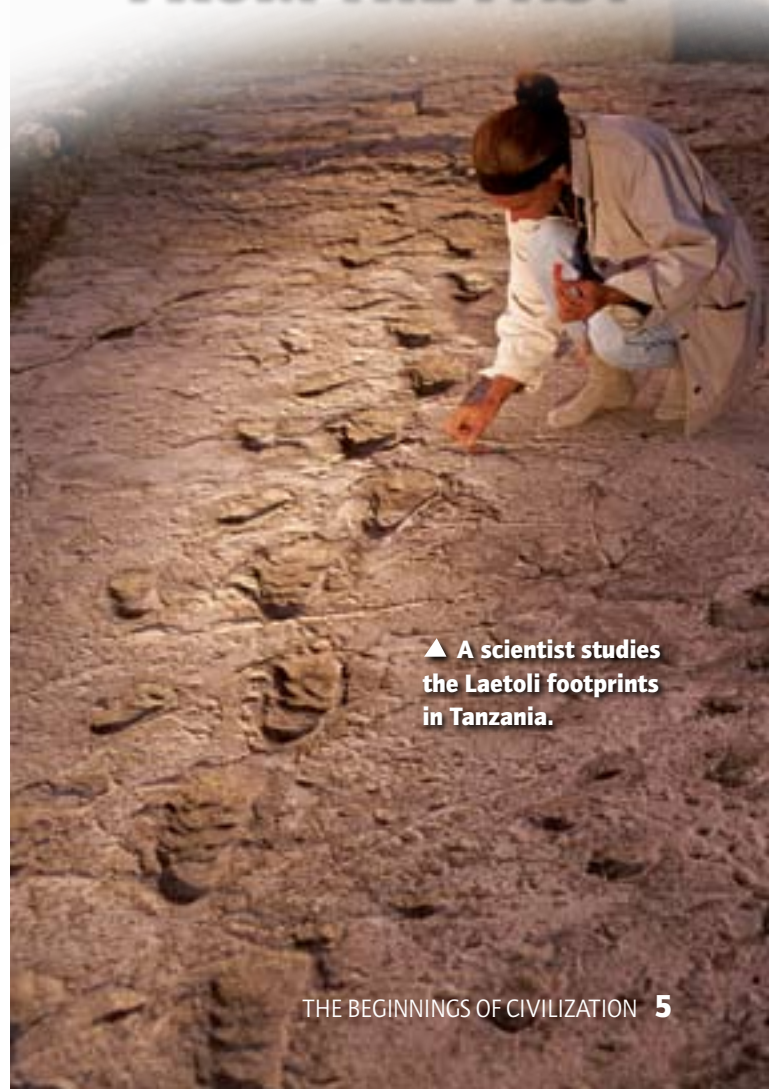
In the 1970s anthropologist Mary Leakey took some fellow scientists to an archaeological site in Laetoli, Tanzania. Littered across the area were large piles of dried elephant dung. One scientist playfully picked up some dung and hurled it at another member of the group. Soon, dung was flying in all directions. As one man ran to avoid being hit, he tripped and fell. When he began to get up, he was amazed by what he saw. Before him were numerous animal tracks, hardened in volcanic ash. The tracks turned out to be around 3.5 million years old—a major find. An even greater find was still to come, however.

As Mary Leakey was examining the tracks one day she saw among them footprints that looked almost human. An analysis of the footprints revealed that two humanlike individuals had made them about 3.5 million years ago. The remarkable find showed that early people had walked upright on two legs long before scientists had thought, providing an important clue to the mystery of human origins. ■

Studying the Distant Past

The human story goes back more than one million years, yet much of this story still remains a mystery. The reason is because writing, our main source of information about the past, has existed for only about 5,000 years. As a result, we know little about prehistory, the vast period of time before the development of writing. To study prehistory, scholars must be detectives, searching for clues and interpreting them to piece together the story of the distant past.

FOOTPRINTS FROM THE PAST



▲ A scientist studies the Laetoli footprints in Tanzania.

A variety of scientific fields analyze clues to learn about prehistory. One scientific field that contributes to our knowledge of prehistory is anthropology. This field includes a number of areas of specialization. For example, some anthropologists study fossils to learn about human origins. Fossils are the preserved remains or imprints of living things, such as preserved bones, teeth, or footprints. Other anthropologists study the cultures of past and present societies. **Culture** refers to a society's knowledge, art, beliefs, customs, and values.

Anthropologists called archaeologists study human material remains to learn about people in the past. Examples of human material remains include architectural ruins and artifacts. **Artifacts** are objects that people in the past made or used, such as coins, pottery, and tools. By analyzing material remains, archaeologists can make educated guesses about people's lives and cultures. For instance, by analyzing tools, archaeologists can draw conclusions about how technologically advanced a society was, what resources it had available, and some of the possible activities of people in the society.

Archaeologists excavate, or dig, at sites where people have left traces. At these sites, called archaeological digs, workers carefully excavate one small area at a time. They use tools such as trowels and small brushes to unearth objects without shifting or damaging them. Using screens, workers sift through removed soil for small items such as pieces of broken pottery. Researchers then use a variety of methods to date and analyze objects.

Anthropology and other scientific fields continue to expand and revise our picture of the prehistoric past. For example, scientists who study genetics have recently revised our understanding of human origins.

READING CHECK Find the Main Idea How do scientists learn about prehistory?

Human Origins

Throughout time, people have wondered about their origins. Where did the first people come from? When did they appear? Although we do not know all the answers, some key discoveries have provided important pieces to the puzzle. Not all scientists agree on the meaning of these discoveries, however; and future discoveries may lead to new ideas about human origins.

Key Discoveries In 1959 anthropologist **Mary Leakey** (LEE-kee) found skull fragments in East Africa that were more than 1.75 million years old. When put together, the fragments formed a skull with a heavy jaw and large teeth, earning it the nickname “Nutcracker Man.” The skull was from an Australopithecine (ah-stray-loh-PITH-i-seen), an early humanlike being or **hominid** (HAH-muh-nuhd). This term refers to humans and early humanlike beings that walked upright.

In 1974 in Ethiopia, an anthropologist named **Donald Johanson** found a partial Australopithecine skeleton. He described his find.

HISTORY'S VOICES

“We reluctantly headed back toward camp. Along the way, I glanced over my right shoulder. Light glinted off a bone. I knelt down for a closer look . . . Everywhere we looked on the slope around us we saw more bones lying on the surface. . . The find launched a celebration in camp.”

—Donald Johanson,
Ancestors: In Search of Human Origins

FACES OF HISTORY

Mary and Louis LEAKEY

1913–1996 and 1903–1972



The husband-and-wife team of Mary and Louis Leakey made some of the most significant discoveries

related to human origins. These discoveries—such as the Nutcracker Man skull, the Laetoli footprints, and the first *Homo habilis* fossils—have greatly expanded our understanding of early people.

Mary Leakey gained an interest in prehistoric archaeology during her childhood. While a teenager, she began working as an illustrator, drawing tools and other artifacts for an archaeologist. This work brought her in contact with Louis Leakey in 1933. Born and raised in Kenya, Louis Leakey had received a degree in anthropology and was working in that field.

After marrying in 1937, the Leakeys spent the next 30 years in East Africa searching together for clues to the origin and early development of humankind. Many of the Leakeys' greatest discoveries were made in the Olduvai Gorge, a steep-sided ravine in Tanzania. The sides of the gorge have yielded stone tools and fossils dating back some 2 million years.

Find the Main Idea How have Mary and Louis Leakey contributed to our knowledge of human origins?

Johanson named the partial skeleton Lucy. Tests showed that Lucy had lived more than 3 million years ago. Based on an analysis of her skeleton and knee joints, Johanson concluded that Lucy had been about 4 feet tall and walked upright. Walking upright is a major advance because it leaves the hands free to use tools.

In the 1970s Mary Leakey made yet another key discovery at a site called Laetoli in Tanzania. There, she and her team found hominid footprints preserved in hardened volcanic ash. Made by Australopithecines about 3.5 million years ago, the footprints provided the oldest evidence at the time of early hominids walking upright. Mary Leakey considered the discovery the most exciting of her career.

New finds continue to expand our knowledge of early people. In 2001 a scientific team found an early hominid skull in a desert region of Chad, a country in Central Africa. The skull has features of both an Australopithecine and a chimpanzee, and the creature it belonged to may have walked upright. The skull has been dated to between 6 and 7 million years old.

Later Hominids Based on the fossil record, more advanced hominids began appearing about 3 million years ago. In 1959 anthropologists Mary and **Louis Leakey** found a hominid fossil in Olduvai (OHL-duh-vy) Gorge, located in Tanzania. The hominid proved to be a new species, which became known as *Homo habilis*, or “handy man.” *Homo habilis* first appeared about 2.4 million years ago in Africa. Compared to earlier hominids, *Homo habilis* had more humanlike features, such as smaller teeth and hands that were better able to grasp objects.

In addition, scientists think *Homo habilis* learned to make and use crude stone tools. These early tools were made by striking one rock against another to create a sharp edge. With these crude tools, hominids could cut meat, chop roots, or scrape meat from bones. The use of tools greatly improved survival.

Other hominids that scientists named *Homo erectus*, or “upright man,” appeared some 2 to 1.5 million years ago in Africa. *Homo erectus* had a larger brain than earlier hominids and thus was probably more intelligent. For example, *Homo erectus* was a more skillful hunter than earlier hominids and created more advanced tools. One such tool was a hand ax made from flint, which is easy to shape into sharp edges.

Early Hominids

QUICK
FACTS

Groups of hominids appeared in Africa between about 5 million and 200,000 years ago. Later groups were more advanced than earlier groups and made better tools. **What advantages did *Homo erectus* have over *Homo habilis*?**

AUSTRALOPITHECINE

- Name means “southern ape”
- Appeared in Africa about 4–5 million years ago
- Stood upright and walked on two legs
- Brain was about one-third the size of those of modern humans



HOMO HABILIS

- Name means “handy man”
- Appeared in Africa about 2.4 million years ago
- Used crude stone tools for chopping and scraping
- Brain was about half the size of those of modern humans



◀ An early Stone Age chopper

HOMO ERECTUS

- Name means “upright man”
- Appeared in Africa about 2–1.5 million years ago
- Used early stone tools such as the hand ax
- Learned to control fire
- Migrated out of Africa



A hand ax ▶



HOMO SAPIENS

- Name means “wise man”
- Appeared in Africa about 200,000 years ago
- Migrated around the world
- Same species as modern humans
- Used a wide range of tools; learned to create fire; likely developed language



◀ A flint knife



Flint hand axes enabled *Homo erectus* to dig more easily, chop through tree limbs, and cut through thick animal hides.

Scientists also think that *Homo erectus* was the first hominid to control fire. Once natural causes, such as lightning, had created a fire, *Homo erectus* learned to use the fire to cook food and to provide heat and protection. With the ability to control fire, *Homo erectus* could live in colder climates as well.

Modern Humans In time, hominids with the physical characteristics of modern humans appeared. Scientists call modern humans *Homo sapiens*, or “wise man.” Every person alive today belongs to this species. With larger brains than earlier hominids, *Homo sapiens* developed more sophisticated tools and shelters and eventually learned to create fire.

Homo sapiens may have also been the first hominids to develop spoken language, perhaps because of improved brain and speech organs. With language, early people were better able to cooperate, hunt in groups, and resolve issues. Language also enabled people to form stronger relationships and interact with other groups.

READING CHECK Identify Supporting Details What four main types of hominids have scientists identified based on fossil evidence?

Spreading Around the World

As later hominids learned to adapt better to the environment, they began to migrate, or move, out of Africa. This movement occurred gradually over hundreds of thousands of years. Scientists do not fully know why later hominids began to migrate, but one major reason was a change in the climate.

The Ice Ages About 1.6 million years ago, much of the world began experiencing long periods of freezing weather called ice ages. As the world climate cycled between colder and warmer periods, huge sheets of ice called glaciers advanced and retreated. When glaciers advanced, ocean levels fell, exposing areas that are today underwater. For example, during the ice ages, the Bering Strait that now separates Asia and North America was an exposed land bridge. Such land bridges helped early hominids spread around the world.

Out of Africa Based on the fossil record, many scientists think that *Homo erectus* was the first hominid to migrate out of Africa. For example, *Homo erectus* fossils have been found throughout Asia and Europe. The ability to walk fully upright and to control fire may have enabled *Homo erectus* to make this migration.

Scientists hold different theories about the origins and migration of *Homo sapiens*. According to one theory, *Homo erectus* groups around the world gradually developed the characteristics of *Homo sapiens* over time. Recent genetic evidence does not support this theory, however. Based on the latest evidence, most scientists now think that *Homo sapiens* originated in Africa about 200,000 years ago. *Homo sapiens* then began to migrate out of Africa around 100,000 years ago.

The map “Migration of Early Humans” shows the possible migration routes of early *Homo sapiens*. After moving into Southwest Asia—the region of the Middle East—early modern humans likely spread across southern Asia and into Australia. Open sea may have separated Australia and Asia at the time, so early humans might have had to use some type of boat to make the crossing.

People took longer to move into Europe and northern Asia because high mountains and cold temperatures made it harder to live in those regions. As people improved their ability to create fire and adapt, though, they spread into Europe and northern Asia as well.

Scientists disagree on when and how the first people reached the Americas, but most scholars think that early people crossed a land bridge from northeast Asia to North America. By at least 9000 BC, humans had spread to all of the continents except Antarctica.

Adapting to New Environments As modern humans migrated around the world, they adapted to new environments. This process of adaptation caused humans to develop some of the genetic variety that exists today.

According to one view, two early groups of modern humans were Neanderthals and Cro-Magnons. Neanderthals lived about 200,000 to 30,000 years ago. After that time, though, they seem to have disappeared. Recent genetic research suggests they died out and may not have actually been *Homo sapiens*. Scientists continue to debate this point, however.

ACADEMIC VOCABULARY

cycle to alternate among two or more things or events

Cro-Magnons appeared about 40,000 years ago. Sturdy and muscular, Cro-Magnons were physically identical to modern humans. They made finely crafted tools, had superior hunting abilities, and were better able to survive. They also created figurines and haunting cave art.

READING CHECK **Analyze Information** How did the ice ages influence early human migration?

Life in the Stone Age

The first humans lived during the prehistoric period called the Stone Age. During this vast period, early people made tools mainly from stone. Scientists call the first part of the Stone Age the **Paleolithic** (pay-lee-uh-LI-thik) **Era**, or Old Stone Age. It lasted from around 2.5 million years ago to around 10,000 years ago.

FORENSICS in History



Can DNA Help Trace Our Origins?

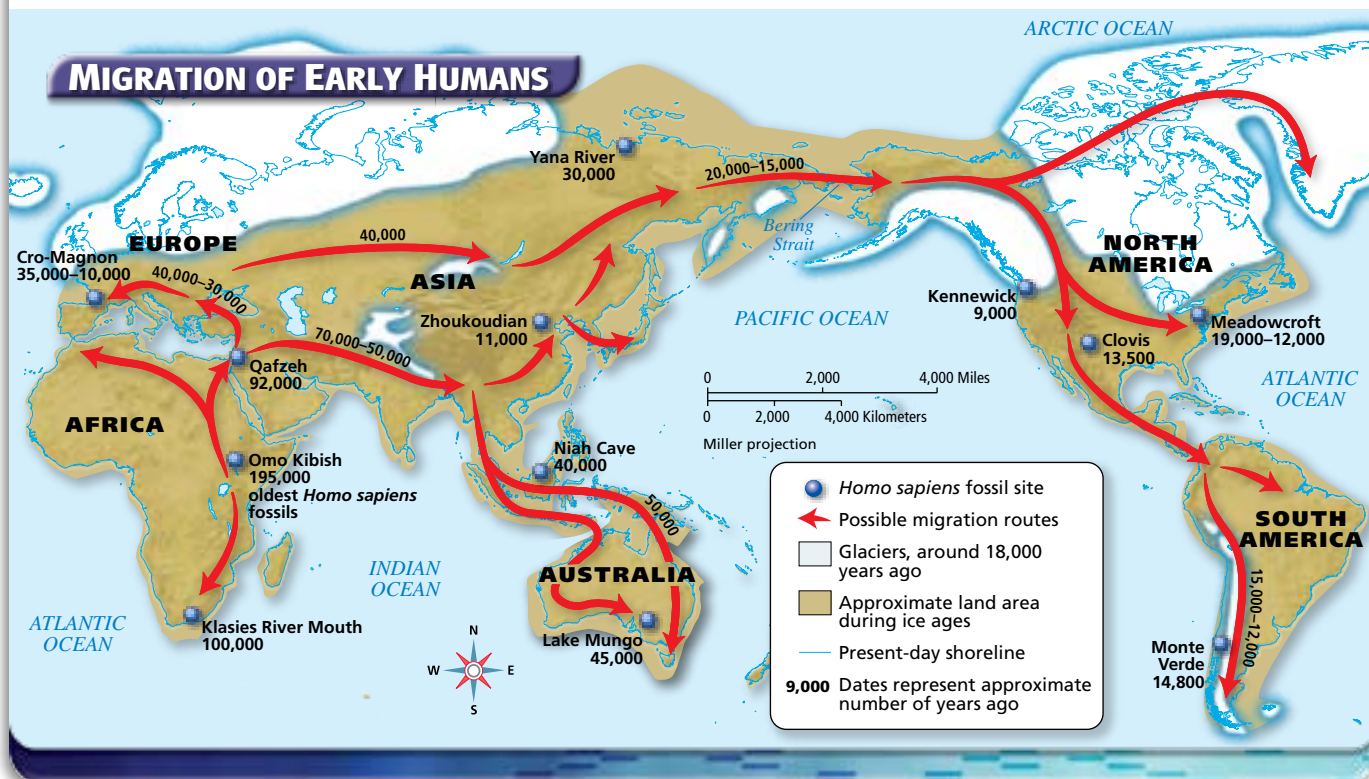
Archaeological evidence suggests that modern humans appeared first in Africa and then slowly spread around the world, reaching the Americas last. However, not all scientists agree with this view. Could your DNA help prove where modern human globetrotters began their travels?

What facts do we have? People may differ on the outside, but genetically speaking all human beings are 99.9 percent identical. The 0.1 percent of genetic material, or DNA, that differs accounts for people's many variations. These genetic variations then get passed down from generation to generation.

Scientists are using people's genetic variations as markers to trace human ancestry. By taking DNA from people around the world, scientists have begun comparing genetic markers across populations.

So far, the results have traced everyone tested back to one woman in Africa who lived about 150,000 years ago, although other people lived at the time. Researchers think that perhaps no more than 1,000 people then made their way out of Africa between 50,000 and 70,000 years ago.

Draw Conclusions How can DNA be used to advance archaeological theories?



Reading like a Historian

Stone Age Art

Analyzing Visuals The prehistoric people of Europe painted beautiful images deep within caves, where only flickering firelight would have lit the walls. The cave painting on the right is from Lascaux Cave, in France. This cave includes some 600 images of animals and symbols that people created between 17,000 and 15,000 years ago. In shades of yellow, red, brown, and black, the images cover the walls and ceilings of the cave complex.

To interpret what this cave art image suggests about the Stone Age, think about

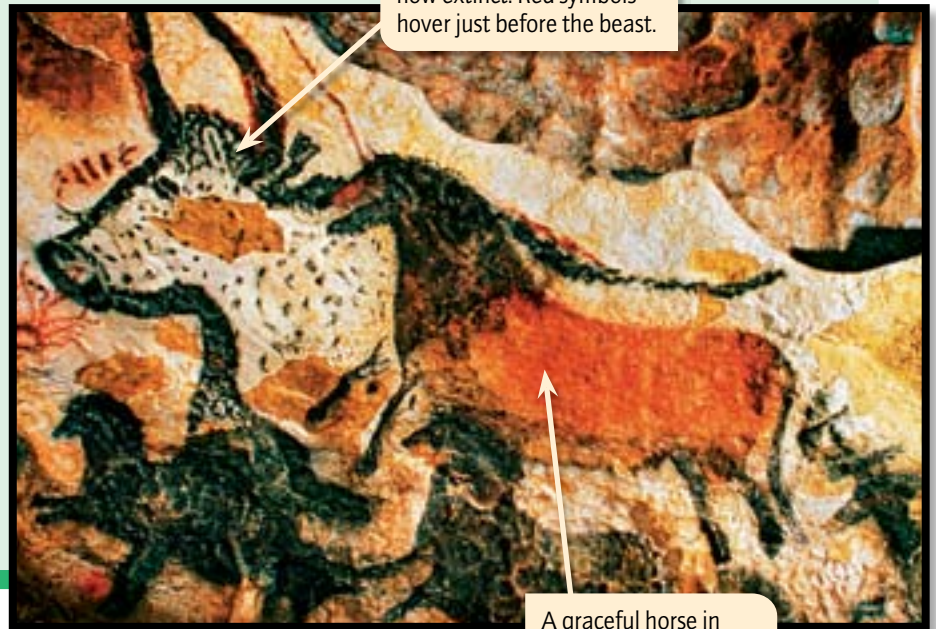
- the subject of the image
- the details in the image
- the creation of the image

**Skills
FOCUS**

READING LIKE A HISTORIAN

- 1. Subject** What is the subject of the art?
- 2. Details** Why might the people who made the art have provided more details for some of the animals than others?
- 3. Creation** What skills and materials would artists have needed to create these images?

See **Skills Handbook**, p. H26



The horned animal is an aurochs, a wild ox that is now extinct. Red symbols hover just before the beast.

A graceful horse in shades of orange and black overlaps the aurochs. Smaller black horses run past below.

THE IMPACT TODAY

Some people still live as hunter-gatherers. These groups include the San of the Kalahari Desert in southern Africa.

READING SKILLS

Predicting What types of new tools do you predict that prehistoric people developed to make survival easier?

Stone Age People During the Stone Age, people lived as **nomads**, moving from place to place as they followed migrating animal herds. These early people lived in small bands, or groups, and relied on the resources around them to survive. For shelter, people took cover in rock overhangs or caves when available. For food, people were **hunter-gatherers**, hunting, fishing, and gathering wild plants, berries, nuts, and other foods. In general, men hunted, while women collected plants and cared for the children. Because each role was important to survival, men and women likely were equals.

Stone Age Technology An important development for early people was the use of technology—the application of knowledge, tools, and materials to make life easier. The first tools that people made were crude chipped stones. Over time, people learned to make better tools out of wood and bone as well as stone.

For example, people learned to attach wooden handles to tools. By attaching a wooden handle to a stone arrow, people invented the spear. With spears, hunters could stand farther away from their prey and throw their weapons, which was safer. Another tool called a spear-thrower enabled Stone Age hunters to throw spears farther than by hand. As a result, hunters could take down larger prey, such as bison and mammoths, which resembled large elephants.

Early humans gradually learned to make more refined and specialized tools. Later Stone Age people learned to make string from plant fibers and animal sinew. People then used the string to make nets and other traps to capture fish and small animals. Other new tools and weapons included the bow and arrow, bone hooks, and fishing spears. To travel by water, some people learned to make canoes by hollowing out logs. Such developments greatly improved Stone Age life.

As later Stone Age people migrated out of Africa, they encountered new environments with different climates or plants and animals. People had to develop new tools and skills to adapt to these new environments.

For example, in colder regions, later Stone Age people needed more than fire to keep them warm. As a result, people learned to make needles from bone and then used the needles to sew together animal skins for clothing. In time, people learned to use skins and other materials to make shoes, hats, and carrying sacks.

In addition to clothing, people learned to build shelters. The first human-made shelters were called pit houses, which were pits dug in the ground and covered with roofs of branches and leaves. Stone Age people eventually began to build shelters above ground as well. Early people used whatever was available to make their shelters. In some places, people used wood to create a frame and then covered it with animal skins. In eastern Europe, wood was scarce, so people used large mammoth bones instead. Still other people built more permanent shelters out of wood, stone, or other materials.

Stone Age Art and Religion Over time, bands of early humans began to form societies. A society is a community of people who share a common culture. Stone Age societies developed cultures that included not only language but also art and spiritual beliefs.

Cro-Magnons and other later Stone Age people produced a variety of art. They carved ornaments and figurines out of antlers, bone, coral, ivory, and shells. Later Stone Age people also painted and carved images on rocks and cave walls. Stunning examples of prehistoric rock and cave art exist around the world. In this art, bulls toss their heads, wounded bison charge at hunters, and horses leap majestically. Symbols and human hands appear as well. To create cave art, prehistoric artists used charcoal, clay, iron, and other materials to produce colors such as black, reds, and yellows.

Scholars are not certain what purpose this early art served. Prehistoric artists may have been representing the world as they saw and experienced it. They may have used cave art to chronicle hunts or to teach hunting skills. Symbols might have recorded the movements of the sun, moon, stars, or planets. Or, the art might have had a spiritual meaning.

Scholars know even less about the spiritual beliefs of early people. Anthropologists think that early people may have practiced **animism**, the belief that all things in nature have spirits. Cave paintings of animals might have been made to honor animal spirits. Early people might have believed in a life after death as well. Neanderthals and Cro-Magnons buried their dead and placed food and objects in the graves. These items might have been for the dead to use in an afterlife.

READING CHECK Summarize How did Stone Age people use technology to adapt and survive?

SECTION 1 ASSESSMENT

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Online Quiz

Keyword: SHL BEG HP

Reviewing Ideas, Terms, and People

1. **a. Recall** What is an **artifact**, and what are two examples of artifacts?
b. Explain How do some anthropologists and archaeologists contribute to our understanding of prehistory?
c. Make Judgments Based on what you have learned about archaeological digs, would you want to work on one? Use information from the text to support your answer.
2. **a. Identify** How have **Mary Leakey**, **Louis Leakey**, and **Donald Johanson** contributed to our knowledge of human origins?
b. Contrast What set *Homo sapiens* apart from earlier **hominids**?
c. Evaluate In your opinion, how did the development of language most benefit prehistoric people? Why?
3. **a. Describe** What possible routes did *Homo sapiens* use to spread from Africa throughout the world?
b. Explain What do most scientists think helped contribute to some of the genetic variation seen among modern humans today?
4. **a. Define** What is a **hunter-gatherer**?
b. Summarize What types of art did later Stone Age people create?
c. Elaborate How did Stone Age technology improve over time?

Critical Thinking

5. **Summarize** Copy the graphic organizer below. Using your notes, complete the graphic organizer by describing what scientists have learned about human origins from each of the key discoveries listed.

Discovery	Importance
Nutcracker Man, 1959	
Lucy, 1974	
Laetoli Footprints, 1970s	
Chad fossils, 2001	

FOCUS ON WRITING

6. **Description** Write a paragraph describing the four main groups of early hominids. Your description should include the name of each hominid group, what scientists know about it, and how each group was more advanced than the previous one.

The Beginning of Agriculture

BEFORE YOU READ

MAIN IDEA

The development of agriculture was one of the most important turning points in human history and significantly changed the way in which many people lived.

READING FOCUS

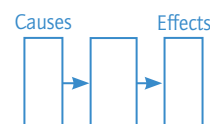
1. What new tools and technologies did early humans develop during the New Stone Age?
2. How did early agriculture develop and spread?
3. In what ways did the development of agriculture change Stone Age society?

KEY TERMS

Neolithic Era
Neolithic Revolution
domestication
pastoralists
megaliths
Bronze Age

TAKING NOTES

As you read, take notes in a graphic organizer like this one. Record details about the causes and effects of the beginning of agriculture.



THE INSIDE STORY

What might seeds reveal about the past? In Syria, on the banks of the Euphrates River, researchers carefully but

quickly combed a prehistoric settlement to learn its secrets. A dam would soon flood the site, and time was running short. As the team of scientists raced to collect artifacts and other remains, a picture of the past began to emerge.

Flint and stone tools and the remains of houses showed that people had settled at the spot around 9,500 years ago. Using a specialized sifter, the scientists also found many seeds mixed among the dirt. An analysis of the seeds showed that they were cultivated, revealing that the people had known how to farm. The scientists were thrilled. They had found one of the first farming settlements.

Then, as the scientists continued to study the site, they had another major surprise. Beneath the first settlement was an even older one, dated to about 11,500 years ago. Once again, the scientists carefully sifted through the dirt and found numerous seeds—but with one major difference. These seeds were wild, yet they were still quite similar to the cultivated seeds from the later settlement. The excited scientists realized that the people who had once lived there might have learned the mysteries of farming in perhaps a single lifetime, far quicker than scientists had thought.

Today the settlements lie hidden beneath Lake Assad, but their secrets are hidden no more. There, people learned to farm. This development would radically change life and move people into the fast lane on the road to civilization. ■

SEEDS OF CHANGE

The settlements the team found were located at this site, which is in Syria. The area now lies beneath Lake Assad. ►



The New Stone Age

With the development of more sophisticated tools, the Paleolithic Era gave way to a period that scientists call the **Neolithic Era**, or New Stone Age. In some places, such as parts of Southwest Asia, this period began as early as 8000 BC and lasted until about 3000 BC. In other places, the era began much later and lasted much longer.

Several advances in toolmaking defined the New Stone Age. Whereas before people had chipped stones to produce sharp edges or points, in the New Stone Age people learned to polish and grind stones to shape tools with sharper edges. These new methods enabled people to make more specialized tools, such as chisels, drills, and saws. However, the most significant advances of the Neolithic Era had to do with food, not tools.

READING CHECK Contrast How did toolmaking in the New Stone Age differ from toolmaking in the Old Stone Age?

Development of Agriculture

For tens of thousands of years—most of human history—people lived as nomads, surviving by hunting and gathering food. Then, around 10,000 years ago, some people learned to farm. The development of agriculture is one of the most important turning points in human history because it radically changed how people lived. As a result, historians refer to the shift to farming as the **Neolithic Revolution**.

Plants Around 10,000 years ago, a warming trend brought an end to the last Ice Age. As the climate grew warmer and drier, sea levels rose. These changes caused many Ice Age plants and animals to become extinct, or die out. At the same time, new plants and animals appeared in some places. For example, wild grains such as barley and wheat began to spread throughout Southwest Asia.

In areas where wild grains spread, some people began to gather them for food. As people gathered grain each year, they may have noticed that new plants tended to grow where seeds fell. In time, people experimented with planting seeds and learned to farm. This process occurred gradually over a long period.

With the development of farming, people began to practice **domestication**, the selective growing or breeding of plants and animals to make them more useful to humans. Each year, people saved and planted the seeds from only the best plants, such as the hardiest. Slowly over time, wild plants became domesticated. Growing and domesticating plants provided people with larger food supplies.

Animals Before they domesticated plants, prehistoric people had already domesticated animals. As with plants, animal domestication required the careful selection and breeding of the best animals, such as the tamest or those that produced the most meat, milk, or wool.

Domestication

As early people began farming, they learned to domesticate plants and animals. For example, people selected the goats with the shortest horns to breed. Over time, many domesticated plants and animals bore little resemblance to their wild ancestors.

Why might people prefer livestock with shorter horns?

Domesticated goat skull ►

Wild goat skull ►

◀ Domesticated wheat

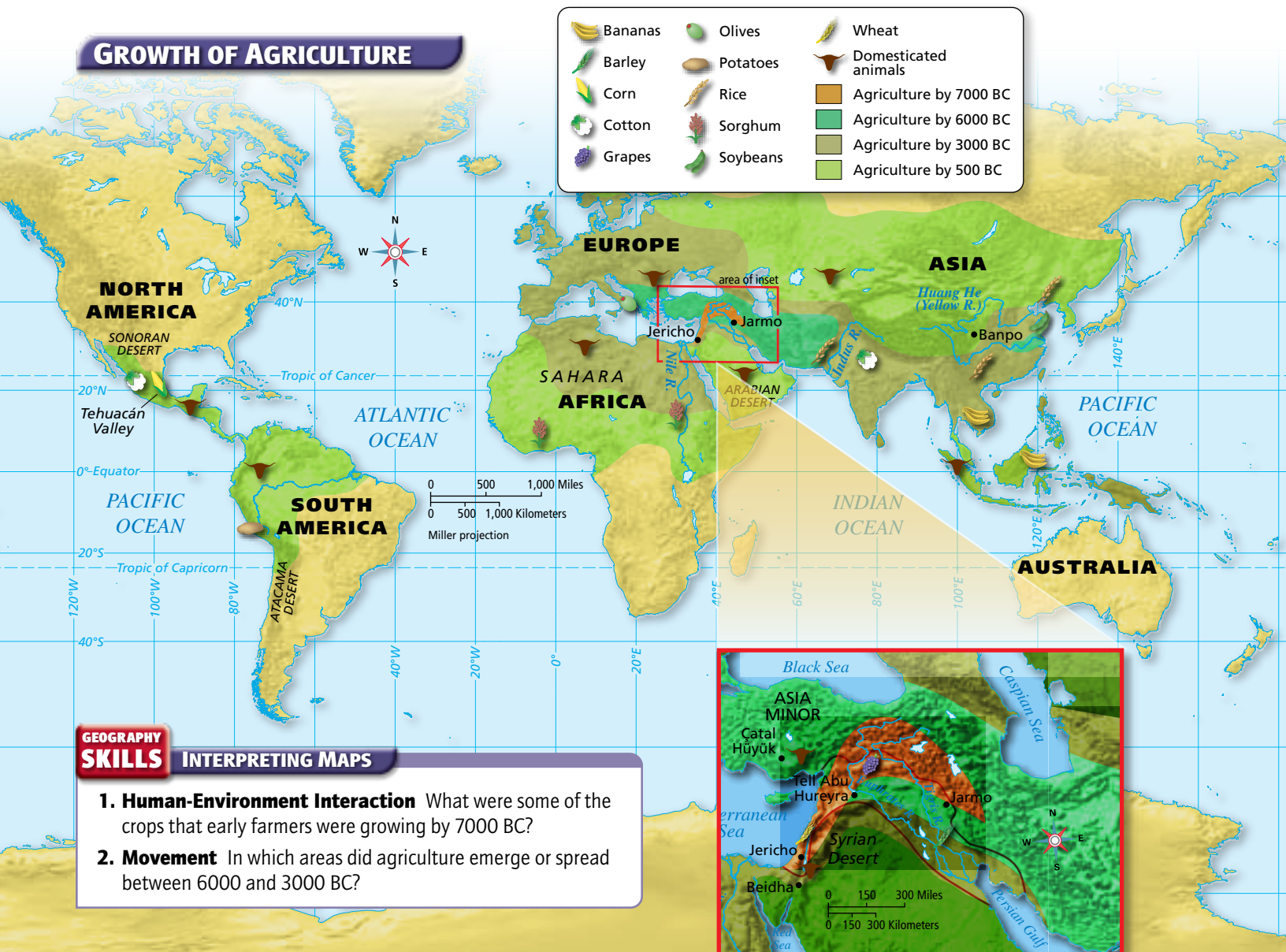
◀ Wild wheat

Scientists think that the first animals that people domesticated were dogs. By 10,000 BC, people in North America and parts of Asia had tamed dogs, perhaps for use in hunting and as guard animals. In time, prehistoric people applied their knowledge of wild herd animals and learned to domesticate cattle, goats, pigs, and sheep.

By domesticating animals, people could raise livestock to provide a more stable supply of meat, milk, and skins or wool. In addition, people could use large animals such as cattle to carry or pull heavy loads and to help with farming. Like plant domestication, animal domestication provided prehistoric people with a larger and more reliable food supply.

Growth of Agriculture The development of agriculture occurred independently in different parts of the world at different times. In the regions where agriculture developed, people domesticated the plants and animals that were available. Those domesticated plants and animals then gradually spread to other areas.

In Southwest Asia, people domesticated barley, wheat, pigs, and sheep. In East Asia and South Asia, people grew barley, rice, and millet and raised cattle, goats, and water buffalo. In northern Africa, people domesticated sorghum and cattle. In Mexico and Central America, early crops included beans, corn, and squash; while in South America people domesticated potatoes and llamas.



Eventually, agriculture spread throughout much of the world. People made the transition to agriculture gradually, however, and often continued to hunt and gather plants as they learned to farm. In addition, some people remained hunter-gatherers, perhaps because their territories were not suited to farming.

READING CHECK Identify Cause and Effect

How did people benefit from farming and the domestication of plants and animals?

Agriculture Changes Society

Agriculture dramatically changed Stone Age societies. For one, the world population grew significantly because agriculture provided a larger and more reliable food supply. For another, people's ways of life changed. Some people began to live as nomadic **pastoralists**, people who ranged over wide areas and kept herds of livestock on which they depended for food and other items. Other people gave up the nomadic lifestyle and formed settlements. By living in settlements, people could farm and pool their labor and resources.

Early Farming Societies In early farming settlements, people often lived close together in houses made of mud bricks or other materials. On the land around their settlements, people grew crops and raised livestock. As populations grew, some settlements developed into villages and towns. By about 6000 BC, villages and towns of up to several hundred people had arisen in parts of the world.

With the growth of agricultural societies, people's everyday activities changed. Instead of hunting and gathering food, many people worked in the fields and tended livestock. Men, women, and children probably divided up the tasks involved in these activities. At the same time, with more food available, some people could spend more time doing activities other than food production. For example, some people became skilled at making crafts or tools.

As agriculture enabled people to produce extra food and products, trade increased. Settlements traded with one another to obtain raw materials and products that they lacked. For example, in Southwest Asia a popular trade good was obsidian, a dark volcanic glass used to make tools, jewelry, and mirrors.

Agriculture and trade made societies more complex and prosperous, and differences in social status began to emerge. Some people gained more wealth and influence than others. Other people rose to positions of authority, overseeing the planting and harvesting, running building projects, or planning defense. Men performed the heavier work in farming and often held positions of authority. As a result, men began to gain dominance and status over women in many agricultural societies.

Religion began to become more formalized in agricultural societies as well. Some societies began to construct structures for religious purposes. For example, in Europe some Neolithic societies built monuments out of **megaliths**, or huge stones, for burial or spiritual purposes. Some Neolithic people began to worship gods and goddesses associated with animals or the elements—air, water, fire, and earth. For example, one European tribe worshipped bulls, while another honored a thunder god. Other people may have worshipped their ancestors.

A more settled agricultural life had some negative effects as well. For example, warfare increased as societies began to fight over land and resources. As people became more dependant on farming, they were more affected by crop failure as a result of bad weather or other causes. In addition, disease increased. In settlements where people lived close together, disease spread more rapidly. Furthermore, increased contact between people and animals caused some animal diseases to cross over to humans. These diseases included the flu, measles, and smallpox.

New Technologies As their ways of life began to change, people developed new tools and methods to make life easier. Early farmers used hand tools such as hoes and sharpened sticks to prepare the soil for planting. Farmers scattered their seeds by hand and may have used animals to trample and loosen hard soil to work in the seeds. Then about 6000 BC, people began to use animals such as cattle to pull plows. With the plow, farmers could till larger areas to produce more crops.

To prepare foods such as grains, Neolithic people developed new tools such as pestles and grindstones. In addition, people learned to use clay to make pottery. Early pottery was used for cooking and to store grains, oils, and water.

READING SKILLS

Predicting How do you predict that agriculture changed Stone Age societies?



One of the most famous examples of **megaliths** can be seen at Stonehenge near Salisbury, England.

HISTORY CLOSE-UP

Çatal Hüyük: An Early Farming Village

The village of Çatal Hüyük is among the oldest farming sites. Around 8,000 years ago the village was home to some 5,000 to 6,000 people, who lived in more than 1,000 houses. The houses were built so closely together that there were few if any streets. The people of Çatal Hüyük farmed, hunted, and fished; traded with people in distant lands; and built shrines.

Villagers used channels to move water from the river to their fields.

Villagers grew barley, peas, and wheat, and grazed livestock in fields and pastures around the village.

Because homes were built so close together, people entered their homes through rooftop openings.

Families buried ancestors beneath the floor of religious shrines in the main living area.

**Skills
FOCUS**

INTERPRETING VISUALS

- 1. Infer** Why might villagers have placed the entrances to their homes on the rooftops?
- 2. Contrast** How were the houses in Çatal Hüyük different from modern American houses?

Inside their homes, families cooked food, stored grain, and used pottery and wooden bowls and cups.

The domestication of animals made it possible for Neolithic people to use wool from goats and sheep to create yarn. Some early farming societies learned to spin yarn and weave it into cloth to make garments and blankets.

Eventually, people learned to use metal, first copper and then bronze, a mix of copper and tin. Bronze is harder than copper and produces stronger objects. As people began to make items from bronze, the Stone Age gave way to a time period that scientists call the **Bronze Age**. This transition occurred as early as 3000 BC in some areas, but much later in others.

Çatal Hüyük Archaeologists have found the remains of several Neolithic settlements and villages. One that has provided a wealth of information is Çatal Hüyük (cha-tal HOO-yuk). This Neolithic village was located in present-day Turkey and was home to some 5,000 to 6,000 people around 6000 BC. The village covered more than 30 acres, making it the largest Neolithic site that archaeologists have found.

The people of Çatal Hüyük grew crops such as barley, peas, and wheat in the fields around their village. In addition, they raised sheep and goats, hunted wild cattle, and fished in a nearby river. Based on artifacts found at Çatal Hüyük, such as shells, villagers traded with people as far away as the Red Sea.

The houses in Çatal Hüyük were built close together, and the village had few if any streets. Because of the closeness of the buildings, people entered their homes through openings in the roofs. Most homes had one main room in which a family lived, and one or two side rooms for storage. In the main room, areas were set aside for sleeping and for domestic tasks, such as cooking and making crafts. In some homes, areas were also set aside for religious shrines. These shrines often contained small female statues, large sculpted bulls' heads, and one or two bodies buried beneath the floor. In addition, families covered the interior walls of their homes with colorful, vibrant paintings.

Ötzi the Iceman Archaeological discoveries continue to add to our knowledge of Neolithic societies. In 1991 hikers in Italy's Ötztal Alps found a frozen male body that had been preserved by the cold, icy conditions. Scientific tests showed that the body was about 5,300 years old and from the Neolithic Era.

Nicknamed Ötzi the Iceman, the Neolithic man and his belongings were well preserved. Ötzi's outfit was made of three types of animal skins stitched together. In addition, he wore leather shoes padded with grass, a woven grass cape, a fur hat, and a sort of backpack. Among his belongings were a deerskin quiver with arrows, a flint dagger, and an ax with a copper blade. Heavy wear on Ötzi's front teeth suggest his diet included coarse grains.

Scientists do not think that Ötzi lived in the cold, mountainous location where he was found. Moreover, an arrowhead in his shoulder suggests he was murdered. Perhaps Ötzi had gone into the mountains to try to escape an enemy but then grew too weak to continue.

READING CHECK Summarize How did the development of agriculture affect Neolithic societies?

ACADEMIC VOCABULARY

domestic relating to everyday life or the home

SECTION 2 ASSESSMENT

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Online Quiz

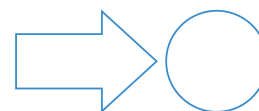
Keyword: SHL BEG HP

Reviewing Ideas, Terms, and People

- a. Recall** What characteristics define the **Neolithic Era**?
 - b. Explain** How did tools in the Neolithic Era differ from those in the Paleolithic Era?
- a. Describe** What is involved in plant and animal **domestication**?
 - b. Summarize** How did the development of agriculture benefit prehistoric people's lives?
 - c. Elaborate** How did geography contribute to the development and spread of agriculture?
- a. Identify** Who is Ötzi the Iceman, and why is he significant?
 - b. Contrast** How did life for early hunter-gatherers differ from that for people in early agricultural societies?
 - c. Develop** What have scientists learned about Neolithic farming societies by studying Çatal Hüyük?

Critical Thinking

- 4. Identify Supporting Details** Create a graphic organizer like the one below. On the left side, describe the key facts related to the development of agriculture, including both plant and animal domestication. On the right side of the graphic organizer, note the ways in which the development of agriculture affected Neolithic societies.



FOCUS ON WRITING

- 5. Persuasion** Write one or two paragraphs in support of the position that the Neolithic Revolution is one of the most important turning points in human history. Address both the positive and negative effects of the development of agriculture.

Foundations of Civilization

BEFORE YOU READ

MAIN IDEA

From farming villages arose cities, and with them, the first civilizations, marking the beginnings of recorded history.

READING FOCUS

1. Why did some early villages develop into cities?
2. What characterized the world's first civilizations, and where did they develop?
3. What factors cause civilizations to change over time?

KEY TERMS

surplus
division of labor
traditional economy
civilization
artisans
cultural diffusion

TAKING NOTES

As you read, take notes in a graphic organizer like this one. Record key facts about the first cities and civilizations, including why civilizations change.

Cities	Civilizations

THE INSIDE STORY

When is a town wall not enough?

The townspeople of Jericho stood back to admire their hard work. A massive stone wall with a 30-foot high watchtower now encircled their town. Jericho's residents had every right to be proud. Around 8000 BC, when most people still lived as nomads, Jericho was the first walled town known to exist. To build such a wall took engineering skill, planning, and leadership.

Located in the Jordan Valley north of the Dead Sea, ancient Jericho was an oasis in an otherwise arid land. A spring at the site provided a continual source of water. With

this water, the people of Jericho grew barley and wheat and herded sheep and goats. In addition, the townspeople traded across the region. Jericho's mighty wall, agriculture, and trade represented the first steps toward civilization.

Yet, Jericho's wall failed to protect the town. Sometime during the 7000s BC, the community at Jericho ceased to exist. Over time, many other groups settled at Jericho and rebuilt its wall. Even so, Jericho never developed into a civilization—the first civilization was still to come. ■

JERICO'S MIGHTY WALL

► The site of ancient Jericho, located in the Jordan Valley, and some of the ruins that remain.



From Villages to Cities

The development of agriculture and the growth of settlements marked a major advance in human history. As societies became more settled, and villages grew in size and complexity, the first cities began to appear.

Advances in farming and changing economies helped lead to the development of cities. Like the transition from a nomadic life to a settled agricultural life, the transition from villages to cities took place gradually.

Advances in Farming As time passed, early farmers continued to develop new methods to increase farm production. One of the most significant advances in farming was the development of irrigation systems. An irrigation system is a network of canals or ditches that links fields of crops to nearby streams or to storage basins of water.

The use of irrigation enabled early people to farm more land and to farm in drier conditions. As a result, farmers could plant more crops and produce more food. With irrigation, some farmers began to produce a **surplus**, or excess, of food. With surplus food, villages could support larger populations.

Changing Economies Because irrigation made farmers more productive, fewer people needed to farm to feed the growing population. As a result, some people were able to work full-time in jobs other than farming. For example, people skilled in making tools and weapons could devote all their time to that work. Other people became full-time weavers, potters, or religious leaders. The economic arrangement in which each worker specializes in a particular task or job is called a **division of labor**.

Food surpluses and a growing division of labor resulted in economic changes. Early farming villages had traditional economies. In a **traditional economy**, economic decisions are made based on custom, tradition, or ritual. In early villages, most people were farmers and relied on trade to obtain a few raw materials.

With the development of irrigation, however, villages could produce extra food as well as valuable trade products. In some villages, leaders began to make economic decisions based on fueling trade and feeding the growing population.

Characteristics of Cities As populations increased and economies became more complex, some villages grew into the first cities. These cities differed from early villages in several ways. First, cities were larger and more densely populated than villages. For example, the first known city was Uruk, located between the Tigris and Euphrates rivers in what is now Iraq. Around 3000 BC Uruk was home to some 40,000 to 50,000 people and covered more than 1,000 acres. In comparison, the village of Çatal Hüyük at its height had only about 5,000 to 6,000 people and covered about 30 acres.

Second, city—or urban—populations were more diverse than village populations. Early villages usually consisted of a few extended families or clans, whereas early cities usually included many unrelated people.

Third, early cities often had a more formal organization than villages. For example, most early cities had a defined center. City centers often contained palaces, temples, monuments, government buildings, and marketplaces. Many early cities had defined boundaries as well, marked by defensive walls, which separated the city from the surrounding villages. The large number of people living in cities provided the labor to create these large-scale building projects.

Finally, early cities served as centers of trade. Merchants and farmers from the surrounding villages traveled to city markets to exchange goods and raw materials. The people in the city produced goods to trade in turn. This trade fed city economies.

READING CHECK Contrast How did early cities differ from early farming villages?

The First Civilizations

The world's first civilizations formed from some of these early cities. A **civilization** is a complex and organized society. The first civilizations arose in fertile river valleys—the Tigris and Euphrates in Southwest Asia, the Nile in Africa, the Indus in South Asia, and the Huang He (also called the Yellow River) in China. In these river valleys, the rivers flooded annually. These floods spread mineral-rich silt from the river bottoms onto the nearby land. As a result, the river valleys had fertile land that could support a growing population.

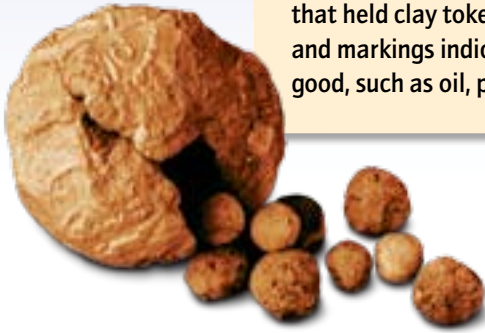
READING SKILLS

Predicting Based on what you have read so far, where do you predict that the first civilizations developed?

Characteristics of Early Civilizations

As large cities began to form, the first civilizations appeared. A civilization is a complex society with a number of specific characteristics. ***In what way are the characteristics of specialized labor and government and religious institutions connected?***

Record Keeping and Writing One early method of record keeping was a clay pouch that held clay tokens. Each token's shape and markings indicated a specific trade good, such as oil, perfume, or sheep.



Although early civilizations differed, they had several characteristics in common:

- Developed cities
- Organized government
- Formalized religion
- Specialization of labor
- Social classes
- Record keeping and writing
- Art and architecture

Developed Cities Cities with developed social and economic institutions, or patterns of organization, formed the basis of early civilizations. Early cities served as political, economic, and cultural centers for surrounding areas. Major cities in the early river valley civilizations include Ur and Uruk near the Tigris and Euphrates rivers, Memphis on the Nile River, Mohenjo Daro on the Indus River, and Anyang near the Huang He.

Organized Government As cities grew, governments formed. Building large irrigation systems and feeding a growing population required planning, decision making, and cooperation. Early governments probably formed in response to such needs. The governments in the first civilizations created laws and established systems of justice. To help coordinate people's efforts, government officials supervised food production and building projects. In addition,

Specialized Labor This model from the civilization of ancient Egypt depicts specialized laborers hard at work pounding grain into flour, rolling dough, and baking bread.



officials gathered taxes and organized defense. In some early civilizations, religious leaders such as priests held government power, while in other early civilizations, influential elders, warriors, or families held power.

Formalized Religion Early civilizations had formal religious institutions that included ceremonies, rituals, and other forms of worship. To gain the gods' favor, priests and other religious leaders performed rituals, such as sacrificing animals or offering gifts of food. To honor the gods, people built large temples and participated in various ceremonies.

Because religious leaders often interpreted the will of the gods, priests became powerful figures in many early civilizations. At the same time, priests and rulers sometimes competed for power. To prove their authority, some leaders claimed that they ruled by the will of the gods or that they represented one of the gods on Earth. As a result, government and religious institutions were often closely connected in early civilizations.

Specialization of Labor As cities became more complex, the division of labor increased and many new jobs developed. For instance, officials gathered taxes, engineers planned irrigation systems, and soldiers defended city walls. While some people farmed, others built large public works, such as temples and roads.



Government and Religious Institutions

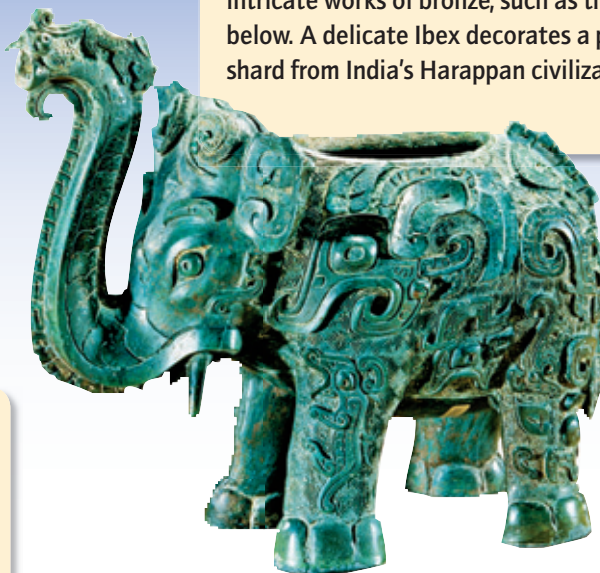
These figurines from the early civilization of Sumer depict praying holy men in sheepskin skirts. Such figurines were placed in temples.

Artisans, or skilled craftspeople, devoted their time to crafts such as basketry, carpentry, metalwork, or pottery. Merchants and traders exchanged the products that artisans made and brought back acquisitions from other areas.

Social Classes As urban societies developed institutions and specialized labor, a social order developed as well. This social order was based on people's occupations, wealth, and influence. In early civilizations, rulers, priests, and nobles had the most power and ranked highest in the social order. Merchants and artisans usually ranked next. Below them were farmers and unskilled workers, who made up the majority of the people. A class of enslaved people often formed the bottom of the social order. Some slaves were people who had been captured in war, while others had been sold into slavery.

Record Keeping and Writing As life in early cities grew increasingly complex, people needed ways to keep permanent records. For example, merchants needed to keep records of trade goods, and officials needed to track tax payments. In early civilizations people used a variety of methods of keeping records before the development of writing. For example, the early civilization of Sumer, which developed along the Tigris and Euphrates rivers, used clay tokens and pouches to keep records. The shape of each token and the markings on it

The Arts China's Shang civilization created intricate works of bronze, such as the elephant below. A delicate Ibex decorates a pottery shard from India's Harappan civilization.



represented a specific item, such as a goat or a piece of pottery. The tokens were stored in a clay pouch. To retrieve the tokens, the pouch had to be broken open. The Inca civilization of Peru, which developed later in South America, used knotted colored strings to keep accounts.

Systems of writing began to develop about 5,000 years ago. The first writing systems used pictographs, or picture symbols, to represent objects or ideas. In time, people created more advanced writing systems that used abstract symbols to express a wider range of ideas. With the development of writing, early civilizations began to create a written record of their society. Such ancient texts and records are still important: they provide historians with a wealth of information about early civilizations.

Along with writing, people in early civilizations developed calendars. Because of the growing importance of farming, people needed to track the changing of the seasons and when it was time to plant or harvest. People in early river valley civilizations also needed to know when yearly floods would occur.

In response to such needs, some early civilizations created calendars. These calendars were based on the phases of the moon, which were easy for early people to see and track. Early lunar, or moon-based, calendars were inaccurate, though, because the lunar year is several days shorter than the solar year.

ACADEMIC VOCABULARY

acquisition something that has been obtained or bought

The Arts The people in early civilizations produced amazing works of art. The styles and techniques that artists used reflected each civilization's culture. Early artists created statues and paintings of gods and goddesses, heroes, and rulers. As the use of bronze spread, some artisans created intricate art pieces in bronze.

Works of art often adorned city squares, public buildings, and royal tombs. The most elaborate pieces of art, such as monumental statues of rulers, were meant to reflect a civilization's power and bring its ruler prestige.

READING CHECK Draw Conclusions What was the relationship between job specialization and the development of social classes in early civilizations?

Change in Civilizations

Once early civilizations developed, they continued to change over time. Factors such as the environment, conflicts, and the movement of people and ideas affected civilizations and led to change. While some changes weakened civilizations, others strengthened them and led to growth and expansion.

Environmental Influences Because of their dependence on farming, people in early civilizations relied on their environments. The forces of nature could easily bring destruction and ruin, however. Raging storms could destroy crops and leave people without enough food.

HISTORY and Economics

Needs and Wants

All people need certain things to survive, such as water, food, and shelter. In addition, people want things in addition to their needs, such as jewelry or cars. To satisfy their needs and wants, people make economic choices. In a society, the three basic economic choices are (1) what to produce, (2) how to produce it, and (3) for whom to produce it. Societies develop economic systems to make these choices. Understanding economic systems is essential for understanding history.

Economic Systems in History Prehistoric hunter-gatherers met their needs and wants simply. As cities and civilizations developed, though, satisfying needs and wants became more complex. People faced new choices: What do we need to prosper? What do we want that we cannot produce for ourselves? With whom will we trade to obtain those things? Such questions forged new economic relationships, and different economic systems developed.

Economic Systems in Your Life Much of history involves the interaction of societies in pursuit of their needs and wants. Conquests, revolutions, periods of artistic development—needs and wants and differing economic systems often

ECONOMIC SYSTEMS

QUICK FACTS

Traditional Economy	People make economic choices based on customs and traditions.
Command Economy	A central government makes all economic decisions.
Market Economy	Private individuals make economic choices based on competition.
Mixed Economy	Uses a mix of traditional, command, and market economies.

factor into such events. For example, imagine two countries each rich in what the other lacks. They form an alliance to meet their needs and wants together. In history you will find many such examples. Finding the "why" behind events, then, is often a matter of discovering the needs and wants involved and the economic systems used to pursue them.

Draw Conclusions How might an understanding of needs and wants and economic systems help you understand the causes of a war?



◀ Two merchants bargain in this carving produced sometime in the 900s to 700s BC.

Flash floods could wipe out whole cities, and drought could kill off livestock. Farming used up the land, and after a period of time the soil lost fertility. Food shortages and other natural disasters could weaken a civilization and leave it open to outside attack.

A need for resources, such as metals, stone, and timber, could also cause civilizations to change. As early civilizations expanded, they began to use more resources. Some resources ran out. Other areas lacked needed resources. In such cases, people had to look for alternative solutions. In areas with few trees, for example, some people began to use dried animal dung as fuel for cooking. To obtain scarce resources, civilizations expanded trade.

Spread of People and Ideas The spread of people and ideas was another source of change in civilizations. Throughout history, the movement of people through trade, migration, and conquest has helped spread cultures and ideas. Traveling merchants learned new languages to conduct trade with foreign groups. Migrants brought their language, customs, and traditions with them when they moved to new areas. Civilizations often imposed their own cultures on the peoples they conquered.

The spread of ideas, beliefs, customs, and technology from one culture to another is called **cultural diffusion**. As a result of cultural diffusion, people adopted new customs, skills, and technologies. Advances such as writing, metalworking, and farming techniques spread from one civilization to another. Artists borrowed designs and materials from other cultures and blended them with their own styles to create new forms and designs. Religious beliefs spread as people adopted the gods and goddesses of other civilizations and made them their own.

Expansion and Warfare Expansion and warfare contributed to change in civilizations as well. As civilizations grew, they needed more land and other resources to support their growing populations. Conflicts over land, water, and other resources occurred and often led to war.

Civilizations waged war to gain control of rich farmland, important sea ports, or regions with valuable resources. Through conquest, civilizations expanded their control over land and people. Through such means, some civilizations developed into states and kingdoms.

Conflicts also arose between civilizations and nomadic groups. Not all people had chosen to live in settled communities. Nomadic pastoralists, or herders, traveled with their herds over wide-ranging territories. These nomadic groups were loosely organized into tribes led by chieftains. Nomadic societies had simple social organizations but developed rich cultures.

Toughened by the need to protect their herds, nomads were usually skilled warriors. In addition, once they learned to domesticate the horse, nomads became highly mobile. Although nomadic groups and settled communities often traded, nomads sometimes launched raids on villages and cities. Further conflicts arose as nomads and farmers competed over land.

READING CHECK **Identify Cause and Effect**
How did cultural diffusion affect early civilizations?

SECTION

3

ASSESSMENT

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Online Quiz
Keyword: SHL BEG HP

Reviewing Ideas, Terms, and People

1. **a. Define** What is a division of labor?
b. Identify Cause and Effect How did irrigation systems help contribute to the development of the first cities?
2. **a. Recall** Where did the world's first four civilizations develop?
b. Summarize What conditions existed in river valleys that encouraged the development of the first civilizations?
c. Evaluate Why do you think that record keeping and writing are necessary characteristics of civilization?
3. **a. Identify** What are some factors that cause civilizations to change?
b. Explain What are some causes of cultural diffusion, and how did it affect early civilizations?
c. Elaborate What are some possible ways that trade, migration, or invasion might lead to the spread of technology?

Critical Thinking

4. **Identify Supporting Details** Use your notes and a graphic organizer like the one shown below to identify and describe each of the characteristics that early civilizations had in common. You will need to add rows to your graphic organizer.

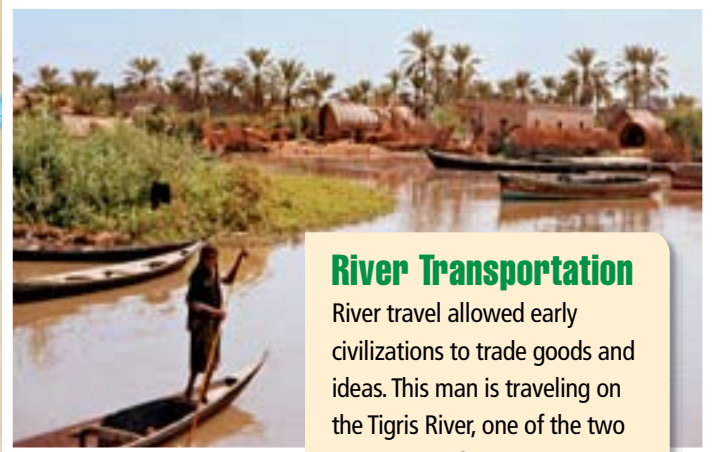
Characteristics	Description

FOCUS ON WRITING

5. **Exposition** Write two paragraphs that explain how migration and cultural diffusion contributed to civilizations changing over time. Consider the spread of both people and ideas.

River Valleys and Civilizations

Pure, sparkling water—it makes life possible. Water also made civilization possible. The first civilizations all arose in river valleys. Common geographic features made these river valleys ideal for farming. The rivers provided water for irrigating crops. The soil along the rivers was highly fertile, nourished each year by rich flood deposits. Flat land bordered the rivers, which made it easier to plant crops. In addition, the river valleys fall in a similar latitude with a warm to hot climate, providing a long growing season.



River Transportation

River travel allowed early civilizations to trade goods and ideas. This man is traveling on the Tigris River, one of the two main rivers of Mesopotamia.



Irrigation and Farming

River water was key to farming in early civilizations. Irrigation canals enabled people to channel the water to their crops. These fields are located along Egypt's Nile River.

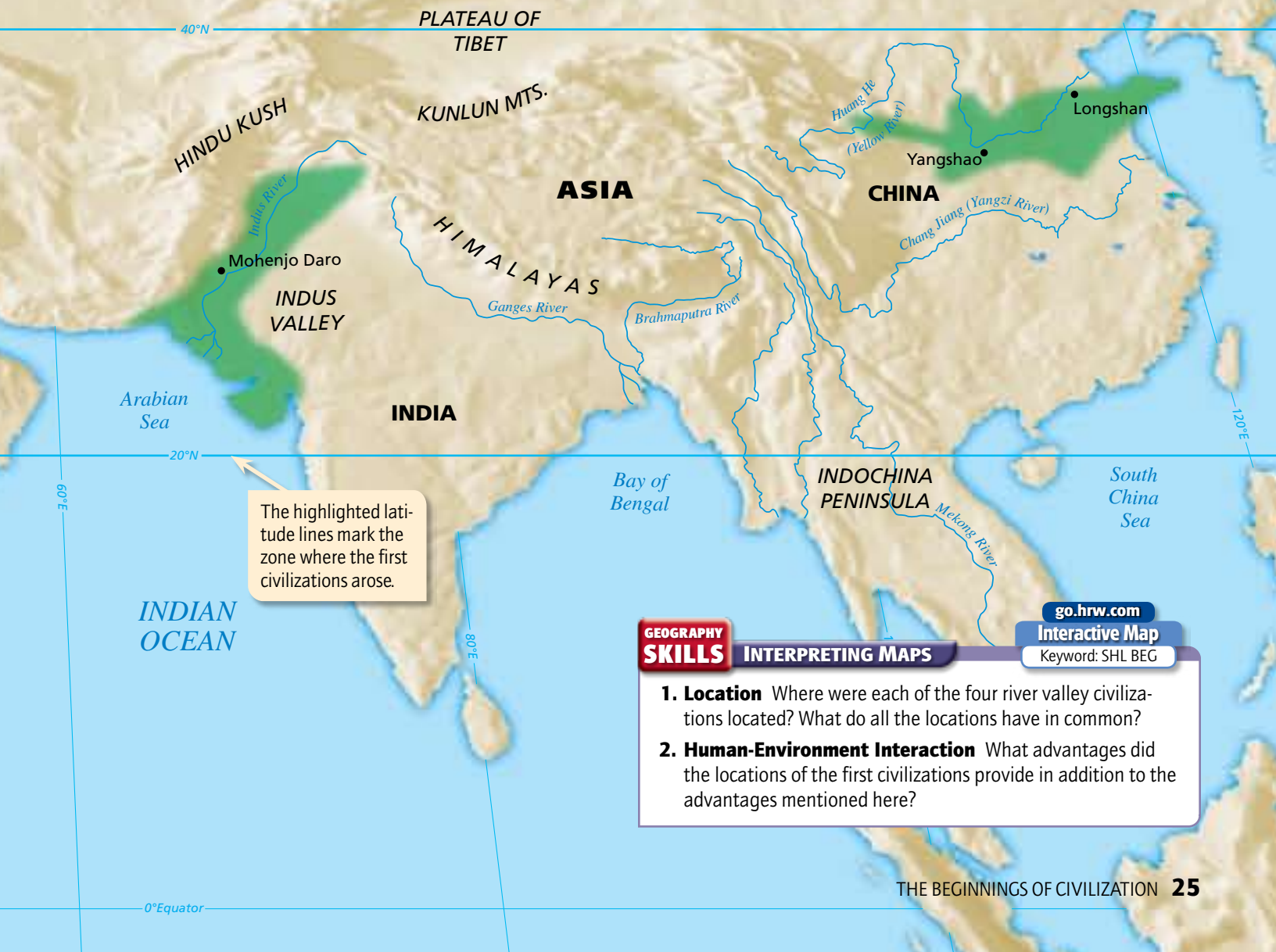




Flooding The first civilizations all arose along rivers that flood their valleys each year. The receding floodwaters left behind fertile silt, enriching the soil and producing abundant crops. At the same time, flooding could be destructive, as in this scene of flooding on the Huang He (Yellow River) in China.

MONGOLIAN
PLATEAU

G O B I



**GEOGRAPHY
SKILLS**

INTERPRETING MAPS

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Interactive Map

Keyword: SHL BEG

- 1. Location** Where were each of the four river valley civilizations located? What do all the locations have in common?
- 2. Human-Environment Interaction** What advantages did the locations of the first civilizations provide in addition to the advantages mentioned here?

Methods of Archaeology

Historical Context The four documents below describe some of the ways in which archaeologists learn about the past without the benefit of written records.

Task Study the selections and answer the questions that follow. After you have studied the documents, you will be asked to write an essay explaining how archaeologists learn about prehistory. You will need to use evidence from these selections and from the chapter to support your essay.

DOCUMENT 1

Excavating the Royal Cemetery of Ur

British archaeologist Sir Leonard Woolley excavated the ruins of Ur, an ancient city in Iraq, from 1922 to 1934. Woolley's excavation of the Royal Tombs of Ur provided a wealth of information about the ancient city and the people who lived there. Along with royalty the cemetery included the remains of court attendants and soldiers, sacrificed to serve their masters after death. The following passage describing Woolley's excavation is from the *Fundamentals of Archaeology*, a 1979 textbook by Robert J. Sharer and Wendy Ashmore.

The burials of King A-bar-gi and Queen Sub-ad were accompanied by interment [burial] of more than 80 other people, . . . including soldiers with gold- and silver-headed spears, female attendants wearing headdresses of lapis, carnelian, and gold, . . . and an array of spectacularly beautiful artifacts such as gaming boards and harps. Recovery was slow and painstaking; because of the quantity and in many cases the fragility of the remains, the overall area was divided into squares. Finds in each square were cleared and removed before work on the next square was begun. . . . A nearly complete funerary scene could later be reconstructed by combining information from each square.

DOCUMENT 2

An Archaeological Dig in Syria

The photograph on the right shows a team of researchers and workers at an archaeological dig in Ebla, Syria. The team is excavating the ruins of a Hittite city from around 1600 BC. The person in the foreground is using a transit, a device for surveying a site. With this device, workers can determine location, plot a map of the site, and divide the site into specific units to map the location and depth where objects are found.



DOCUMENT 3

Çatal Hüyük

Archaeologist Ian Hodder has led the excavation at Çatal Hüyük, a Neolithic farm village, since 1993. In the following passage from the article “This Old House” in the June 2006 edition of *Natural History* magazine, Hodder describes why the Çatal Hüyük site is such an archeological goldmine.

How much can be learned from what is perhaps the most intriguing feature of all about Çatalhöyük: that the site was built and rebuilt over the centuries in ways that provide an unusually rich record of the minutiae [small details] of daily life? The main reason for the abundance of the archaeological record [at Çatalhöyük] was that the Çatalhöyükans used a particular kind of construction material. Instead of making hard, lime floors that held up for decades (as was the case at many sites in Anatolia and the Middle East), the inhabitants of Çatalhöyük made their floors mostly out of a lime-rich mud plaster, which remained soft and in need of continual resurfacing. Once a year—in some cases once a month—floors and wall plasters had to be resurfaced. Those thin layers of plaster, somewhat like the growth rings in a tree, trap traces of activity. . . . The floors even preserve such subtle tokens of daily life as the impressions of floor mats.

DOCUMENT 4

Ötzi the Iceman

The 5,300-year-old body of a Neolithic traveler, nicknamed Ötzi the Iceman, has provided a wealth of information on Neolithic life in Europe. The passage below is from the article “Testimony from the Iceman” in the February 2003 edition of *Smithsonian* magazine. In the article, writer Bob Cullen describes how the long-dead Iceman still speaks.

Until Otzi, archaeologists had been required to reconstruct Neolithic civilization from skeletal remains, flint tools, and arrowheads, bits of pottery and the beginnings of metallurgy. The glacier’s damp, freezing temperature had preserved not only Otzi himself but also a grove of organic artifacts—clothing, wooden handles for tools and weapons, feathered arrows never before seen by modern eyes. . . . The radiocarbon dating of Otzi’s ax blade forced a revision in the generally accepted date for the advent [start] of copper smelting in the Alpine region. The feathers on two of his arrows showed that Neolithic man understood the ballistic principles that make an arrow rotate and fly more accurately. The embers that he carried wrapped in maple leaves in a birch-bark container suggested how Neolithic people transported fire from place to place.

Skills FOCUS

READING LIKE A HISTORIAN

DOCUMENT 1

- a. Identify** What method did Woolley use to excavate Ur’s royal cemetery, and what objects did he find?
- b. Draw Conclusions** What types of conclusions do you think that archaeologists could draw about Ur based on the items found in the excavation of the royal cemetery?

DOCUMENT 2

- a. Identify** What are some of the tools and equipment that the workers are using at the excavation?
- b. Interpret** Based on the photograph, what are some of the activities that take place at an archaeological dig, and what are some of the difficulties that workers face?

DOCUMENT 3

- a. Identify Main Ideas** What aspect of Çatal Hüyük has provided archaeologists with a wealth of information?

- b. Evaluate** Based on this passage, do you think that luck plays a role in archaeological research? Explain your answer.

DOCUMENT 4

- a. Describe** What have scientists learned from Ötzi?
- b. Explain** Why is Ötzi such a significant find?

DOCUMENT-BASED ESSAY QUESTION

Archaeologists use many methods to learn about prehistory without the benefit of written records. Using the documents above and information from the chapter, form a thesis about the ways in which archaeologists learn about prehistory and some of the challenges they face. Then write an essay providing details to support your thesis.

See **Skills Handbook**, p. H25, H26

Chapter Review

QUICK
FACTS

VISUAL STUDY GUIDE

Key Discovery	Discoverer and Location
Nutcracker Man, 1959	Mary Leakey, East Africa
Lucy, 1974	Donald Johanson, Ethiopia
Laetoli footprints, 1970s	Mary Leakey, Tanzania
<i>Homo habilis</i> fossil, 1959	Mary and Louis Leakey, Olduvai Gorge in Tanzania
Chad skull, 2001	French Team, Chad

Hominid Group	Appeared About
Australopithecines (Southern Ape)	4–5 million years ago
<i>Homo habilis</i> (Handy Man)	2.4 million years ago
<i>Homo Erectus</i> (Upright Man)	2–1.5 million years ago
<i>Homo Sapiens</i> (Wise Man) • Neanderthals • Cro-Magnons	200,000 years ago • 200,000 years ago • 40,000 years ago

Paleolithic Era (Old Stone Age)

- nomadic bands of hunter-gatherers
- use of simple, chipped stone tools
- use of fire
- development of language
- creation of cave paintings and figurines
- burial of the dead

Neolithic Era (New Stone Age)

- farming and the domestication of plants and animals
- polishing of stone tools
- settlement of farming villages
- increases in types of activities, trade and differences in wealth
- pottery, weaving, and the plow

The First Cities and Civilizations

- irrigation leads to food surpluses
- development of division of labor
- rise of the first cities and civilizations
- development of government and religious institutions
- emergence of social classes
- invention of record keeping/writing

Review Key Terms and People

Complete each sentence by filling the blank with the correct term or person.

- _____ refers to a society's knowledge, art, beliefs, customs, and values.
- _____ are people who survive by eating animals that they have caught or plants they have collected.
- _____ is the spreading of cultural traits from one society to another.
- Characteristics of _____ include developed cities, record keeping and writing, and the specialization of labor.
- To _____ is to alternate between two events.
- By experimentation, people learned the practice of _____, or the selective growing or breeding of plants and animals for human use.
- Pottery, tools, and weapons are examples of _____, or objects made and used by humans.
- The development of agriculture is sometimes called the _____ because of the profound effects of agriculture on history.
- Skilled craftspeople called _____ fashioned baskets, pottery, and metal goods by hand.
- Herding societies did not establish permanent settlements but instead lived as _____, moving their herds from place to place in search of grazing land.



Comprehension and Critical Thinking

SECTION 1 (pp. 5–11)

- 11. a. Recall** How do scientists study prehistory without the aid of written records from that time?
- b. Summarize** What are three ways in which early humans adapted to new environments during the Stone Age?
- c. Develop** If you were an archaeologist and found bead jewelry and stone chopping tools in an ancient woman's grave, what might you conclude?

SECTION 2 (pp. 12–17)

- 12. a. Identify** What was the Neolithic Revolution, and why was it important?
- b. Identify Cause and Effect** How did the domestication of plants and animals change prehistoric societies during the Neolithic Era?
- c. Make Judgments** What can scientists conclude about life during the Neolithic Era from Ötzi the Iceman? Consider Ötzi's clothing, articles and weapons, location, and death in your answer.

SECTION 3 (pp. 18–23)

- 13. a. Recall** What were the common characteristics of early civilizations?
- b. Explain** How did the world's first civilizations develop, and what did the four locations where they developed have in common?
- c. Elaborate** In early civilizations how were religion, government, and social classes all interconnected?

Reading Skills

Predicting Use what you have learned about predicting to answer the questions below.

- 14.** As people began using bronze to create tools, the Stone Age gave way to the Bronze Age. What do you predict was one way in which the use of bronze tools affected early human societies?
- 15.** Which characteristics of civilizations do you predict were most beneficial in helping the first civilizations grow and endure?
- 16.** As early civilizations grew and expanded, how do you predict that nomadic pastoralists and more settled civilizations interacted?

Analyzing Visuals

Reading Like a Historian The image shows two cave sculptures of bison, which prehistoric people carved out of the wall of a cave at Tuc d'Audoubert, Ariège, France.



Bison Cave Sculpture, Tuc d'Audoubert, Ariège, France

- 17. Draw Conclusions** Based on the carvings, what conclusions can you draw about the people who made them?
- 18. Infer** Why do you think that early prehistoric people made these carvings?

Using the Internet

go.hrw.com

Practice Online

Keyword: SHL BEG

- 19.** What would it be like to be an archaeologist and search for artifacts from the past? Using the keyword above, do research to learn about recent archaeological finds. Select two or more artifacts that interest you and write a short, informative article about them that could go in a school science magazine. Describe each artifact in detail.

WRITING ABOUT HISTORY



Exposition: Writing an Explanation The Neolithic Revolution dramatically changed prehistoric societies.

- 20. Assignment:** In an essay, explain how the Neolithic Revolution affected the way in which people lived, the types of activities people performed, and the technology people used. To provide support for your explanation, use information from this chapter and from other research as needed. Be sure to collect facts and examples to illustrate your points.