



Studying ancient footprints is one way scientists can learn about the past. These footprints, preserved in volcanic ash, were made in Tanzania some 3.5 million years ago.

 Interactive Flipped Video

 **TEKS**
29.A

>> Objectives

Learn how scholars study the historical past.

Find out how anthropologists investigate the period of prehistory.

Understand how discoveries in Africa and beyond have influenced anthropologists' views about early humans and their ancestors.

>> Key Terms

prehistory
historian
artifact
anthropology
culture
archaeology
Mary Leakey
Louis Leakey
Olduvai Gorge
technology
Donald Johanson

1.1

By about 5,000 years ago, groups of people in different parts of the world had begun to keep written records. The invention and use of writing marked the beginning of recorded history. However, humans and their ancestors had lived on Earth for thousands upon thousands of years before the recording of history began. We call the long period of time before people invented writing prehistory.

Learning About Our Past

Studying Prehistory

Understanding Our Past Historians are scholars who study and write about the historical past. Historians often learn details of the past from **artifacts**, or objects made by humans. Clothing, coins, artwork, and tombstones are all types of artifacts. However, historians rely even more on written evidence, such as letters or tax records.

Although it is often hard to find thorough written records from early times, those that exist offer us a narrative of events, as well as names and dates. Historians of the recent past also study such evidence as photographs or films.

Like a detective, a historian must evaluate all evidence to determine if it is reliable. Do records of a meeting between two officials tell us exactly what was said? Who was taking notes? Was a letter writer really giving an eyewitness report or just passing on rumors? Could the letter be a forgery? Historians try to find the answers to questions like these. They then interpret the evidence, or explain what it means. Often, a historian's goal is to determine the causes of a certain development or event, such as a war or an economic collapse. By explaining why things occurred in the past, historians can help us

understand what happens today and what may happen in the future.

Generally, historians try to give a straightforward account of events. However, sometimes their personal experiences, cultural backgrounds, or political opinions bias their interpretations. Other times, historians disagree with one another about what the evidence proves. Such differences can lead to lively debates.

? **SUMMARIZE** What kinds of evidence do historians use to study the past?

ELPS **ELPS 1.A.1** Practice using prior knowledge to understand key terms in *Studying Prehistory*.

Investigating Prehistory

About 150 years ago, scholars began studying the period of prehistory. They hoped to learn about the origins and development of people and their societies. Today, we call this field of study **anthropology**.

The Field of Anthropology Modern anthropologists specialize in certain areas of their field. For example, some study the bones of our ancestors to understand how human physical traits have changed over time. Other anthropologists focus on the characteristics of human cultures from both the past and present.

In anthropology, **culture** refers to the way of life of a society, which includes its beliefs, values, and practices. Culture is handed down from one generation to the next through learning and experience.

The Field of Archaeology Within the field of anthropology, a specialized branch exists called archaeology (ahr kee AHL uh jee). **Archaeology** is the study of past people and cultures through their material remains. These remains include buildings, and artifacts such as tools, weapons, pottery, clothing, and jewelry. Archaeologists find and analyze artifacts to learn about life during prehistory as well as during historical times. This helps them draw conclusions about the beliefs, values, and activities of our ancestors. However, most archaeologists agree that the story of the past is never fully known. Since archaeologists make new discoveries frequently, at times they must revise their theories in light of the new evidence.

Archaeologists at Work Finding ancient artifacts can be difficult, but archaeologists have devised many useful means of doing so. In the 1800s and early 1900s, archaeologists would pick a likely place, called a site, and begin digging. The farther down they dug, the older the artifacts they found.

Some of the objects, which had been buried for very long periods of time, crumbled as soon as they were removed from the ground. Today, archaeologists and

Dating Material Remains

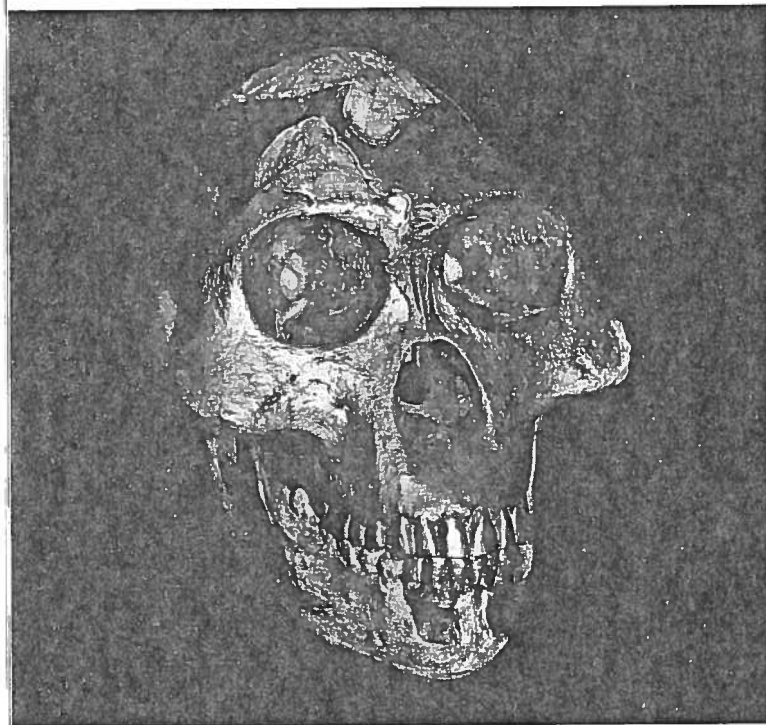
RELATIVE DATING METHODS	
WHAT IS IT?	Determining whether material remains are older or newer than one another.
WHEN IS IT USED?	To study artifacts that change in style over time.
HOW DO SCIENTISTS USE IT?	To create a chronology based on the general fact that older artifacts are found in lower levels of an archaeological site than newer ones.
ABSOLUTE DATING METHODS	
WHAT IS IT?	Determining exact ages of organic objects such as bones, by measuring carbon-14, a radioactive element.
WHEN IS IT USED?	To determine whether bones found near each other were buried at the same time.
HOW DO SCIENTISTS USE IT?	All living things contain carbon-14, which decays at a set rate. As a result, archaeologists can use carbon-14 levels to date the remains of once-living items such as bones, wood, and ash.

>> **Analyze Charts** Which dating method would you use to determine the age of a fossilized tooth fragment?



>> Analyze Information When researching an archaeological site, scientists use exact measurements. Why do you think archaeologists have to be so precise?

 **Interactive Gallery**



>> “Lucy” was discovered in Ethiopia in 1974. Scientists date the skeleton to at least 3 million years ago. It was the first time archaeologists had enough of one skeleton to reconstruct and view an actual hominid.

others who work with them take great care to preserve such fragile artifacts.

Once archaeologists have found artifacts, they analyze them. One technique is to mark the location of each type of artifact found on a map of the site. After studying the map, an archaeologist may be able to tell what activities people took part in at different locations within the site. An area full of rabbit bones, for example, might suggest the workplace of a cook. Archaeologists also need to find out how old the artifacts are.

Geologists, or experts on earth science, can help with this task by determining the age of rocks located near archaeological sites. In addition, botanists and zoologists—experts on plants and on animals—examine seeds and animal bones to learn about the diets of our ancestors. Experts on climate determine what conditions our ancestors faced on the plains of Africa or in ice-covered parts of Europe.

Biologists analyze human bones as well as bloodstains found on old stone tools and weapons. Geographers provide three-dimensional maps of the terrain at archaeological sites.

In addition to working with experts in various fields, archaeologists today use many modern innovations to study their findings. Computers help them store and sort data or develop accurate maps of archaeological sites. Aerial photographs help archaeologists to better see the layout of land and structures once lived in by past people. Techniques for measuring radioactivity aid scientists in determining the age of objects.

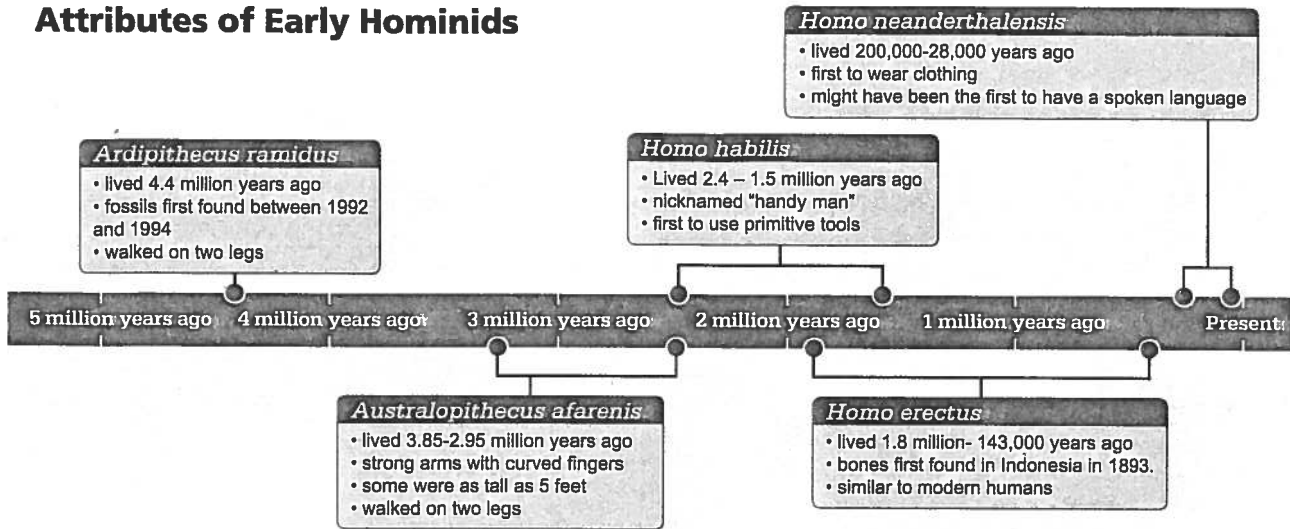
? DESCRIBE Why is it that the farther down an archaeologist digs, the more he or she can find out about the past?

Discoveries in Africa and Beyond

Before the 1950s, anthropologists knew little about early humans and their ancestors. Prehistoric groups did not have cities, countries, organized central governments, or complex inventions, so clues about them were hard to find. However, archaeologists in East Africa started uncovering ancient footprints, bones, and tools. With these first key discoveries, scholars began to form a picture of life during prehistory.

East Africa In the 1930s, anthropologists **Mary Leakey** and **Louis Leakey** started searching for clues to the human past in a deep canyon in Tanzania called **Olduvai Gorge** (OHL duh vy). Geologists have dated the bottom layers of Olduvai Gorge to an age of 1.7 to 2.1 million years. As the Leakeys searched the sides of

Attributes of Early Hominids



Source: Smithsonian Institution

>> As the centuries passed, hominid groups developed physically and gained new skills.

the gorge, they found very ancient tools chipped from stone. Although these tools looked simple, with jagged edges and rough surfaces, they showed that whoever had made them had learned to develop technologies to help them survive.

Technology refers to the skills and tools people use to meet their basic needs and wants. More recent stone tools proved more sophisticated—both smooth and polished—but the older ones were exciting to the Leakeys. They felt there must be evidence of the makers of those tools in Olduvai Gorge as well.

In 1959, after more than two decades of searching, Mary Leakey found a skull embedded in ancient rock at Olduvai Gorge. After careful testing, the Leakeys concluded that the skull belonged to an early hominid. Hominids, a group that includes humans and their closest relatives, all walk upright on two feet. Humans are the only hominids that live today.

Additional evidence of early hominids was found in 1974 by anthropologist **Donald Johanson**. In Ethiopia, Johanson found many pieces of a single hominid skeleton, which was dated to at least 3 million years ago. For the first time, archaeologists had enough of one skeleton to piece together and really look at an early hominid. Johanson named his historic find "Lucy" after a Beatles' song. Studying Lucy's skeleton, Johanson could see that she was an upright walker who was about 4 feet (1.2 meters) tall.

Early Hominid Groups As of today, scientists and anthropologists have discovered and studied numerous remains and artifacts of hominids.

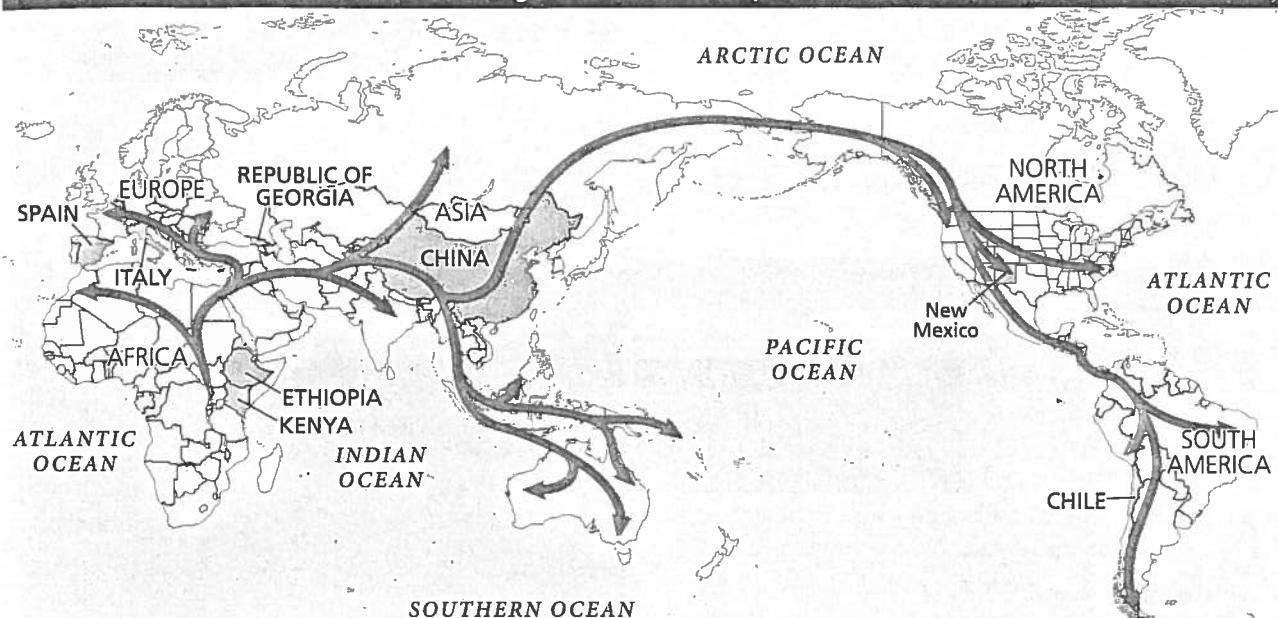
From this work, they have established that a number of different groups of hominids lived over the course of several million years. They call the earliest group of hominids australopithecines (aw stray loh PITH uh synz).

Lucy and the hominids who left their footprints in Laetoli were australopithecines. All the australopithecines lived in Africa. Anthropologists think that they may have lived there as early as 7 million years ago.

About 2 million years ago, a group of hominids emerged that anthropologists call *Homo habilis*. Scholars gave the group this name, which means "handy man," because they thought these were the first hominids to make stone tools. Since the discovery of *Homo habilis*, anthropologists have uncovered even older stone tools—2.6 million years in age—but they have not determined which hominids created them. By studying many stone tools, anthropologists have concluded that *Homo habilis* used their tools for purposes such as cutting, scraping, chopping, or sawing plants, animals, and wood.

Another group of hominids, called *Homo erectus*, also appeared around 2 million years ago. They were given their name, which means "upright man," because their skeletons show that they were fully upright walkers. *Homo erectus* were notable for having

Migrations of *Homo sapiens*



>> Analyze Maps *Homo sapiens* migrated along the routes shown on the map. Why would early *Homo sapiens* follow large herds of animals?

 **Interactive Map**

larger brains and bones and smaller teeth than other hominids.

They also showed a greater range of capabilities. For example, *Homo erectus* are thought to be the first hominids to learn how to use fire. They also pioneered a new form of stone tool, called a hand ax, that could be used as the earlier tools were but also worked for digging, shattering stone or bone, and boring holes into hard surfaces. *Homo erectus* remains have been found in Asia and Europe, making scholars think they were the first hominids to migrate out of Africa.

Evidence of *Homo Sapiens* Scientists think that between 250,000 and 100,000 years ago, *Homo erectus* disappeared and a new group of hominids emerged.

This new group, called *Homo sapiens*, is the group to which modern humans belong. There is some dispute over where *Homo sapiens* first lived. Many scholars think the archaeological and scientific evidence supports the “Out of Africa” theory, which says that *Homo sapiens* first lived in Africa and then migrated into other areas of the world. Other scientists think that *Homo erectus* developed into *Homo sapiens* around the same time in different parts of the world.

Either way, scholars think that two groups of *Homo sapiens* soon arose—Neanderthals and the earliest

modern humans. Early modern humans eventually spread all over the world, while Neanderthals lived mostly in Europe and western Asia. Sometime between 50,000 and 30,000 years ago, the Neanderthals disappeared, leaving early modern humans as the only hominids on Earth.

? CONNECT How did *Homo habilis* use the tools they fashioned?

ASSESSMENT

- 1. Apply Concepts** What types of obstacles do historians have to overcome to give a straightforward account of past events?
- 2. Describe** Describe the “Out of Africa” theory.
- 3. Connect** How have anthropologists learned about the ancestors of modern humans?
- 4. Classify** What is the significance of the Olduvai Gorge in East Africa?
- 5. Explain** Why did scholars give *Homo habilis* the nickname “handy man?”

1.2

Based on the evidence gathered by anthropologists over many years, scholars have divided prehistory into different eras. They call the long period from at least 2 million B.C. to about 10,000 B.C. the Old Stone Age, or Paleolithic Period. They refer to the period from about 10,000 B.C. until the end of prehistory as the New Stone Age, or Neolithic Period. During both eras, people created and used various types of stone tools. However, during the New Stone Age, people began to develop new skills and technologies that led to dramatic changes in their everyday lives.



>> Scholars believe that Stone Age hunters followed animal herds across a land bridge that once connected Asia and North America.

 Interactive Flipped Video

The Neolithic Revolution

Old Stone Age Skills and Beliefs

Early modern humans lived toward the end of the Old Stone Age. Researchers have pieced together evidence left by early modern humans to paint a picture of what daily life was like for them.

Early modern people were **nomads**, or people who move from place to place to find food. Typically, about 20 or 30 people lived together in small bands, or groups. They survived by hunting and by gathering food.

In general, men hunted or fished. Women and children gathered berries, fruits, nuts, grains, roots, or shellfish. This food kept the band alive when game animals were scarce.

Strategies for Survival Early people depended heavily on their environment for food and shelter. They also found ways to adapt their surroundings to their needs. As hominids had throughout the Stone Age, early humans made tools and weapons out of the materials at hand—stone, bone, or wood. They built fires for cooking and used animal skins for clothing. At some point, early modern humans developed spoken language, which allowed them to cooperate during the hunt and perhaps discuss plans for the future.

 Interactive Flipped Video

TEKS

1.A, 2.A, 17.A, 17.B

>> Objectives

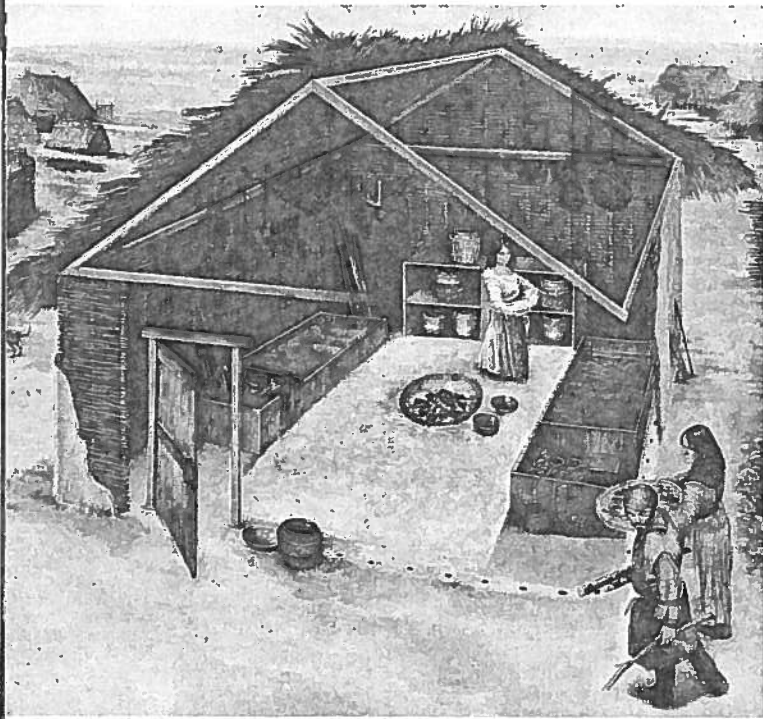
Describe the skills and beliefs that early modern humans developed during the Old Stone Age.

Analyze why the development of agriculture is considered the start of the New Stone Age and the Neolithic Revolution.

Explain how the Neolithic Revolution dramatically changed the way people lived.

>> Key Terms


Old Stone Age
Paleolithic Period
New Stone Age
Neolithic Period
nomad
animism
Neolithic Revolution
domesticate
Çatalhüyük
Jericho



>> **Draw Conclusions** Based on this illustration, what evidence would archaeologists use to learn about the interior of Neolithic houses?



>> Scientists study Neolithic cave art to understand early religious beliefs known as animism.

 **Interactive Gallery**

Some Old Stone Age people also learned to travel across water, which helped them spread into new places. For example, people boated from Southeast Asia to Australia at least 40,000 years ago, most likely using rafts or canoes. They may have stopped for years at islands along the way, but in between they would have had to boat across as much as 40 miles (64 kilometers) of open ocean.

Early Religious Beliefs Toward the end of the Old Stone Age, people began to leave evidence of their belief in a spiritual world. About 100,000 years ago, some people began burying their dead with great care. Some anthropologists think that this practice suggests a belief in life after death. Old Stone Age people may have believed the afterlife would be similar to life in this world and thus provided the dead with tools, weapons, and other needed goods to take with them.

Many scholars think that our ancestors believed the world was full of spirits and forces that might reside in animals, objects, or dreams. Such beliefs are known as **animism**. In Europe, Australia, and Africa, cave or rock paintings vividly portray animals such as deer, horses, and buffaloes. Some cave paintings show people, too. The paintings often lie deep in caves, far from a band's living quarters. Some scholars think cave paintings were created as part of animist religious rituals.

? DESCRIBE What skills did Old Stone Age people develop to adapt and meet their needs?

Farming Begins a New Stone Age

The New Stone Age began about 12,000 years ago (or about 10,000 B.C.), when nomadic people made a breakthrough that had far-reaching effects—they learned to farm.

The Neolithic Revolution By producing their own food, people no longer needed to roam in search of animals, fish, or plants. For the first time, they could remain in one place throughout the year. As a result, early farmers settled the first permanent villages. They also developed entirely new skills and technologies. This transition from nomadic life to settled farming brought about such dramatic changes in way of life that it is often called the **Neolithic Revolution**.

The Domestication of Plants and Animals These early farmers were the first humans to **domesticate** plants and animals—that is, to raise them in a controlled way that makes them best suited to human

use. Plant domestication may have begun with food gatherers realizing that seeds scattered on the ground would produce new plants the next year. Animal domestication may have begun with people deciding to round up the animals they usually hunted. They could then use the animals as they always had—for food and skins—as well as to provide other benefits, such as milk or eggs.

Evidence shows that people began to farm in different parts of the world at different times, and that they did not domesticate all the same plants or animals in each place.

The dog was probably the first animal to be domesticated, at least 15,000 years ago. People brought domesticated dogs wherever they migrated. From about 8000 B.C. to 6000 B.C., people in western Asia and northern Africa domesticated goats, sheep, pigs, and cattle; and people in South America domesticated llamas and alpacas.

Around the same time—from about 10,000 B.C. to 6000 B.C.—people in West Africa and Southeast Asia domesticated yams, in China millet and rice, in Central America and Mexico squash, and in the Middle East barley, chickpeas, peas, lentils, and wheat.

2 IDENTIFY MAIN IDEAS How did farming change the lives of Neolithic people?

Dramatic Change with the Neolithic Revolution

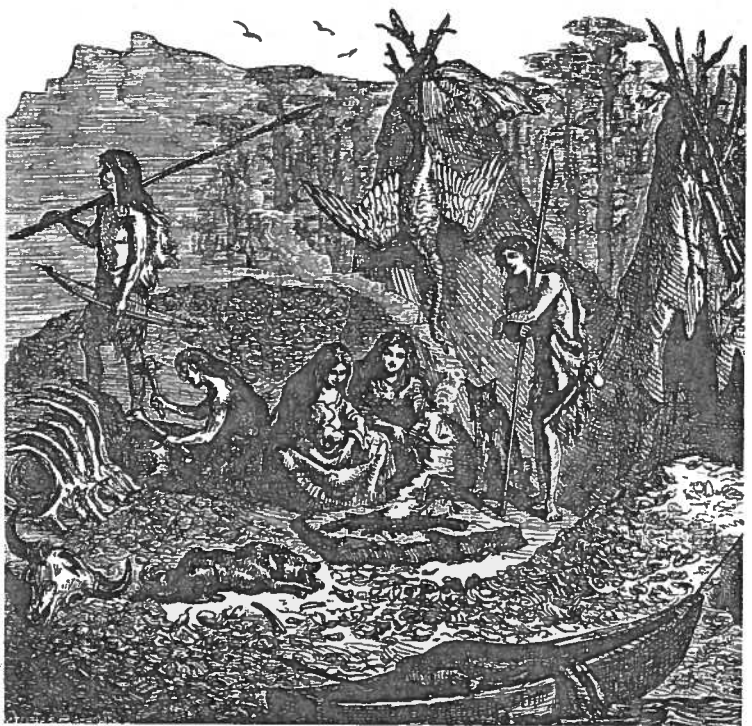
Once the Neolithic Revolution had begun, no greater change in the way people lived took place until the Industrial Revolution of the late 1700s. Settled farming led to the establishment of the first villages and to significant advances in technology and culture. As you will read in the next section, these advances eventually led to a new stage of development—the emergence of cities and civilizations.

Establishing the Earliest Villages Archaeologists have unearthed the remains of some of the first Neolithic villages, including **Çatalhüyük** (chah TAHL hyoo YOOK) in modern-day Turkey and **Jericho** (JEHR ih koh), which still exists today as an Israeli-controlled city. Jericho was built between 10,000 and 9000 B.C. Although the village was tiny—about the size of a few soccer fields—a few thousand people lived in it.

The village was surrounded by a huge wall, which suggests that it had a government or leader who was able to organize a large construction project. Çatalhüyük seems to have developed around 7000 B.C. and may have had a population as large as 6,500 people.



>> Visitors can still see the ruins of ancient Jericho, located on Israel's West Bank.



>> During the Neolithic Period, people used tools and weapons, built boats, cooked over fires, and domesticated dogs.

[Interactive Gallery](#)

The village covered about three times more land than Jericho and included hundreds of rectangular mud-brick houses, all connected and all about the same size.

Settled People Change Their Ways of Life Like their Paleolithic ancestors, early farmers probably divided up the work by gender and age. Still, important differences began to emerge. In settled farming communities, men came to dominate family, economic, and political life. Heads of families, probably older men, formed a council of elders and made decisions about when to plant and harvest. When food was scarce, warfare increased, and some men gained prestige as warriors. These elite warriors asserted power over others in society.

Settled people had more personal property than nomadic people. In addition, some settled people accumulated more possessions than their neighbors, so differences in wealth began to appear.

New Technologies To farm successfully, people had to develop new technologies. Like farmers today, they had to find ways to protect their crops and measure out enough seed for the next year's harvest. They also needed to measure time accurately to know when to plant and harvest. Eventually, people would use such measurements to create the first calendars.

Many farmers learned to use animals such as oxen or water buffalo to plow the fields.

Archaeological evidence shows that some villages had separate workshops where villagers made tools, including smooth, polished ax heads and chipped arrowheads. In some parts of the world, Neolithic people learned to weave cloth from animal hair or vegetable fibers. Many Neolithic people began using clay to create pottery for cooking and storage. Archaeologists have learned about life during this period from finds such as "the Iceman"—the body of a Neolithic man found preserved in snow in the European Alps alongside various tools and belongings.

Technologies were not invented everywhere at the same time. Knowledge of some traveled slowly from one area to another, perhaps taking thousands of years to spread across continents. Other technologies were invented separately in different parts of the world and showed varying degrees of similarity.

The Neolithic Impact The Neolithic Revolution had a tremendous impact. Farming, especially in the river valleys, would form the social and economic cornerstones of urban civilization and government. For example, floods could often wipe out entire villages if they were not contained. As a result, Neolithic peoples worked together and formed governments to

Before and After the Neolithic Revolution

Thousand of years after it began, the Neolithic Revolution still affects our lives.	
BEFORE	AFTER
STRATEGIES FOR SURVIVAL	STRATEGIES FOR SURVIVAL
<ul style="list-style-type: none"> • Nomadic hunters and gatherers • Depended on environment for food and shelter 	<ul style="list-style-type: none"> • Domesticated plants and animals • Settled in farming villages • Surpluses of food
GOVERNMENT	GOVERNMENT
<ul style="list-style-type: none"> • Family ruled by the male 	<ul style="list-style-type: none"> • Village government with chief and council • Cities had organized government • Built public works construction projects
ECONOMY	ECONOMY
<ul style="list-style-type: none"> • No real economy 	<ul style="list-style-type: none"> • Traditional economy—the barter system
TECHNOLOGY	TECHNOLOGIES
<ul style="list-style-type: none"> • Technology • Language developed 	<ul style="list-style-type: none"> • Plowing • Weaving • Pottery • Calendars

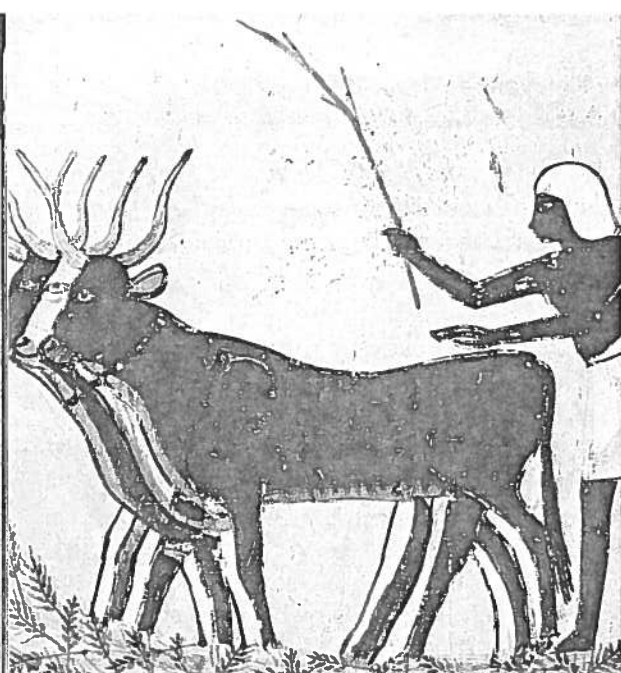
>> **Analyze Charts** Based on this chart, which statement would be correct? Paleolithic people were more advanced than Neolithic people; or Neolithic people were more advanced than Paleolithic people.

direct projects such as the building of dikes and dams. Farming also resulted in surpluses of food, which allowed some farmers to gain wealth. That wealth, often passed to succeeding generations, was the basis of a social class system.

? IDENTIFY What role did gender play in early Neolithic villages?

ASSESSMENT


- 1. Predict Consequences** How might the development of spoken language have influenced the religious beliefs of Neolithic people?
- 2. Determine Relevance** Why is the beginning of farming considered the beginning of the Neolithic Revolution?
- 3. Draw Conclusions** How did the social status of males change in villages during the Neolithic Revolution?
- 4. Hypothesize** What would modern society look like today had the Neolithic Revolution not taken place?
- 5. Cite Evidence** What change marked the beginning of the New Stone Age and how did that change impact people's ways of life?



>> **Apply Concepts** Why was farming so crucial to the development of river valley civilizations, including those that flourished in Egypt?

 **Interactive Flipped Video**

TEKS

 **1.A, 2.A, 2.B, 16.A, 16.B, 17.A, 17.B, 19.A, 19.B**

>> Objectives

Analyze the conditions under which the first cities and civilizations arose.

Outline the basic features that define civilization.

Understand the ways in which civilizations have changed over time.

>> Key Terms

surplus
traditional economy
civilization
steppe
polytheistic
artisan
pictograph
scribe
cultural diffusion
city-state
empire
theocracy,

1.3

During the Neolithic Revolution, the establishment of villages such as Catalhüyük and Jericho symbolized a huge step in human development. Societies were becoming more organized, and people's technological innovations were becoming increasingly complex. Soon would follow a momentous change in human existence—the development of civilizations.

Civilization Begins

The First Cities and Civilizations

The earliest civilizations to develop were situated near major rivers. These rivers provided a regular water supply and a means of transportation. The animals that flocked to the rivers to drink were a source of food. Perhaps most important, conditions in the river valleys favored farming. Floodwaters spread silt—tiny bits of rock and dirt from the river bottom—across the valleys, renewing the soil and keeping it fertile.

In such rich conditions, farmers were able to produce a **surplus** of food, or more than was necessary. These surpluses allowed them to feed growing populations and to store food for the future. Thus they were able to produce enough food to support increasingly large populations.

As populations expanded, some villages swelled into the world's first cities. In these cities, some of the people were able to work at jobs other than farming. This was a radical departure from the traditional economies of the Stone Age. A **traditional economy** relies on habit, custom, or ritual and tends not to change over time.

Villagers had to work cooperatively to build bridges, dams, and other projects that benefited the community. In large cities, governments were formed to organize these projects. Projects that facilitated production and trade brought economic benefits. Early

Neolithic governments extended their political power to create new economic opportunities as trade began to flourish.

River Valley Civilizations The rise of cities was the main feature of civilization. A **civilization** is a complex, highly organized social order. The world's first civilizations arose independently in a number of river valleys. These River Valley Civilizations include Sumer, between the Tigris and Euphrates rivers in the Middle East; Egypt, along the Nile River; the Indus civilization, along the Indus River in India; and the Shang civilization, along the Huang (hwhang) River, or Yellow River, in China. You will read in depth about each of these River Valley Civilizations in later topics.

Civilizations in the Americas Unlike the first civilizations in Asia and Africa, the first civilizations in the Americas arose away from river valleys. Major civilizations emerged in the highlands of Peru, Mexico, and Central America, where people learned to farm on the sides of mountains or to fill in swamps with land for farming.

Life Away From Cities Away from the first cities, many people continued to hunt, gather food, or live in farming villages. On some less fertile lands or on sparse, dry grasslands called **steppes**, nomadic herders tended cattle, sheep, goats, or other animals. Because

the lands did not have abundant water or grass, these nomads had to keep moving to find new pasture.

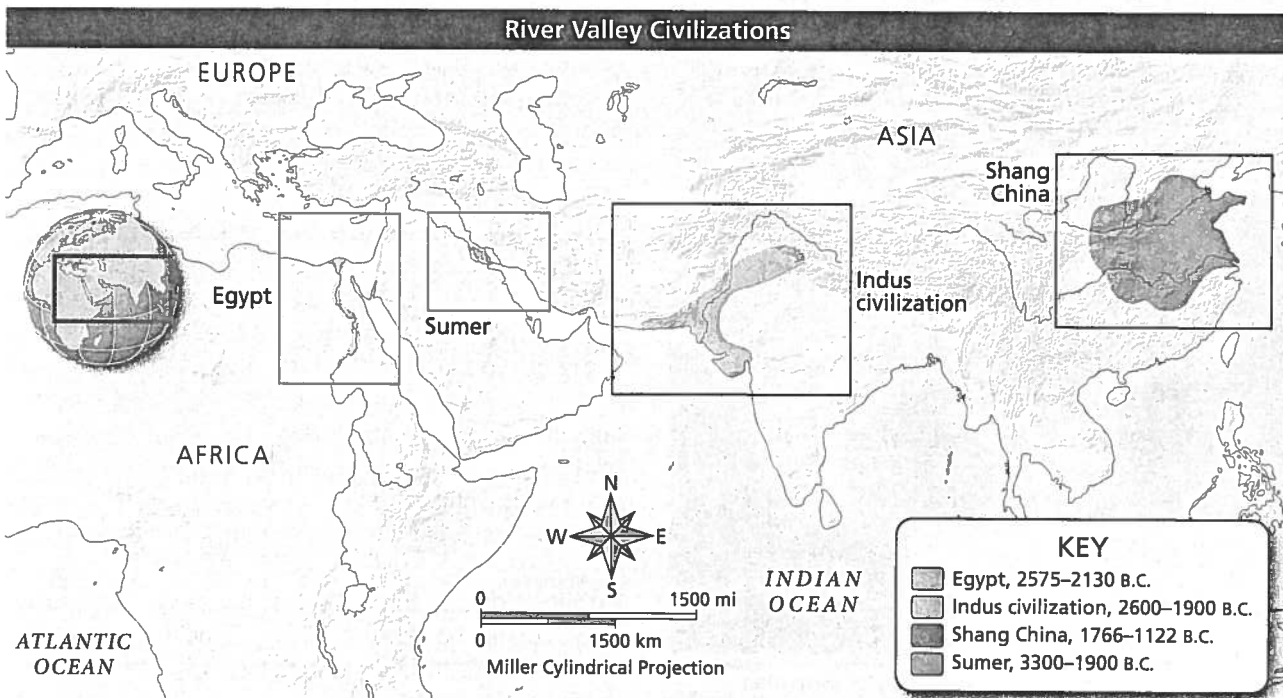
DESCRIBE Describe how river valleys were ideal locations for the development of civilization.

Features That Define Civilization

What did the early civilizations that arose in different parts of the world have in common? While cities are the main feature of civilization, historians distinguish several other basic features of most early civilizations. Seven of the major features are (1) organized governments, (2) complex religions, (3) job specialization, (4) social classes, (5) arts and architecture, (6) public works, and (7) writing.

Organized Governments Councils of elders or chiefs ruled many of the world's farming villages. However, in cities, more powerful organized governments arose to oversee large-scale efforts that benefited the people. For example, as cities grew, their residents required a steady supply of food. A central government could coordinate the production of large amounts of food.

In addition, farmers near rivers needed to control flooding and channel waters to the fields. A well-organized government could bring people together for



>> **Analyze Maps** How did river valleys help civilizations to prosper?

Interactive Map

projects such as building dikes, digging canals, and carving out irrigation ditches.

Many rulers relied on royal officials to help them govern. They issued laws, collected taxes, and organized defense systems. Over time, governments became more complex, and separate departments evolved to oversee different functions of government. In many early governments, priests probably had the greatest power. In a **theocracy**, the government was run by religious leaders. In other governments, warrior kings emerged as the main political leaders. Often, they claimed their right to rule came from the gods, and power was passed from father to son. Thus, many political rulers gained religious power as well.

Complex Religions Most ancient people were **polytheistic**, which means they believed in many gods.

People appealed to sun gods, river goddesses, and other gods that they believed controlled natural forces or human activities such as birth or war.

In early religions, priests and worshipers sought to gain the favor of the gods through complex rituals such as ceremonies, dances, prayers, and hymns. To ensure divine help, people built temples and sacrificed animals, crops, or sometimes other humans to the gods. Sacrifices and other ceremonies required the full-

time attention of priests, who had special training and knowledge.

Job Specialization The lives of city dwellers differed from those of nomads. Urban people developed so many new crafts that a single individual could not master all the skills needed to make tools, weapons, or other goods. For the first time, individuals began to specialize in certain jobs. Some became **artisans**, or skilled craftspeople, and made pottery or finely carved or woven goods. Among the crafts developed in cities, metalworking was particularly important.

People learned to make tools and weapons, first out of copper and later out of bronze, a more durable mixture of copper and tin.

Cities had other specialists, too. Bricklayers built city walls. Soldiers defended these walls. Merchants sold goods in the marketplace. Singers, dancers, and storytellers entertained on public occasions. Such specialization made people dependent on others for their various needs.

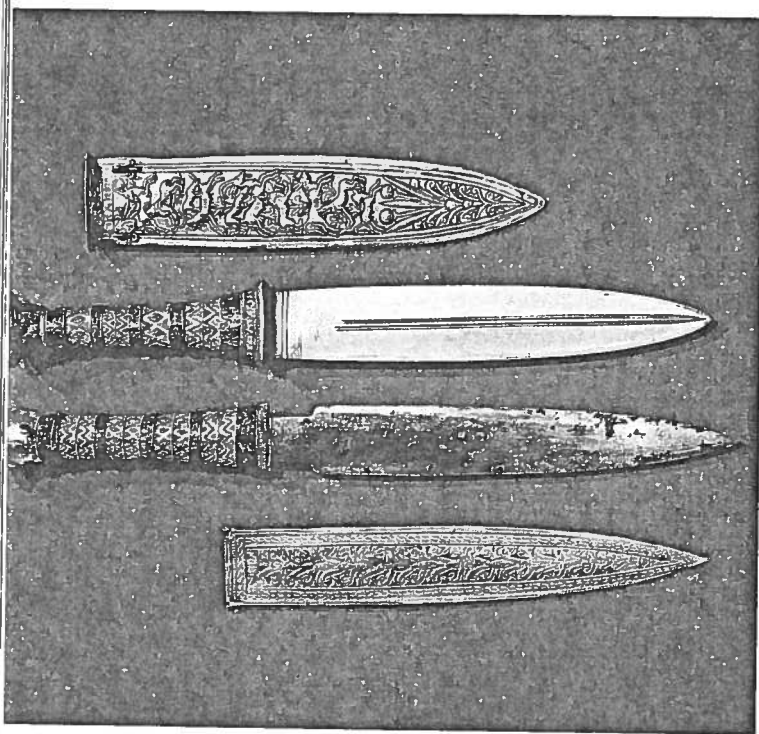
Social Classes In cities, social organization became more complex. People were ranked according to their jobs. Such ranking led to the growth of social classes. Priests and nobles usually occupied the top level of an ancient society. Next came a small class of wealthy merchants, followed by artisans. Below them came the vast majority of people—peasant farmers who lived in the surrounding villages and produced food for the city.

In many civilizations, slaves occupied the lowest social level. Poor families sometimes sold family members into slavery to pay their debts. Others became slaves as punishment for crimes or were prisoners captured in war. Because male captives were often killed, women and children made up the largest number of slaves in some societies.

Arts and Architecture The arts and architecture of ancient civilizations expressed the talents, beliefs, and values of the people who created them. Temples and palaces often dominated the city landscape. Many rulers may have ordered such buildings to be constructed in order to remind people of the strength and power of their government and religion. The skilled workers who built these massive buildings decorated them with wall paintings, statues of gods, goddesses, or rulers, and other stunning pieces of design work.

Public Works Strong rulers also ordered vast public works to be built. Such projects included irrigation systems, roads, bridges, and defensive walls.

These public works projects were meant to benefit the city by protecting it from attack, ensuring its food



>> These daggers are from the tomb of an Egyptian pharaoh, or ruler. The dagger on top has a blade of gold. The bottom dagger has a blade of iron.

Basic Features of Civilizations

FEATURE	DESCRIPTION
Cities	<ul style="list-style-type: none"> • Larger and more organized than villages • Cities support the other features of civilization
Governments	<ul style="list-style-type: none"> • Coordinate public works projects such as bridge and dam construction • Establish laws and organize defense
Complex Religions	<ul style="list-style-type: none"> • Belief in one or more gods or goddesses • Institution of rituals
Job Specialization	<ul style="list-style-type: none"> • Different types of jobs that leads workers to specialize on one task
Social Classes	<ul style="list-style-type: none"> • Ranked groups are based on job or economic standing
Arts and Architecture	<ul style="list-style-type: none"> • Artwork that expresses a society's talents, beliefs, and values
Public Works	<ul style="list-style-type: none"> • Large-scale projects for the mutual benefit of a city and its people
Writing	<ul style="list-style-type: none"> • Structured writing system initially used by governments and religious leaders to record important information

>> **Analyze Charts** Which features do you think most affected the daily lives of average people?



supply, or enhancing the reputation of its ruler. The projects were often quite costly, requiring a great deal of human labor and sometimes resulting in the loss of lives during construction.

Writing Of the earliest civilizations, some but not all developed a critical skill—writing. The first writing systems were established in different places and at different times, in many cases with no contact among the different groups who created them. Thus the earliest writing systems varied in appearance, structure, and purpose.

Some were first used in temples, where priests needed to record amounts of grain collected, accurate information about the seasons, and precise rituals and prayers. Other writing systems were first used on public monuments, where rulers spelled out their greatest achievements as a means of advertising their power to the people. Archaeologists have found masses of ancient writings, some on clay tablets or vases, others on stone statues, and yet others on the walls of buildings.

The first step people made toward developing writing was to use **pictographs** (also called pictograms), or simple drawings that look like the objects they represent.

Later, they developed complex writing systems including symbols that represent words, syllables, or

letters. As writing grew more complex, only specially trained people called **scribes** could read and write. Scribes kept records for priests, rulers, and merchants. Only a few societies permitted women to become scribes, an occupation that could lead to political power.

Nomadic Life and Civilizations Nomadic cultures differed from civilizations in their social organization—that is, they did not exhibit many of the characteristics of civilization. The people did not build cities, and their governments were simpler than those of civilizations. However, nomadic peoples often excelled in arts and sciences. For example, many groups developed sophisticated traditions in oral poetry, music, weaving, jewelry making, and animal raising.

2 IDENTIFY CENTRAL IDEAS What role did religion play in early civilizations?

ELPS **ELPS 1.B.1** Discuss *Features That Define Civilization* with your classmates. Identify and correct any speaking errors that you make.

Civilizations Change

Ancient civilizations changed in many ways over the centuries. Among the chief causes of change were shifts in the physical environment and interactions among people. Among the major results was the expansion of cities into larger political entities.

The Effect of the Environment Like their Stone Age ancestors, people living in early civilizations depended heavily on the physical environment. They needed ample rain and fertile soil to be able to produce crops. Resources such as stone, timber, or metals were also essential. Significant changes in the environment could have an immediate impact on people's lives.

At times, a sudden, drastic event would devastate a community. An earthquake or the eruption of a volcano could wipe out an entire civilization. Farming the same land too much could destroy soil fertility, and rivers could become too salty. Cities would then suffer famine, and survivors would be forced to move away.

If people used up nearby timber or ran out of other building resources, they would have to find ways to adapt to this scarcity. They might, for example, trade with people in areas where such resources were readily available. Or they might use alternate building materials such as reeds.

Cultural Diffusion Another major source of change for people living in ancient times was **cultural diffusion**, the spread of ideas, customs, and technologies from one people to another. Cultural diffusion occurred through migration, trade, and warfare.

As famine, drought, or other disasters led people to migrate, they interacted with others whose lives differed from their own. As a result, people often shared and adapted the customs of others. Trade, too, introduced people to new goods or better methods of producing them.

In ancient times, skills such as working with bronze and writing, as well as religious beliefs, passed from one society to another.

Warfare also brought change. Often, victorious armies forced their way of life upon the people they defeated. On other occasions, the victors incorporated the ways of a conquered people into their society.

Cities Become City-States As ancient rulers gained more power, they conquered territories beyond the boundaries of their cities. This expansion led to the rise of the **city-state**, a political unit that included a city and its surrounding lands and villages. Rulers, nobles, and priests often controlled the land outside the city and forced peasants to give them some of the crops they grew on it. In some places, a significant portion of each harvest went to support the government and temples.

The First Empires Rival leaders often battled for power. Sometimes, ambitious rulers conquered many cities and villages, creating the first empires. An **empire** is a group of states or territories controlled by one ruler. For the conquered people, defeat was painful and often cruel.

At the same time, empire building also brought benefits. It helped end war between neighboring communities and created common bonds among people. As you will soon read, many impressive civilizations and powerful empires developed all over the world and left a lasting legacy behind them.



>> This store room in Pompeii shows various bowls and the remains of one person who was buried alive after a volcano rained hot ash down on the ancient city.

? CONNECT How did warfare influence cultural diffusion?

ASSESSMENT

- 1. Compare** How did the development of early Asian and African civilizations compare to the development of early American civilizations?
- 2. Cite Evidence** How did religion influence government?
- 3. Identify** Name the seven basic features of civilization.
- 4. Summarize** How did the establishment of a writing system change civilization?
- 5. Draw Conclusions** How did warfare further empire building?