

Reading Focus

- What advances did people make during the Old Stone Age?
- How can we learn about the religious beliefs of early people?
- Why was the Neolithic agricultural revolution a turning point in history?

Vocabulary

nomad
glacier
animism
domesticate

Taking Notes

Copy the before-and-after chart shown below. As you read the section, add information about human history under each heading. Save the completed chart to help you recall what you learn in this section.

PEOPLE LEARN TO FARM

Before	After
• Lived in small groups	• Populations grew
•	•

Main Idea

The change from nomadic to farming life led to the emergence of civilizations.

Setting the Scene

A small band of hunters and food gatherers was camped on the shore of Lake Turkana in East Africa. One member of the group picked up a stone and chipped it with another stone to make a sharp, jagged edge. The toolmaker may have used this simple tool to cut meat from a dead animal or to sharpen a stick for digging up edible roots.

The toolmaker left the chipped stone near the lake. Some three million years later, anthropologist Richard Leakey picked it up. "It is a heart-quickenning thought," Leakey later said, "that we share the same . . . heritage with the hand that shaped the tool that we can now hold in our own hands."

Very slowly, early people learned to make better tools and weapons from stone, bone, and wood. They also developed new skills. Technological advances like these helped more people to survive.

The Old Stone Age

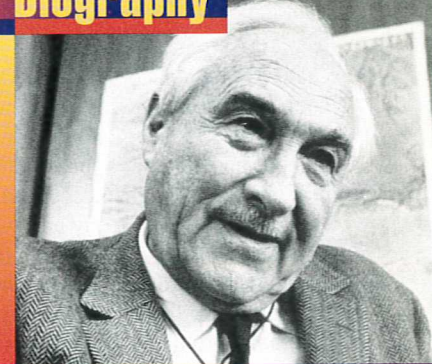
Historians call the earliest period of human history the Old Stone Age, or Paleolithic age. This long period dates from about 2 million B.C., the time of the first stone toolmakers, to about 10,000 B.C.

African Beginnings Anthropologists have found startling evidence of early human life in East Africa. In 1959, Mary and Louis Leakey found pieces of bone embedded in ancient rock at Olduvai (OHL duh way) Gorge in Tanzania. After careful testing, they concluded that the bone belonged to early hominids, or humanlike primates. In 1974, Donald Johanson found part of a hominid skeleton in Ethiopia. Johanson named his find "Lucy" after a Beatles' song.

Because of such evidence, many scientists think that the earliest people lived in East Africa. Later, their descendants may have migrated north and east into Europe and Asia. In time, people reached the Americas, Australia, and the islands of the Pacific.

Hunters and Food Gatherers Paleolithic people lived in small hunting and food-gathering bands numbering about 20 or 30 people. Everyone contributed to feeding the group. In general, men hunted or fished. Women, with their small children, gathered berries, fruit, nuts, wild grain, roots, or even shellfish. This food kept the band alive when game was scarce. Paleolithic people were **nomads**, moving from place to place as they followed game animals and ripening fruit.

Biography



Louis Leakey 1903–1972

No one who heard Louis Leakey talk about Africa ever forgot it. "He cast a spell," recalled Donald Johanson, "making each listener believe he was speaking only to him or her." Leakey's enthusiasm inspired a whole generation of anthropologists.

Born in Kenya, Leakey began looking for early human remains in East Africa. He and his wife, Mary, found many tools, bones, and other artifacts. Even while working as a spy during World War II, Leakey continued digging in his free time. In later life, he traveled all over the world, lecturing and raising funds for new research projects.

Theme: Impact of the Individual Why might someone devote his or her life to studying human origins?



Primary Source

Art in a Cave

An artist describes seeing cave paintings near Lascaux, France:

"I left the wonderful cave of Lascaux feeling slightly dazed. In such a short time it was not possible to absorb fully the hundreds of painted animals that appeared to prance over the calcite-covered walls and ceilings. Heavy bulls—over sixteen feet long—jostled for space with tiny deer. Leaping cows straddled groups of small ponies, and ibex butted one another like animated bookends. Rounding a sharp corner, I was suddenly confronted by two large black bison, shown rushing away in opposite directions. In the stillness, one could almost hear the animals' stampeding hooves as they hurried to escape capture."

—Douglas Mazonowicz,
Voices From the Stone Age

Skills Assessment

Primary Source How does this artist's description of the Lascaux cave paintings convey a sense of excitement?

People depended wholly on their environment for survival. At the same time, they found ways to adapt to their surroundings. They made simple tools and weapons out of the materials at hand—stone, bone, or wood. At some point, Stone Age people developed spoken language, which let them cooperate during the hunt and perhaps discuss plans for the future.

Still, prehistoric people faced severe challenges from the environment. During several ice ages, the Earth cooled. Thick **glaciers**, or sheets of ice, spread across parts of Asia, Europe, and North America. To endure the cold, Paleolithic people invented clothing. Wrapped in animal skins, they took refuge in caves or under rocky overhangs during the long winters. They also learned to build fires for warmth and cooking. In this harsh life, only the hardy survived.

Early Religious Beliefs

About 30,000 years ago, people began to leave evidence of their belief in a spiritual world. To them, the world was full of spirits and forces that might reside in animals, objects, or dreams. Such beliefs are known as **animism**.

In France, Spain, and northern Africa, cave or rock paintings vividly portray animals such as deer, horses, and buffaloes. Some cave paintings show stick-figure people, too. The paintings often lie deep in the caves, far from a band's living quarters. Cave paintings may have been part of animist religious rituals in which hunters sought help from the spirit world for success in an upcoming hunt.

Archaeologists have also found small stone statues that probably had religious meaning. Statues of pregnant women, for example, may have been symbols meant to ensure survival of the band. They suggest that early people worshiped earth-mother goddesses, givers of food and life.

Toward the end of the Old Stone Age, some people began burying their dead with great care. This practice suggests a belief in life after death. They probably believed the afterlife would be similar to life in this world, so they provided the dead with tools, weapons, and other needed goods. Burial customs like these survived in many places into modern times.

The Neolithic Agricultural Revolution

About 11,000 years ago, nomadic bands made a breakthrough that had far-reaching effects. They learned to farm. By producing their own food, they could remain in one place. Farmers thus settled into permanent villages and developed a new range of skills and tools. This change from nomadic to settled farming life ushered in the New Stone Age, or Neolithic age.

The First Farmers No one knows when and how people began to plant seeds for food. Some scholars think that, in the Eastern Hemisphere, farming started in the Middle East and then spread. Others argue that farming developed independently in different regions. No matter which way it occurred, the change had such dramatic effects that historians call it the Neolithic agricultural revolution.

Food-gathering women may have been the first to notice that if seeds were scattered on the ground, new plants would grow the next year. They may also have seen that removing some plants enabled nearby ones to grow stronger. If game animals were scarce, a band might camp at a place where plants grew and begin cultivating them season after season.

The Neolithic revolution included a second feature. People learned to **domesticate**, or tame, some of the animals they had once hunted. Rather than wait for migrating animals to return each year, hunters rounded them up. Then they herded the animals to good grasslands or penned them in rough enclosures. The animals provided people with a source of protein.

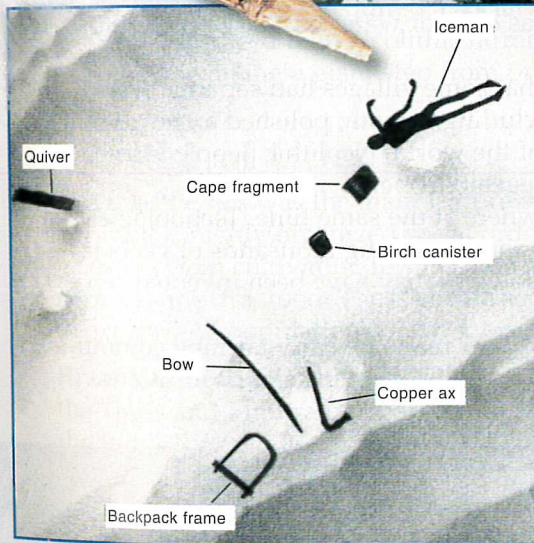


Analyzing Primary Sources

Clues to the Iceman Mystery

In 1991, hikers in the Alps stumbled upon a gruesome sight, a man's head and shoulders sticking out of the ice. Investigators soon discovered that the man had not died recently. In fact, the Iceman, as newspapers called him, had frozen to death more than 5,000 years earlier. Fascinated, scientists studied the Iceman and his belongings.

The Iceman and his possessions were preserved in a pocket of snow (right). The 4½-inch stone-and-wood dagger (below) was found near his body.



The Iceman's possessions, such as the bow and quiver shown on this diagram (left), give clues to his occupation. According to researcher Konrad Spindler, "In the high mountains, a shepherd would have to be armed with bow and arrow to defend himself from wild animals and human enemies, and also to secure food for himself."

Scientists were impressed by the complexity of the Iceman's ax. Its copper blade was bound onto a wooden handle with birch gum and leather.

Skills Assessment

- Based on its size and shape, the dagger that was found with the Iceman might have been used to
 - chop wood for fires.
 - cut up meat or vegetables.
 - kill large animals.
 - carve through solid rock.
- What conclusion can be made based on the discovery of the copper ax?
 - The Iceman used copper because stone was unavailable in the Alps.
 - People in the Alps knew how to mine and work with copper.
 - The early peoples of the Alps used copper for ornamental purposes.
 - Iron tools replaced copper tools.
- Critical Thinking Making Inferences** (a) Based on these artifacts, what can you infer about the Iceman's day-to-day life? (b) Consider the quality of workmanship of these artifacts. What does this tell you about the Iceman and the culture in which he lived?

Skills Tip

When using an artifact as a primary source, try to determine how that item might have been used at the time it was made.



Changing Ways of Life The Neolithic agricultural revolution enabled people to become food producers for the first time. It led to a growth in population, which in turn led to more interaction among human communities. No greater change in the way people lived took place until the Industrial Revolution of the late 1700s.

Like their Paleolithic ancestors, early farmers still divided up the work by gender and age. Still, important differences began to emerge. In settled farming communities, the status of women declined as 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 both women and other men. These changes did not mean that women lost all their influence or rights. Rather, they show that village life was reshaping the roles of both women and men.

Settled people had more personal property than their nomadic ancestors. Some people accumulated more possessions than their neighbors, so differences in wealth appeared. Yet big differences among social classes did not exist at this time.

Early Calendars

From the Stone Age on, different cultures developed calendars based on the cycles of the sun and the moon. These calendars were created by the Aztecs of Mexico (top) and the Babylonians of the Middle East (bottom).

Theme: Economics and Technology Why was it important for farming societies to create calendars?

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 so that they would know when to plant and harvest. Gradually, they created the first calendars. In some places, 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.

Inventions did not appear everywhere at the same time. Technologies might travel slowly from one area to another, taking thousands of years to spread across continents. Other technologies may have been invented separately in different parts of the world.

By about 5,000 years ago, the advances made by early farming communities led to a new stage of development—the emergence of civilizations.

SECTION 2 Assessment

Recall

- Identify:** (a) Paleolithic age, (b) Mary and Louis Leakey, (c) Neolithic age.
- Define:** (a) nomad, (b) glacier, (c) animism, (d) domesticate.

Comprehension

- How did Paleolithic people learn to adapt to their environment?
- What do burial customs suggest about the beliefs of early peoples?
- (a) What were the key features of the Neolithic agricultural revolution? (b) How did it change people's lives?

Critical Thinking and Writing

- Recognizing Causes and Effects** (a) Why would economic scarcity often lead to increased warfare between farming communities? (b) How do you think economic scarcity and warfare changed the status of women in Stone Age societies?
- Connecting to Geography** Why would geography probably have played a more important role in the lives of people during the Old Stone Age than it plays in your life today?



Activity

Take It to the NET

Use Internet sources to find out more about prehistoric cave paintings. Then, use the information to write a talk that a tour guide might give to visitors. Include the location of the caves, interesting features about the paintings, and information about the people who made them.