SECTION 2

Egyptian wooden model of an agricultural scene from about 2000 B.C.

WITNESS HISTORY AUDIO

The World's First Revolution

"For hundreds of thousands of years, [man] had lived on wild foods, as a hunter and gatherer. . . . The revolutionary step forward was the discovery that wild grains could be cultivated and made more productive, and wild animals herded and their products made constantly available. With this discovery, the growth of fixed settlements became possible. . . . From this, all civilisation is derived."

—Kathleen Kenyon, archaeologist

Focus Question How was the introduction of agriculture a turning point in prehistory?

Turning Point: The Neolithic Revolution

Objectives

- Describe the skills and beliefs that early modern humans developed during the Old Stone Age.
- Analyze why the beginning of farming is considered the start of the New Stone Age and the Neolithic Revolution.
- Explain how the Neolithic Revolution dramatically changed the way people lived.

Terms, People, and Places

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

Note Taking

Reading Skill: Summarize Use the chart below to summarize the eras of prehistory before and after the introduction of agriculture.

Eras of Prehistory	
Life Before Farming	Life After Farming
•	•
•	•
•	•

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.

Skills and Beliefs of the Old Stone Age

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.

Humans Develop 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

INFOGRAPHIC

Techniques for Making Stone Tools

Archaeologists have discovered vast quantities of stone tools and artifacts related to their creation. Hominids made many early tools from stones such as flint that are relatively easy to shape by chipping off flakes of the stone. Once chipped, these stones have very sharp edges. Even stone tools from locations very far apart were made in similar sizes and shapes and with similar techniques.

Oldowan Choppers and Flakes*
2.6–1.2 million years ago
Toolmakers chipped a few flakes off a stone to create a sharp-edged chopper. They often also used the flakes for scraping and cutting.

Acheulian Hand Axes
1.5 million–200,000 years ago Toolmakers chipped flakes off both sides of a stone and then shaped it into an oval with two straight, sharp edges.

Levallois Axes*
200,000–35,000 years ago
Toolmakers chipped sharp edges all around a stone. Then they knocked off one large flake that was thick in the center and sharp all around.

*Images are about 60 percent of actual size.

Creating any type of stone tool required patience, skill, strength, and a number of other tools.

Using a hard stone, the toolmaker strikes flakes off another stone to create the rough shape of an Acheulian ax.

The toolmaker uses a piece of bone to carefully refine the tool's shape.

Using a small chisel, the toolmaker chips the final flakes off the stone.

Thinking Critically

1. **Make Comparisons** How were the Acheulian hand axes and the Levallois axes similar? How were they different?
2. **Make Inferences** What can we infer about hominids communication skills from the stone tools they made?

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.

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.

Clues About 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.

Checkpoint **What skills did Old Stone Age people develop in order to adapt their surroundings to their needs?**

The New Stone Age Begins With Farming

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.**

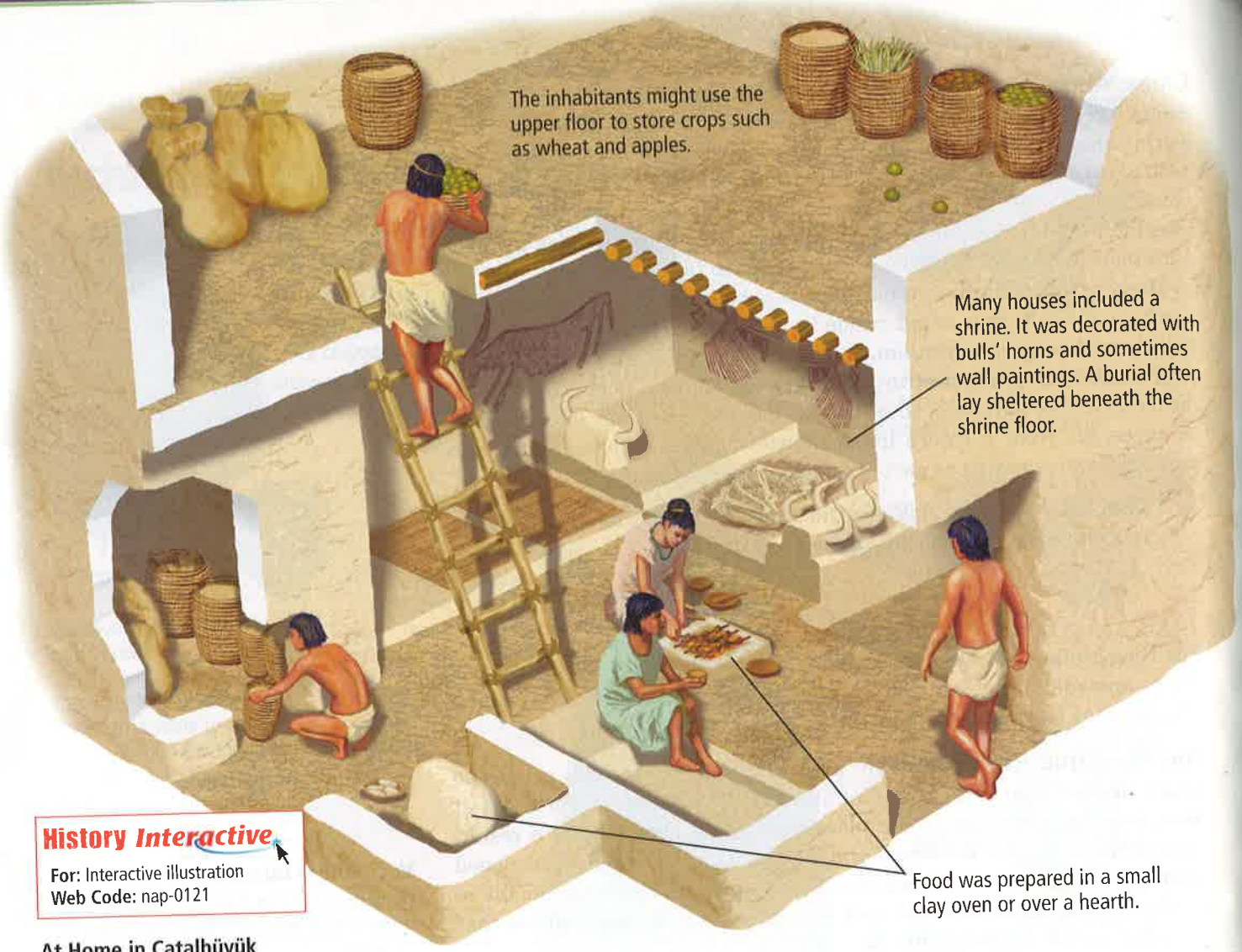
Vocabulary Builder
transition—(tran ZISH un) *n.* process of undergoing a change from one stage to another

People Domesticate 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.

Checkpoint **What major lifestyle changes did farming allow people to make?**

World's First Domesticated Animal
About 10,000 years after people first domesticated dogs, people in some cultures began depicting dogs in their artwork. Around 2000 B.C., an artist from Mesopotamia created this stone sculpture of a dog, which is covered in ancient writing.



History Interactive

For: Interactive illustration
Web Code: nap-0121

At Home in Çatalhüyük
Archaeologists have studied the ruins of Çatalhüyük to learn about the village's houses. They think people entered a house through a hole in its roof. *Based on the illustration, what evidence do you think archaeologists used to learn about the interior of the houses?*

The Neolithic Revolution Brings Dramatic Change

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.

Earliest Villages Established 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. 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.

Villagers Invent 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. As well, 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.

Checkpoint **What new technologies did people invent as a result of agriculture?**

SECTION 2 Assessment

Progress Monitoring *Online*
For: Self-quiz with vocabulary practice
Web Code: naa-0121

Terms, People, and Places

1. What do many of the key terms listed at the beginning of the section have in common? Explain.

Note Taking

2. **Reading Skill: Summarize** Use your completed chart to answer the Focus Question: How was the introduction of agriculture a turning point in prehistory?

Comprehension and Critical Thinking

3. **Predict Consequences** How do you think the development of spoken language influenced people's development of skills and religious beliefs?
4. **Determine Relevance** How are our lives today affected by the Neolithic Revolution that occurred 11,000 years ago?
5. **Make Comparisons** How was settled village life different from nomadic life? Consider population size, social status, and technology in your answer.

Writing About History

Quick Write: Gather Information
Choose a topic from this section to write a research report about and gather sources related to it. Your sources may include books, magazines, and the Internet. For example, on the topic of cave paintings, you might locate the following:

- a magazine article that describes and shows photographs of the paintings in a particular cave
- a book that compares Stone Age cave paintings from different regions