

# Early River Valley Civilizations, 3500 B.C.–450 B.C.

## Previewing Main Ideas

**INTERACTION WITH ENVIRONMENT** The earliest civilizations formed on fertile river plains. These lands faced challenges, such as seasonal flooding and a limited growing area.

**Geography** *What rivers helped sustain the four river valley civilizations?*

**POWER AND AUTHORITY** Projects such as irrigation systems required leadership and laws—the beginnings of organized government. In some societies, priests controlled the first governments. In others, military leaders and kings ruled.

**Geography** *Look at the time line and the map. In which empire and river valley area was the first code of laws developed?*

**SCIENCE AND TECHNOLOGY** Early civilizations developed bronze tools, the wheel, the sail, the plow, writing, and mathematics. These innovations spread through trade, wars, and the movement of peoples.

**Geography** *Which river valley civilization was the most isolated? What factors contributed to that isolation?*

### INTEGRATED TECHNOLOGY

#### eEdition

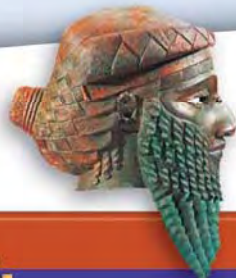
- Interactive Maps
- Interactive Visuals
- Interactive Primary Sources



#### INTERNET RESOURCES

Go to [classzone.com](http://classzone.com) for:

- Research Links
- Internet Activities
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- Maps
- Test Practice
- Current Events



**3000 B.C.**

◀ City-states form in Sumer, Mesopotamia. (bronze head of an Akkadian ruler)

**WORLD**

**3500 B.C.**

**2500 B.C.**



**2660 B.C.**

◀ Egypt's Old Kingdom develops. (Egyptian scribe statue)



# Four River Valley Civilizations



**1792 B.C.**  
Hammurabi develops code of laws for Babylonian Empire.

**1027 B.C.**  
Zhou Dynasty forms in China. (Zhou bronze vessel) ▶



**1500 B.C.**

**500 B.C.**



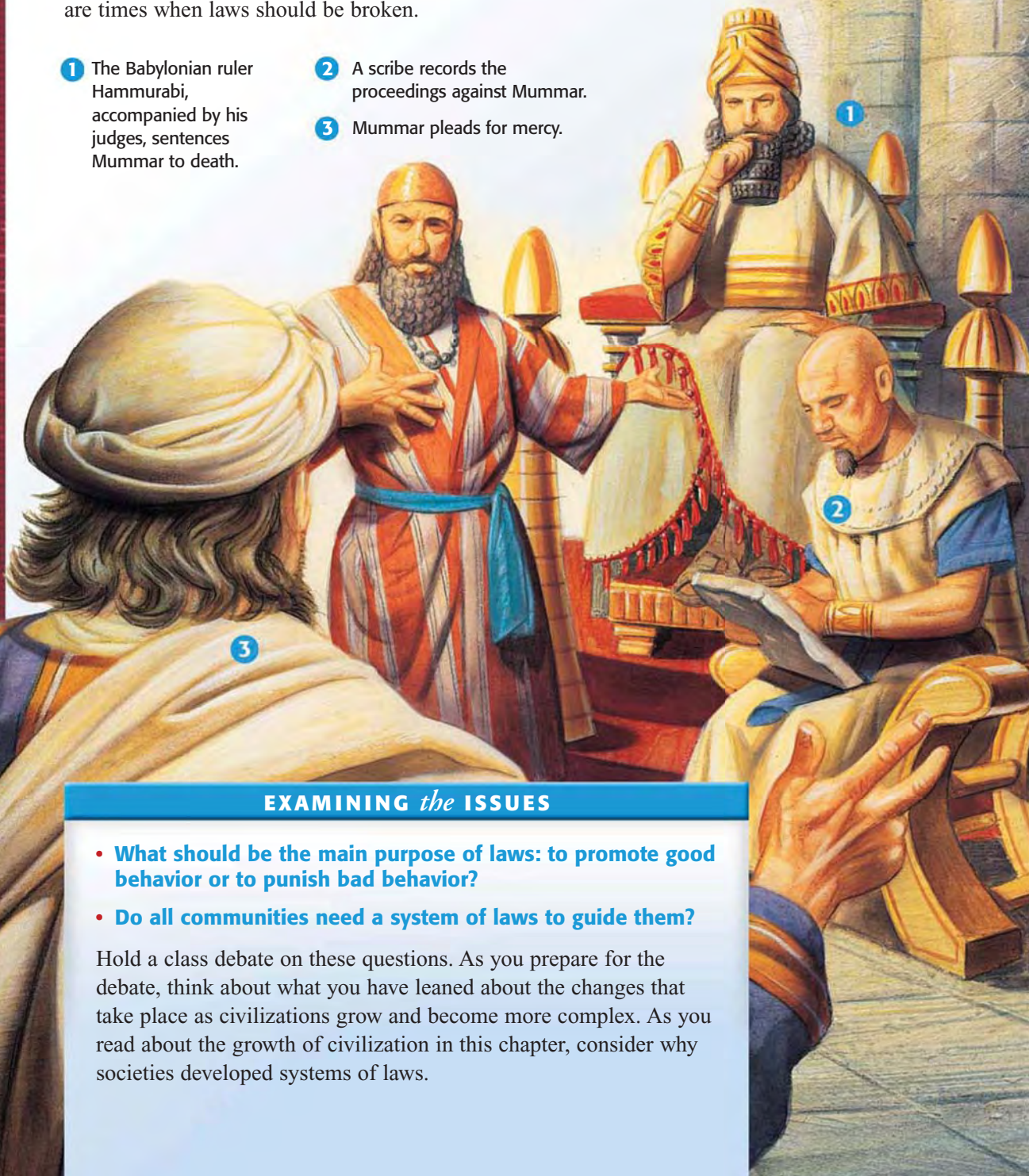
**1750 B.C.**  
◀ Indus Valley civilization declines. (fragment of a Harappan pot)

## Why do communities need laws?

The harvest has failed and, like many others, you have little to eat. There are animals in the temple, but they are protected by law. Your cousin decides to steal one of the pigs to feed his family. You believe that laws should not be broken and try to persuade him not to steal the pig. But he steals the pig and is caught.

The law of the Babylonian Empire—Hammurabi’s Code—holds people responsible for their actions. Someone who steals from the temple must repay 30 times the cost of the stolen item. Because your cousin is unable to pay this fine, he is sentenced to death. You begin to wonder whether there are times when laws should be broken.

- 1 The Babylonian ruler Hammurabi, accompanied by his judges, sentences Mummar to death.
- 2 A scribe records the proceedings against Mummar.
- 3 Mummar pleads for mercy.



### EXAMINING *the* ISSUES

- **What should be the main purpose of laws: to promote good behavior or to punish bad behavior?**
- **Do all communities need a system of laws to guide them?**

Hold a class debate on these questions. As you prepare for the debate, think about what you have learned about the changes that take place as civilizations grow and become more complex. As you read about the growth of civilization in this chapter, consider why societies developed systems of laws.



# City-States in Mesopotamia

## MAIN IDEA

**INTERACTION WITH ENVIRONMENT** The earliest civilization in Asia arose in Mesopotamia and organized into city-states.

## WHY IT MATTERS NOW

The development of this civilization reflects a settlement pattern that has occurred repeatedly throughout history.

## TERMS & NAMES

- Fertile Crescent
- Mesopotamia
- city-state
- dynasty
- cultural diffusion
- polytheism
- empire
- Hammurabi

**SETTING THE STAGE** Two rivers flow from the mountains of what is now Turkey, down through Syria and Iraq, and finally to the Persian Gulf. Over six thousand years ago, the waters of these rivers provided the lifeblood that allowed the formation of farming settlements. These grew into villages and then cities.

## Geography of the Fertile Crescent

A desert climate dominates the landscape between the Persian Gulf and the Mediterranean Sea in Southwest Asia. Yet within this dry region lies an arc of land that provided some of the best farming in Southwest Asia. The region's curved shape and the richness of its land led scholars to call it the **Fertile Crescent**. It includes the lands facing the Mediterranean Sea and a plain that became known as **Mesopotamia** (MEHS•uh•puh•TAY•mee•uh). The word in Greek means "land between the rivers."

The rivers framing Mesopotamia are the Tigris (TY•grihs) and Euphrates (yoo•FRAY•teez). They flow southeastward to the Persian Gulf. (See the map on page 30.) The Tigris and Euphrates rivers flooded Mesopotamia at least once a year. As the floodwater receded, it left a thick bed of mud called silt. Farmers planted grain in this rich, new soil and irrigated the fields with river water. The results were large quantities of wheat and barley at harvest time. The surpluses from their harvests allowed villages to grow.

**Environmental Challenges** People first began to settle and farm the flat, swampy lands in southern Mesopotamia before 4500 B.C. Around 3300 B.C., the people called the Sumerians, whom you read about in Chapter 1, arrived on the scene. Good soil was the advantage that attracted these settlers. However, there were three disadvantages to their new environment.

- Unpredictable flooding combined with a period of little or no rain. The land sometimes became almost a desert.
- With no natural barriers for protection, a Sumerian village was nearly defenseless.
- The natural resources of Sumer were limited. Building materials and other necessary items were scarce.

## TAKING NOTES

**Identifying Problems and Solutions** Use a chart to identify Sumer's environmental problems and their solutions.

Problems	Solutions
1.	1.
2.	2.
3.	3.

## The Fertile Crescent, 2500 B.C.



### Present-day Persian Gulf

In 2500 B.C., the Persian Gulf was larger than it is today. Over time the Tigris and Euphrates have joined together and filled in this shallow area. The ancient coastline is shown above with a blue line.

### GEOGRAPHY SKILLBUILDER: Interpreting Maps

- 1. Location** Where are the Tigris and Euphrates River valleys found?
- 2. Place** What is the most likely cause of the change in the Persian Gulf coastline?

**Solving Problems Through Organization** Over a long period of time, the people of Sumer created solutions to deal with these problems.

- To provide water, they dug irrigation ditches that carried river water to their fields and allowed them to produce a surplus of crops.
- For defense, they built city walls with mud bricks.
- Sumerians traded their grain, cloth, and crafted tools with the peoples of the mountains and the desert. In exchange, they received raw materials such as stone, wood, and metal.

These activities required organization, cooperation, and leadership. It took many people working together, for example, for the Sumerians to construct their large irrigation systems. Leaders were needed to plan the projects and supervise the digging. These projects also created a need for laws to settle disputes over how land and water would be distributed. These leaders and laws were the beginning of organized government—and eventually of civilization. **A**

### MAIN IDEA

#### Summarizing

**A** What are three solutions to the environmental challenges of Mesopotamia?

## Sumerians Create City-States

The Sumerians stand out in history as one of the first groups of people to form a civilization. As you learned in Chapter 1, five key characteristics set Sumer apart from earlier human societies: (1) advanced cities, (2) specialized workers, (3) complex institutions, (4) record keeping, and (5) improved technology. All the later peoples who lived in this region of the world built upon the innovations of Sumerian civilization.

By 3000 B.C., the Sumerians had built a number of cities, each surrounded by fields of barley and wheat. Although these cities shared the same culture, they developed their own governments, each with its own rulers. Each city and the surrounding land it controlled formed a **city-state**. A city-state functioned much as an independent country does today. Sumerian city-states included Uruk, Kish, Lagash, Umma, and Ur. As in Ur, the center of all Sumerian cities was the walled temple with a ziggurat in the middle. There the priests and rulers appealed to the gods for the well-being of the city-state.

**Priests and Rulers Share Control** Sumer's earliest governments were controlled by the temple priests. The farmers believed that the success of their crops depended upon the blessings of the gods, and the priests acted as go-betweens with the gods. In addition to being a place of worship, the ziggurat was like a city hall. (See page 22 for a ziggurat.) From the ziggurat the priests managed the irrigation system. Priests demanded a portion of every farmer's crop as taxes.

In time of war, however, the priests did not lead the city. Instead, the men of the city chose a tough fighter who could command the city's soldiers. At first, a commander's power ended as soon as the war was over. After 3000 B.C., wars between cities became more and more frequent. Gradually, Sumerian priests and people gave commanders permanent control of standing armies. **B**

In time, some military leaders became full-time rulers. These rulers usually passed their power on to their sons, who eventually passed it on to their own heirs. Such a series of rulers from a single family is called a **dynasty**. After 2500 B.C., many Sumerian city-states came under the rule of dynasties.

**The Spread of Cities** Sumer's city-states grew prosperous from the surplus food produced on their farms. These surpluses allowed Sumerians to increase long-distance trade, exchanging the extra food and other goods for items they needed.

By 2500 B.C., new cities were arising all over the Fertile Crescent, in what is now Syria, northern Iraq, and Turkey. Sumerians exchanged products and ideas, such as living in cities, with neighboring cultures. This process in which a new idea or a product spreads from one culture to another is called **cultural diffusion**.

## Sumerian Culture

The belief systems, social structure, technology, and arts of the Sumerians reflected their civilization's triumph over its dry and harsh environment.

**A Religion of Many Gods** Like many peoples in the Fertile Crescent, the Sumerians believed that many different gods controlled the various forces in nature. The belief in more than one god is called **polytheism** (PAHL•ee•thee•IHZ•uhm). Enlil, the god of storms and air, was among the most powerful gods. Sumerians feared him as "the raging flood that has no rival." Demons known as Ugallu protected humans from the evil demons who caused disease, misfortune, and misery.

Sumerians described their gods as doing many of the same things humans do—falling in love, having children, quarreling, and so on. Yet the Sumerians also believed that their gods were both immortal and all-powerful. Humans were nothing but their servants. At any moment, the mighty anger of the gods might strike, sending a fire, a flood, or an enemy to destroy a city. To keep the gods happy, the

▼ Iku-Shamagen, King of Mari, a city-state in Sumer, offers prayers to the gods.



### MAIN IDEA

#### Analyzing Causes

**B** How did military leaders gain power in the city-states?



▲ This gold and lapis ram with a shell fleece was found in a royal burial tomb.

Sumerians built impressive ziggurats for them and offered rich sacrifices of animals, food, and wine.

Sumerians worked hard to earn the gods' protection in this life. Yet they expected little help from the gods after death. The Sumerians believed that the souls of the dead went to the "land of no return," a dismal, gloomy place between the earth's crust and the ancient sea. No joy awaited souls there. A passage in a Sumerian poem describes the fate of dead souls: "Dust is their fare and clay their food."

Some of the richest accounts of Mesopotamian myths and legends appear in a long poem called the *Epic of Gilgamesh*. (See a selection from the Gilgamesh epic on page 83.)

**Life in Sumerian Society** With civilization came the beginning of what we call social classes. Kings, landholders, and some priests made up the highest level in Sumerian society. Wealthy merchants ranked next. The vast majority of ordinary Sumerian people worked with their hands in fields and workshops. At the lowest level of Sumerian society were the slaves. Some slaves were foreigners who had been captured in war. Others were Sumerians who had been sold into slavery as children to pay the debts of their poor parents. Debt slaves could hope to eventually buy their freedom.

Social class affected the lives of both men and women.

Sumerian women could work as merchants, farmers, or artisans. They could hold property in their own names. Women could also join the priesthood. Some upper-class women did learn to read and write, though Sumer's written records mention few female scribes. However, Sumerian women had more rights than women in many later civilizations.

**Sumerian Science and Technology** Historians believe that Sumerians invented the wheel, the sail, and the plow and that they were among the first to use bronze. Many new ideas and inventions arose from the Sumerians' practical needs.

- **Arithmetic and geometry** In order to erect city walls and buildings, plan irrigation systems, and survey flooded fields, Sumerians needed arithmetic and geometry. They developed a number system in base 60, from which stem the modern units for measuring time (60 seconds = 1 minute) and the 360 degrees of a circle.
- **Architectural innovations** Arches, columns, ramps, and the pyramid shaped the design of the ziggurat and permanently influenced Mesopotamian civilization.
- **Cuneiform** Sumerians created a system of writing. One of the first known maps was made on a clay tablet in about 2300 B.C. Other tablets contain some of the oldest written records of scientific investigations in the areas of astronomy, chemistry, and medicine.

## The First Empire Builders

From 3000 to 2000 B.C., the city-states of Sumer were almost constantly at war with one another. The weakened city-states could no longer ward off attacks from the peoples of the surrounding deserts and hills. Although the Sumerians never recovered from the attacks on their cities, their civilization did not die. Succeeding sets of rulers adapted the basic ideas of Sumerian culture to meet their own needs.

### Vocabulary

*epic*: a long heroic poem that tells the story of a historical or legendary figure

**Sargon of Akkad** About 2350 B.C., a conqueror named Sargon defeated the city-states of Sumer. Sargon led his army from Akkad (AK•ad), a city-state north of Sumer. The Akkadians had long before adopted most aspects of Sumerian culture. Sargon's conquests helped to spread that culture even farther, beyond the Tigris-Euphrates Valley.

By taking control of both northern and southern Mesopotamia, Sargon created the world's first **empire**. An empire brings together several peoples, nations, or previously independent states under the control of one ruler. At its height, the Akkadian Empire loosely controlled land from the Mediterranean Coast in the west to present-day Iran in the east. Sargon's dynasty lasted only about 200 years, after which it declined due to internal fighting, invasions, and a famine. 🕒

**MAIN IDEA**

**Contrasting**

🕒 How does an empire differ from a city-state?

**Babylonian Empire** In about 2000 B.C., nomadic warriors known as Amorites invaded Mesopotamia. Gradually, the Amorites overwhelmed the Sumerians and established their capital at Babylon, on the Euphrates River. The Babylonian Empire reached its peak during the reign of **Hammurabi**, from 1792 B.C. to 1750 B.C. Hammurabi's most enduring legacy is the code of laws he put together.

**Hammurabi's Code** Hammurabi recognized that a single, uniform code of laws would help to unify the diverse groups within his empire. He collected existing rules, judgments, and laws into the Code of Hammurabi. Hammurabi had the code engraved in stone, and copies were placed all over his empire.

**> Analyzing Primary Sources**

**Hammurabi's Code of Laws**

The image at the right shows the top of a pillar that had Hammurabi's Code engraved on it. Hammurabi's law code prescribed punishments ranging from fines to death. Often the punishments were based on the social class of the victim. Here are some examples of the laws:

**PRIMARY SOURCE**

- 8. If a man has stolen an ox, a sheep, a pig, or a boat that belonged to a temple or palace, he shall repay thirty times its cost. If it belonged to a private citizen, he shall repay ten times. If the thief cannot pay, he shall be put to death.
- 142. If a woman hates her husband and says to him "You cannot be with me," the authorities in her district will investigate the case. If she has been chaste and without fault, even though her husband has neglected or belittled her, she will be held innocent and may return to her father's house.
- 143. If the woman is at fault, she shall be thrown into the river.
- 196. If a man put out the eye of another man, his eye shall be put out.
- 198. If he puts out the eye of freed man or break the bone of a free man, he shall pay one gold mina.
- 199. If he put out the eye of a man's slave, or break the bone of a man's slave, he shall pay one-half of its value.

**CODE OF HAMMURABI**, adapted from a translation by L. W. King



**DOCUMENT-BASED QUESTIONS**

- 1. **Making Inferences** Why might the punishments for the crimes be based on social class?
- 2. **Forming Opinions** What do you think the value was in making the punishments for the crimes known to all?



## History Makers



**Hammurabi**  
? –1750 B.C.

The noted lawgiver Hammurabi was also an able military leader, diplomat, and administrator of a vast empire. Hammurabi himself described some of his accomplishments:

*As for the land of Sumer and Akkad, I collected the scattered peoples thereof, and I procured food and drink for them. In abundance and plenty I pastured them, and I caused them to dwell in peaceful habitation.*

### INTEGRATED TECHNOLOGY

**RESEARCH LINKS** For more on Hammurabi, go to [classzone.com](http://classzone.com)

The code lists 282 specific laws dealing with everything that affected the community, including family relations, business conduct, and crime. Since many people were merchants, traders, or farmers, for example, many of the laws related to property issues. Additionally, the laws sought to protect women and children from unfair treatment. The laws tell us a great deal about the Mesopotamians' beliefs and what they valued.

Although the code applied to everyone, it set different punishments for rich and poor and for men and women. It frequently applied the principle of retaliation (an eye for an eye and a tooth for a tooth) to punish crimes.

The prologue of the code set out the goals for this body of law. It said, "To bring about the rule of righteousness in the land, to destroy the wicked and the evil-doers; so that the strong should not harm the weak." Thus, Hammurabi's Code reinforced the principle that government had a responsibility for what occurred in society. For example, if a man was robbed and the thief was not caught, the government was required to compensate the victim. **D**

Nearly two centuries after Hammurabi's reign, the Babylonian Empire, which had become much smaller, fell to the neighboring Kassites. Over the years, new groups dominated the Fertile Crescent. Yet the later peoples, including the Assyrians, Phoenicians, and Hebrews, would adopt many ideas of the early Sumerians. Meanwhile, a similar pattern of development, rise, and fall was taking place to the west, along the Nile River in Egypt. Egyptian civilization is described in Section 2.

### MAIN IDEA

#### Recognizing Effects

**D** How did Hammurabi's law code advance civilization?

## SECTION 1 ASSESSMENT

**TERMS & NAMES** 1. For each term or name, write a sentence explaining its significance.

- Fertile Crescent
- Mesopotamia
- city-state
- dynasty
- cultural diffusion
- polytheism
- empire
- Hammurabi

### USING YOUR NOTES

2. Which of the problems you listed required the most complex solution? Explain.

Problems	Solutions
1.	1.
2.	2.
3.	3.

### MAIN IDEAS

3. What were the three environmental challenges to Sumerians?
4. How did the Sumerians view the gods?
5. What areas of life did Hammurabi's Code cover?

### CRITICAL THINKING & WRITING

6. **DETERMINING MAIN IDEAS** How was Sumerian culture spread throughout Mesopotamia?
7. **RECOGNIZING EFFECTS** Why is the development of a written code of laws important to a society?
8. **ANALYZING CAUSES** How did the need to interact with the environment lead to advances in civilization?
9. **WRITING ACTIVITY** **POWER AND AUTHORITY** What advantages did living in cities offer the people of ancient Mesopotamia? Do modern cities offer any of the same advantages? Write a **compare-and-contrast essay** supporting your answer with references to the text.

### CONNECT TO TODAY WRITING A STATUS REPORT

Research the South East Anatolian Water Project in Turkey. The project will place dams on the Tigris and Euphrates rivers. Create a **map** and write a **status report** that summarizes the current status of the project.

# Pyramids on the Nile

## MAIN IDEA

### SCIENCE AND TECHNOLOGY

Using mathematical knowledge and engineering skills, Egyptians built magnificent monuments to honor dead rulers.

## WHY IT MATTERS NOW

Many of the monuments built by the Egyptians stand as a testament to their ancient civilization.

## TERMS & NAMES

- delta
- Narmer
- pharaoh
- theocracy
- pyramid
- mummification
- hieroglyphics
- papyrus

**SETTING THE STAGE** To the west of the Fertile Crescent in Africa, another river makes its way to the sea. While Sumerian civilization was on the rise, a similar process took place along the banks of this river, the Nile in Egypt. Yet the Egyptian civilization turned out to be very different from the collection of city-states in Mesopotamia. Early on, Egypt was united into a single kingdom, which allowed it to enjoy a high degree of unity, stability, and cultural continuity over a period of 3,000 years.

## The Geography of Egypt

From the highlands of East Africa to the Mediterranean Sea, the Nile River flows northward across Africa for over 4,100 miles, making it the longest river in the world. (See the map on page 36.) A thin ribbon of water in a parched desert land, the great river brings its water to Egypt from distant mountains, plateaus, and lakes in present-day Burundi, Tanzania, Uganda, and Ethiopia.

Egypt's settlements arose along the Nile on a narrow strip of land made fertile by the river. The change from fertile soil to desert—from the Black Land to the Red Land—was so abrupt that a person could stand with one foot in each.

**The Gift of the Nile** As in Mesopotamia, yearly flooding brought the water and rich soil that allowed settlements to grow. Every year in July, rains and melting snow from the mountains of east Africa caused the Nile River to rise and spill over its banks. When the river receded in October, it left behind a rich deposit of fertile black mud called silt.

Before the scorching sun could dry out the soil, the peasants would prepare their wheat and barley fields. All fall and winter they watered their crops from a network of irrigation ditches.

In an otherwise parched land, the abundance brought by the Nile was so great that the Egyptians worshiped it as a god who gave life and seldom turned against them. As the ancient Greek historian Herodotus (hih•RAHD•uh•tuhs) remarked in the fifth century B.C., Egypt was the “gift of the Nile.”

**Environmental Challenges** Egyptian farmers were much more fortunate than the villagers of Mesopotamia. Compared to the unpredictable Tigris and Euphrates rivers, the Nile was as regular as clockwork. Even so, life in Egypt had its risks.

## TAKING NOTES

**Summarizing** Use a web diagram to summarize Egyptian achievements.





**The Mighty Nile**

The Landsat image (left) shows the Nile flowing into its delta. An outline of the continental United States (below) shows the length of the Nile's course. The actual length of the Nile with all its twists and turns is more than 4,100 miles.

**GEOGRAPHY SKILLBUILDER: Interpreting Maps**

- 1. Movement** In which direction does the Nile flow?
- 2. Location** Describe the location of Upper Egypt and Lower Egypt.

- When the Nile's floodwaters were just a few feet lower than normal, the amount of fresh silt and water for crops was greatly reduced. Thousands of people starved.
- When floodwaters were a few feet higher than usual, the unwanted water destroyed houses, granaries, and the precious seeds that farmers needed for planting.
- The vast and forbidding deserts on either side of the Nile acted as natural barriers between Egypt and other lands. They forced Egyptians to live on a very small portion of the land and reduced interaction with other peoples.

However, the deserts shut out invaders. For much of its early history, Egypt was spared the constant warfare that plagued the Fertile Crescent. **A**

**Upper Egypt and Lower Egypt** Ancient Egyptians lived along the Nile from the mouth well into the interior of Africa. River travel was common, but it ended at the point in the Nile where boulders turn the river into churning rapids called a cataract (KAT•uh•rakt). This made it impossible for riverboats to pass this spot, known as the First Cataract, to continue upstream south to the interior of Africa.

Between the First Cataract and the Mediterranean lay two very different regions. Because its elevation is higher, the river area in the south is called Upper Egypt. It is a skinny strip of land from the First Cataract to the point where the river starts to fan out into many branches. To the north, near the sea, Lower Egypt includes the Nile **delta** region. The delta begins about 100 miles before the river enters the Mediterranean. The delta is a broad, marshy, triangular area of land formed by deposits of silt at the mouth of the river.

**MAIN IDEA**

**Contrasting**

**A** What was the main difference between the flooding of the Nile and that of the rivers in Mesopotamia?

The Nile provided a reliable system of transportation between Upper and Lower Egypt. The Nile flows north, so northbound boats simply drifted with the current. Southbound boats hoisted a wide sail. The prevailing winds of Egypt blow from north to south, carrying sailboats against the river current. The ease of contact made possible by this watery highway helped unify Egypt's villages and promote trade.

## Egypt Unites into a Kingdom

Egyptians lived in farming villages as far back as 5000 B.C., perhaps even earlier. Each village had its own rituals, gods, and chieftain. By 3200 B.C., the villages of Egypt were under the rule of two separate kingdoms, Lower Egypt and Upper Egypt. Eventually the two kingdoms were united. There is conflicting historical evidence over who united Upper and Lower Egypt. Some evidence points to a king called Scorpion. More solid evidence points to a king named **Narmer**.

The king of Lower Egypt wore a red crown, and the king of Upper Egypt wore a tall white crown shaped like a bowling pin. A carved piece of slate known as the Narmer Palette shows Narmer wearing the crown of Lower Egypt on one side and the crown of Upper Egypt on the other side. Some scholars believe the palette celebrates the unification of Egypt around 3000 B.C.

Narmer created a double crown from the red and white crowns. It symbolized a united kingdom. He shrewdly settled his capital, Memphis, near the spot where Upper and Lower Egypt met, and established the first Egyptian dynasty. Eventually, the history of ancient Egypt would consist of 31 dynasties, spanning 2,600 years. Historians suggest that the pattern for Egypt's great civilization was set during the period from 3200 to 2700 B.C. The period from 2660 to 2180 B.C., known as the Old Kingdom, marks a time when these patterns became widespread.

**Pharaohs Rule as Gods** The role of the king was one striking difference between Egypt and Mesopotamia. In Mesopotamia, kings were considered to be representatives of the gods. To the Egyptians, kings were gods. The Egyptian god-kings, called **pharaohs** (FAIR•ohz), were thought to be almost as splendid and powerful as the gods of the heavens. This type of government in which rule is based on religious authority is called a **theocracy**.

The pharaoh stood at the center of Egypt's religion as well as its government and army. Egyptians believed that the pharaoh bore full responsibility for the kingdom's well-being. It was the pharaoh who caused the sun to rise, the Nile to flood, and the crops to grow. It was the pharaoh's duty to promote truth and justice. **B**

**Builders of the Pyramids** Egyptians believed that their king ruled even after his death. He had an eternal life force, or *ka*, which continued to take part in the governing of Egypt. In the Egyptians' mind, the *ka* remained much like a living king in its needs and pleasures. Since kings expected to reign forever, their tombs were even more important than their palaces. For the kings of the Old Kingdom, the resting place after death was an immense structure called a **pyramid**. The Old Kingdom was the great age of pyramid building in ancient Egypt.

## Connect to Today

### Scorpion King

In 1999 Egyptologists discovered a series of carvings on a piece of rock about 18 by 20 inches. The tableau scene has symbols that may refer to a king named Scorpion.

The rock shows a figure carrying a staff. Near the head of the figure is a scorpion. Another artifact, a macehead, also shows a king with the scorpion symbol. Both artifacts suggest that Egyptian history may go back to around 3250 B.C. Some scholars believe the Scorpion is the earliest king to begin unification of Egypt, represented by the double crown shown below.



crown of  
Upper Egypt

crown of  
Lower Egypt

crown of Upper  
and Lower Egypt

### MAIN IDEA

#### Making Inferences

**B** Why were Egypt's pharaohs unusually powerful rulers?

These magnificent monuments were remarkable engineering achievements, built by people who had not even begun to use the wheel. Unlike the Sumerians, however, the Egyptians did have a good supply of stone, both granite and limestone. For the Great Pyramid of Giza, for example, the limestone facing was quarried just across the Nile. Each perfectly cut stone block weighed at least 2 1/2 tons. Some weighed 15 tons. More than 2 million of these blocks were stacked with precision to a height of 481 feet. The entire structure covered more than 13 acres.

The pyramids also reflect the strength of the Egyptian civilization. They show that Old Kingdom dynasties had developed the economic strength and technological means to support massive public works projects, as well as the leadership and government organization to carry them out.

## Egyptian Culture

With nature so much in their favor, Egyptians tended to approach life more confidently and optimistically than their neighbors in the Fertile Crescent. Religion played an important role in the lives of Egyptians.

**Religion and Life** Like the Mesopotamians, the early Egyptians were polytheistic, believing in many gods. The most important gods were Re, the sun god, and Osiris (oh•SY•rihs), god of the dead. The most important goddess was Isis, who represented the ideal mother and wife. In all, Egyptians worshiped more than 2,000 gods and goddesses. They built huge temples to honor the major deities.

In contrast to the Mesopotamians, with their bleak view of death, Egyptians believed in an afterlife, a life that continued after death. Egyptians believed they would be judged for their deeds when they died. Anubis, god and guide of the underworld, would weigh each dead person's heart. To win eternal life, the heart could be no heavier than a feather. If the heart tipped the scale, showing that it was heavy with sin, a fierce beast known as the Devourer of Souls would pounce on the impure heart and gobble it up. But if the soul passed this test for purity and truth, it would live forever in the beautiful Other World.

People of all classes planned for their burials, so that they might safely reach the Other World. Kings and queens built great tombs, such as the pyramids, and other Egyptians built smaller tombs. Royal and elite Egyptians' bodies were preserved by **mummification**, which involves embalming and drying the corpse to prevent it from decaying. Scholars still accept Herodotus's description of the process of mummification as one of the methods used by Egyptians.



### PRIMARY SOURCE

First, they draw out the brains through the nostrils with an iron hook. . . . Then with a sharp stone they make an incision in the side, and take out all the bowels. . . . Then, having filled the belly with pure myrrh, cassia, and other perfumes, they sew it up again; and when they have done this they steep it in natron [a mineral salt], leaving it under for 70 days. . . . At the end of 70 days, they wash the corpse, and wrap the whole body in bandages of waxen cloth.

HERODOTUS, *The History of Herodotus*


Attendants placed the mummy in a coffin inside a tomb. Then they filled the tomb with items the dead person could use in the afterlife, such as clothing, food, cosmetics, and jewelry. Many Egyptians purchased scrolls that contained hymns, prayers, and magic spells intended to guide the soul in the afterlife. This collection of texts is known as the *Book of the Dead*.

### Vocabulary

*deities*: gods or goddesses

### MAIN IDEA

#### Analyzing Primary Sources

 What does this description suggest about the Egyptians' knowledge of the human body?

## Pyramids and Mummies

Etched into some of the stones of the pyramids are the nicknames of the teams of workers who built them—"the Vigorous Gang," "the Enduring Gang," and "the Craftsman Gang," for example. Just as construction workers today leave their marks on the skyscrapers they build, the pyramid builders scratched messages for the ages inside the pyramids.

Who were the pyramid builders? Peasants provided most of the labor. They worked for the government when the Nile was in flood and they could not farm. In return for their service, though, the country provided the workers with food and housing during this period.



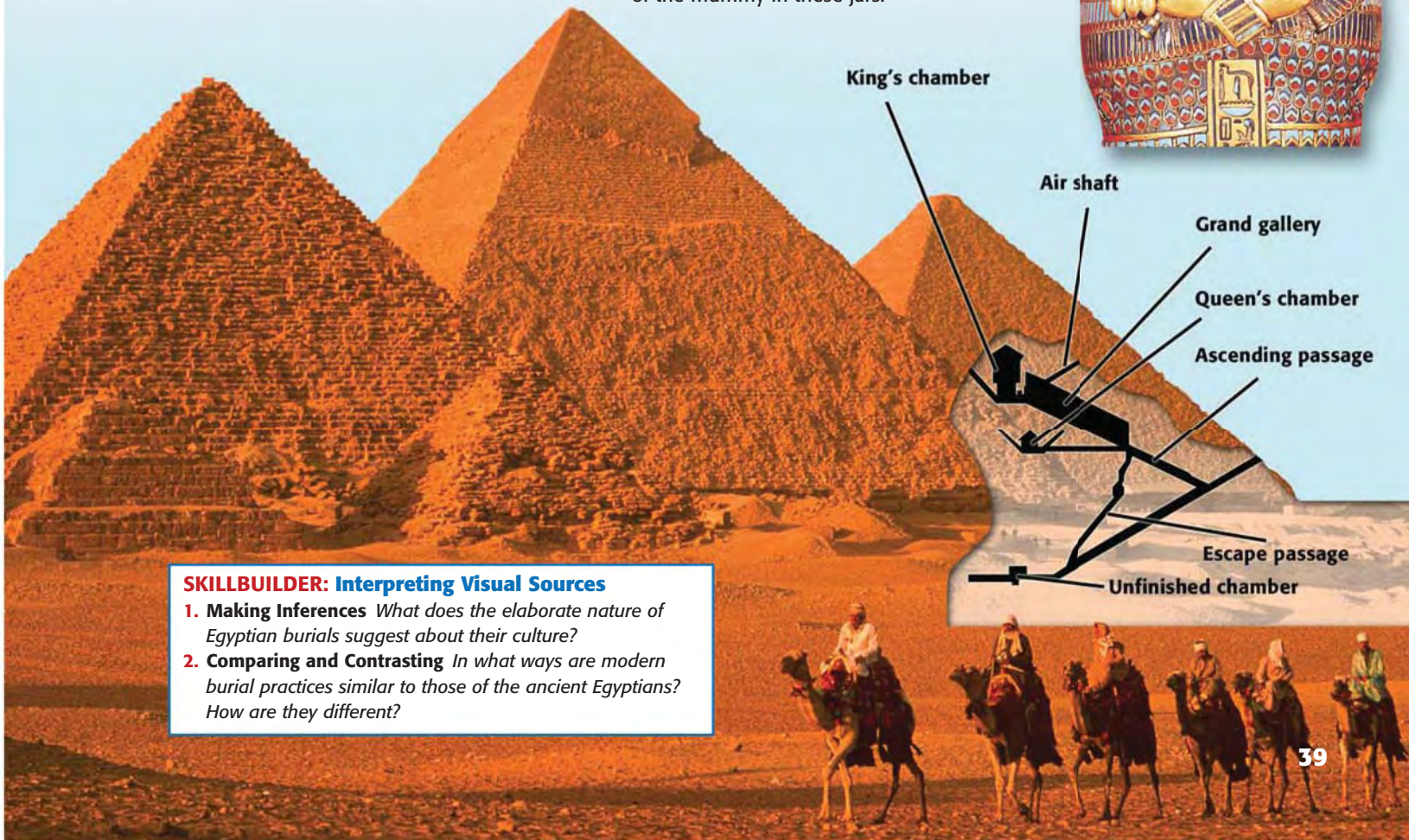
◀ The ancient Egyptians mummified the body so the soul could return to it later. Egyptian embalmers were so skillful that modern archaeologists have found mummies that still have hair, skin, and teeth.

▼ This solid gold death mask of the pharaoh Tutankhamen covered the head of his mummy. The mask, which weighs 22.04 pounds, is part of a popular exhibit in the Egyptian Museum in Cairo, Egypt.



▼ The largest of the pyramids is the Great Pyramid (right background) at Giza, completed about 2556 B.C. The diagram shows how the interior of a pyramid looks.

▲ These clay vessels are called Canopic jars. After preparing the mummy, embalmers placed the brain, liver, and other internal organs of the mummy in these jars.



### SKILLBUILDER: Interpreting Visual Sources

- 1. Making Inferences** *What does the elaborate nature of Egyptian burials suggest about their culture?*
- 2. Comparing and Contrasting** *In what ways are modern burial practices similar to those of the ancient Egyptians? How are they different?*

## Life in Egyptian Society

Like the grand monuments to the kings, Egyptian society formed a pyramid. The king, queen, and royal family stood at the top. Below them were the other members of the upper class, which included wealthy landowners, government officials, priests, and army commanders. The next tier of the pyramid was the middle class, which included merchants and artisans. At the base of the pyramid was the lower class, by far the largest class. It consisted of peasant farmers and laborers.

In the later periods of Egyptian history, slavery became a widespread source of labor. Slaves, usually captives from foreign wars, served in the homes of the rich or toiled endlessly in the gold mines of Upper Egypt.

The Egyptians were not locked into their social classes. Lower-and middle-class

Egyptians could gain higher status through marriage or success in their jobs. Even some slaves could hope to earn their freedom as a reward for their loyal service. To win the highest positions, people had to be able to read and write. Once a person had these skills, many careers were open in the army, the royal treasury, the priesthood, and the king's court.

Women in Egypt held many of the same rights as men. For example, a wealthy or middle-class woman could own and trade property. She could propose marriage or seek divorce. If she were granted a divorce, she would be entitled to one-third of the couple's property. **D**

**Egyptian Writing** As in Mesopotamia, the development of writing was one of the keys to the growth of Egyptian civilization. Simple pictographs were the earliest form of writing in Egypt, but scribes quickly developed a more flexible writing system called **hieroglyphics** (HY•uhr•uh•GLIHF•ihks). This term comes from the Greek words *hieros* and *gluph*, meaning “sacred carving.”

As with Sumerian cuneiform writing, in the earliest form of hieroglyphic writing, a picture stood for an idea. For instance, a picture of a man stood for the idea of a man. In time, the system changed so that pictures stood for sounds as well as ideas. The owl, for example, stood for an *m* sound or for the bird itself. Hieroglyphs could be used almost like letters of the alphabet.

Although hieroglyphs were first written on stone and clay, as in Mesopotamia, the Egyptians soon invented a better writing surface—**papyrus** (puh•PY•ruhs) reeds. These grew in the marshy delta. The Egyptians split the reeds into narrow strips, placed them crosswise in two layers, dampened them, and then pressed them. As the papyrus dried, the plant's sap glued the strips together into a paperlike sheet.

**Egyptian Science and Technology** Practical needs led to many Egyptian inventions. For example, the Egyptians developed a calendar to help them keep track of the time between floods and to plan their planting season. Priests observed that the same star—Sirius—appeared above the eastern horizon just before the floods came.

### History *in* Depth

#### The Rosetta Stone

In 1799, near the delta village of Rosetta, some French soldiers found a polished black stone inscribed with a message in three languages. One version was written in hieroglyphics (top inset). A second version was in a simpler form of hieroglyphics, and the third was in Greek (both are shown in the bottom inset).

Since ancient Greek was a well-known language, it provided clues to the meaning of the hieroglyphics. Still, deciphering the Rosetta Stone took many years. In 1822, a French scholar named Jean François Champollion (shahm•paw•LYAWN) finally broke the code of the hieroglyphics.



#### MAIN IDEA

#### Comparing

**D** How was the status of women similar in Egyptian and Sumerian societies?

They calculated the number of days between one rising of the star and the next as 365 days—a solar year. They divided this year into 12 months of 30 days each and added five days for holidays and feasting. This calendar was so accurate that it fell short of the true solar year by only six hours.

Egyptians developed a system of written numbers for counting, adding, and subtracting. The system would have helped to assess and collect taxes. Scribes used an early form of geometry to survey and reset property boundaries after the annual floods. Mathematical knowledge helped Egypt’s skillful engineers and architects make accurate measurements to construct their remarkable pyramids and palaces. Egyptian architects were the first to use stone columns in homes, palaces, and temples.

Egyptian medicine was also famous in the ancient world. Egyptian doctors knew how to check a person’s heart rate by feeling for a pulse in different parts of the body. They set broken bones with splints and had effective treatments for wounds and fevers. They also used surgery to treat some conditions. **E**

**MAIN IDEA**

**Summarizing**

**E** What were the main achievements of the ancient Egyptians?

## Invaders Control Egypt

The power of the pharaohs declined about 2180 B.C., marking the end of the Old Kingdom. Strong pharaohs regained control during the Middle Kingdom (2040–1640 B.C.) and restored law and order. They improved trade and transportation by digging a canal from the Nile to the Red Sea. They built huge dikes to trap and channel the Nile’s floodwaters for irrigation. They also created thousands of new acres of farmland by draining the swamps of Lower Egypt.

The prosperity of the Middle Kingdom did not last. In about 1640 B.C., a group from the area of Palestine moved across the Isthmus of Suez into Egypt. These people were the Hyksos (HIHK•sahs), which meant “the rulers of foreign lands.” The Hyksos ruled much of Egypt from 1630 to 1523 B.C.

Egypt would rise again for a new period of power and glory, the New Kingdom, which is discussed in Chapter 4. During approximately the same time period as the Old Kingdom and Middle Kingdom existed in Egypt, civilization was emerging in the Indus River Valley.

**SECTION**

**2**

**ASSESSMENT**

**TERMS & NAMES** 1. For each term or name, write a sentence explaining its significance.

- delta
- Narmer
- pharaoh
- theocracy
- pyramid
- mummification
- hieroglyphic
- papyrus

**USING YOUR NOTES**

2. Which of the Egyptian achievements do you consider the most important? Explain.



**MAIN IDEAS**

3. How did being surrounded by deserts benefit Egypt?
4. How did the Egyptians view the pharaoh?
5. Why did Egyptians mummify bodies?

**CRITICAL THINKING & WRITING**

6. **DRAWING CONCLUSIONS** Which of the three natural features that served as boundaries in ancient Egypt was most important to Egypt’s history? Explain.
7. **RECOGNIZING EFFECTS** What impact did Egyptian religious beliefs have on the lives of Egyptians?
8. **COMPARING AND CONTRASTING** How were cuneiform and hieroglyphic writing similar? different?
9. **WRITING ACTIVITY** **SCIENCE AND TECHNOLOGY** Select an Egyptian invention or achievement. Write a **paragraph** about how your selected achievement changed the Egyptians’ life.

**CONNECT TO TODAY** **CREATING A LANGUAGE**

Devise a **set of symbols** to create a language. Write several sentences and have classmates try to decipher the message.



## Work and Play in Ancient Egypt

For ancient Egyptians, life often involved hard work. When the weather was good, most worked in the fields, producing food for their families and for export. During flood season, thousands of these farmers were called upon to help build the pharaohs' temples.

But life was not all about work. Archaeological digs offer evidence that both upper-class Egyptians and the common people found ways to enjoy themselves.

### INTEGRATED TECHNOLOGY

**RESEARCH LINKS** For more on life in ancient Egypt, go to [classzone.com](http://classzone.com)



### ▲ Farmers

This detail from a tomb painting shows Egyptian farmers at work. Egyptians grew enough wheat and barley to have food reserves for themselves and for export to other civilizations. They also grew fruit and vegetables in irrigated fields.

### ▼ Games

Games were popular with all classes of Egyptian society. The board shown below is for the game senet—also depicted in the painting. Players threw sticks or knuckle bones to move their pieces through squares of good or bad fortune. A player won by moving all his or her pieces off the board.



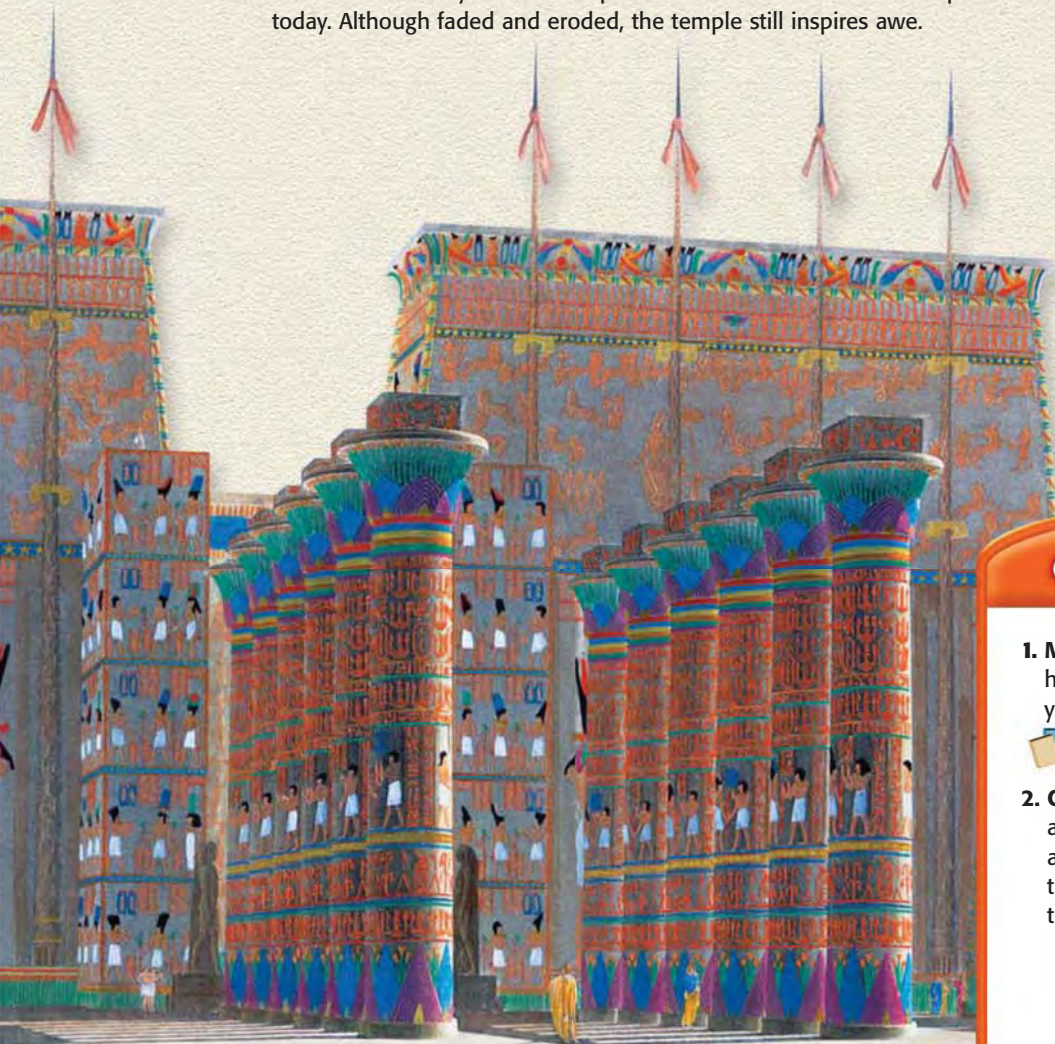


### ▲ Cosmetics

Ancient Egyptians used cosmetics for both work and play. They protected field workers from sun and heat and were used to enhance beauty. Egyptian men and women applied makeup, called kohl, to their eyes. They made kohl from minerals mixed with water. They also soaked flowers and fragrant woods in oil and rubbed the oil into their skin. The dark eye makeup softened the glare of the sun. The oils protected their skin from the dry air. Egyptians kept their cosmetics in chests such as the one shown above.

### ▼ Temple Builders

The artist's colorful drawing of what the Karnak Temple Complex might have looked like explains why Egyptian pharaohs needed thousands of laborers to build their temples. Some historians believe the laborers may have been part of a rotating workforce drafted from the agricultural classes around Egypt—a form of community service. The photo at lower left shows the temple as it is today. Although faded and eroded, the temple still inspires awe.



## > DATA FILE


### MORE ON WORK

- **Surgeons** Ancient Egypt had skilled surgeons. Written evidence shows that Egyptian surgeons knew how to stitch cuts and set broken bones. Some Egyptian mummies even show evidence of being operated on. We know the names of about 150 physicians—2 of them were women.
- **Papyrus Growers** A large industry was built around the harvesting of papyrus. Papyrus was used to make the material Egyptians wrote on. Scrolls of various sizes could be made. One mathematics papyrus was 15 feet long and 3 inches wide.

### MORE ON PLAY

- **Pets** Egyptians kept various animals as pets. Nobles would even have their pets mummified and buried with them. A single pet cemetery was discovered that contained 1,000,000 bird mummies.
- **Royal Dogs** The Pharaoh hound was very popular in ancient Egypt. Artifacts from 4000 B.C. show images of the breed. Today, a Pharaoh hound puppy bred for competition can cost up to \$1,500.

## Connect to Today

1. **Making Inferences** From what you have read here, what inferences can you make about Egyptian society?  
 See Skillbuilder Handbook, page R10.
2. **Comparing and Contrasting** How are the work and leisure activities of ancient Egypt different from those in the United States today? How are they similar?



# Planned Cities on the Indus

## MAIN IDEA

**INTERACTION WITH ENVIRONMENT** The first Indian civilization built well-planned cities on the banks of the Indus River.

## WHY IT MATTERS NOW

The culture of India today has its roots in the civilization of the early Indus cities.

## TERMS & NAMES

- subcontinent
- Harappan civilization
- monsoon

**SETTING THE STAGE** The great civilizations of Mesopotamia and Egypt rose and fell. They left behind much physical evidence about their ways of life. This is the case in what today is the area known as Pakistan and part of India where another civilization arose about 2500 B.C. However, historians know less about its origins and the reasons for its eventual decline than they do about the origins and decline of Mesopotamia and Egypt, because the language of the culture has not been translated.

### TAKING NOTES

#### Drawing Conclusions

Use the graphic organizer to draw conclusions about Indus Valley civilizations.

Indus Valley	
Cities	fact
Language	fact
Trade	fact

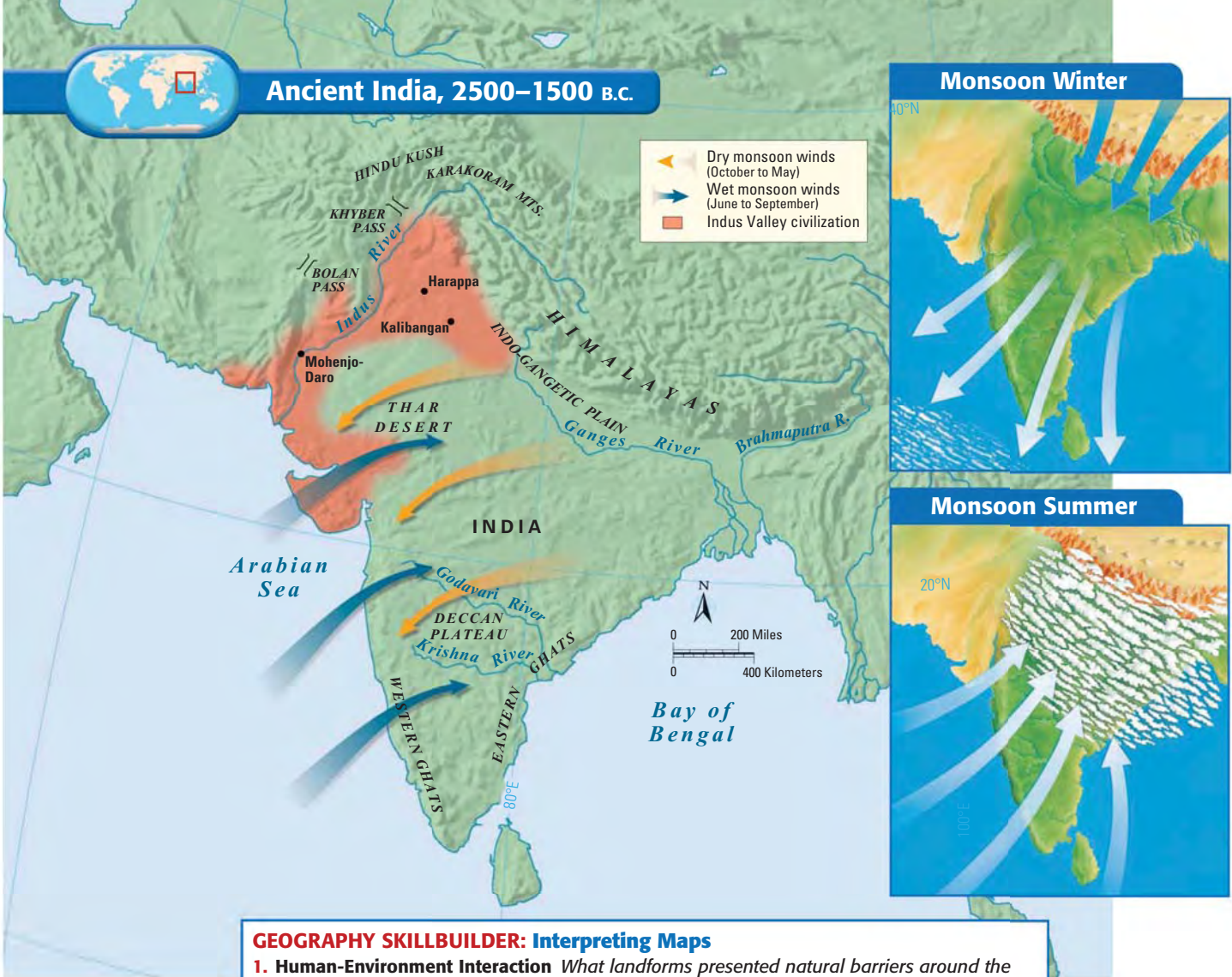
## The Geography of the Indian Subcontinent

Geographers often refer to the landmass that includes India, Pakistan, and Bangladesh as the Indian **subcontinent**. A wall of the highest mountains in the world—the Hindu Kush, Karakorum, and Himalayan ranges—separates this region from the rest of the Asian continent.

**Rivers, Mountains, and Plains** The world’s tallest mountains to the north and a large desert to the east helped protect the Indus Valley from invasion. The mountains guard an enormous flat and fertile plain formed by two rivers—the Indus and the Ganges (GAN•jeez). Each river is an important link from the interior of the subcontinent to the sea. The Indus River flows southwest from the Himalayas to the Arabian Sea. Much of the lower Indus Valley is occupied by the Thar Desert. Farming is possible only in the areas directly watered by the Indus. The Ganges drops down from the Himalayas and flows eastward across northern India. It joins the Brahmaputra River as it flows to the Bay of Bengal.

The Indus and Ganges and the lands they water make up a large area that stretches 1,700 miles across northern India and is called the Indo-Gangetic Plain. Like the Tigris, the Euphrates, and the Nile, these rivers carry not only water for irrigation, but also silt, which produces rich land for agriculture.

Below the Indo-Gangetic Plain, the southern part of the subcontinent is a peninsula that thrusts south into the Indian Ocean. The center of the peninsula is a high plateau cut by twisting rivers. This region is called the Deccan (DEK•uhn) Plateau. The plateau is framed by low mountain ranges called the Eastern and Western Ghats. These mountains keep moist air from reaching the plateau, making it a dry region. A narrow border of lush, tropical land lies along the coasts of southern India.



**GEOGRAPHY SKILLBUILDER: Interpreting Maps**

- Human-Environment Interaction** What landforms presented natural barriers around the Indus Valley?
- Movement** Why do the winter monsoon winds carry so little moisture?

**Monsoons** Seasonal winds called **monsoons** dominate India’s climate. From October to February, winter monsoons from the northeast blow dry air westward across the country. Then, from the middle of June through October, the winds shift. These monsoons blow eastward from the southwest, carrying moisture from the ocean in great rain clouds. The powerful storms bring so much moisture that flooding often happens. When the summer monsoons fail to develop, drought often causes crop disasters.

**Environmental Challenges** The civilization that emerged along the Indus River faced many of the same challenges as the ancient Mesopotamian and Egyptian civilizations.

- Yearly floods spread deposits of rich soil over a wide area. However, the floods along the Indus were unpredictable.
- The rivers sometimes changed course.
- The cycle of wet and dry seasons brought by the monsoon winds was unpredictable. If there was too little rain, plants withered in the fields and people went hungry. If there was too much rain, floods swept away whole villages. **A**

**MAIN IDEA**

**Identifying Problems**

**A** What environmental challenge did the farmers of the Indus Valley face that the Sumerians and Egyptians did not?

## Civilization Emerges on the Indus

Historians know less about the civilization in the Indus Valley than about those to the west. They have not yet deciphered the Indus system of writing. Evidence comes largely from archaeological digs, although many sites remain unexplored, and floods probably washed away others long ago. At its height, however, the civilization of the Indus Valley influenced an area much larger than did either Mesopotamia or Egypt.

**Earliest Arrivals** No one is sure how human settlement began in the Indian subcontinent. Perhaps people who arrived by sea from Africa settled the south. Northern migrants may have made their way through the Khyber Pass in the Hindu Kush mountains. Archaeologists have found evidence in the highlands of agriculture and domesticated sheep and goats dating to about 7000 B.C. By about 3200 B.C., people were farming in villages along the Indus River.

**Planned Cities** Around 2500 B.C., while Egyptians were building pyramids, people in the Indus Valley were laying the bricks for India's first cities. They built strong levees, or earthen walls, to keep water out of their cities. When these were not enough, they constructed human-made islands to raise the cities above possible floodwaters. Archaeologists have found the ruins of more than 100 settlements along the Indus and its tributaries mostly in modern-day Pakistan. The largest cities were Kalibangan, Mohenjo-Daro, and Harappa. Indus Valley civilization is sometimes called **Harappan civilization**, because of the many archaeological discoveries made at that site.

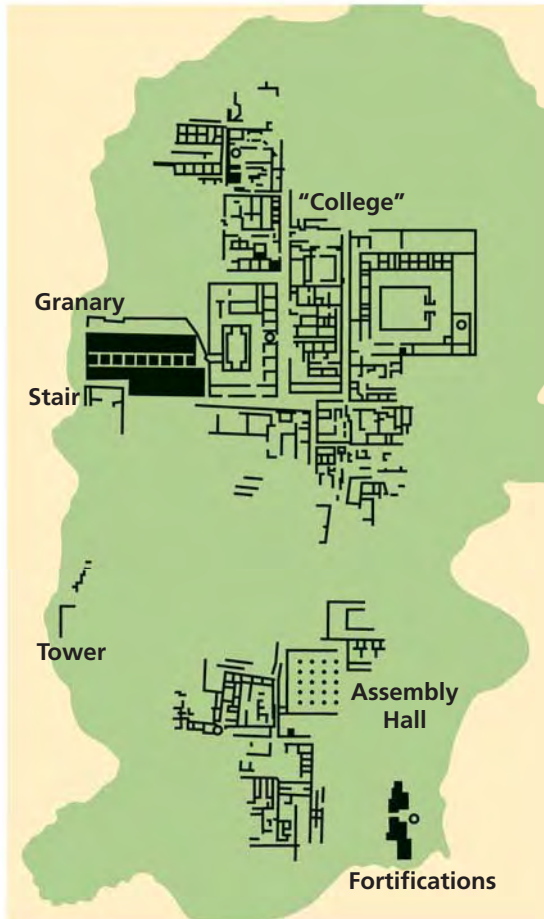
One of the most remarkable achievements of the Indus Valley people was their sophisticated city planning. The cities of the early Mesopotamians were a jumble of buildings connected by a maze of winding streets. In contrast, the people of the Indus laid out their cities on a precise grid system. Cities featured a fortified area called a citadel, which contained the major buildings of the city. Buildings were constructed of oven-baked bricks cut in standard sizes, unlike the simpler, irregular, sun-dried mud bricks of the Mesopotamians.

Early engineers also created sophisticated plumbing and sewage systems. These systems could rival any urban drainage systems built before the 19th century. The uniformity in the cities' planning and construction suggests that the Indus peoples had developed a strong central government.

**Harappan Planning** Harappa itself is a good example of this city planning. The city was partially built on mud-brick platforms to protect it from flooding. A thick brick wall about three and a half miles long surrounded it. Inside was a citadel, which provided protection for the royal family and also served as a temple.

The streets in its grid system were as wide as 30 feet. Walls divided residential districts from each other. Houses varied in size. Some may have been three stories high. Narrow lanes separated rows of houses, which were laid out in block units. Houses featured bathrooms where wastewater flowed out to the street and then to sewage pits outside the city walls.

▼ A map of the citadel portion of Mohenjo-Daro shows an organized pattern of buildings and streets.



## Plumbing in Mohenjo-Daro

From the time people began living in cities, they have faced the problem of plumbing: how to obtain clean water and remove human wastes? In most ancient cities, people retrieved water from a river or a central well. They dumped wastes into open drainage ditches or carted them out of town. Only the rich had separate bathrooms in their homes.

By contrast, the Indus peoples built extensive and modern-looking plumbing systems. In Mohenjo-Daro, almost every house had a private bathroom and toilet. No other civilization achieved this level of convenience until the 19th and 20th centuries. The toilets were neatly built of brick with a wooden seat. Pipes connected to each house carried wastewater into an underground sewer system.

### INTEGRATED TECHNOLOGY

**RESEARCH LINKS** For more on water and waste management go to [classzone.com](http://classzone.com)


### Plumbing Facts

- The ancient Romans also built sophisticated plumbing and sewage systems. Aqueducts supplied Roman cities with water.
- In the 17th century, engineers installed a series of water wheels to pump water for the fountains of Versailles, the palace of French king Louis XIV. The water was pumped from a river three miles away. This was the largest water-supply system powered by machine rather than gravity.
- The flush toilet was patented in 1775 by Alexander Cumming, a British mathematician and watchmaker.



- 1 In their private baths, people took showers by pouring pitchers of water over their head.
- 2 Wastes drained through clay pipes into brick sewers running below the streets. These sewers had manholes, through which sanitation workers could inspect the drains and clean out the muck.

### Connect to Today

1. **Making Inferences** What does the attention the Indus people gave to the plumbing and sewer systems suggest about their culture?  
 See Skillbuilder Handbook, Page R10.
2. **Comparing and Contrasting** Find out how water is supplied and wastewater disposed of in your home or community. How does the system in your home or community compare with what was used in Mohenjo-Daro?

## Harappan Culture

Harappan culture spread throughout the Indus valley. Like the Egyptian and Mesopotamian civilizations you have studied, the culture was based on agriculture. Artifacts help to explain some aspects of the culture.

▼ Harappan seals show an elephant (top), an Indian rhinoceros (middle), and a zebu bull (bottom).



**Language** Like the other two river valley civilizations, the Harappan culture developed a written language. In contrast to cuneiform and hieroglyphics, the Harappan language has been impossible to decipher. This is because, unlike the other two languages, linguists have not found any inscriptions that are bilingual. The Harappan language is found on stamps and seals made of carved stone used for trading pottery and tools. About 400 symbols make up the language. Scientists believe the symbols, like hieroglyphs, are used both to depict an object and also as phonetic sounds. Some signs stand alone and others seem to be combined into words. **B**

**Culture** The Harappan cities show a remarkable uniformity in religion and culture. The housing suggests that social divisions in the society were not great. Artifacts such as clay and wooden children's toys suggest a relatively prosperous society that could afford to produce nonessential goods. Few weapons of warfare have been found, suggesting that conflict was limited.

The presence of animal images on many types of artifacts suggests that animals were an important part of the culture. Animals are seen on pottery, small statues, children's toys, and seals used to mark trade items. The images provide archaeologists with information about animals that existed in the region. However, some of the seals portray beasts with parts of several different animals—for example, the head of a man, an elephant trunk and tusks, horns of a bull, and the rump of a tiger. As in the case of the Harappan language, the meaning of these images has remained a mystery.

**Role of Religion** As with other cultures, the rulers of the Harappan civilization are believed to have close ties to religion. Archaeologists think that the culture was a theocracy. But no site of a temple has been found. Priests likely prayed for good harvests and safety from floods. Religious artifacts reveal links to modern Hindu culture. Figures show what may be early representations of Shiva, a major Hindu god. Other figures relate to a mother goddess, fertility images, and the worship of the bull. All of these became part of later Indian civilization.

**Trade** The Harappans conducted a thriving trade with peoples in the region. Gold and silver came from the north in Afghanistan. Semiprecious stones from Persia and the Deccan Plateau were crafted into jewelry. The Indus River provided an excellent means of transportation for trade goods. Brightly colored cotton cloth was a desirable trade item since few people at the time knew how to grow cotton. Overland routes moved goods from Persia to the Caspian Sea.

The Indus River provided a link to the sea. This access allowed Indus Valley inhabitants to develop trade with distant peoples, including the Mesopotamians. Seals probably used by Indus merchants to identify their goods have been found in Sumer. Ships used the Persian Gulf trade routes to bring copper, lumber, precious stones, and luxury goods to Sumer. Trading began as early as 2600 B.C. and continued until 1800 B.C.

### MAIN IDEA

#### Clarifying

**B** What is the main reason Harappan language has not been deciphered?

## Indus Valley Culture Ends

Around 1750 B.C., the quality of building in the Indus Valley cities declined. Gradually, the great cities fell into decay. The fate of the cities remained a mystery until the 1970s. Then, satellite images of the subcontinent of India revealed evidence of shifts in tectonic plates. The plate movement probably caused earthquakes and floods and altered the course of the Indus River.

Some cities along the rivers apparently suffered through these disasters and survived. Others were destroyed. The shifts may have caused another river, the Sarswati, to dry up. Trade on this river became impossible, and cities began to die. Harappan agriculture, too, would have been influenced by these events. It is likely that these environmental changes prevented production of large quantities of food. Furthermore, Harappan agriculture may have suffered as a result of soil that was exhausted by overuse. This too, may have forced people to leave the cities in order to survive.

Other factors had an impact on the Indus subcontinent. As Chapter 3 explains, the Aryans, a nomadic people from north of the Hindu Kush mountains, swept into the Indus Valley around 1500 B.C. Indian civilization would grow again under the influence of these nomads. At this same time, farther to the east, another civilization was arising. It was isolated from outside influences, as you will learn in Section 4.



▲ The bearded figure above might be a Harappan god or perhaps a priest king.

### Vocabulary

*tectonic plates:* moving pieces of the earth's crust

### MAIN IDEA

#### Analyzing Causes

What factors may have contributed to the decline of the Indus Valley civilization?

### SECTION

## 3

### ASSESSMENT

**TERMS & NAMES** 1. For each term or name, write a sentence explaining its significance.

- subcontinent
- monsoon
- Harappan civilization

#### USING YOUR NOTES

2. What is one conclusion you can draw about the Indus Valley civilization?

Indus Valley	
Cities	fact
Language	fact
Trade	fact

#### MAIN IDEAS

3. What problems can monsoons cause?
4. How were the planned cities of the Indus Valley different from other early cities?
5. What reasons are suggested for the disappearance of the Indus Valley civilization?

#### CRITICAL THINKING & WRITING

6. **DRAWING CONCLUSIONS** What evidence suggests Indus Valley cities were run by a strong central government?
7. **SYNTHESIZING** What skills would the construction of planned cities require? Explain.
8. **MAKING INFERENCES** How were the people of the Indus Valley connected to Mesopotamia?
9. **WRITING ACTIVITY** **INTERACTION WITH ENVIRONMENT** Write a **comparison** of how Sumerians, Egyptians, and the people of the Harappan civilization made use of their environment. Then identify which group you think made better use of what they had.

#### INTEGRATED TECHNOLOGY INTERNET ACTIVITY

Use the Internet to research Harappan seals. Make some sketches of what you see. Then create a **sketch** of a seal that might have been found in a ruin in an Indus Valley civilization.

#### INTERNET KEYWORD

Harappan seals



# River Dynasties in China

## MAIN IDEA

**POWER AND AUTHORITY** The early rulers introduced ideas about government and society that shaped Chinese civilization.

## WHY IT MATTERS NOW

The culture that took root during ancient times still affects Chinese ways of life today.

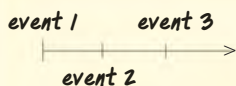
## TERMS & NAMES

- loess
- oracle bone
- Mandate of Heaven
- dynastic cycle
- feudalism

**SETTING THE STAGE** The walls of China’s first cities were built 4,000 years ago. This was at least 1,000 years after the walls of Ur, the great pyramids of Egypt, and the planned cities of the Indus Valley were built. Unlike the other three river valley civilizations, the civilization that began along one of China’s river systems continues to thrive today.

## TAKING NOTES

**Following Chronological Order** On a time line, identify major events in early Chinese dynasties.



## The Geography of China

Natural barriers somewhat isolated ancient China from all other civilizations. To China’s east lay the Yellow Sea, the East China Sea, and the Pacific Ocean. Mountain ranges and deserts dominate about two-thirds of China’s landmass. In west China lay the Taklimakan (TAH•kluh•muh•KAHN) Desert and the icy 15,000-foot Plateau of Tibet. To the southwest are the Himalayas. And to the north are the desolate Gobi Desert and the Mongolian Plateau.

**River Systems** Two major river systems flow from the mountainous west to the Pacific Ocean. The Huang He (hwahng HUH), also known as the Yellow River, is found in the north. In central China, the Chang Jiang (chang jyhang), also called Yangtze (yang•SEE), flows east to the Yellow Sea. The Huang He, whose name means “yellow river,” deposits huge amounts of yellowish silt when it overflows its banks. This silt is actually fertile soil called **loess** (LOH•uhs), which is blown by the winds from deserts to the west and north.

**Environmental Challenges** Like the other ancient civilizations in this chapter, China’s first civilization developed in a river valley. China, too, faced the dangers of floods—but its geographic isolation posed its own challenges.

- The Huang He’s floods could be disastrous. Sometimes floods devoured whole villages, earning the river the nickname “China’s Sorrow.”
- Because of China’s relative geographic isolation, early settlers had to supply their own goods rather than trading with outside peoples.
- China’s natural boundaries did not completely protect these settlers from outsiders. Invasions from the west and north occurred again and again in Chinese history.

**China’s Heartland** Only about 10 percent of China’s land is suitable for farming. Much of the land lies within the small plain between the Huang He and the



## Ancient China, 2000–200 B.C.

The Huang He, or Yellow River, is named for the color of its silt. This silt nurtured early development of Chinese civilization and is still a vital resource today.

Extent of Shang Dynasty (Approximate)  
Extent of Zhou Dynasty (Approximate)  
Border of modern China



Yellow silt gives the Huang He a distinctive color.

### GEOGRAPHY SKILLBUILDER: Interpreting Maps

- 1. Location** Describe the location of the Huang He and Chang Jiang in terms of where they begin and end.
- 2. Region** What area did the Shang and Zhou dynasties control?

Chang Jiang in eastern China. This plain, known as the North China Plain, is China's heartland. Throughout China's long history, its political boundaries have expanded and contracted depending on the strength or weakness of its ruling families. Yet the heartland of China remained the center of its civilization.

## Civilization Emerges in Shang Times

Fossil remains show that ancestors of modern humans lived in southwest China about 1.7 million years ago. In northern China near Beijing, a *Homo erectus* skeleton was found. Known as Peking man, his remains show that people settled the river valley as much as 500,000 years ago.

**The First Dynasties** Even before the Sumerians settled in southern Mesopotamia, early Chinese cultures were building farming settlements along the Huang He. Around 2000 B.C., some of these settlements grew into China's first cities. According to legend, the first Chinese dynasty, the Xia (shyah) Dynasty, emerged about this time. Its leader was an engineer and mathematician named Yu. His flood-control and irrigation projects helped tame the Huang He and its tributaries so that settlements could grow. The legend of Yu reflects the level of technology of a society making the transition to civilization.

About the time the civilizations of Mesopotamia, Egypt, and the Indus Valley fell to outside invaders, a people called the Shang rose to power in northern China.

## History *in* Depth

### Lady Hao's Tomb

Lady Hao was a wife of king Wu Ding, a Shang ruler, during the 1200s B.C. Her relatively small grave contained some 460 bronze artifacts, 750 jade objects, and more than 6,880 cowry shells. Also found in the tomb beside Lady Hao's coffin were the remains of 16 people and 6 dogs.

Writings found in other places reveal a remarkable figure in Lady Hao. On behalf of her husband, she led more than one military campaign, once with a force of 13,000 troops. She also took charge of rituals dedicated to the spirits of Shang ancestors, a duty reserved for the most distinguished members of the royal family.

### INTEGRATED TECHNOLOGY

**INTERNET ACTIVITY** Create a multimedia presentation about Lady Hao's tomb and its contents. Go to [classzone.com](http://classzone.com) for your research.

The Shang Dynasty lasted from around 1700 B.C. to 1027 B.C. It was the first family of Chinese rulers to leave written records. The Shang kings built elaborate palaces and tombs that have been uncovered by archaeologists. The artifacts reveal much about Shang society.

**Early Cities** Among the oldest and most important Shang cities was Anyang (ahn•YAHNG), one of the capitals of the Shang Dynasty. Unlike the cities of the Indus Valley or Fertile Crescent, Anyang was built mainly of wood. The city stood in a forest clearing. The higher classes lived in timber-framed houses with walls of clay and straw. These houses lay inside the city walls. The peasants and craftspeople lived in huts outside the city.

The Shang surrounded their cities with massive earthen walls for protection. The archaeological remains of one city include a wall of packed earth 118 feet wide at its base that encircled an area of 1.2 square miles. It likely took 10,000 men more than 12 years to build such a structure. Like the pyramids of Egypt or the cities of the Indus Valley, these walls demonstrate the Shang rulers' ability to raise and control large forces of workers. **A**

Shang peoples needed walled cities because they were constantly waging war. The chariot, one of the major tools of war, was probably first introduced by contact with cultures from western Asia. Professional warriors underwent lengthy training to learn the techniques of driving and shooting from horse-drawn chariots.

### MAIN IDEA

#### Comparing

**A** What did Shang cities have in common with those of Sumer?

## The Development of Chinese Culture

In the Chinese view, people who lived outside of Chinese civilization were barbarians. Because the Chinese saw their country as the center of the civilized world, their own name for China was the Middle Kingdom.

The culture that grew up in China had strong unifying bonds. From earliest times, the group seems to have been more important than the individual. A person's chief loyalty throughout life was to the family. Beyond this, people owed obedience and respect to the ruler of the Middle Kingdom, just as they did to the elders in their family.

**Family** The family was central to Chinese society. The most important virtue was respect for one's parents. The elder men in the family controlled the family's property and made important decisions. Women, on the other hand, were treated as inferiors. They were expected to obey their fathers, their husbands, and later, their own sons. When a girl was between 13 and 16 years old, her marriage was arranged, and she moved into the house of her husband. Only by bearing sons for her husband's family could she hope to improve her status.

**Social Classes** Shang society was sharply divided between nobles and peasants. A ruling class of warrior-nobles headed by a king governed the Shang. These noble families owned the land. They governed the scattered villages within the Shang lands and sent tribute to the Shang ruler in exchange for local control.

**Religious Beliefs** In China, the family was closely linked to religion. The Chinese believed that the spirits of family ancestors had the power to bring good fortune

#### Vocabulary

*tribute*: payment made to keep peace

or disaster to living members of the family. The Chinese did not regard these spirits as mighty gods. Rather, the spirits were more like troublesome or helpful neighbors who demanded attention and respect. Every family paid respect to the father's ancestors and made sacrifices in their honor.

Through the spirits of the ancestors, the Shang consulted the gods. The Shang worshiped a supreme god, Shang Di, as well as many lesser gods. Shang kings consulted the gods through the use of **oracle bones**, animal bones and tortoise shells on which priests had scratched questions for the gods. After inscribing a question on the bone, a priest applied a hot poker to it, which caused it to crack. The priests then interpreted the cracks to see how the gods had answered.

**Development of Writing** In the Chinese method of writing, each character generally stands for one syllable or unit of language. Recall that many of the Egyptian hieroglyphs stood for sounds in the spoken language. In contrast, there were practically no links between China's spoken language and its written language. One could read Chinese without being able to speak a word of it. (This seems less strange when you think of our own number system. Both a French person and an American can understand the written equation  $2 + 2 = 4$ . But an American may not understand the spoken statement "Deux et deux font quatre.")

The Chinese system of writing had one major advantage. People in all parts of China could learn the same system of writing, even if their spoken languages were very different. Thus, the Chinese written language helped unify a large and diverse land, and made control much easier.

The disadvantage of the Chinese system was the enormous number of written characters to be memorized—a different one for each unit of language. A person needed to know over 1,500 characters to be barely literate. To be a true scholar, one needed to know at least 10,000 characters. For centuries, this severely limited the number of literate, educated Chinese. As a general rule, a nobleperson's children learned to write, but peasant children did not. **B**



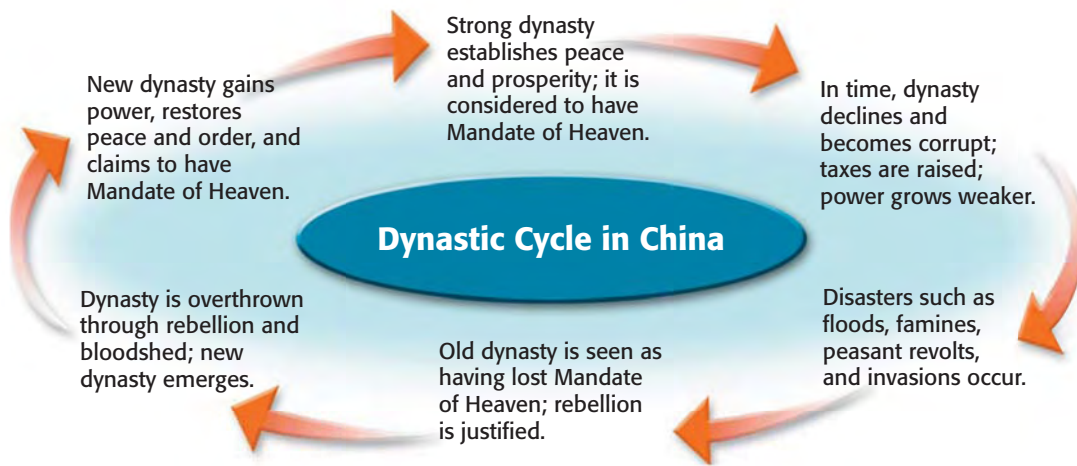
▲ The earliest evidence of Chinese writing is seen on oracle bones like this one found in the city of Anyang.

**MAIN IDEA**

**Recognizing Effects**

**B** How did writing help unite China?

Chinese Writing									
The earliest writing systems in the world—including Chinese, Sumerian, and Egyptian—developed from pictographs, or simplified drawings of objects. The writing system used in China today is directly related				to the pictographic writing found on Shang oracle bones. As you can see in the chart below, the ancient pictographs can still be recognized in many modern Chinese characters.					
	ox	goat, sheep	tree	moon	earth	water	field	heaven	to pray
Ancient symbol									
Modern character	牛	羊	木	月	土	水	田	天	祝



## Zhou and the Dynastic Cycle

Around 1027 B.C., a people called the Zhou (joh) overthrew the Shang and established their own dynasty. The Zhou had adopted much of the Shang culture. Therefore, the change in dynasty did not bring sweeping cultural change. Nevertheless, Zhou rule brought new ideas to Chinese civilization.

**Mandate of Heaven** To justify their conquest, the Zhou leaders declared that the final Shang king had been such a poor ruler that the gods had taken away the Shang’s rule and given it to the Zhou. This justification developed over time into a broader view that royal authority came from heaven. A just ruler had divine approval, known as the **Mandate of Heaven**. A wicked or foolish king could lose the Mandate of Heaven and so lose the right to rule. The Duke of Shao, an aide of the Zhou leader who conquered the Shang, described the mandate:

**Vocabulary**  
*mandate*: a command or instruction from a higher authority

### PRIMARY SOURCE

Heaven, unpitiful, has sent down ruin on Yin [another name for Shang]. Yin has lost the Mandate, and we Zhou have received it. I dare not say that our fortune would continue to prosper, even though I believe that heaven favors those who are sincere in their intentions. I dare not say, either that it would end in certain disaster. . . .

The Mandate of Heaven is not easy to gain. It will be lost when men fail to live up to the reverent and illustrious virtues of their forefathers.

**DUKE OF SHAO**, quoted in *The Chinese Heritage*

The Mandate of Heaven became central to the Chinese view of government. Floods, riots, and other calamities might be signs that the ancestral spirits were displeased with a king’s rule. In that case, the Mandate of Heaven might pass to another noble family. This was the Chinese explanation for rebellion, civil war, and the rise of a new dynasty. Historians describe the pattern of rise, decline, and replacement of dynasties as the **dynastic cycle**, shown above.

### MAIN IDEA

**Synthesizing**  
 According to Chinese beliefs, what role did the Mandate of Heaven play in the dynastic cycle?

**Control Through Feudalism** The Zhou Dynasty controlled lands that stretched far beyond the Huang He in the north to the Chang Jiang in the south. To govern this vast area, it gave control over different regions to members of the royal family and other trusted nobles. This established a system called **feudalism**. Feudalism is a political system in which nobles, or lords, are granted the use of lands that legally belong to the king. In return, the nobles owe loyalty and military service to the king and protection to the people who live on their estates. Similar systems would arise centuries later in both Japan and Europe.

At first, the local lords lived in small walled towns and had to submit to the superior strength and control of the Zhou rulers. Gradually, however, the lords grew stronger as the towns grew into cities and expanded into the surrounding territory.

Peoples who had been hostile toward the lords gradually accepted their rule and adopted Zhou ways. As a result, the local lords became less dependent on the king. More and more, they fought among themselves and with neighboring peoples for wealth and territory.

**Improvements in Technology and Trade** The Zhou Dynasty produced many innovations.

- Roads and canals were built to stimulate trade and agriculture.
- Coined money was introduced, which further improved trade.
- Blast furnaces that produced cast iron were developed.

Zhou cast iron production would not be matched in Europe until the Middle Ages. The Zhou used iron to create weapons, especially dagger-axes and swords. They also used it for common agricultural tools such as sickles, knives, and spades. Iron tools made farm work easier and more productive. The ability to grow more food helped Zhou farmers support thriving cities.

**A Period of Warring States** The Zhou ruled from around 1027 to 256 B.C. The Zhou empire was generally peaceful and stable. Gradually, however, Zhou rule weakened. In 771 B.C., nomads from the north and west sacked the Zhou capital and murdered the Zhou monarch. A few members of the royal family escaped and set up a new capital at Luoyang.

However, the Zhou kings at Luoyang were almost powerless, and they could not control the noble families. The lords sought every opportunity to pick fights with neighboring lords. As their power grew, these warlords claimed to be kings in their own territory. As a result, the later years of the Zhou are often called “the time of the warring states.”

Amidst the bloodshed, traditional values collapsed. The very heart of Chinese civilization—love of order, harmony, and respect for authority—had been replaced with chaos, arrogance, and defiance. As you will learn in Chapter 4, the dynastic cycle was about to bring a new start to Chinese civilization.



▲ These Chinese coins are made of bronze. Their shape resembles a digging tool such as a hoe or spade.

## SECTION

# 4

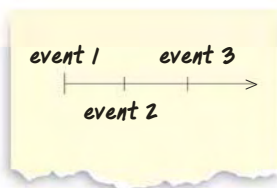
## ASSESSMENT

**TERMS & NAMES** 1. For each term or name, write a sentence explaining its significance.

- loess
- oracle bone
- Mandate of Heaven
- dynastic cycle
- feudalism

### USING YOUR NOTES

2. Which event do you think was a turning point in Chinese history?



### MAIN IDEAS

3. Between which two rivers is the heartland of China found?
4. What family obligations did a Chinese person have?
5. How is the dynastic cycle connected to the Mandate of Heaven?

### CRITICAL THINKING & WRITING

6. **RECOGNIZING EFFECTS** In your judgment, what are the benefits and drawbacks of the belief that the group was more important than the individual?
7. **COMPARING** How did the social classes in Shang society differ from those in Egyptian society?
8. **ANALYZING MOTIVES** Do you think that the Zhou Dynasty's downfall resulted from its method of control? Why or why not?
9. **WRITING ACTIVITY** **POWER AND AUTHORITY** Study the dynastic cycle. Then write a **letter to the editor** suggesting that the current ruler should be replaced.

### CONNECT TO TODAY CREATING A POSTER

Research the Three Gorges Dam Project in China. The project will place dams on the Chang Jiang. Create a **poster** showing the locations of the dams, some statistics about them, and an explanation of the project's purpose.

# Chapter 2 Assessment

## TERMS & NAMES

Briefly explain the importance of each of the following to early river valley civilizations from 3500–450 B.C.

1. Fertile Crescent
2. city-state
3. polytheism
4. empire
5. pharaoh
6. hieroglyphics
7. Harappan civilization
8. Mandate of Heaven

## MAIN IDEAS

### City-States in Mesopotamia Section 1 (pages 29–34)

9. What is the Fertile Crescent and why is it called that?
10. Name three disadvantages of Sumer's natural environment.
11. What circumstances led to the beginning of organized government?

### Pyramids on the Nile Section 2 (pages 35–43)

12. Why did the Egyptians build pyramids?
13. Herodotus remarked that Egypt was the "gift of the Nile." What did he mean by this?

### Planned Cities on the Indus Section 3 (pages 44–49)

14. What does the uniformity of Indus Valley cities tell us about their government?
15. What evidence exists to show that Indus Valley civilizations traded with Sumer?

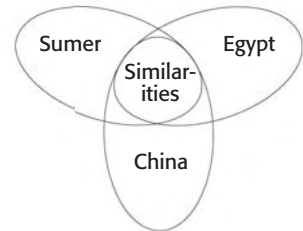
## River Dynasties in China Section 4 (pages 50–55)

16. What was the great advantage of the Chinese written language?
17. Explain the dynastic cycle in China.

## CRITICAL THINKING

### 1. USING YOUR NOTES

Create a Venn diagram to indicate differences and similarities in religious beliefs among these ancient civilizations.



### 2. HYPOTHESIZING

**POWER AND AUTHORITY** Think about a massive public project that might be done today, such as building a large dam. In terms of government power and authority, how would this be similar to the building of the pyramids? How would it be different?

### 3. DRAWING CONCLUSIONS

**SCIENCE AND TECHNOLOGY** Why was it necessary to develop writing before civilization could advance?

### 4. MAKING INFERENCES




What reasons might be suggested for the location of civilizations along river valleys?

### 5. COMPARING

How was a theocracy different from a government run by warrior-kings?

## VISUAL SUMMARY

### Early River Valley Civilizations

	Sumer	Egypt	Indus Valley	China
<b>Environment</b> 	<ul style="list-style-type: none"> <li>• Tigris and Euphrates flooding unpredictable</li> <li>• No natural barriers</li> <li>• Limited natural resources</li> </ul>	<ul style="list-style-type: none"> <li>• Nile flooding predictable</li> <li>• Natural barriers: deserts</li> <li>• Nile an easy transportation link</li> </ul>	<ul style="list-style-type: none"> <li>• Indus flooding unpredictable</li> <li>• Natural barriers: mountains, deserts</li> <li>• Monsoon winds</li> </ul>	<ul style="list-style-type: none"> <li>• Huang He flooding unpredictable</li> <li>• Natural barriers: mountains, deserts</li> <li>• Geographically isolated</li> </ul>
<b>Power and Authority</b> 	<ul style="list-style-type: none"> <li>• Independent city-states governed by monarchs</li> <li>• City-states united into first empires</li> </ul>	<ul style="list-style-type: none"> <li>• Pharaohs rule kingdom as gods</li> <li>• Pharaohs built pyramids</li> </ul>	<ul style="list-style-type: none"> <li>• Strong centralized government</li> <li>• Planned cities</li> </ul>	<ul style="list-style-type: none"> <li>• Community and family important</li> <li>• Sharp social divisions</li> <li>• Mandate of Heaven</li> </ul>
<b>Science and Technology</b> 	<ul style="list-style-type: none"> <li>• Cuneiform</li> <li>• Irrigation</li> <li>• Bronze</li> <li>• Wheel, sail, plow</li> </ul>	<ul style="list-style-type: none"> <li>• Hieroglyphics</li> <li>• Pyramids</li> <li>• Mathematics, geometry</li> <li>• Medicine</li> </ul>	<ul style="list-style-type: none"> <li>• Writing (not yet deciphered)</li> <li>• Cities built on precise grid</li> <li>• Plumbing and sewage systems</li> </ul>	<ul style="list-style-type: none"> <li>• Writing</li> <li>• Silk</li> <li>• Coined money</li> <li>• Cast iron</li> </ul>

## STANDARDS-BASED ASSESSMENT

Use the quotation and your knowledge of world history to answer questions 1 and 2.

**Additional Test Practice, pp. S1–S33**

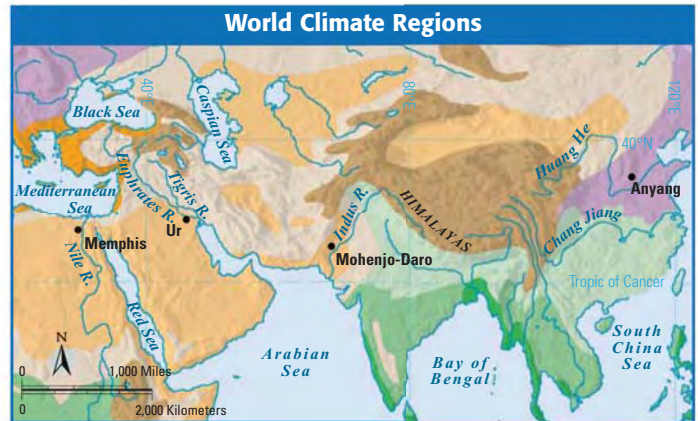
### PRIMARY SOURCE

The Lord of Fishes, He Who Makes the marsh birds to Go Upstream. There are no birds which come down because of the hot winds. He who makes barley and brings emmer [a kind of wheat] into being, that he may make the temples festive. If he is sluggish, then nostrils are stopped up, and everybody is poor. If there be thus a cutting down in the food offerings of the gods, then a million men perish among mortals, covetousness is practiced, the entire land is in a fury, and great and small are on the execution-block. . . . When he rises, then the land is in jubilation, then every belly is in joy, every backbone takes on laughter, and every tooth is exposed.

“Hymn to the Nile,” from *Ancient Near Eastern Texts*

- What natural phenomenon does the Lord of the Fishes represent?
  - volcanic action
  - monsoons
  - the annual flooding of the Nile
  - a major fish kill
- Why are the people happy when the Lord of the Fishes comes to them?
  - The wars they fight will be over.
  - They will have food to eat.
  - Corruption will stop.
  - There will be a new pharaoh.

Use the map and your knowledge of world history to answer question 3.



- How is the location of Anyang different from the other cities shown?

- It is located in the Western Hemisphere.
- It is not located in a river valley.
- Its climate is tropical.
- Its climate is not dry.



### INTEGRATED TECHNOLOGY

**TEST PRACTICE** Go to [classzone.com](http://classzone.com)

- Diagnostic tests
- Strategies
- Tutorials
- Additional practice

## ALTERNATIVE ASSESSMENT

### 1. Interact *with* History

On page 28, you looked at the justice of Hammurabi’s Code. Now that you have read about the development of four civilizations, think about how laws differ from place to place. How have they developed and changed over time? What similarities do you see between Hammurabi’s Code and the laws you live under today? How are they different? Discuss your opinions with a small group.

### 2. WRITING ABOUT HISTORY

**INTERACTION WITH ENVIRONMENT** Write four **poems**, one for each civilization in the chapter. Include some reference to how each civilization interacted with the environment. Consider the following:

- the effect of the environment on life in the area
- responses to the environment by the people

### INTEGRATED TECHNOLOGY

#### Creating a Multimedia Presentation

Using the Internet, the library, or government resources, research the street structure of Washington, D.C., Boston, or the structure of your hometown streets. Identify their similarities and differences. Then research/work with a team to present your findings in a multimedia presentation.

- Which cities have a grid system? Which do not?
- What evidence is there of planning in the cities?
- What are the obvious similarities and differences of the two locations?