

# Chapter

# 5

Roger Wood/CORBIS

# Greek Civilization

The temple of Delphi was very important to ancient Greeks. Many people believed the priestess here could foretell the future. ▶



## When & Where?



400 B.C.

● **399 B.C.**  
Socrates sentenced to death

300 B.C.

● **330 B.C.**  
Alexander the Great conquers Persian Empire

200 B.C.

● **c. 287 B.C.**  
Mathematician and inventor Archimedes is born



# Chapter Preview

Many Greeks studied science, philosophy, mathematics, and the arts. When Alexander the Great conquered the Persian Empire, he spread Greek culture and ideas throughout southwest Asia and the Mediterranean world.



View the Chapter 5 video in the *World History: Journey Across Time* Video Program.

## Section 1

### The Culture of Ancient Greece

The Greeks made great strides in the arts. Greek poetry, art, and drama are still part of our world today.

## Section 2

### Greek Philosophy and History

The Greeks' love of wisdom led to the study of history, politics, biology, and logic.

## Section 3

### Alexander the Great

Alexander the Great was only 25 years old when he conquered the Persian Empire. As a result of his conquests, Greek art, ideas, language, and architecture spread throughout southwest Asia and North Africa.

## Section 4

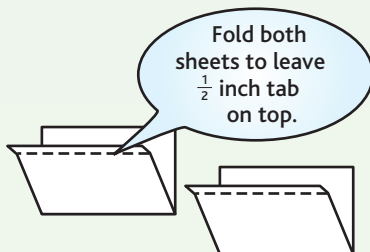
### The Spread of Greek Culture

Greek cities became centers of learning and culture. Greek scientists developed advanced ideas about astronomy and mathematics.

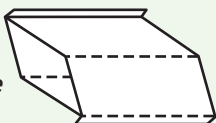
## FOLDABLES™ Study Organizer

**Organizing Information** Make the following foldable to help you organize information about Greek culture and philosophy.

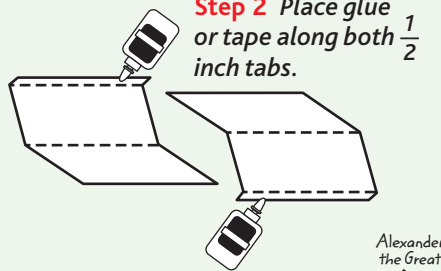
**Step 1** Fold two sheets of paper in half from top to bottom.



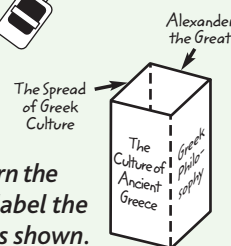
**Step 3** Fit both sheets of paper together to make a cube as shown.



**Step 2** Place glue or tape along both  $\frac{1}{2}$  inch tabs.



**Step 4** Turn the cube and label the foldable as shown.



**Reading and Writing**  
As you read the chapter, list the developments that occurred in ancient Greece. Write the developments under the correct foldable category.

# Reading Social Studies

Reading  
Skill

Context

## 1 Learn It!

### Using Context Clues

When you have trouble understanding the words in a passage, it is very difficult to get the author's message. You may know part of a word's definition or even how to pronounce it, but you still may not understand its full meaning.

Look at the word *inspiration* in the following paragraph. Use the highlighted words to help you understand its meaning.

Look at phrases around the word to find clues to its meaning.

The key to Alexander's courage may have been his childhood education. Alexander kept a copy of the *Iliad* under his pillow. Most likely his **inspiration** was Homer's warrior-hero Achilles. In the end, Alexander's reputation outstripped even Achilles', and today he is called Alexander the Great.

—from page 177

### Reading Tip

When you don't understand a word or a concept, reread the sentence or paragraph. Find other words that will give you clues to its meaning.

In this paragraph, the word *inspiration* means something that influences or has an effect on someone.

## 2 Practice It!

### What Does It Mean?

Read the following paragraph about Aesop. Write down all the words or phrases that help you fully understand the meaning of the word *fable*.

About 550 B.C., a Greek slave named Aesop (EE • SAHP) made up his now famous fables. A fable (FAY • buhl) is a short tale that teaches a lesson. In most of Aesop's fables, animals talk and act like people. These often funny stories point out human flaws as well as strengths. Each fable ends with a message, or moral.

—from page 158

### Read to Write .....

Turn to any page in this chapter. Close your eyes and point to a word. It can be any word, even "a" or "the." Now write a paragraph explaining how the rest of the words in the sentence or paragraph where that word appears helped you to determine its meaning.

Aesop ►

## 3 Apply It!

As you read the chapter, create five word webs. Put an important word or idea in a center circle. Surround it with circles containing words from the text that help explain it.



# The Culture of Ancient Greece

## Get Ready to Read!

### What's the Connection?

You have read that under Pericles, Athens became a center of beauty and culture. During this Golden Age, Greek thinkers, writers, and artists contributed many new ideas to the world.

### Focusing on the Main Ideas

- The Greeks believed that gods and goddesses controlled nature and shaped their lives. (page 155)
- Greek poetry and fables taught Greek values. (page 157)
- Greek drama still shapes entertainment today. (page 160)
- Greek art and architecture expressed Greek ideas of beauty and harmony. (page 162)

### Locating Places

Mount Olympus (uh•LIHM•puhs)  
Delphi (DEHL•FY)

### Meeting People

Homer (HOH•muhr)  
Aesop (EE•SAHP)  
Sophocles (SAH•fuh•KLEEZ)  
Euripides (yu•RIH•puh•DEEZ)

### Building Your Vocabulary

myth (MIHTH)  
oracle (AWR•uh•kuhl)  
epic (EH•pihk)  
fable (FAY•buhl)  
drama (DRAH•muh)  
tragedy (TRA•juh•dee)  
comedy (KAH•muh•dee)

### Reading Strategy

**Compare and Contrast** Create a Venn diagram showing similarities and differences between an epic and a fable.



NATIONAL GEOGRAPHIC

## When & Where?



700 B.C.

c. 700s B.C.

Homer writes the *Iliad* and *Odyssey*

600 B.C.

c. 550 B.C.

Aesop writes a series of fables

500 B.C.

c. 500s B.C.

Greek architects begin using marble columns







▲ This painting shows a Greek man at the oracle at Delphi receiving a prophecy. **Why were these prophecies often confusing?**

But Greek gods and goddesses were not thought to be all-powerful. According to Greek myths, even though gods had special powers, they looked like human beings and acted like them. They married, had children, quarreled, played tricks on each other, and fought wars.

Because Greeks sought their gods' favor, they followed many rituals. A ritual is a set of actions carried out in a fixed way. As part of their rituals, the Greeks prayed to their gods and also gave them gifts. In return, they hoped that the gods would grant good fortune to them. Many Greek festivals honored the gods and goddesses. Festivals dedicated to Zeus were held at Olympia.

The Greeks also believed in an afterlife. When people died, the Greeks believed their spirits went to a gloomy world beneath the earth ruled by a god named Hades.

**What Was a Greek Oracle?** The Greeks believed that each person had a fate or destiny. They believed that certain events were going to happen no matter what they did. They also believed in prophecy. A prophecy is a prediction about the future. The Greeks believed that the gods gave prophecies to people to warn them about the future in time to change it.

To find out about the future, many Greeks visited an **oracle** (AWR•uh•kuhl). This was a sacred shrine where a priest or priestess spoke for a god or goddess. The most famous was the oracle at the Temple of Apollo at **Delphi** (DEHL•fy). The oracle chamber was deep inside the temple. The room had an opening in the floor where volcanic smoke hissed from a crack in the earth.

A priestess sat on a tripod—a three-legged stool—in the oracle chamber and listened to questions. The priests translated her answers. State leaders or their messengers traveled to Delphi to ask advice from the oracle of Apollo.

The priestess in the oracle often gave answers in riddles. When one king, named Croesus (KREE•suhs), sent messengers to the oracle at Delphi, they asked if the king should go to war with the Persians. The oracle replied that if Croesus attacked the Persians, he would destroy a mighty empire. Overjoyed to hear these words, Croesus declared war on the Persians. The Persian army crushed his army. The mighty empire King Croesus had destroyed was his own!

**Reading Check Explain** Why did the Greeks have rituals and festivals for their gods and goddesses?

# Greek Poetry and Fables

**Main Idea** Greek poetry and fables taught Greek values.

**Reading Focus** Do you have favorite stories? Are the characters in the stories brave and clever? Read about the characters of the best-loved stories in early Greece.

Greek poems and stories are the oldest in the Western world. For hundreds of years, Europeans and Americans have used these early works as models for their own poems and stories. Shakespeare, for example, borrowed many Greek plots and settings.

The earliest Greek stories were **epics** (EH•pihks). These long poems told about

heroic deeds. The first great epics of early Greece were the *Iliad* and the *Odyssey*. The poet **Homer** (HOH•muhr) wrote these epics during the 700s B.C. He based them on stories of a war between Greece and the city of Troy, which once existed in what is today northwestern Turkey.

In the *Iliad*, a prince of Troy kidnaps the wife of the king of Sparta. The kidnapping outrages the Greeks. The king of Mycenae and the brother of the king of Sparta lead the Greeks in an attack on Troy.

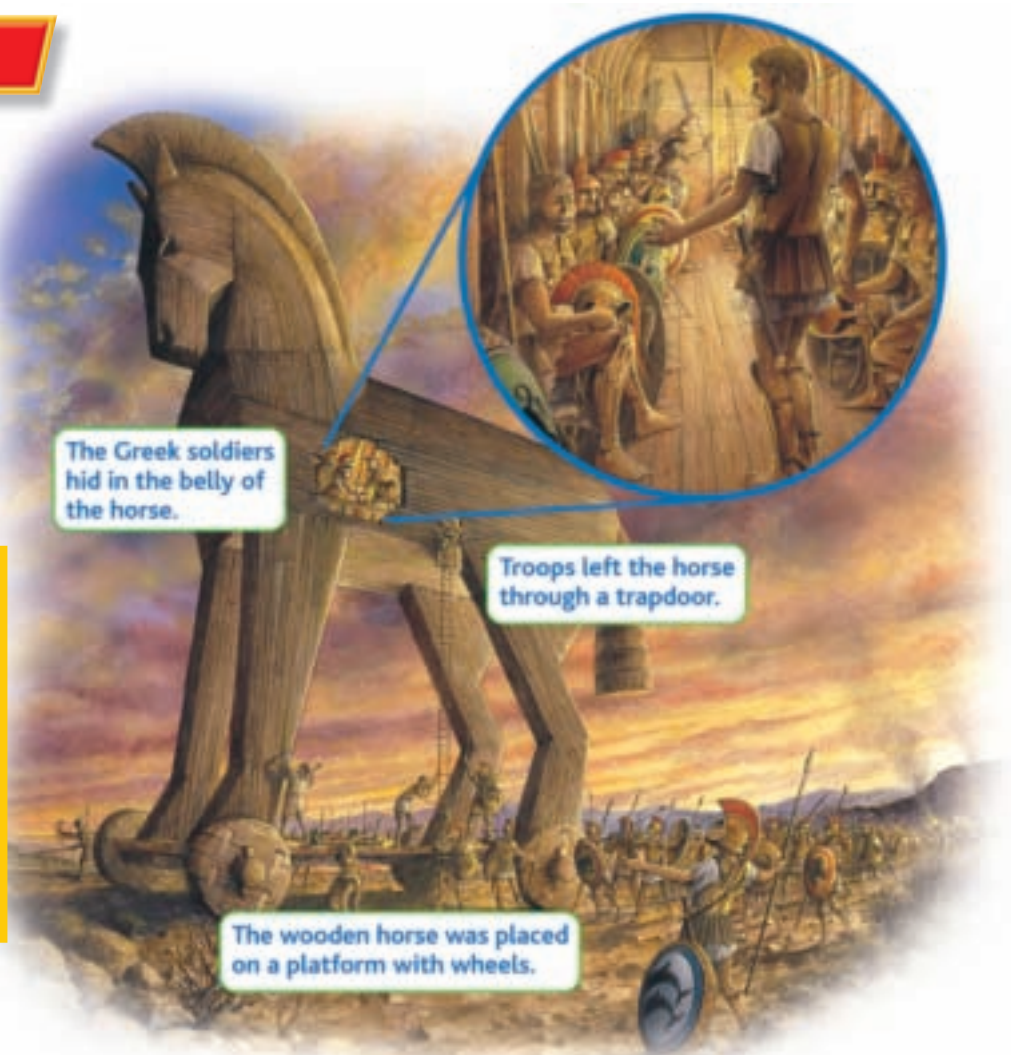
The battle for Troy drags on for 10 years. Finally, the Greeks come up with a plan to take the city. They build a huge, hollow, wooden horse. The best Mycenaean warriors hide inside the horse.

## The Trojan Horse

After building the Trojan horse, the Greeks returned to their ships and pretended to retreat. Despite warnings, the Trojans brought the horse within their city as a war trophy. The Greeks inside the horse opened the city gates for their fellow soldiers and captured the city. **What epic included the story of the Trojan horse?**



▲ Clay carving of the Trojan horse





The Trojans, thinking the horse was a gift from the Greeks, celebrate and roll the giant horse into the city. That night, the Greek warriors quietly climb from the horse and capture the city.

The *Odyssey* tells the story of Odysseus, another Greek hero. It describes his journey home from the Trojan War. Odysseus faces storms, witches, and giants before returning to his wife. Because it took Odysseus 10 years to get home, we use the word *odyssey* today to mean a long journey with many adventures.

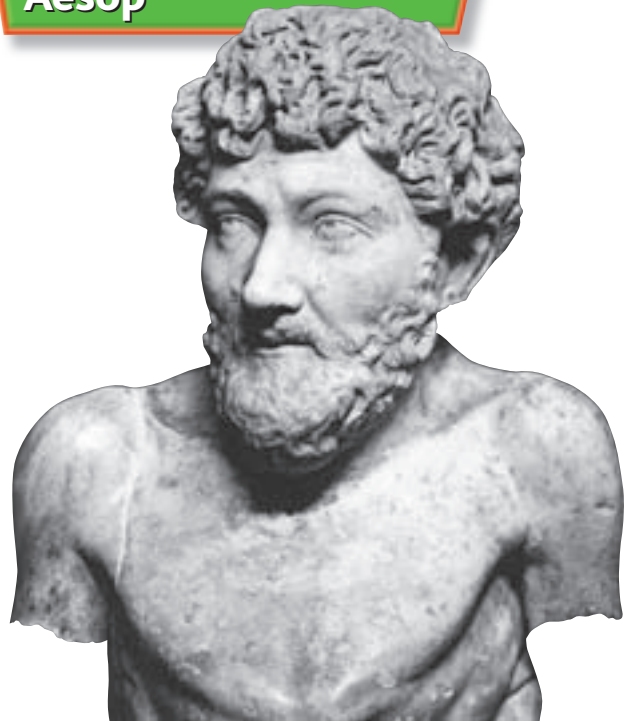
Greeks believed the *Iliad* and the *Odyssey* were more than stories. They looked on the epics as real history. These poems gave the Greeks an ideal past with a cast of heroes. Generations of Greeks read Homer's works. One Athenian wrote, "My father was anxious to see me develop into a good man . . . [so] he compelled me to memorize all of Homer."

Homer's stories taught courage and honor. They also taught that it was important to be loyal to your friends and to value the relationship between husband and wife. The stories showed heroes striving to be the best they could be. Heroes fought to protect their own honor and their family's honor. Homer's heroes became role models for Greek boys.

**Who Was Aesop?** About 550 B.C., a Greek slave named **Aesop** (EE•SAHP) made up his now famous fables. A **fable** (FAY•buhl) is a short tale that teaches a lesson. In most of Aesop's fables, animals talk and act like people. These often funny stories point out human flaws as well as strengths. Each fable ends with a message, or moral.

One of the best-known fables is "The Tortoise and the Hare." In this fable, a tortoise and a hare decide to race. More than

## Aesop



According to legend, Aesop was freed from slavery and became an adviser to Greek rulers. **What is a fable?**

halfway into the race, the hare is way ahead. He stops to rest and falls asleep. Meanwhile, the tortoise keeps going at a slow but steady pace and finally wins the race.

The moral of the story is "slow and steady wins the race." Some of the phrases we hear today came from Aesop's fables. "Sour grapes," "a wolf in sheep's clothing," and "appearances often are deceiving" are examples.

For about 200 years, Aesop's fables were a part of Greece's oral tradition. This means they were passed from person to person by word of mouth long before they were ever written down. Since then, countless writers have retold the stories in many different languages.

**Reading Check Describe** What are the characteristics of a fable?

## HOMER

c. 750 B.C.

Homer's epic poems—the *Iliad* and the *Odyssey*—are famous, but until the 1900s, historians believed that Homer never existed. Historians now know Homer was a real person, but they still debate whether he wrote his poems alone or with the help of other poets.

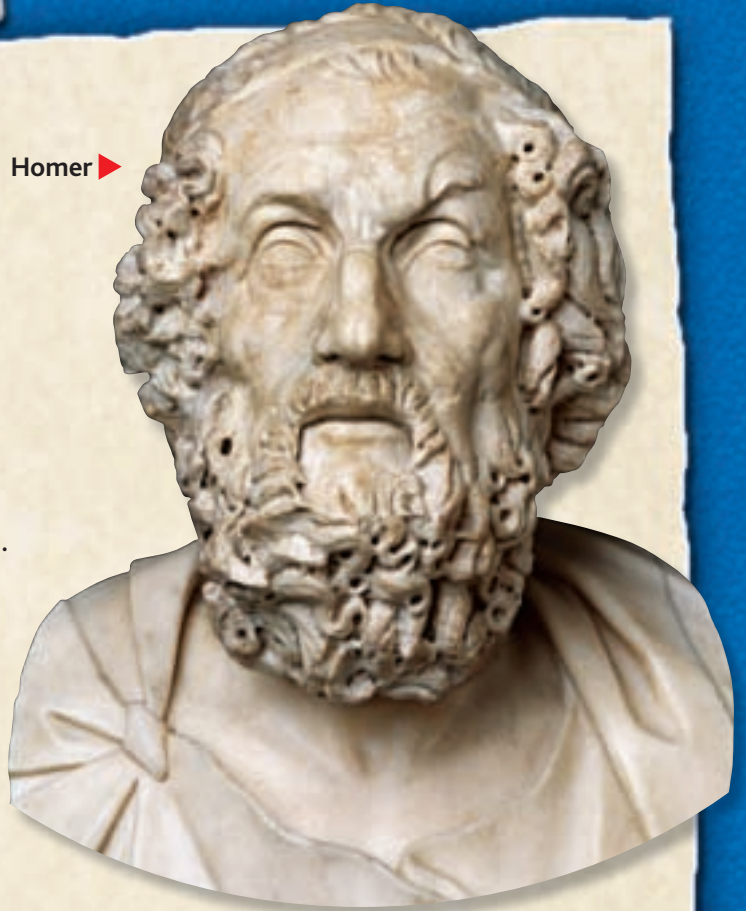
Many historians have speculated, or made educated guesses, about Homer's personal life. Some say that Homer came from Ionia and seven cities claim to be his birthplace. Some believe that he was blind. Others believe that he wandered from town to town.

Legends tell of Homer's strong influence on his readers. For example, as a young child, Alexander the Great is said to have slept with a copy of the *Iliad* under his pillow.

Homer used the term *aoidos* for a poet. This word means "singer," which tells us that the poetry created during Homer's time was memorized and recited, not written down. Usually, short, simple poems that were easy to remember were told to an audience as entertainment.

Homer created a different style of poetry that influenced all Western literature that followed. His epics are long and involve complex characters, dramatic action, and interesting events. Because each section of the *Iliad* and the *Odyssey* has these characteristics, most historians today think that only one poet could have created both epics. Whoever Homer was, his two epics have influenced readers for more than 3,000 years.

Homer ▶



**"I hate as I hate [Hades']  
own gate that man  
who hides one thought  
within him while he  
speaks another."**

—Homer, the *Iliad*

### Then and Now

Review the characteristics of an epic. Then do research to identify a modern epic.



## Greek Drama

**Main Idea** Greek drama still shapes entertainment today.

**Reading Focus** Think about your favorite movie. How would you describe it? Is it a tragedy? Is it a comedy? Read to find out how Greek plays still influence our entertainment.

What is **drama** (DRAH•muh)? Drama is a story told by actors who pretend to be characters in the story. In a drama, actors speak, show emotion, and imitate the actions of the characters they represent.

Today's movies, plays, and television shows are all examples of drama.

**Tragedies and Comedies** The Greeks performed plays in outdoor theaters as part of their religious festivals. They developed two kinds of dramas—comedies and tragedies.

In a **tragedy** (TRA•juh•dee), a person struggles to overcome difficulties but fails. As a result, the story has an unhappy ending. Early Greek tragedies presented people in a struggle against their fate. Later Greek tragedies showed how a person's character flaws caused him or her to fail.

## Linking Past & Present

### The Theater

**THEN** Tragedies and comedies were staged at a theater on the slopes of the Acropolis in Athens. The plays included music and dance. Greek actors wore costumes and held large masks. The masks told the audience who the actor was supposed to be—a king, a soldier, or a god. All the actors were men, even those playing female parts.

▼ A modern-day play



▲ Ruins of a Greek theater

**NOW** Actors today include both men and women—and even children and animals. Special effects and makeup have replaced handheld masks. Music in modern theater is sometimes just as important as the actors' words. *If you watched a Greek play, what might it tell you about life in ancient Greece?*

In a **comedy** (KAH • muh • dee), the story ends happily. Today we use the word *comedy* to mean a story filled with humor. The word actually means any drama that has a happy ending.

Greek stories dealt with big questions, such as:

- What is the nature of good and evil?
- What rights should people have?
- What role do gods play in our lives?

The three best-known writers of Greek tragedies were Aeschylus (EHS • kuh • luhs), **Sophocles** (SAH • fuh • KLEEZ), and **Euripides** (yu • RIH • puh • DEEZ). The best-known writer of Greek comedies was Aristophanes (ar • uh • STAH • fuh • NEEZ).

Early Greek tragedies had only one actor who gave speeches and a chorus that sang songs describing the events. Aeschylus was the first to introduce the idea of having two actors. This let the writer tell a story involving conflict between the two people. Aeschylus also introduced costumes, props, and stage decorations—all ideas we still use today.

One of Aeschylus's best-known plays is a group of three plays called the *Oresteia* (ohr • eh • STY • uh). Aeschylus wrote the plays in 458 B.C. They describe what happens when the king of Mycenae returns home from the Trojan War. The *Oresteia* teaches that evil acts cause more evil acts and suffering. In the end, however, reason triumphs over evil. The moral of these plays is that people should not seek revenge.

Sophocles, a general and a writer of plays, developed drama even further. He used three actors in his stories instead of one or two. He also placed painted scenes behind the stage as a backdrop to the action. Two of Sophocles' most famous plays are *Oedipus Rex* (EH • duh • puhs REHKS) and *Antigone* (an • TIH • guh • nee) In *Antigone*, Sophocles



▲ This artwork shows actors preparing for a play. **When and where were Greek plays performed?**

◀ Comedy and tragedy masks

asks the question “Is it better to follow orders or to do what is right?”

Euripides, a later playwright, tried to take Greek drama beyond heroes and gods. His characters were more down-to-earth. Euripides' plots show a great interest in real-life situations. He questioned traditional thinking, especially about war. He showed war as cruel and women and children as its victims.

The works of Aristophanes are good examples of comedies. They make fun of leading politicians and scholars. They encourage the audience to think as well as to laugh. Many of Aristophanes' plays included jokes, just like popular television comedies do today.

 **Reading Check Summarize** What two types of drama did the Greeks create?



## Greek Art and Architecture

**Main Idea** Greek art and architecture expressed Greek ideas of beauty and harmony.

**Reading Focus** Do you consider any building in your neighborhood a work of art? Read on to find out about buildings that people have admired as art for centuries.

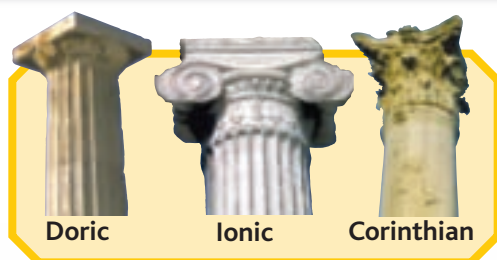
Artists in ancient Greece believed in certain ideas and tried to show those ideas in their work. These ideas have never gone out of style. Greek artists wanted people to

see reason, moderation, balance, and harmony in their work. They hoped their art would inspire people to base their lives on these same ideas.

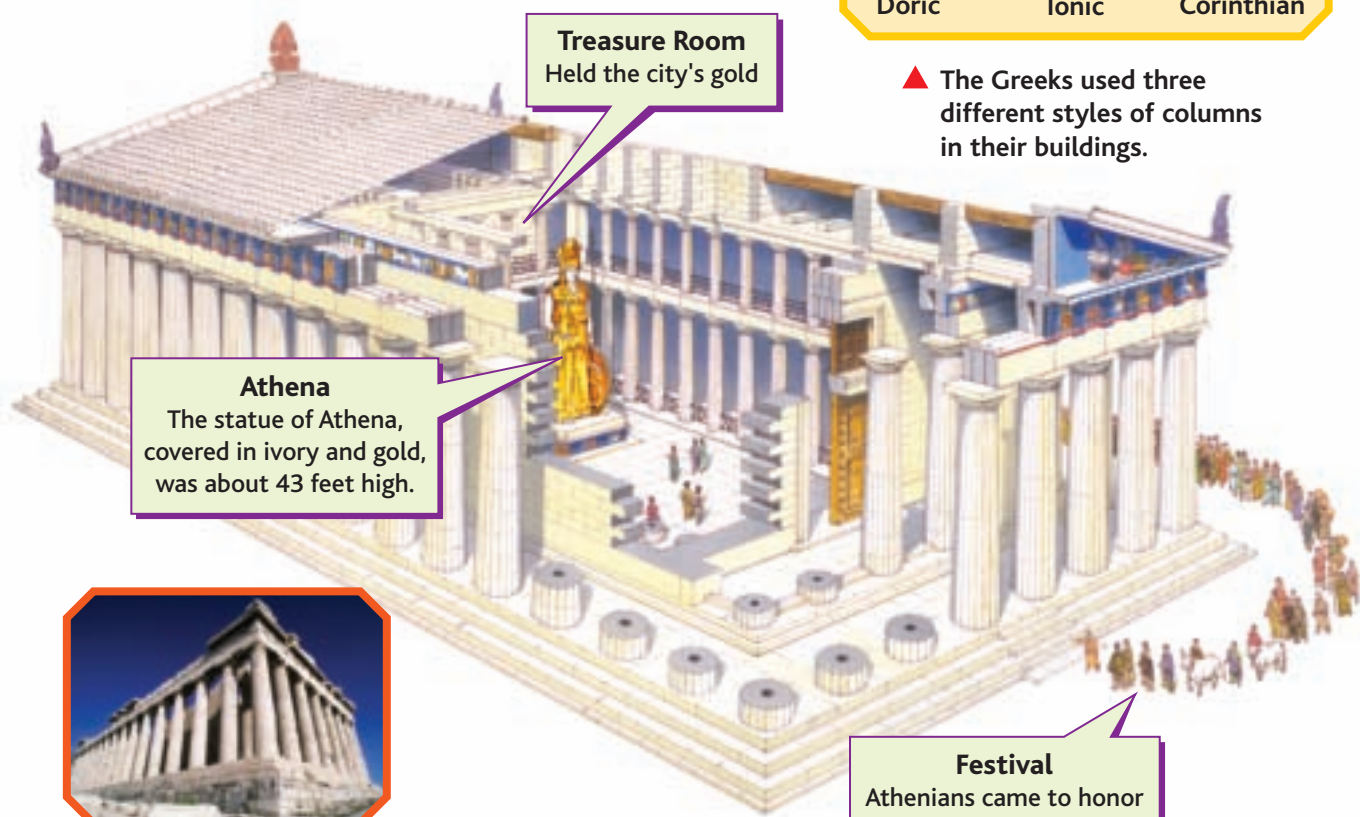
We know that the Greeks painted murals, but none of them have survived. However, we can still see examples of Greek painting on Greek pottery. The pictures on most Greek pottery are either red on a black background or black on a red background. Large vases often had scenes from Greek myths. Small drinking cups showed scenes from everyday life.

### The Parthenon

Standing at almost 230 feet long and 100 feet wide, the Parthenon was the glory of ancient Athens. It was built between 447 and 432 B.C. **What was the purpose of the Parthenon?**



▲ The Greeks used three different styles of columns in their buildings.



**Treasury Room**  
Held the city's gold

**Athena**  
The statue of Athena, covered in ivory and gold, was about 43 feet high.

**Festival**  
Athenians came to honor Athena every four years.




▲ Today the Parthenon still rises above Athens.

In addition to making pottery, the Greeks were skilled architects. Architecture is the art of designing and building structures. In Greece, the most important architecture was the temple dedicated to a god or goddess. The best-known example is the Parthenon. Temples, such as the Parthenon, had a walled room in their centers. Statues of gods and goddesses and the gifts offered to them were kept in these central rooms.

Large columns supported many Greek buildings. The first Greek columns were carved from wood. Then, in 500 B.C., the Greeks began to use marble. Marble columns were built in sections. Large blocks of marble were chiseled from stone quarries and brought by oxen-drawn wagon to the building site. The sections were stacked on top of each other. To keep

them from toppling, the column's sections were joined with wooden pegs. Today, marble columns are common features of churches and government buildings. Some of the best-known buildings in our nation's capital, such as the White House and the Capitol, have columns similar to Greek columns.

Many Greek temples were decorated with sculpture. Greek sculpture, like Greek architecture, was used to express Greek ideas. The favorite subject of Greek artists was the human body. Greek sculptors did not copy their subjects exactly, flaws and all. Instead, they tried to show their ideal version of perfection and beauty.

 **Reading Check Identify** What was the most important type of building in ancient Greece?

## Section 1 Review

**History Online**  
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### Reading Summary

#### Review the Main Ideas

- The Greeks believed gods and goddesses influenced their lives. They believed oracles spoke for the gods and goddesses.
- The Greeks wrote long poems, called epics, and short tales, called fables, to pass on Greek values.
- The Greeks created the ideas of tragedy and comedy that are still used in drama today.
- Greek art forms, such as painting, architecture, and sculpture, expressed Greek ideas of beauty, harmony, and moderation.

### What Did You Learn?


1. How and why did the Greeks honor their gods?
2. What values did the epic poems of Homer teach Greeks?

#### Critical Thinking

3. **Contrast** How do Greek tragedies and comedies differ?
4. **Summarizing Information** Draw a table to describe the characteristics of Greek architecture and pottery.

Greek Architecture	
Greek Pottery	

5. **Evaluate** Do you think the themes of Euripides' plays would be popular today?

6. **Make Generalizations** Why did Greek artists include the ideas of reason, moderation, balance, and harmony in their works?
7. **Expository Writing** Greek literature tells us what the Greeks thought was important. Choose a modern book, movie, or television show. Write a paragraph to explain what it would tell others about our society.
8.  **Reading Context Clues** Explain how the words in the following sentence would help you find the meaning of the word *moral*.  
 "The moral of the story is 'slow and steady wins the race.'"



# ICARUS AND DAEDALUS

Retold by Josephine Preston Peabody

## Before You Read

**The Scene:** This story takes place on the Greek island of Crete in the legendary time when both humans and gods lived in ancient Greece.

**The Characters:** Daedalus is the master architect for King Minos of Crete. Icarus is the son of Daedalus.

**The Plot:** King Minos once liked and trusted his servant, the architect Daedalus. The king's favor, though, soon runs out and he locks Daedalus and his son, Icarus, in a high tower. Daedalus secretly plans to escape.

## Vocabulary Preview

**mortal:** human

**veer:** to shift or change direction

**waver:** to become unsteady

**rash:** done without thought or preparation

**reel:** to turn or seem to turn around and around

**quench:** to satisfy or put an end to a need or desire

**vainly:** without success

**H**ave you ever known someone who ignored warnings and did something dangerous? This is the story of a young boy who does not listen to his father and suffers the consequences.

## As You Read

*Keep in mind that a myth is a special kind of story, usually involving gods or goddesses. Greek myths, like this one, were told and retold over many hundreds of years. Try to figure out why the Greeks told this story. What lesson does it teach?*



**A**mong all those mortals who grew so wise that they learned the secrets of the gods, none was more cunning than Daedalus.<sup>1</sup>

He once built, for King Minos of Crete, a wonderful Labyrinth of winding ways so cunningly tangled up and twisted around that, once inside, you could never find your way out again without a magic clue. But the king's favor veered with the wind, and one day he had his master architect imprisoned in a tower. Daedalus managed to escape from his cell; but it seemed impossible to leave the island, since every ship that came or went was well guarded by order of the king.

At length, watching the sea-gulls in the air—the only creatures that were sure of liberty,—he thought of a plan for himself and his young son Icarus,<sup>2</sup> who was captive with him.

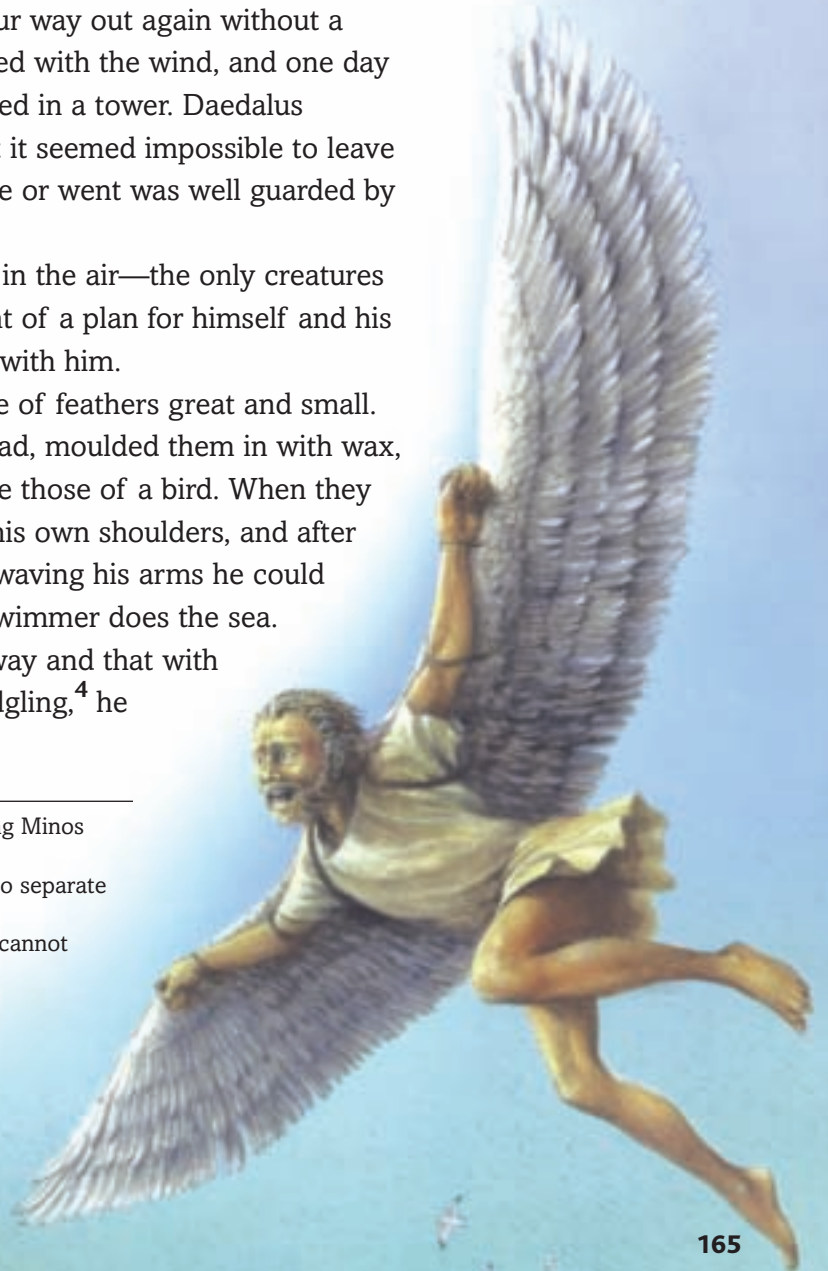
Little by little, he gathered a store of feathers great and small. He fastened these together with thread, moulded them in with wax, and so fashioned two great wings like those of a bird. When they were done, Daedalus fitted them to his own shoulders, and after one or two efforts, he found that by waving his arms he could winnow the air and cleave<sup>3</sup> it, as a swimmer does the sea. He held himself aloft, wavered this way and that with the wind, and at last, like a great fledgling,<sup>4</sup> he learned to fly.

<sup>1</sup>**Daedalus** (DEH • duhl • uhs): architect for King Minos

<sup>2</sup>**Icarus** (IH • kuh • ruhs): son of Daedalus

<sup>3</sup>**winnow . . . and cleave**: here, both mean “to separate or divide”

<sup>4</sup>**fledgling**: a young bird without feathers that cannot yet fly





Without delay, he fell to work on a pair of wings for the boy Icarus, and taught him carefully how to use them, bidding him beware of rash adventures among the stars. “Remember,” said the father, “never fly very low or very high, for the fogs about the earth would weigh you down, but the blaze of the sun will surely melt your feathers apart if you go too near.”

For Icarus, these cautions went in at one ear and out by the other. Who could remember to be careful when he was to fly for the first time? Are birds careful? Not they! And not an idea remained in the boy’s head but the one joy of escape.

The day came, and the fair wind that was to set them free. The father bird put on his wings, and, while the light urged them to be gone, he waited to see that all was well with Icarus, for the two could not fly hand in hand. Up they rose, the boy after his father. The hateful ground of Crete sank beneath them; and the country folk, who caught a glimpse of them when they were high above the tree-tops, took it for a vision of the gods,—Apollo,<sup>5</sup> perhaps, with Cupid<sup>6</sup> after him.

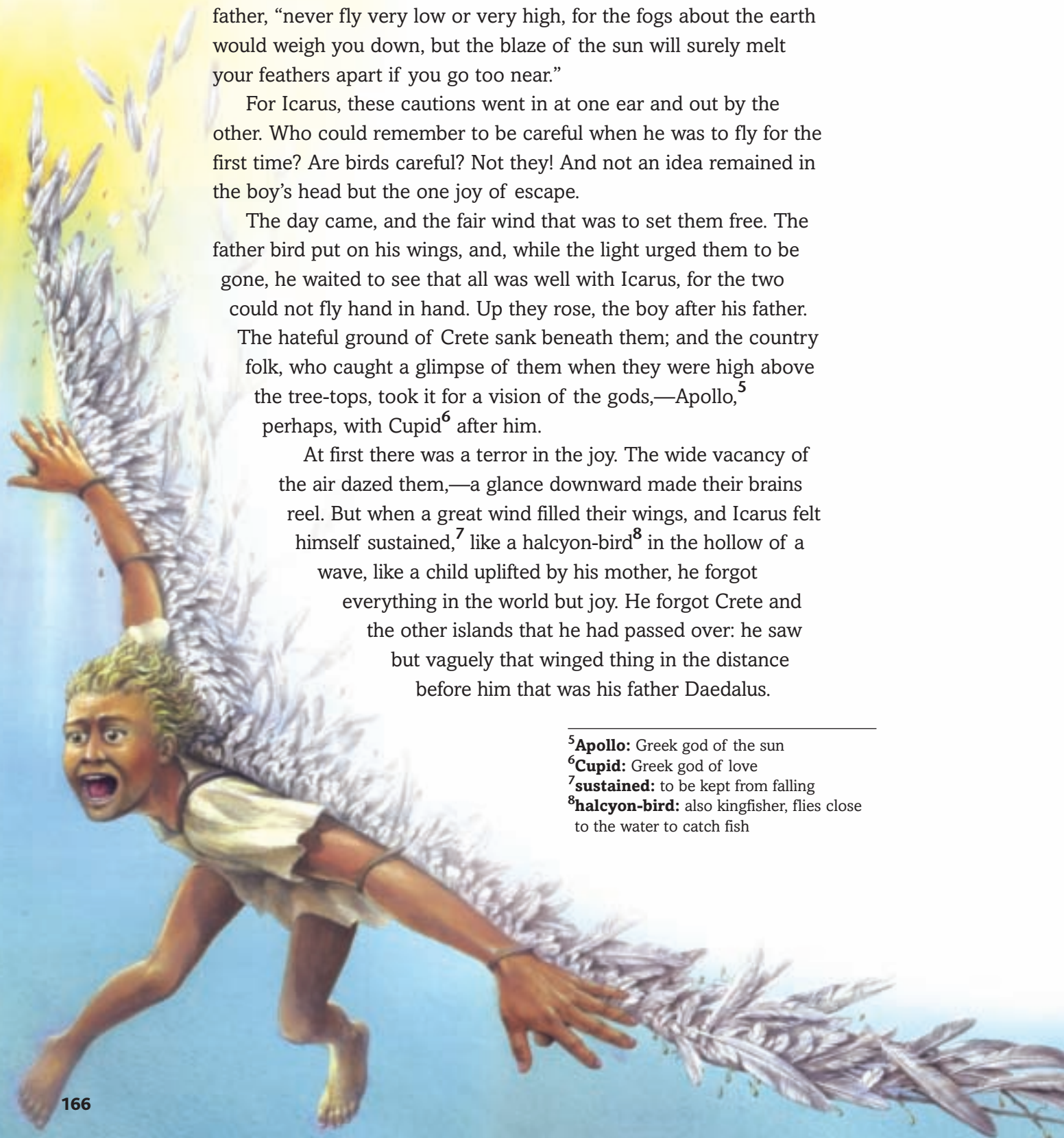
At first there was a terror in the joy. The wide vacancy of the air dazed them,—a glance downward made their brains reel. But when a great wind filled their wings, and Icarus felt himself sustained,<sup>7</sup> like a halcyon-bird<sup>8</sup> in the hollow of a wave, like a child uplifted by his mother, he forgot everything in the world but joy. He forgot Crete and the other islands that he had passed over: he saw but vaguely that winged thing in the distance before him that was his father Daedalus.


<sup>5</sup>**Apollo:** Greek god of the sun

<sup>6</sup>**Cupid:** Greek god of love

<sup>7</sup>**sustained:** to be kept from falling

<sup>8</sup>**halcyon-bird:** also kingfisher, flies close to the water to catch fish





He longed for one draught<sup>9</sup> of flight to quench the thirst of his captivity: he stretched out his arms to the sky and made toward the highest heavens.

Alas for him! Warmer and warmer grew the air. Those arms, that had seemed to uphold him, relaxed. His wings wavered, drooped. He fluttered his young hands vainly,—he was falling,—and in that terror he remembered. The heat of the sun had melted the wax from his wings; the feathers were falling, one by one, like snowflakes; and there was none to help.

He fell like a leaf tossed down the wind, down, down, with one cry that overtook Daedalus far away. When he returned, and sought high and low for the poor boy, he saw nothing but the bird-like feathers afloat on the water, and he knew that Icarus was drowned.


The nearest island he named Icaria, in memory of the child; but he, in heavy grief, went to the temple of Apollo in Sicily, and there hung up his wings as an offering. Never again did he attempt to fly.



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<sup>9</sup>**draught:** here, means “a taste”

### Responding to the Reading

1. What does King Minos do to keep Daedalus and Icarus from escaping from Crete?
2. How does the setting of the story influence the plot? Support your ideas with details from the story.
3. **Drawing Conclusions** Do you think Daedalus is a concerned father? Why or why not? Support your opinion with examples.
4. **Evaluating Information** Why does Icarus disobey his father's words of caution?
5.  **Reading** **Read to Write** Imagine you are Icarus. Would you listen to your father's advice? Write one or two paragraphs explaining what you would have done and why.



# Greek Philosophy and History

## Get Ready to Read!

### What's the Connection?

Section 1 discussed early Greek artists and writers. Many of them made the years between 500 and 350 B.C. the Golden Age for Greece. Greek thinkers and historians also produced works that shape people's views of the world today.

### Focusing on the Main Ideas

- Greek philosophers developed ideas that are still used today. (page 169)
- Greeks wrote the first real histories in Western civilization. (page 173)

### Meeting People

**Pythagoras** (puh•THA•guh•ruhs)

**Socrates** (SAH•kruh•TEEZ)

**Plato** (PLAY•TOH)

**Aristotle** (AR•uh•STAH•tuhl)

**Herodotus** (hih•RAH•duh•tuhs)

**Thucydides** (thoo•SIH•duh•DEEZ)

### Building Your Vocabulary

**philosophy** (fuh•LAH•suh•fee)

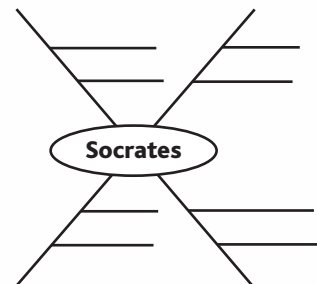
**philosopher** (fuh•LAH•suh•fuhr)

**Sophist** (SAH•fihst)

**Socratic method** (suh•KRA•tihk)

### Reading Strategy

**Categorizing Information** Use diagrams like the one below to show the basic philosophies of Socrates, Plato, and Aristotle.



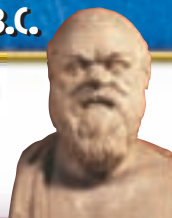
## When & Who?

500 B.C.



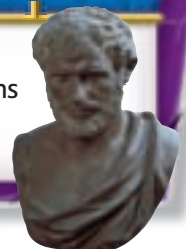
435 B.C.  
Herodotus  
writes history  
of Persian Wars

400 B.C.



399 B.C.  
Socrates  
sentenced  
to death

300 B.C.



335 B.C.  
Aristotle opens  
the Lyceum  
in Athens

## Greek Philosophers

**Main Idea** Greek philosophers developed ideas that are still used today.

**Reading Focus** Who are you? Why are you here? Read to learn how the ancient Greeks tried to answer similar “big” questions.

The word **philosophy** (fuh•LAH•suh•fee) comes from the Greek word for “love of wisdom.” Greek philosophy led to the study of history, political science, science, and mathematics. Greek thinkers who believed the human mind could understand everything were called **philosophers** (fuh•LAH•suh•fuhrs).

Many philosophers were teachers. One Greek philosopher, **Pythagoras** (puh•THA•guh•ruhs), taught his pupils that the universe followed the same laws that governed music and numbers. He believed that all relationships in the world could be expressed in numbers. As a result, he developed many new ideas about mathematics. Most people know his name because of the Pythagorean theorem that is still used in geometry. It is a way to determine the length of the sides of a triangle.

**Who Were the Sophists?** The **Sophists** (SAH•fihsts) were professional teachers in ancient Greece. They traveled from city to



▲ This artwork shows Greek philosophers involved in a discussion. **Where does the word philosophy come from?**



## Greek Philosophers

### Sophists

### Socrates

### Plato

### Aristotle

#### Thinker Or Group



#### Main Idea

Sophists like Libanius (above) thought that people should use knowledge to improve themselves. They believed that there is no absolute right or wrong.

He was a critic of the Sophists. Socrates believed that there was an absolute right and wrong.

He rejected the idea of democracy as a form of government. Plato believed that philosopher-kings should rule society.

Aristotle taught the idea of the “golden mean.” He believed observation and comparison were necessary to gain knowledge.

#### Important Contribution

They developed the art of public speaking and debate.

He created the Socratic method of teaching.

He described his vision of the ideal government in his work the *Republic*.

He wrote over 200 books on philosophy and science. He divided all governments into three basic types.

#### Influence on Today

The importance of public speaking can be seen in political debates between candidates.

His methods influenced the way teachers interact with their students.

He introduced the idea that government should be fair and just.

His political ideas still shape political ideas today.

city and made a living by teaching others. They believed students should use their time to improve themselves. Many taught their students how to win an argument and make good political speeches.

Sophists did not believe that gods and goddesses influenced people. They also rejected the idea of absolute right or wrong. They believed that what was right for one person might be wrong for another.

**The Ideas of Socrates** One critic of the Sophists was **Socrates** (SAH • kruh • TEEZ). Socrates was an Athenian sculptor whose true love was philosophy. Socrates left no writings behind. What we know about him we have learned from the writings of his students.

Socrates believed that an absolute truth existed and that all real knowledge was within each person. He invented the **Socratic method** (suh • KRA • tihk) of teaching still used today. He asked pointed questions to force his pupils to use their reason and to see things for themselves.

Some Athenian leaders considered the Socratic method a threat to their power. At one time, Athens had a tradition of questioning leaders and speaking freely. However, their defeat in the Peloponnesian War changed the Athenians. They no longer trusted open debate. In 399 B.C. the leaders accused Socrates of teaching young Athenians to rebel against the state. A jury found Socrates guilty and sentenced him to death. Socrates could have fled the city, but

he chose to remain. He argued that he had lived under the city's laws, so he had to obey them. He then drank poison to carry out the jury's sentence.

**The Ideas of Plato** One of Socrates' students was **Plato** (PLAY•toh). Unlike Socrates, we are able to learn a lot about Plato from his writings. One work Plato wrote is called the *Republic*. It explains his ideas about government. Based on life in Athens, Plato decided that democracy was not a good system of government. He did not think that rule by the people produced fair or sensible policies. To him, people could not live good lives unless they had a just and reasonable government.

In the *Republic*, Plato described his ideal government. He divided people into three basic groups. At the top were philosopher-kings, who ruled using logic and wisdom. Warriors made up the second group. They defended the state from attack.

The third group included the rest of the people. They were driven by desire, not by wisdom like the first group or courage like the second. These people produced the state's food, clothing, and shelter. Plato also believed that men and women should have the same education and an equal chance to have the same jobs.

**Who Was Aristotle?** Plato established a school in Athens known as the Academy. His best student was **Aristotle** (AR•uh•STAH•tuhl). Aristotle wrote more than 200 books on topics ranging from government to the planets and stars.

In 335 B.C. Aristotle opened his own school called the Lyceum. At the Lyceum, Aristotle taught his pupils the "golden mean." This idea holds that a person should do nothing in excess. For example, a person

should not eat too little or too much but just enough to stay well.

Aristotle also helped to advance science. He urged people to use their senses to make observations, just as scientists today make observations. Aristotle was the first person to group observations according to their similarities and differences. Then he made generalizations based on the groups of facts.

Like Plato, Aristotle wrote about government. He studied and compared the governments of 158 different places to find the best form of government. In his book *Politics*, Aristotle divided the governments into three types:

- Government by one person, such as a monarch (king or queen) or a tyrant
- Government by a few people, which might be an aristocracy or an oligarchy
- Government by many people, as in a democracy

Aristotle noticed that governments run by a few people were usually run by the rich. He noticed that most democracies were run by the poor. He thought the best government was a mixture of the two.

Aristotle's ideas shaped the way Europeans and Americans thought about government. The founders of the United States Constitution tried to create a mixed government that balanced the different types Aristotle had identified.

 **Reading Check Contrast** How did Aristotle's idea of government differ from Plato's?



**Web Activity** Visit [jat.glencoe.com](http://jat.glencoe.com) and click on *Chapter 5—Student Web Activity* to learn more about ancient Greece.



# Biography

## PLATO AND ARISTOTLE

*Plato c. 428–347 B.C.*

*Aristotle 384–322 B.C.*

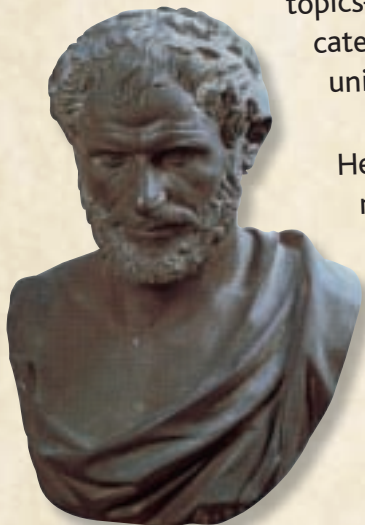
Plato was from a noble Greek family and had planned a career in politics. However, he was so horrified by the death of his teacher, Socrates, that he left politics and spent many years traveling and writing. When Plato returned to Athens in 387 B.C., he founded an academy, where he taught using Socrates' method of questioning. His academy drew bright young students from Athens and other Greek city-states. Plato looked for truth beyond the appearances of everyday objects and reflected this philosophy in his writing and teaching. He believed the human soul was the connection between the appearance of things and ideas.

Plato and Aristotle—two of the greatest ancient Greek philosophers—met as teacher and student at Plato's Academy in Athens. Aristotle left his home in Stagira and arrived on the Academy's doorstep when he was eighteen years old. He remained at Plato's Academy for 20 years, until the death of his teacher. Unlike Plato, Aristotle did not come from a noble family. His father was the court physician to the king of Macedonia. At an early age, Aristotle's father introduced him to the topics of medicine and biology, and these became his main interests of study. Aristotle sought truth through a systematic, scientific approach. He liked to jot down notes and details about different topics—from weather to human behavior—and arrange them in categories. He did not trust the senses' ability to understand the universe.

After Plato's death, Aristotle traveled for about 12 years. He also tutored the future Alexander the Great. Later in his life, he returned to Athens and opened his own school, the Lyceum. He made his school the center for research in every area of knowledge known to the Greeks.



Plato ▲



▲ Aristotle

### Then and Now

Aristotle spent 20 years at Plato's Academy. What present-day careers or subjects of study require lifelong learning?

# Greek Historians

**Main Idea** Greeks wrote the first real histories in Western civilization.

**Reading Focus** Why is history important? Read on to find out what Greek historians thought was important.

In most places in the ancient world, people did not write history. Legends and myths explained their past. Some civilizations kept long lists of rulers and the dates they were in power, but no one tried to explain the past by studying events. Then, in 435 B.C., a Greek named **Herodotus** (hih•RAH•duh•tuhs) wrote the history of the Persian Wars.

In his book, Herodotus tried to separate fact from legend. He asked questions, recorded answers, and checked the truthfulness of his sources. Although his history includes some errors and uses gods and goddesses to explain some events, Western historians consider him the “father of history.”

Many historians consider **Thucydides** (thoo•SIH•duh•DEEZ) the greatest historian of the ancient world. Thucydides fought in the Peloponnesian War. After he lost a battle, he was sent into exile. There he wrote his *History of the Peloponnesian War*.

Unlike Herodotus, Thucydides saw war and politics as the activities of human beings, not gods. He also stressed the importance of having accurate facts:

“Either I was present myself at the events which I have described or else I heard of them from eyewitnesses whose reports I have checked with as much thoroughness as possible.”

—Thucydides, *History of the Peloponnesian War*

**Reading Check Identify** How did Thucydides view war and politics?

## Section 2 Review

History  online

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### Reading Summary

Review the **Main Ideas**

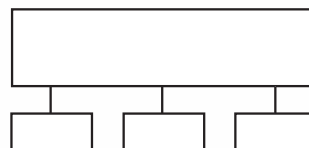
- The ideas of Greek philosophers, including Socrates, Plato, and Aristotle, still affect modern thinking about education, government, and science.
- Herodotus and Thucydides are considered western civilization’s first historians. They believed that people could understand the present by studying the past.

### What Did You Learn?

1. Who were the Sophists and what were their beliefs?
2. Before Herodotus, how did Greeks explain the past?

### Critical Thinking

3. **Organizing Information** Draw a diagram like the one below. Use the diagram to organize Plato’s ideas about an ideal government.



4. **Science Link** How are Aristotle’s teachings related to the scientific method used by scientists today?
5. **Contrast** What is different about the works of Herodotus and Thucydides?
6. **Summarize** Describe Aristotle’s contributions to government.
7. **Persuasive Writing** Do you agree with Plato’s vision of the ideal state in the *Republic*? Write an editorial expressing your viewpoint.



# Alexander the Great

## Get Ready to Read!

### What's the Connection?

In Section 2, you learned that the Greek philosopher Aristotle was also a teacher. The king of Macedonia admired Greek culture and hired Aristotle to tutor his son, Alexander. Years later, his son would take control of the Greek world.

### Focusing on the Main Ideas

- Philip II of Macedonia united the Greek states. (page 175)
- Alexander the Great conquered the Persian Empire and spread Greek culture throughout southwest Asia. (page 176)

### Locating Places

**Macedonia** (MA•suh•DOH•nee•uh)

**Chaeronea** (KEHR•uh•NEE•uh)

**Syria** (SIHR•ee•uh)

**Alexandria** (A•lihg•ZAN•dree•uh)

### Meeting People

**Philip II**

**Alexander the Great**

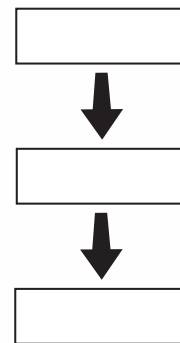
### Building Your Vocabulary

**legacy** (LEH•guh•see)

**Hellenistic Era** (HEH•luh•NIHS•tihk)

### Reading Strategy

**Sequencing** Create a diagram like the one below to track the achievements of Alexander the Great.



## When & Where?



360 B.C.

359 B.C.

Philip II becomes king of Macedonia

340 B.C.

331 B.C.

Alexander defeats Darius at Gaugamela

320 B.C.

323 B.C.

Alexander dies

## Macedonia Attacks Greece

**Main Idea** Philip II of Macedonia united the Greek states.

**Reading Focus** Have you ever wanted something because your neighbor had it? Read to find what the king of Macedonia wanted from his neighbors, the Greeks.

**Macedonia** (MA • suh • DOH • nee • uh) lay north of Greece. The Macedonians raised sheep and horses and grew crops in their river valleys. They were a warrior people who fought on horseback. The Greeks looked down on them, but by 400 B.C., Macedonia had become a powerful kingdom.

**A Plan to Win Greece** In 359 B.C. **Philip II** rose to the throne in Macedonia. Philip had lived in Greece as a young man. He admired everything about the Greeks—their art,

their ideas, and their armies. Although Macedonia was influenced by Greek ideas, Philip wanted to make his kingdom strong enough to defeat the mighty Persian Empire. In order to achieve this goal, Philip needed to unite the Greek city-states with his own kingdom.

Philip trained a vast army of foot soldiers to fight like the Greeks. He took over the city-states one by one. He took some city-states by force and bribed the leaders of others to surrender. Some united with his kingdom voluntarily.

Demosthenes (dih • MAHS • thuh • NEEZ) was a lawyer and one of Athens's great public speakers. He gave several powerful speeches warning Athenians that Philip was a threat to Greek freedom. He urged Athens and other city-states to join together to fight the Macedonians.

### Primary Source

#### Demosthenes' Warning

▼ Demosthenes

As King Philip II of Macedonia became more powerful, he began to take part in the affairs of Greece. Demosthenes realized that Macedonia's powerful army would eventually be a threat to Greece. He tried to warn the Greeks to take action.

"Remember only that Philip is our enemy, that he has long been robbing and insulting us, that wherever we have expected aid from others we have found hostility, that the future depends on ourselves, and that unless we are willing to fight him there we shall perhaps be forced to fight here. . . . You need not speculate [guess] about the future except to assure yourselves that it will be disastrous unless you face the facts and are willing to do your duty."

—Demosthenes, "The First Philippic" in *Orations of Demosthenes*



#### DBQ Document-Based Question

Which line of Demosthenes' speech tells what he thinks will happen if the Greeks ignore Philip?



However, by the time the Greeks saw the danger, it was too late. The Peloponnesian War had left the Greeks weak and divided. In many Greek city-states, the population had declined after the Peloponnesian War. Fighting had destroyed many farms and left people with no way to earn a living. As a result, thousands of young Greeks left Greece to join the Persian army. Many who stayed behind began fighting among themselves. The city-states grew weaker.

Although the Athenians joined some other Greek states to fight Philip's army, they could not stop the invasion. In 338 B.C. the Macedonians crushed the Greek allies at the Battle of **Chaeronea** (KEHR•uh•NEE•uh) near Thebes. Philip now controlled most of Greece.

**Reading Check Summarize** Why did Philip II invade Greece?

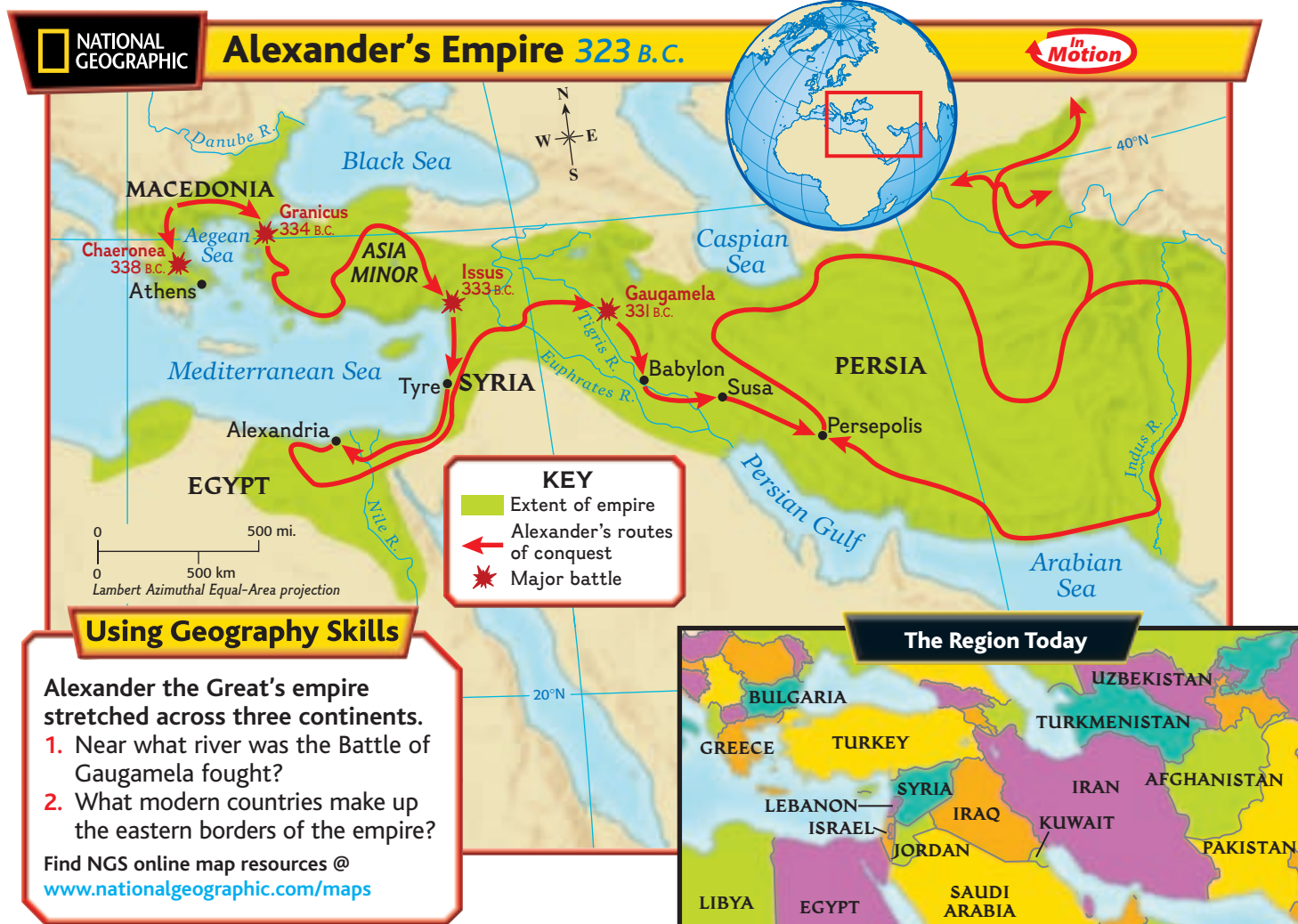
## Alexander Builds an Empire

**Main Idea** Alexander the Great conquered the Persian Empire and spread Greek culture throughout southwest Asia.

**Reading Focus** What will you be doing at age 20? Read to learn what Philip's son Alexander achieved.

Philip planned to conquer the Persian Empire with the Greeks' help. Before Philip could carry out his plan, however, he was murdered. As a result, the invasion of Asia fell to his son.

Alexander was only 20 when he became king of Macedonia. Philip had carefully trained his son for leadership. While still a boy, Alexander often went with his father to the battlefield. At age 16 he rose to commander in the Macedonian army. After his



father's death, Alexander was ready to fulfill his father's dream—the invasion of the Persian Empire.

**Alexander's Conquests** In the spring of 334 B.C., Alexander invaded Asia Minor with about 37,000 Macedonian and Greek foot soldiers. He also took along 5,000 mounted warriors. With Alexander at their head, the cavalry destroyed the forces of the local Persian satraps at the Battle of Granicus.

By the next year, Alexander had freed the Greek cities in Asia Minor from Persian rule and defeated a large Persian army at Issus. He then turned south. By the winter of 332 B.C., he had captured **Syria** (SIHR•ee•uh) and Egypt. Then he built the city of **Alexandria** (A•lihng•ZAN•dree•uh) as a center of business and trade. The city became one of the most important cities in the ancient world.

In 331 B.C. Alexander headed east and defeated the Persians at Gaugamela, near Babylon. After this victory, his army easily overran the rest of the Persian Empire. However, Alexander did not stop at Persia. Over the next three years, he marched east as far as modern Pakistan. In 326 B.C. he crossed the Indus River and entered India. There he fought a number of bloody battles. Weary of continuous war, his soldiers refused to go farther. Alexander agreed to lead them home.

On the return march, the troops crossed a desert in what is now southern Iran. Heat and thirst killed thousands of soldiers. At one point, a group of soldiers found a little water and scooped it up in a helmet. Then they offered the water to Alexander. According to a Greek historian, Alexander, "in full view of his troops, poured the water on the ground. So extraordinary was the effect of this action that the water wasted by

## Alexander the Great



▲ This carving of Alexander the Great on his horse decorated the side of a tomb. **Was Alexander able to fulfill his plans of conquest? Explain.**

Alexander was as good as a drink for every man in the army."

In 323 B.C. Alexander returned to Babylon. He wanted to plan an invasion of southern Arabia but was very tired and weak from wounds. He came down with a bad fever. Ten days later he was dead at age 32.

**Alexander's Legacy** Alexander was a great military leader. He was brave and even reckless. He often rode into battle ahead of his men and risked his own life. He inspired his armies to march into unknown lands and risk their lives in difficult situations.

The key to Alexander's courage may have been his childhood education. Alexander kept a copy of the *Iliad* under his pillow. Most likely his inspiration was Homer's warrior-hero Achilles. In the end, Alexander's reputation outstripped even Achilles', and today he is called **Alexander the Great**.



A **legacy** (LEH•guh•see) is what a person leaves behind when he or she dies. Alexander's skill and daring created his legacy. He helped extend Greek and Macedonian rule over a vast area. At the same time, he and his armies spread Greek art, ideas, language, and architecture wherever they went in southwest Asia and northern Africa. Greeks, in turn, brought new ideas back from Asia and Africa.

Alexander's conquests marked the beginning of the **Hellenistic Era** (HEH•luh•NIHS•tihk). The word *Hellenistic* comes from a Greek word meaning "like the Greeks." It refers to a time when the Greek language and Greek ideas spread to the non-Greek people of southwest Asia.

**The Empire Breaks Apart** Alexander the Great planned to unite Macedonians, Greeks, and Persians in his new empire. He used Persians as officials and encouraged his soldiers to marry Asian women. After Alexander died, however, his generals fought one another for power. As a result, the empire that Alexander had created fell apart. Four kingdoms took its place: Macedonia, Pergamum (PUHR•guh•muhm), Egypt, and the Seleucid Empire (suh•LOO•suhd). Look at the map on page 179 to see where these kingdoms were located.

All government business in the Hellenistic kingdoms was conducted in the Greek language. Only those Asians and Egyptians who spoke Greek could apply

(l)Van Arthus-Bertrand/CORBIS, (r)Archives Charmel/Bridgeman Art Library

## Alexandria, Egypt



### ▼ Modern Alexandria



◀ The lighthouse of Alexandria was one of the Seven Wonders of the Ancient World. A fire in its tall tower guided ships into harbor. **What was special about Alexandria in 100 B.C.?**



for government posts. The kings preferred to give the jobs to Greeks and Macedonians. In this way, Greeks managed to stay in control of the governments.

By 100 B.C., the largest city in the Mediterranean world was Alexandria, which Alexander had founded in Egypt. In addition, the Hellenistic kings created many new cities and military settlements.

These new Greek cities needed architects, engineers, philosophers, artisans, and artists. For this reason, Hellenistic rulers encouraged Greeks and Macedonians to settle in southwest Asia. These colonists provided new recruits for the army and a pool of government officials and workers. They helped spread Greek culture into Egypt and as far east as modern-day Afghanistan and India.

**Reading Check Explain** What was Alexander's legacy?



**Using Geography Skills**

Following Alexander's death, his empire separated into four kingdoms.

1. Which kingdom appears to have had the most territory?
2. Which kingdoms were at least partially located in Asia?

## Section 3 Review

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### Reading Summary

Review the **Main Ideas**

- Following the Battle of Chaeronea in 338 B.C., King Philip of Macedonia ruled all of Greece.
- Alexander the Great, King Philip's son, conquered an empire that stretched to Africa in the south and India in the east. After Alexander's death, his empire split into several kingdoms.

### What Did You Learn?

1. How did Philip II of Macedonia feel about the Greeks?
2. What ended Alexander's conquest of India?
3. **Analyze** Why was Alexander a good leader?
4. **Summarize** Draw a table to summarize what you know about each topic.
5. **Predict** How might history have been different if Alexander had lived longer?
6. **Geography Skills** How many continents did Alexander's empire reach?
7. **Reading Context Clues** What do you think the word *assure* means in this passage? "... assure yourselves that it will be disastrous unless you face the facts and are willing to do your duty." What words give clues to its meaning?

Philip of Macedonia	Alexander the Great	Alexander's Empire After His Death



# You Decide . . .

## Alexander the Great: Villain or Hero?

### Villain

Was Alexander the Great really great? Or was he an evil conqueror? Those who see him as bloodthirsty and cruel give this as evidence against Alexander. They say he

- destroyed Persepolis
- attacked Tyre, killing 10,000 people and enslaving 30,000
- treated his slaves harshly
- ordered the murder of several close advisers.

Many legends about Alexander have been told. One historian found this account to support the “villain theory.”

“The following is my favourite [story] which is found all the way from Turkey to Kazakhstan: Iskander [Alexander] was actually a devil and he had horns. But his hair was long and wavy and the horns were never seen. Only his barbers knew. But he feared they could not keep the secret. So, he killed them when they discovered. His last barber pretended not to notice and kept the secret. Eventually though he could bear it no longer and, as he could tell no one, he ran to a well and called down the well: ‘Iskander has horns!’ But in the bottom of the well were whispering reeds [used in flutes] and they echoed the story until it went round the whole world.”

—Michael Wood,  
“In the Footsteps of  
Alexander the Great”



▲ Alexander the Great (at far left)





▲ Alexander the Great

## Hero

Other historians consider Alexander the Great to be a hero. They claim he brought progress, order, and culture to each new land he conquered. In support of him, they say Alexander

- tried to promote learning
- visited all of his wounded men after each battle
- spared the lives of the queen and princess of Persia
- built new cities where others had been destroyed.

Arrian, a Greek historian who lived in the A.D. 100s, wrote about Alexander this way:

"For my own part, I think there was at that time no race of men, no city, nor even a single individual to whom Alexander's name and fame had not penetrated. For this reason it seems to me that a hero totally unlike any other human being could not have been born without the agency [help] of the deity [gods]."

—Arrian, *The Anabasis of Alexander*

On two points all historians agree: Alexander was a brilliant general and he was a brave fighter. He once boasted to his men:

"For there is no part of my body, in front at any rate, remaining free from wounds; nor is there any kind of weapon used either for close combat or for hurling at the enemy, the traces of which I do not bear on my person. For I have been wounded with the sword in close fight, I have been shot with arrows, and I have been struck with missiles projected from engines of war; and though oftentimes I have been hit with stones and bolts of wood for the sake of your lives, your glory, and your wealth, I am still leading you as conquerors over all the land and sea, all rivers, mountains, and plains. I have celebrated your weddings with my own, and the children of many of you will be akin to my children."

—Arrian, *The Anabasis of Alexander*

### You Be the Historian

#### Checking for Understanding

1. Why do some people view Alexander the Great as a villain?
2. Why do others view him as a hero?
3. Was Alexander wicked or heroic? Take the role of a historian. Write a brief essay or persuasive speech that explains how you see Alexander the Great. Be sure to use facts to support your position. You can compare him to other famous rulers to strengthen your argument.



# The Spread of Greek Culture

## Get Ready to Read!

### What's the Connection?

In Section 3, you read that Alexander's conquests helped to spread Greek culture. The kings who came after Alexander also tried to attract the best and brightest Greeks to Asia and Egypt. They hoped to recreate the glory of Greece's Golden Age in their own kingdoms.

### Focusing on the Main Ideas

- Hellenistic cities became centers of learning and culture. (page 183)
- Epicurus and Zeno showed the world different ways to look at happiness. (page 184)
- Hellenistic scientists made major discoveries in math and astronomy. (page 185)

### Locating Places

Rhodes (ROHDZ)

Syracuse (SIHR•uh•KYOOS)

### Meeting People

Theocritus (thee•AH•kruh•tuhs)

Aristarchus (AR•uh•STAH•kuhs)

Eratosthenes

(EHR•uh•TAHS•thuh•NEEZ)

Euclid (YOO•kluhd)

Archimedes (AHR•kuh•MEE•deez)

### Building Your Vocabulary

Epicureanism

(EH•pih•kyu•REE•uh•NIH•zuhm)

Stoicism (STOH•uh•SIH•zuhm)

astronomer (uh•STRAH•nuh•muhr)

plane geometry (jee•AH•muh•tree)

solid geometry (jee•AH•muh•tree)

### Reading Strategy

**Summarizing Information** Create a diagram to show the major Greek contributions to Western civilization.



## When & Where?



350 B.C.

c. 300 B.C.  
King Ptolemy I invites Euclid to Alexandria

275 B.C.

291 B.C.  
Menander, the playwright, dies

200 B.C.

212 B.C.  
Archimedes killed by Romans

## Greek Culture Spreads

**Main Idea** Hellenistic cities became centers of learning and culture.

**Reading Focus** Imagine you are a leading citizen in a new city. How would you make it the best city possible? Read to find out how leaders in the Hellenistic Era improved their cities.

During the Hellenistic Era, philosophers, scientists, poets, and writers flocked to the new Greek cities in southwest Asia and Egypt, especially Alexandria. Many came to take advantage of Alexandria's library. Its more than 500,000 scrolls were useful to students of literature and language. Alexandria also had a museum where researchers went to do their work.

**Architecture and Sculpture** The Hellenistic kingdoms were lands of opportunity for Greek architects. New cities were being founded, and old ones were being rebuilt. The Hellenistic kings wanted to make these cities like the cultural centers of Greece. They paid handsome fees to line the streets with baths, theaters, and temples.

Hellenistic kings and other wealthy citizens hired Greek sculptors to fill their towns and cities with thousands of statues. These statues showed the same level of workmanship as the statues from Greece's Golden Age.

**Literature and Theater** Hellenistic leaders also admired talented writers. Kings and leading citizens spent generous sums of money supporting writers' work. As a result, the Hellenistic Age produced a large body of literature. Sadly, very little of this writing has survived.

One of the works we know about is an epic poem by Appolonius (A•puh•LOH•nee•uhs) of **Rhodes** (ROHDZ). Called *Argonautica*, it tells the legend of Jason and his band of heroes. They sail the seas in search of a ram

## Primary Source The Poetry of Theocritus

Theocritus is considered the creator of pastoral poetry. Pastoral poetry deals with rural life, especially the lives of shepherds. It often compares rural and city life. In this selection, he talks about shepherding as a way of life.

"Shepherd, your song is sweeter than the water that tumbles and splashes down from the rocks.

If the Muses get the ewe for their prize,  
you'll win the [baby] lamb.  
But if they choose  
the lamb, you'll carry away the ewe."

—Theocritus, "First Idyll"



▲ Sculpture of shepherd

### DBQ Document-Based Question

How does Theocritus describe the song of the shepherd?

with golden fleece. Another poet, **Theocritus** (thee•AH•kruh•tuhs), wrote short poems about the beauty of nature.

Athens remained the center of Greek theater. Playwrights in Athens created a new kind of comedy. The stories had happy endings and still make people laugh. However, unlike the comedies of Greece's Golden Age, they did not poke fun at political leaders. Instead the plays told stories about love and relationships. One of the best known of the new playwrights was Menander (muh•NAN•duhr), who lived from 343 B.C. to 291 B.C.

**Reading Check Explain** How did the Hellenistic kingdoms spread Greek culture?



# The Way It Was

## Science and Inventions

**Greek Medicine** The ancient Greeks believed that their gods had the power to cure them of illnesses and injuries. Greek temples were places of healing as well as places of worship. In temples, priests treated patients with herbs, prayed, and made sacrifices to the gods as part of the healing process.

In the 400s B.C., the practice of medicine began to change. Hippocrates (hīh • PAH • kruh • TEEZ), a doctor and pioneer of medical science, began to separate medicine from religion. He stressed that it was important to examine the body and look at a patient's symptoms to find out why someone was ill. He also taught that it was important to have a healthy diet.



▲ Greek doctor treating patients

Hippocrates is well known for the oath, or pledge, that he asked his medical students to recite. His students had to promise never to harm and always to care for their

patients. New doctors still take a version of the Hippocratic Oath when they graduate from medical school.

### Connecting to the Past

1. How were illnesses and injuries treated before Hippocrates?
2. How did Hippocrates change the way medicine was practiced in ancient Greece?

## Philosophy

**Main Idea** Epicurus and Zeno showed the world different ways to look at happiness.

**Reading Focus** What makes you happy? Read on to learn about different Greek ideas about happiness.

During the Hellenistic Era, Athens continued to attract the most famous philosophers in the Greek world. The two most important philosophers were Epicurus and Zeno.

**Epicureans** Epicurus founded a philosophy we now know as **Epicureanism** (EH • pih • kyu • REE • uh • NIH • zuhm). He taught his students that happiness was the goal of life. He believed that the way to be happy was to seek out pleasure.

Today the word *epicurean* means the love of physical pleasure, such as good food or comfortable surroundings. However, to Epicurus, pleasure meant spending time with friends and learning not to worry about things. Epicureans avoided worry by staying out of politics and public service.

**Who Were the Stoics?** A Phoenician named Zeno developed **Stoicism** (STOH • uh • sih • zuhm). It became a very popular philosophy in the Hellenistic world. When Zeno came to Athens, he could not afford to rent a lecture hall. So he taught at a building known as the “painted porch” near the city market. “Stoicism” comes from *stoa*, the Greek word for “porch.”

For Stoics, happiness came from following reason, not emotions, and doing your duty. Today the word *stoic* is used to describe someone who is not affected by joy or grief. Unlike Epicureans, Stoics thought people had a duty to serve their city.

**Reading Check Contrast** What were the differences between Epicureanism and Stoicism?

## Greek Science and Math

**Main Idea** Hellenistic scientists made major discoveries in math and astronomy.

**Reading Focus** Do you know how to find the area of a square? If so, you are doing geometry. Read on to find out about the person who created geometry and other scientists from the Hellenistic Era.

Scientists, especially mathematicians and astronomers, made major contributions during the Hellenistic Era. **Astronomers** (uh•STRAH•nuh•muhrs) study stars, planets, and other heavenly bodies. **Aristarchus** (AR•uh•STAH•kuhs), an astronomer from Samos, claimed that the sun was at the center of the universe and that Earth circled the sun. At the time, other astronomers rejected Aristarchus's ideas. They thought that Earth was the center of the universe.

Another astronomer, **Eratosthenes** (EHR•uh•TAHS•thuh•NEEZ), was in charge of the library at Alexandria. Eratosthenes

concluded that Earth is round. He then used his knowledge of geometry and astronomy to measure Earth's circumference—the distance around Earth.

Eratosthenes put two sticks in the ground far apart from each other. When the sun was directly over one stick, the shadow was shorter than the shadow at the other stick. By measuring the shadows, he was able to calculate the curve of Earth's surface.

Using his measurements, Eratosthenes estimated that the distance around Earth equaled 24,675 miles (39,702 km). Amazingly, his estimate was within 185 miles (298 km) of the actual distance. Using similar methods, he measured the distance to the sun and to the moon. His measurements were quite accurate.

**Euclid** (YOO•kluhd) is probably the most famous Greek mathematician. His best-known book *Elements* describes plane geometry. **Plane geometry** (jee•AH•muh•tree) is the branch of mathematics that shows

### Greek Scientists and Their Contributions

#### Scientist

#### Scientific "Firsts"

**Archimedes**

Established the science of physics  
Explained the lever and compound pulley

Archimedes ▶

**Aristarchus**

Established that Earth revolves around the sun

**Eratosthenes**

Figured out that Earth is round

**Euclid**

Wrote a book that organized information about geometry

**Hipparchus**

Created a system to explain how planets and stars move

**Hippocrates**

Known as the "Father of Medicine"  
First to write a medical code of good behavior

**Hypatia**

Expanded knowledge of  
mathematics and  
astronomy

**Pythagoras**

First to establish the  
principles of geometry



#### Understanding Charts

The ancient Greeks made advances in science.

1. What were Archimedes' achievements?
2. **Identify** Who wrote a code of behavior that doctors still follow today?





▲ Euclid

how points, lines, angles, and surfaces relate to one another. Around 300 B.C., King Ptolemy I (TAH•luh•mee) of Egypt asked Euclid if he knew an easier way to learn geometry than by

reading *Elements*. Euclid answered that “there is no royal way” to learn geometry.

The most famous scientist of the Hellenistic Era was **Archimedes** (AHR•kuh•MEE•deez) of **Syracuse** (SIHR•uh•KYOOS). He worked on **solid geometry** (jee•AH•muh•tree)—the study of ball-like shapes called spheres and tubelike shapes called cylinders. He also figured out the value of *pi*. This number is used to measure the area

of circles and is usually represented by the symbol  $\pi$ .

Archimedes was also an inventor. One story about Archimedes tells how he invented weapons. “Give me a lever and a place to stand on,” Archimedes said to the king of Syracuse, “and I will move the earth.”

The king of Syracuse was impressed. He asked Archimedes to use his levers to defend the city. So Archimedes designed catapults—machines that hurled arrows, spears, and rocks. When Romans attacked Syracuse in 212 B.C., Archimedes’ catapults drove them back. It took the Romans three years to capture Syracuse. During the massacre that followed, Archimedes was killed.

**Reading Check Explain** Who was the most famous scientist of the Hellenistic Era? What did he contribute?

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## Section 4 Review

### Reading Summary

#### Review the Main Ideas

- Hellenistic cities, such as Alexandria, attracted some of the Greek world’s best architects, sculptors, and writers.
- During the Hellenistic Era, new philosophies, such as Stoicism and Epicureanism, developed.
- Hellenistic scientists, including Aristarchus, Eratosthenes, Euclid, and Archimedes, made important advances in the fields of astronomy and mathematics.

### What Did You Learn?

1. Why did the city of Alexandria attract scholars?
2. Describe the form of philosophy developed by Zeno.

#### Critical Thinking

3. **Summarize** Draw a table like the one below. Write several facts about each scientist in the correct column.

Aristarchus	
Eratosthenes	
Euclid	
Archimedes	

4. **Compare and Contrast**

How were the comedies of the Hellenistic Era and those of Greece’s Golden Age similar and different?

5. **Analyze** How would knowledge of geometry be helpful to the Greeks?

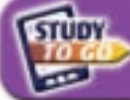
6. **Identify** What did the Epicureans believe about happiness?

7. **Reading Context Clues**

Name two words in this sentence that help define the word *playwright*.  
 “Playwrights in Athens created a new kind of comedy.”

# Chapter 5

# Reading Review



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## Section 1 The Culture of Ancient Greece

### Vocabulary

myth  
oracle  
epic  
fable  
drama  
tragedy  
comedy

### Focusing on the Main Ideas

- The Greeks believed that gods and goddesses controlled nature and shaped their lives. (page 155)
- Greek poetry and fables taught Greek values. (page 157)
- Greek drama still shapes entertainment today. (page 160)
- Greek art and architecture expressed Greek ideas of beauty and harmony. (page 162)

## Section 2 Greek Philosophy and History

### Vocabulary

philosophy  
philosopher  
Sophist  
Socratic method

### Focusing on the Main Ideas

- Greek philosophers developed ideas that are still used today. (page 169)
- Greeks wrote the first real histories in Western civilization. (page 173)

## Section 3 Alexander the Great

### Vocabulary

legacy  
Hellenistic Era

### Focusing on the Main Ideas

- Philip II of Macedonia united the Greek states. (page 175)
- Alexander the Great conquered the Persian Empire and spread Greek culture throughout southwest Asia. (page 176)



▲ Alexander the Great

## Section 4 The Spread of Greek Culture

### Vocabulary

Epicureanism  
Stoicism  
astronomer  
plane geometry  
solid geometry

### Focusing on the Main Ideas

- Hellenistic cities became centers of learning and culture. (page 183)
- Epicurus and Zeno showed the world different ways to look at happiness. (page 184)
- Hellenistic scientists made major discoveries in math and astronomy. (page 185)



# Assessment and Activities

## Review Vocabulary

1. Write a brief paragraph that defines and compares the following terms.

epic    fable    myth

Decide if each statement is *True* or *False*.

- 2. An oracle was a shrine Greeks visited to receive prophecies.
- 3. Sophists were professional teachers.
- 4. The death of Socrates marks the beginning of the Hellenistic Era.
- 5. Astronomers study stars, planets, and other heavenly bodies.
- 6. Euclid developed plane geometry.

## Review Main Ideas

### Section 1 • The Culture of Ancient Greece

7. What did the Greeks believe about their gods and goddesses?
8. What did Greek art and architecture express?

### Section 2 • Greek Philosophy and History

9. How long did the ideas of Greek philosophers last?

10. Why are Greek historians so important?

### Section 3 • Alexander the Great

11. Which leader united the Greek states?
12. What are the two main accomplishments of Alexander the Great?

### Section 4 • The Spread of Greek Culture

13. Why were Hellenistic cities important?
14. In what fields did Hellenistic scientists make advances?

## Critical Thinking

15. **Understanding Cause and Effect** How did the Peloponnesian War weaken the Greek states?
16. **Analyze** Why would knowing the circumference of Earth have been helpful to the Greeks?
17. **Compare** How was religion in ancient Greece similar to religion in ancient Egypt?
18. **Analyze** Why do you think the development of written history is important?

Review

Reading Skill

Context

## Words in Context

Read this passage from page 158.

“My father was anxious to see me develop into a good man . . . [so] he compelled me to memorize all of Homer.”

19. Based on how *compelled* is used in this sentence, what do you think it means?
- a. asked
- b. taught
- c. forced
- d. dared

To review this skill, see pages 152–153.

## Geography Skills

Study the map below and answer the following questions.

- Location** Analyze the location of the Hellenistic kingdoms. What present-day countries control territory that was controlled by the Seleucid empire?
- Human/Environment Interaction** Which kingdom do you think was the most difficult to govern based on its geography?



## Read to Write

- Descriptive Writing** Imagine you are a journalist living in Alexandria, Egypt, during the Hellenistic Era. Write an article describing life in the city.
- Using Your FOLDABLES™** Review the developments in early Greece that you listed on your foldable. Using numbers, rank each development from the most valuable to the least valuable. Explain the reason for your highest and lowest ranking.

## Linking Past and Present

- Expository Writing** The Nobel prize is awarded yearly to people who have made great achievements. Do research to find out more about the award. Then choose one Greek philosopher, writer, scientist, or leader who you think deserves the Nobel prize. Write a short speech to explain why. Present your speech to the class.

## Using Technology

- Creating a Multimedia Presentation** Use the Internet and print resources, such as newspapers and magazines, to research Greek architecture. Then use the computer or posterboard to design and construct your own building using Greek designs. The Greeks dedicated some of their buildings to gods and goddesses. Dedicate your building to someone in history and design it with that person in mind. Share your research and design with the class.

## Primary Source Analyze

In this account, Thucydides describes the masses of people who entered Athens around 430 B.C. seeking relief from the plague.

"There were no houses for them, and, living as they did during the hot season in badly ventilated huts, they died like flies. . . . For the catastrophe was so overwhelming that men, not knowing what would happen next to them, became indifferent to every rule of religion or law. All the funeral ceremonies which used to be observed were now disorganized, and they buried the dead as best they could."

—Thucydides, *History of the Peloponnesian War*

## DBQ Document-Based Questions

- What hardships did newcomers to Athens face during the time of the plague?
- What does Thucydides mean when he says that men "became indifferent to every rule of religion or law"?