

▶ This statue shows Hatshepsut wearing the false beard traditionally worn by the male pharaohs.

3.1

Hatshepsut Expands Trade



At any grocery store, you can find exotic fruits from distant lands right alongside the crunchy apples from a nearby orchard. Like you, the ancient Egyptians had access to food and other goods from near and far.

MAIN IDEA

Under a great female pharaoh, Egypt grew wealthy through conquest and trade.

mt EGYPT'S GREAT FEMALE RULER

On the heels of the defeat of the Hyksos came the **New Kingdom**, which spanned nearly 500 years from 1550 B.C. to 1070 B.C. This period of prosperity saw Egypt grow more powerful than ever as it built a mighty empire. Its large professional army expanded the empire northeast into Palestine and south into Nubia. Plunder from war and taxes from conquered lands made Egypt rich, but so did trade. Under the rule of **Hatshepsut** (haht-SHEHP-soot), history's earliest well-known female ruler, trade flourished.

Hatshepsut came to power sometime around 1470 B.C. After her husband the

pharaoh died, she ruled with her stepson, Thutmose III (thoot-MOH-suh), who was very young. Hatshepsut played a smart political game and won enough support to be crowned sole king. She performed all the religious, military, and political functions of the pharaoh, and she even dressed as a king.

TRADE AND EXPANSION mt

Like other pharaohs, Hatshepsut fought wars to expand the empire, but she also promoted trade. Egypt had abundant resources to **barter**, or exchange, for things the land couldn't produce—especially timber and exotic luxuries. These goods traveled along trade routes and pathways established by traders over land and sea. Hatshepsut sent expeditions as far as East Africa. Egyptian merchants and traders bartered Egyptian beer, wine, food, and manufactured goods for myrrh trees, incense, ebony, ivory, leopard skins, and monkeys. The wealth generated through these expeditions stimulated Egypt's economy and funded great building projects.

Back in Egypt, Hatshepsut moved the capital city to Thebes and ordered many great monuments constructed to celebrate her rule. After 15 years in power, she disappeared suspiciously, possibly murdered by her stepson. Thutmose III became a mighty pharaoh in his own right and tried to erase Hatshepsut's name from all monuments and records. Luckily for future generations, he did not entirely succeed. Instead, a solid trail of clues has allowed historians to reconstruct Hatshepsut's remarkable reign.

REVIEW & ASSESS

- 1. READING CHECK** In what ways did Egypt prosper during the reign of Hatshepsut?
- 2. DRAW CONCLUSIONS** Why did the pharaohs engage in trade with other countries?
- 3. FORM AND SUPPORT OPINIONS** What details support the opinion that Hatshepsut was an ambitious leader?



3.2

BIOGRAPHY

RAMSES II

RULED
1279 B.C. – 1213 B.C.

The women and children wail, and the men look up to the sun god in desperation. After ruling for 66 years, the pharaoh is dead. Most Egyptians have known no other king, and the dead pharaoh wasn't just any ruler. He was **Ramses II**—also known as Ramses the Great, a man who earned his title. Egypt was never more powerful than during Ramses' long reign.



- Job:** Pharaoh of Egypt
- Education:** Ruled alongside his father, Seti I
- Home:** Pi-Ramses

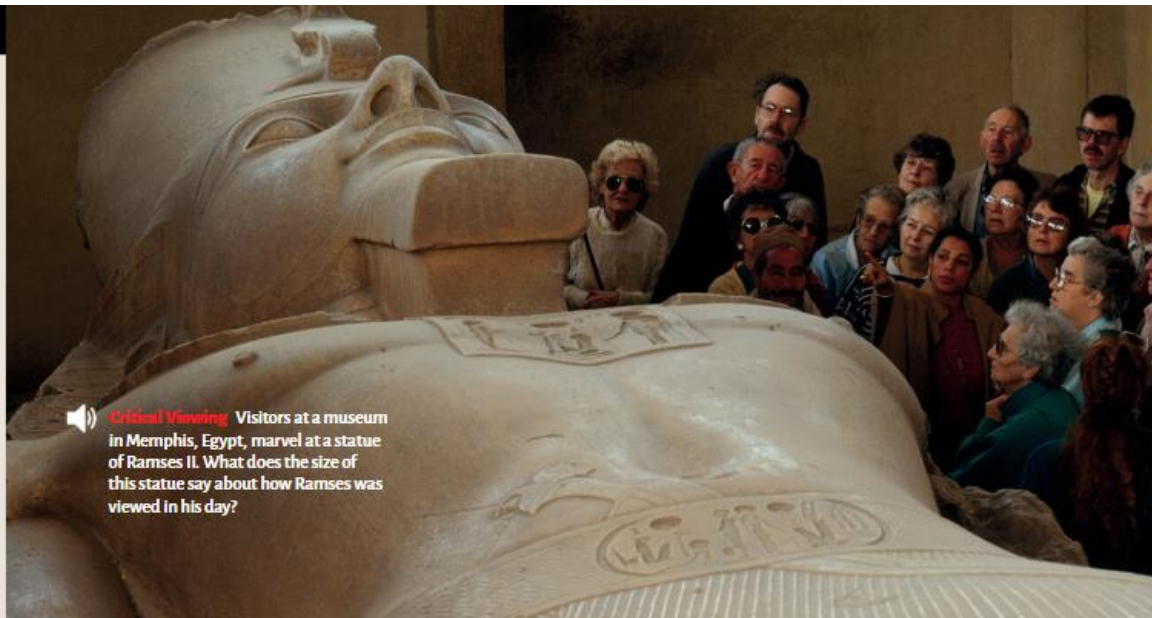


mt A LONG AND POWERFUL REIGN

Lasting 66 years, Ramses' (RAM-zeez) reign was one of the longest in Egyptian history. Ramses expanded Egypt's empire south into Nubia, west into Libya, and into the eastern Mediterranean. There he clashed with another ancient people, the Hittites (HIH-tyts).

The Hittites had a powerful empire centered around present-day Turkey, and they also sought to control the eastern Mediterranean. In his fifth year as pharaoh, Ramses fought a huge battle against the Hittites at Kadesh (kay-DEHSH). The battle stopped the Hittites' advance, but war with the Hittites dragged on for more than 15 years. At last, Ramses wrote letters to the Hittite king and negotiated a peace treaty. Peace with the Hittites and Egypt's territorial expansion helped Ramses create a strong economy.

Ramses went on to carve his legacy in stone and make himself unforgettable. First he built a new capital city, which he



Critical Viewing Visitors at a museum in Memphis, Egypt, marvel at a statue of Ramses II. What does the size of this statue say about how Ramses was viewed in his day?

FINEST HOUR

He led Egypt's army against the Hittites at the Battle of Kadesh around 1274 B.C.

WORST MOMENT

He saw 12 of his sons die before he did.

FRIENDS

The people loved him, affectionately calling him Sese (SEH-say), a nickname for "Ramses." He had about 200 wives and more than 100 children.

TRIVIA



His mummified nose was stuffed with peppercorns to keep its distinctive shape. When his mummy was exhibited in Paris, it received the Presidential Guard of Honor reserved for visiting royalty.

called Pi-Ramses (puh-RAM-zeez). Then he commissioned an awesome number of temples, monuments, and statues. At Abu Simbel (ah-boo SIHM-buhl) in Egyptian-controlled Nubia, Ramses had two cavernous temples carved out of the rock cliff face. His massive tomb at Thebes had a long wait for him—Ramses outlived 12 sons, dying in 1213 B.C. at more than 90 years of age.

mt THE NEW KINGDOM ENDS

Egypt's power was at its peak under Ramses the Great. After his death, several challenges emerged. Members of the ruling dynasty clashed with each other. In addition, Egypt was repeatedly invaded by a group known as the Sea Peoples.

Although they never conquered Egypt, the Sea Peoples waged a lengthy war that left Egypt's civilization weak and unstable.

In the years following the New Kingdom, Egypt was conquered and controlled by various foreign powers. First the Libyans and then the Nubians sieged large areas of land. Later, another people from Southwest Asia, the Persians, conquered Egypt. After 332 B.C., Egypt came under the control of the Macedonians, a people from the Greek peninsula. The final pharaohs were all Macedonians, right down to the last one, the famous Cleopatra VII. When Rome conquered Egypt in 30 B.C., Cleopatra committed suicide. It was a suitably dramatic end to 3,000 years of pharaohs.



REVIEW & ASSESS

- 1. READING CHECK** What weakened Egypt's power after the death of Ramses II?
- 2. MAKE INFERENCES** Why did peace with the Hittites help strengthen Egypt's economy?
- 3. COMPARE AND CONTRAST** Think about Ramses II and Hatshepsut. What did these two strong pharaohs have in common?

3.4

The Rise of Kush



How well do you know your neighbors? How do their lives affect yours? From annoyingly loud parties to borrowing tools or exchanging gifts, neighbors interact. Egypt couldn't ignore its closest neighbor, Nubia.

MAIN IDEA

The Nubian kingdom of Kush followed Egypt as a center of power, culture, and trade.

mt KUSH CONTROLS EGYPT

Just south of Egypt, across the first cataract of the Nile, lay the land of **Nubia**. Rich in gold, copper, and other important resources needed by Egypt, Nubia also provided a critical trade route for exotic goods from central Africa. This helps explain why the histories of Egypt and Nubia are so deeply connected. Early Nubia was a collection of chiefdoms dominated by Egypt. Later, when stronger Nubian kingdoms emerged, Egypt took more active control of its southern neighbor. It conquered and colonized large areas of Nubia, and Nubia's people adopted many Egyptian practices and customs during a thousand years of direct rule. Eventually, however, the tables were turned.

In the generations following the reign of Ramses II, the Nubian kingdom of **Kush** asserted its independence. It grew strong and ambitious. The Kushite king, Piankhi, invaded Egypt, sweeping north to take control of Thebes, Memphis, and Upper and Lower Egypt. In 728 B.C., Piankhi

united the kingdoms of Egypt and Kush under a new line of Kushite kings.

Piankhi did not think of himself as a foreign conqueror but as a traditional pharaoh reviving Egyptian traditions. The Kushite kings styled themselves as pharaohs and continued classic Egyptian religious, social, and political practices. They built pyramids, mummified their dead, and worshipped Egyptian gods.

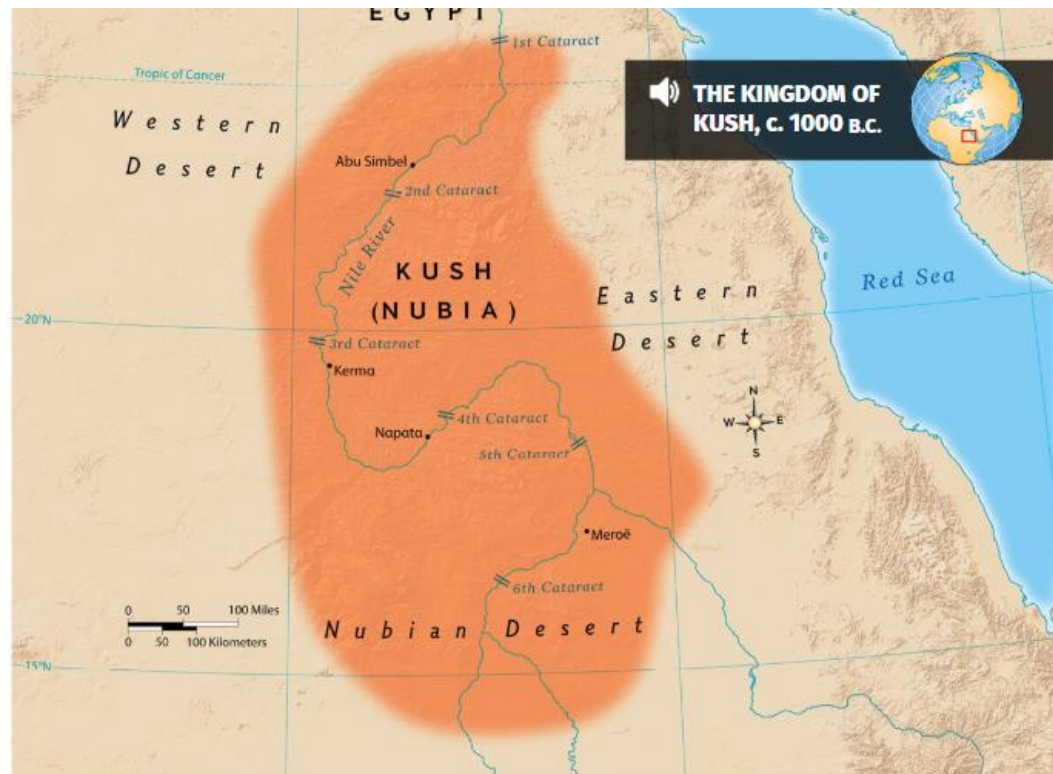
Eventually, the Kushite kings came into conflict with the iron-weapon wielding superpower of Assyria to the northeast of Egypt. In the course of the war, Kush lost control of Egypt to the Assyrians. Some of the fighting was fierce; the city of Thebes was destroyed before the Kushite kings abandoned Egypt.

TRADE IN IRON AND GOLD mt

After being pushed out of Egypt, Kush continued to flourish as an independent power. Its capital, Napata (nah-PAH-tuh), had a palace and a temple to the Egyptian god Amun (AH-muhn), one of the creator gods. The city's strategic location across two major trade routes ensured that Kush remained an important center of international trade. The Kushites had stores of gold, and they began to mine and produce iron as well.

Around 590 B.C., the Kushite capital moved south to another important trading city called Meroë (MAIR-oh-ee). Here the Egyptian influence continued with royal pyramids and temples to Amun and the goddess Isis. The Nubians expanded their kingdom and opened up many new trading routes, especially for iron.

Iron was increasingly important in the ancient world because it was used to make strong tools, and Meroë had abundant supplies of iron ore. Because of its resources, the city remained an important economic and political center for several centuries.



THE KINGDOM OF KUSH, c. 1000 B.C.



GOLD

The importance of gold to Nubia is clear from its name. *Nub* was the Egyptian word for gold, and Nubia was rich with it. Skilled goldsmiths turned gold ore into intricate jewelry, such as this pendant of the goddess Isis.

REVIEW & ASSESS

- 1. READING CHECK** In what ways did Kush follow Egypt as a center of power, culture, and trade in Africa?
- 2. MAKE INFERENCES** Would life have changed a great deal for Egyptians living under the rule of the Kushite kings? Why or why not?
- 3. INTERPRET MAPS** Why do you think Kushite kings established the kingdom's two capital cities—Napata and later Meroë—along the Nile River?

4.1 Hieroglyphs and Papyrus



You might be able to guess the meaning of some foreign words. But try reading a store bar code.

The seemingly random arrangement of lines is actually a unique writing system telling you the product and price. To read it, you need to crack the code. Egyptian writing was just as baffling until archaeologists discovered the key—a slab of rock called the Rosetta Stone.

MAIN IDEA

The Egyptians valued writing and wrote for many purposes.



Critical Viewing This carving shows a pair of scribes at work during the Old Kingdom. What does the image tell you about a scribe's job?

COMMON HIEROGLYPHS



Sun
(or day)



R
(a mouth symbol)



S
(a folded cloth symbol)



N
(water ripple)

mt WRITING AND WRITERS

Egyptian writing developed sometime before 3000 B.C., and it used **hieroglyphs** (HY-ruh-glihfs) instead of letters. A hieroglyph could be a picture representing an object, or it could represent a sound or an idea. By combining hieroglyphs, the Egyptians formed words and sentences.

The hieroglyphic writing system was very complex. There were nearly 800 hieroglyphs, no vowels, and very complicated rules. Few people mastered the skill of writing in hieroglyphs.

These special people were known as **scribes**, or professional writers, and they were among the most highly respected people in Egypt. It took five years of intense training to become a scribe, but the benefits made up for the hard work. Scribes were powerful, well paid, and had many privileges.

Reading and writing were just part of a scribe's job. Scribes were also skilled in art, mathematics, bookkeeping, law, engineering, and architecture. All scribes were important, but a really talented scribe could move up in Egypt's social hierarchy. One royal scribe eventually became the pharaoh Horemheb.

PAPER AND THE ROSETTA STONE mt

Hieroglyphs were painted and carved on tombs, temples, and monuments. For important documents, the Egyptians used sheets of a paperlike material called **papyrus** (puh-PY-ruhs), made from reeds that grew along the banks of the Nile. Sheets of papyrus could be glued together to make scrolls—some scrolls were several yards long. Papyrus was light and easy for a scribe to carry.

Eventually, the Egyptians abandoned the old forms of writing. For many years, scholars tried to crack the code of the hieroglyphs. Then, in A.D. 1799, a slab of rock was discovered near Rosetta, Egypt. On it was carved the same text in hieroglyphs, another form of writing, and Greek. Because scholars understood Greek, they were able to figure out what the hieroglyphs meant. Thanks to the Rosetta Stone, historians can read hieroglyphs and learn about the lives of the people who produced them.

REVIEW & ASSESS

- 1. READING CHECK** How much time did it take to become a scribe in ancient Egypt?
- 2. IDENTIFY MAIN IDEAS AND DETAILS** What details support the idea that scribes were among the most highly respected people in Egypt?
- 3. MAKE INFERENCES** What does the complexity of the hieroglyphic writing system tell us about the role of scribes?

4.2 Medicine, Science, and Mathematics

The priest chants magic spells while the doctor applies a fragrant lotion to your wound. He carefully bandages it and gives you a foul-smelling medicine sweetened with honey. You gag on it, but the chances are you'll live. The ancient Egyptians were advanced medical practitioners for their time.

MAIN IDEA

Egyptians put their advanced knowledge of medicine, science, and mathematics to practical use.



CANOPIC JARS

Canopic (kuh-NOH-pihk) jars contained the internal organs of a mummified body. The head-shaped lids on the jars represent the sons of the god Horus.

mt MEDICINE

Egypt had the most advanced medical practices in the ancient world. Some ancient Egyptian science was so accurate that it formed the foundation of later medical practices in Europe. The Egyptians had developed a detailed understanding of anatomy through mummifying bodies. They identified the heart as the most important organ and the pulse as its "voice."

Doctors provided medicines made from plants and minerals, set broken bones, and even performed surgery. Researchers have found medical texts

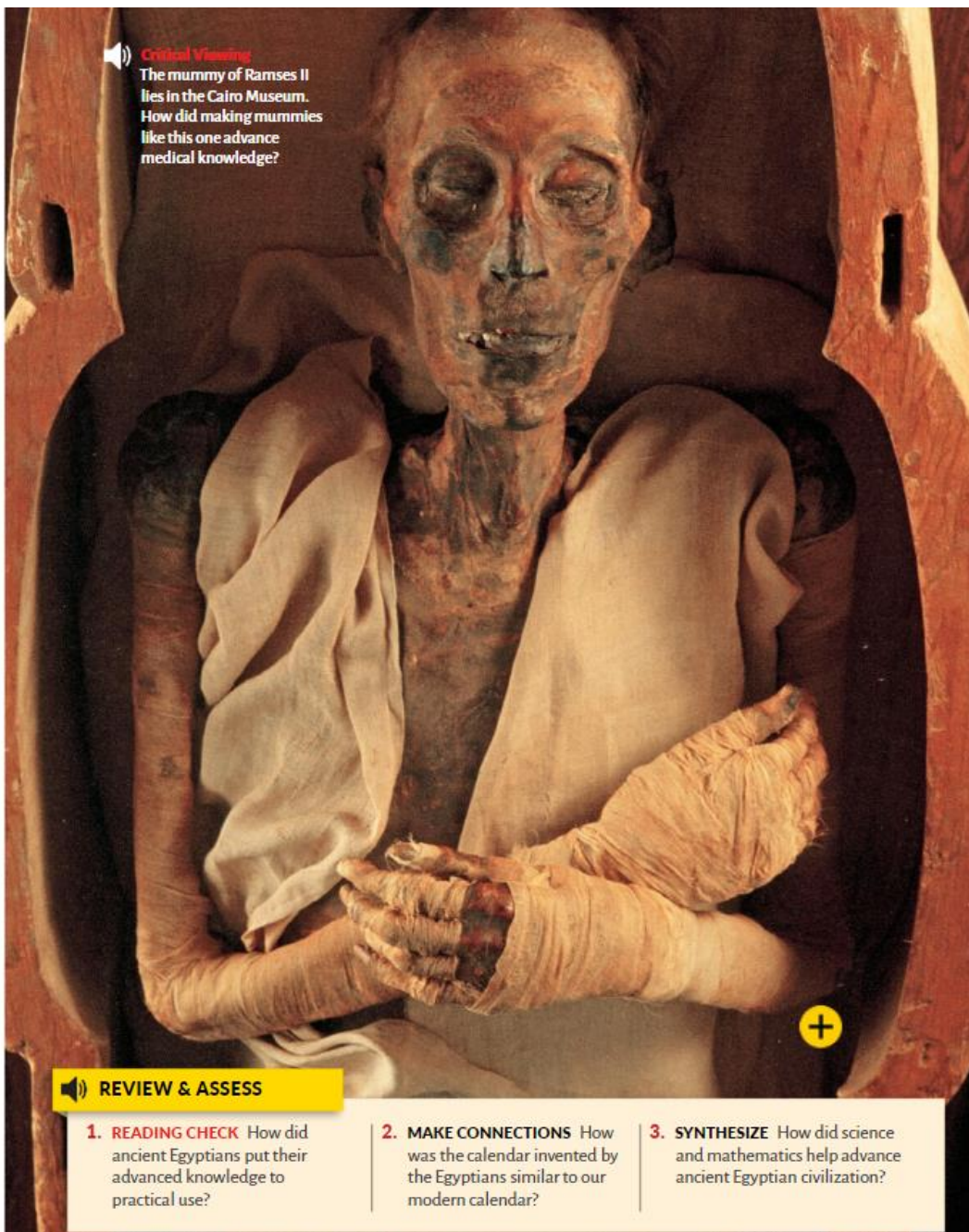
written on papyrus that give doctors instructions and advice for treating a variety of illnesses. Texts and carvings also show some of the surgical tools that doctors used to treat their patients. Magical spells to heal different illnesses were also considered part of medical treatment.

SCIENCE AND MATHEMATICS mt

Ancient Egyptians were gifted astronomers as well as talented doctors. Astronomy is the branch of science that studies the sun, moon, stars, planets, and space. By making observations of the moon, ancient Egyptian astronomers developed a 365-day calendar. It had 24-hour days, 10-day weeks, 3-week months, and 12-month years. The extra five days were added as birthdays for five gods and were considered unlucky.

The Egyptians were also excellent mathematicians. Like us, they used a decimal counting system that included fractions. However, they did not use zero. Egyptian mathematicians established several key principles of geometry, accurately calculating angles and areas. They could calculate the area of a circle and the volume of a pyramid or cylinder. These skills made it possible to design big buildings like the pyramids.

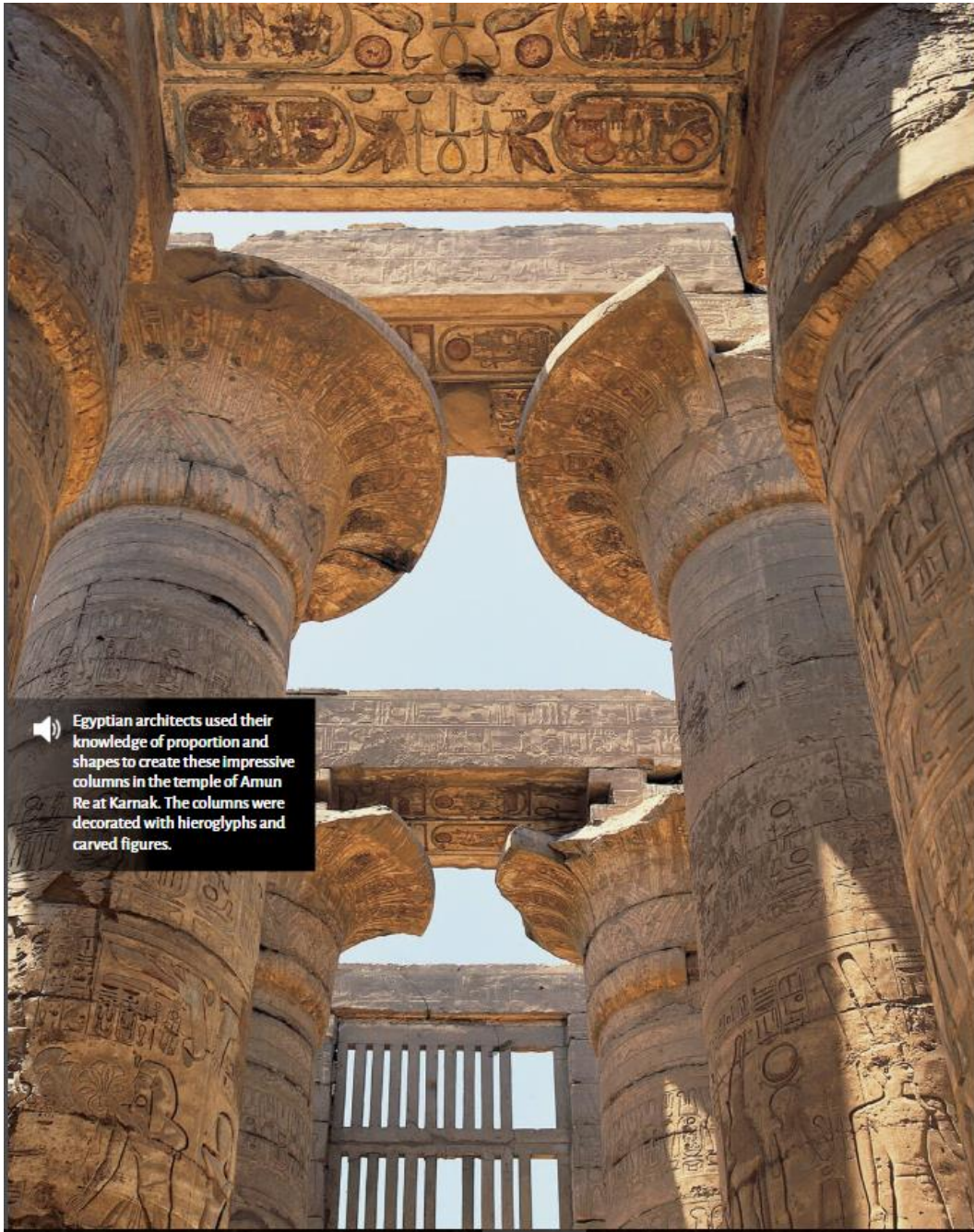
Less visible but equally impressive was their mastery of the mathematics needed to run an empire. Scribes accurately calculated how many workers would be needed for building projects and how much food they would eat. Similar assessments estimated trade profits, crop yields, and taxes. Along with trade and military might, math and science were foundations of ancient Egypt's civilization.



Critical Viewing
The mummy of Ramses II lies in the Cairo Museum. How did making mummies like this one advance medical knowledge?

REVIEW & ASSESS

- 1. READING CHECK** How did ancient Egyptians put their advanced knowledge to practical use?
- 2. MAKE CONNECTIONS** How was the calendar invented by the Egyptians similar to our modern calendar?
- 3. SYNTHESIZE** How did science and mathematics help advance ancient Egyptian civilization?



Speaker icon Egyptian architects used their knowledge of proportion and shapes to create these impressive columns in the temple of Amun Re at Karnak. The columns were decorated with hieroglyphs and carved figures.

4.3

Art and Architecture



The figures in ancient Egyptian paintings look awkward with their bodies facing the viewer, heads and feet facing right. Surely the artist didn't believe people really look like this!

MAIN IDEA

The ancient Egyptians created distinctive art and architecture.



A DISTINCTIVE ART STYLE

Ancient Egyptian art is easily recognizable. That is because artists used a distinctive style called frontalism. According to this style, the head and legs were drawn in profile, but the shoulders, chest, and arms were drawn as if they were facing front. The result looked pretty unnatural, but realism wasn't the goal. Most portraits were painted for religious purposes, which made it important to show as much of the body as possible. Frontalism achieved this goal.

Artists arranged each figure in a painting precisely to achieve balance and order. To get the sizes and proportions right, they

followed a strict formula. Typically the human body was divided into three equal parts: from foot to knee, from knee to elbow, and from elbow to hairline. A figure's waist appeared exactly halfway up the body.

Most paintings showed scenes from everyday life. These included pharaohs performing religious rituals, fighting battles, or feasting, and ordinary people at work or play. Artists painted and carved figures and scenes like these in great temples, monuments, and tombs. This ancient art has revealed much about Egyptian life and beliefs.

ARCHITECTURE AND SACRED SHAPES

Egyptian architects also used clever techniques to make their soaring temples and other buildings look impressive. The architects used grid lines to create precise designs. They also applied mathematics to their designs using the "golden ratio." This mathematical formula helped architects achieve the most pleasing proportions—what looks good, in other words. The Greeks borrowed and developed the formula, and the golden ratio is still used today.

Certain geometric shapes, such as squares and triangles, were considered sacred, so architects included these in their designs. The most important shape, though, was the pyramid, which dominated Egyptian architecture throughout the civilization's 3,000-year history. In addition to the Great Pyramid of Khufu, architects built many other pyramids all over Egypt. Small pyramids even topped the tombs of the skilled craftspeople who built Egypt's great monuments.



REVIEW & ASSESS

- 1. READING CHECK** What makes ancient Egyptian art and architecture stand out?
- 2. DRAW CONCLUSIONS** What do Egyptian art and architecture reveal about the place of religion in ancient Egyptian society?
- 3. DETERMINE WORD MEANINGS** How does the base word *front* clarify the meaning of the *frontalism* style of art?