EGYPT: Land of the Pharaohs

Dr. Kent Weeks, professor of Egyptology, and his team from the American University in Cairo have reached the central hall in the largest tomb ever found in Egypt. The giant crypt is located in the Valley of the Kings on the west side of the Nile near the Egyptian city of Luxor. The tomb was originally discovered by an English traveller in 1820, but was never explored. In the 1920s, its entrance was covered over with debris during the excavation of the tomb of King Tutankhamen by.

Dr. Weeks discovered the hidden entrance in 1987 by studying the diaries of the English traveller. Excavation work has been in progress ever since that exciting discovery.

What is in this tomb? Archaeologists believe that the tomb contains the remains of 50 sons of the pharaoh Ramses II. Ramses II, who lived well into his eighties, ruled Egypt from 1279 BCE to 1213 BCE and fathered more than 100 children. Sixty seven rooms have been discovered in the main tomb so far, but since none is smaller than 3 m square, Egyptologists believe that they may have been carved all at once, as part of a master design. The tomb contains a wealth of burial objects, inscriptions, and a statue of Osiris, the ancient Egyptian god of the underworld. The names of four of the sons have already been found inscribed on the walls and on objects in the tomb.

Archaeologists have only brushed the surface of the knowledge and treasures the tomb may hold.

Egyptologists have toiled for centuries uncovering ancient remains and artifacts, deciphering inscriptions, and restoring the monuments of this great civilization on the Nile. Khnumhotep, the high priest of Memphis and the fourth son of Ramses II, was likely the first Egyptologist. In the 18th century BCE, the pharaohs who had built the pyramids had been dead for almost a thousand years. Khnumhotep spent hours wandering around the pyramids and other ruins of the region, studying the mysteries surrounding his ancestors.

We are still trying to unravel those mysteries today. With every new archaeological discovery, historians raise new questions. For example, was Ramses II's tomb built gradually over the course of his reign? Was it built according to a master design? Were the pharaoh's sons buried in the tomb when they died, or were their bodies all brought there near the end of Ramses' reign? What more will this tomb tell us about ancient Egyptian civilization?
RED LAND, BLACK LAND

Civilization in Egypt began about 3100 BCE, not long after it began in Mesopotamia. Like Mesopotamia, Egypt developed around a great river system. Egyptian civilization had its humble beginnings as a scattering of villages and settlements stretching in a narrow strip along the mighty Nile River, the longest river in the world.

The land along the banks of the Nile was extremely fertile. The river flooded annually, depositing rich supplies of silt for surrounding fields. The flooding created a narrow ribbon of fertility that cut through the deserts in North Africa. To the Egyptians, therefore, the Nile was a life line. It provided water for both irrigation and drinking, silt for their fields, and a natural highway to link their communities.

The Nile was a friendlier river than either the Tigris or the Euphrates, and life was more stable in ancient Egypt than in Mesopotamia. Sudden and disastrous floods like those in Mesopotamia happened rarely. The flooding of the Nile was more predictable. In fact, flooding was so predictable that Egyptians could set their agricultural calendar according to the river's schedule.

As ancient Egyptian civilization developed, it stretched from the mouth of the Nile on the Mediterranean Sea south to Elephantine, near the First Cataract of the Nile. Filled with granite rock, this cataract served as a natural border between Egypt and Nubia to the south.

The Egyptians called the region of rich silt soil along the banks of the Nile the Kemnet, or Black Land. Beyond this fertile strip of land were the dead sands of the surrounding deserts. The Libyan Desert to the west and the Arabah Desert to the east. The Egyptians called these forbidding territories the Dishurt or the Red Land.

The desolate appearance of the Red Land was somewhat deceiving. A treasure house of minerals lay beneath the shifting sands. The Arabian Desert was a storehouse of gold and fine gems, including garnet, agate, and chalcedony. The desert's vastness and emptiness provided copper for the manufacture of tools and weapons. The Libyan Desert in the west yielded valuable building materials such as granite, quartzite, flint, marble, and slate.

The Dead Sea was also valuable in other ways. In the Libyan Desert, running parallel to the Nile, were six oases (fertile areas) named wadis. Most were under Egyptian control. Two of these wads became important suppliers of wine: another, the Wadi Natrun, was a source of natron, a salt used in the embalming of bodies. The deserts also acted as a buffer, shielding Egypt from invasions and, to some extent, isolating it from outside influences.

In addition to the sharp contrast between the Red Land and the Black Land, there were also major differences between the landscapes of the upper and lower regions of the Nile.

The landscape of Upper Egypt was marked by the Nile river valley, which ranged from 6 to 20 km wide. In this region, called the is-Semen or land of the shema-reed, the Nile flows from the highlands in a single stream towards modern Cairo, cutting through a plateau of sandstone in the north and limestone in the north, and creating a deep trough with cliffs on either side towering several hundred meters high. The people living in the Nile river valley could never forget how close they were to the desert. Its mountains and cliffs stood in clear view, reminding the Egyptians of their dependence on the Nile.

In contrast, in Lower Egypt, north of present-day Cairo, the Nile separates into different branches that veer northeast and northwest to the Mediterranean Sea, creating a fertile triangular plain. This area was called the is-maheb, the land of the papyrus plant, or the Nile delta. In ancient times, the river emptied into the Mediterranean Sea from as many as seven different mouths, all abundant in ducks and geese, fish, and herons. Here, the land was black and flat, often swampy, but with extensive areas of ideal pasture land. The delta was more isolated and protected from land invasions than the valley of Upper Egypt, and the desert only encroached upon it at its margins. The outlet to the sea was also important for trade and cultural exchange. Trade routes stretched from Egypt throughout the Mediterranean region. Historians have evidence, for example, that Egyptians influenced early Minoan and Mycenaean civilizations, which led to ancient Greece.

REFLECT AND ANALYZE

1. Explain how each of the following physical features affected the development of civilization in ancient Egypt:
   a) the Nile River
   b) the Libyan and Arabian deserts
   c) the Mediterranean Sea

2. a) How did the landscapes of Upper Egypt and Lower Egypt differ?
   b) What effects do you think these differences might have on the development of civilization in each region?

3. Compare the natural environments of ancient Egypt and ancient Mesopotamia. Draw and label sketch maps in your answer.

4. The shema-reed and the papyrus plant were two important resources in ancient Egypt. Find out how the Egyptians used these resources.

HISTORICAL OVERVIEW

The two regions of Upper Egypt and Lower Egypt began as separate kingdoms. The rulers of Upper Egypt wore a tall white crown, while the rulers of Lower Egypt wore a red crown. About 3100 BCE, political maneuvering by powerful leaders in the north and south resulted in war between the two areas. The king of Upper Egypt triumphed, and the united kingdom emerged as a powerful civilization. This was the beginning of the Predynastic Period of ancient Egypt.

Later rulers of the united Egypt wore a double crown representing both regions, and used titles such as "Lord of the Two Lands" and "King of Upper and Lower Egypt" to remind the people that the land had once been divided into two distinct kingdoms. Following unification, two goddesses served to protect the king: Sekhmet of the south and Buto of the north.

The king of Upper Egypt who unified the country was Menes. He founded a new capital city, Memphis, 16 km south of modern Cairo. Here he built a temple to Ptah, chief god of Memphis, and constructed administration buildings that served ancient Egypt for over 3500 years. Menes became the first of a long line of kings to rule ancient Egypt. He began the first Egyptian dynasty—the first success-
## Egypt: A Developmental Timeline

### Political Developments

<table>
<thead>
<tr>
<th>Period</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predynastic Period</td>
<td>Menes unites Upper and Lower Egypt</td>
</tr>
<tr>
<td>Old Kingdom</td>
<td>pharaohs are seen as living gods</td>
</tr>
<tr>
<td></td>
<td>Egypt is divided into provinces, each headed by a governor</td>
</tr>
<tr>
<td></td>
<td>Memphis becomes the capital of the united Egypt, the first nation state in the world</td>
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<tr>
<td>Middle Kingdom</td>
<td>pharaohs are threatened by the independence of local governors</td>
</tr>
<tr>
<td></td>
<td>Luxor gains prominence</td>
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<tr>
<td></td>
<td>Egypt recruits a standing army</td>
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<tr>
<td></td>
<td>Asians seize control of the delta region</td>
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<tr>
<td>New Kingdom</td>
<td>Thutmose I extends the empire into southwest Asia (1504–1492 BCE)</td>
</tr>
<tr>
<td></td>
<td>Hatshepsut becomes a powerful female pharaoh (1479–1458 BCE)</td>
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<tr>
<td></td>
<td>Thutmose III brings Palestine and Syria into the empire and re-establishes control over Nubia and Kush (1479–1425 BCE)</td>
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<tr>
<td>Late Dynastic Period</td>
<td>a struggle for royal power in among priests and nobles of Egypt</td>
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<tr>
<td></td>
<td>General Ptahheremengeri of Memphis takes control of Egypt (1822 BCE)</td>
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<tr>
<td></td>
<td>Amenhotep III of Assyria invades Egypt (1200 BCE)</td>
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<td></td>
<td>Achaternakhte of Asyria invades Egypt (1200 BCE)</td>
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<td></td>
<td>the army is developed into a highly organized fighting force</td>
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<td></td>
<td>Thebes II rules as the emirate of Egyot</td>
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<tr>
<td></td>
<td>the Hyksos dominate Egypt</td>
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</tbody>
</table>

### Cultural Developments

<table>
<thead>
<tr>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>hieroglyphics are developed</td>
</tr>
<tr>
<td>hieroglyphics improve</td>
</tr>
<tr>
<td>foreign cultural influences increase</td>
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<tr>
<td>renewed interest in learning takes place</td>
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<tr>
<td>literature flourishes</td>
</tr>
<tr>
<td>Ishtarhsut promotes the arts in Egypt</td>
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<tr>
<td>Amenhotep IV (Akenaton) carries out the Amarna Revolution, making the god Aton the only recognized god of Egypt (1379–1353 BCE)</td>
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<tr>
<td>Turanishamna restores the old religion of Egypt (1538–1527 BCE)</td>
</tr>
<tr>
<td>Hermesheb compasses a new religion of Akenaton (1323–1305 BCE)</td>
</tr>
<tr>
<td>extensive monumental works are built at Thebes</td>
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</tbody>
</table>

### Technological & Economic Developments

<table>
<thead>
<tr>
<th>Events</th>
</tr>
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<tbody>
<tr>
<td>irrigation systems are developed</td>
</tr>
<tr>
<td>Djoser builds the Step pyramid at Saqqara</td>
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<tr>
<td>Khufu builds the Great Pyramid at Giza</td>
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<td>the pyramid of Chephren is built at Giza</td>
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<td>the pyramid of Mycerinus is built at Giza</td>
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<tr>
<td>the government begins to regulate farming and trade</td>
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<tr>
<td>trade promoted with Palestine and Syria</td>
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<td>workshops begin to produce fine crafts</td>
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<tr>
<td>Hyksos introduce horse-drawn chariot, copper arrowheads and daggers</td>
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<tr>
<td>curved-blade swords, compound bow</td>
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<tr>
<td>Thutmose IV extends foreign trade into Punt (Kushatia)</td>
</tr>
<tr>
<td><em>the use of iron tools and weapons spreads</em></td>
</tr>
<tr>
<td><em>copper, bronze, bronze lamps, the lathe, the split rib bon, and the key are introduced</em></td>
</tr>
<tr>
<td><em>agriculture is improved by the introduction of the ox-drawn water wheel and the flax-spinning machine</em></td>
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sien of rulers who claimed their descent from a common ancestor.

The Predynastic period lasted a little over 400 years. During this time, kings faced considerable internal opposition as they tried to secure their power. But it was during this period that the Egyptians began to develop essential irrigation systems along the Nile River, and created a system of writing called Hieroglyphics.

The Old Kingdom or "The Age of the Pyramids"

It was not until the beginning of the Old Kingdom in 2560 BCE that a powerful king finally created a central government strong enough to command the country. This king was Djoser. During his rule, Djoser ordered his people to build him an enormous tomb, the Step Pyramid at Saqqara. Rising to a height of 60 m in six giant steps, this pyramid was the first monumental stone building ever constructed in the world. The magnitude of this project—which involved moving massive amounts of stone, recruiting thousands of laborers, and feeding the workers—indicates how powerful Djoser was, and symbolizes the unlimited authority enjoyed by Egyptian rulers of the period.

From the Third to the Sixth Dynasties, the Egyptians considered the rulers of the Old Kingdom to be living gods. The kings, known as pharaohs, demonstrated an attitude of being more than earthly mortals by remaining distant or aloof from the general population they ruled. The images that remain of these early kings reflect severe features and suggest how aloof and powerful they must have been.

The great pyramids of the kings of the Fourth Dynasty, on the plateau of Giza high above Cairo, mark the zenith of the rulers' power and achievement. Today, we still marvel that a civilization could accomplish such feats. The famous pyramid of Khufu (Cheops) stands an impressive 146.6 m high. The other two famous pyramids, those of Khufu's son Chephren and his brother Mycerinus, were built by farmers, who could be recruited when the floodwaters of the Nile covered their fields. Historians often describe the Old Kingdom as "the age of the pyramids" because these monumental structures are one of the greatest achievements of the period.

The Old Kingdom also witnessed other important accomplishments. Hieroglyphics, the Egyptian form of picture writing, improved. More sophisticated engineering skills led to the construction of temples and elaborate tombs for the king or pharaoh. The Egyptians designed irrigation systems and improved farming. Trade became more regulated, and spread throughout the Mediterranean region, enriching Egypt with new inventions and goods, including the potter's wheel from Mesopotamia, timber from Syria, and oil and wine from Crete.

The foundations of organized government were laid when the rulers divided the state into provinces or districts, each with its own governor appointed by the pharaoh.

During this period, the king had a personal bodyguard but ancient Egypt had no standing army. When regions such as Libya or Nubia posed any potential threat to the kingdom, the governors of the various provinces raised troops to defend the empire. Once this temporary army completed a specific military campaign, it was either disbanded or assigned to some other state work project, such as building the pyramids at Giza.

By the Fifth Dynasty, the authority of the king had weakened. High priests and government officials yied for power. The pyramids of the kings of the Fifth and Sixth Dynasties are markedly smaller, reflecting the general impoverishment of Egypt. Towards the end of the Sixth Dynasty, the climate and the Nile River combined to bring about the end of the old monarchy.

With low rainfall and a series of weak floods from the Nile, Egypt suffered from famines.

After the death of Pepi II, who had reigned as king for 94 years, the organization of the Old Kingdom failed. Egypt again separated into two distinct parts. Without a strong king enough to control the entire territory, the country entered a time of general disorder called the First Intermediate Period.

The First Intermediate Period lasted a very short time, certainly less than 100 years. Records are few and badly written, but historians think that many local chiefs competed for power, each declaring himself king and attempting to form his own dynasty. Meanwhile, the court at Memphis fell into a state of neglect. Governors no longer chose the traditional pattern of burial in the capital near their king, preferring instead to be buried in their own towns in tombs shafts built for family and friends.

The Middle Kingdom or "The Age of the Nobles"

The Middle Kingdom, which began in 2040 BCE, was formed when one strong family from the region of Luxor re-established order and succeeded in claiming the throne. These kings of the Eleventh Dynasty called either Intef or Mentuhotep, reunited Egypt, controlling its administration from a town called Itjasawy, rather than from Memphis. Although its actual location is unknown, Egyptianologists think it was located in the region of the Fayum, south of Memphis. Egypt began to prosper once again. Trade links forged during the Old Kingdom were rebuilt with neighbours such as Syria and Palestine. Workshops started to produce fine crafts. As scholars began again to copy literary texts, the people's interest in learning was renewed.

Architecture, literature, and the arts flourished in this period.

Despite the new control established by pharaohs of the Middle Kingdom, local governors or nobles were still quite independent and posed a constant threat to the monarchy. Amenemhat I (1850-1865 BCE), first king of the Twelfth Dynasty, was murdered as a result of a conspiracy involving his own bodyguard. A strong ruler, Amenemhat I had managed to restore many of the traditions associated with the Old Kingdom and had conquered much of Nubia.

The powerful nobles of the Middle Kingdom maintained their own powerful armies. By the Twelfth Dynasty, pharaohs began to see the need for maintaining a standing army to preserve their own power. Therefore, after appointing army scribes, they raised and maintained a state army by setting recruitment quotas for each district within the kingdom.

The rulers of the Thirteenth Dynasty...
inherited a strong power base and an empire that had expanded its economic influence and political boundaries, but this dynasty was characterized by a series of short reigns and kings who gained little personal fame. Consequently, the authority of the throne weakened. At the same time, a great number of people from other countries settled in Egypt. Many of them were brought in from Asia as prisoners of war during the campaigns of the Twelfth Dynasty kings. These settlers gained power rapidly, establishing their base in the town of Avaris in the delta and seizing control about 1670 BCE.

During a Second Intermediate Period, Egypt was controlled by foreign rulers now often called the Hyksos kings. These kings were probably not all from one country, but were a mixture of races of non-Egyptian origin, many from Syria and Palestine. The Egyptians referred to them as the "rulers of foreign lands." It was the Greeks who later named these kings Hyksos.

While the Hyksos adopted many Egyptian traditions, they also introduced important innovations into Egypt. Their new technology included the horse-drawn cart, copper arrowheads, daggers cast in one piece for greater strength, the scimitar or curved-blade sword, and the compound bow, built of several layers of tough springy wood for greater strength. In fact, the Hyksos had used these very innovations to conquer the Egyptians.

Eventually, a warrior family from Luxor rallied the forces of Upper Egypt and drove the Hyksos out, using the improved military technology that the Hyksos had introduced. The victorious generals from Luxor began the New Kingdom, one of the greatest periods in Egyptian civilization.

The New Kingdom or "The Age of the Empire"
The New Kingdom emerged in 1550 BCE. During this period, Egypt became the ancient world's strongest empire and Luxor (Thebes) became a great city once again.

The pharaohs of the New Kingdom seemed fearless, tireless, strong, and invincible in battle. They were determined that Egypt should never again fall into the hands of foreigners. Yet they were less about rulers of old, and were always keen to advance the positions of worthy supporters. They protected their borders from foreign invasion by maintaining permanent garrisons in the towns and cities to the north.

The pharaohs of the New Kingdom increased the size of their standing armies and concentrated more on building the empire. Thutmose I (1594 BCE–1592 BCE) led a military force into southwestern Asia as far as the Euphrates River. This force then flowed into the Egyptian treasury from the peoples he conquered, enriching the empire. Later rulers extended Egypt’s territory even farther.

Thutmose III (1479 BCE–1425 BCE) became the greatest military leader of the New Kingdom, and the country reached the zenith of its power during his reign. He was determined to create a mighty Egyptian empire, and led his armies on military campaigns into Asia almost every year for more than two decades.

Through Thutmose III’s conquests, Palestine and Syria became part of the empire. Egypt also re-established control over Kush and Nubia, both valuable sources of slaves, copper, gold, ivory, and ebony. The army took children of foreign princes back to Egypt to guarantee that the conquered territories would obey the pharaoh. Egyptian armies and military posts, established in foreign cities, watched for any local activity that could threaten the growing power of Egypt. By the end of his reign, Thutmose III ruled the east: the Egyptian empire stretched as far as the Euphrates River and the Taurus Mountains.

During this period, innovations began to appear in the Egyptian military. Leather body armour covered with metal scales was introduced. Chaoteorae, the elite branch of the military, began to carry large shields, and both warrior and horse wore heavy blankets of quilted leather, lined with linen, to offer most of their backs. The armies became highly organized fighting forces. Slaves captured in the Asiatic and Nubian wars were often forced to serve in the Egyptian military. In the later period of the New Kingdom, armies included increasing numbers of hired foreign troops or mercenaries. The coronation of Amenhotep IV (1352 BCE–1336 BCE), who called himself Akhenaton, marked a turning point in Egyptian power. Akhenaton turned his back on many of the old traditions of ancient Egypt. He built a new capital city at an isolated location near what is now Tell el Amarna, 280 km north of Thebes, and changed the nature of Egyptian religion by declaring that the people could only worship one god, the sun god Aton. Utterly preoccupied with religious matters, he neglected the Egyptian empire at a time when it was being threatened by the Hittite nation.

Akhenaton’s religious reforms, known as the Amarna Revolution, led to an outpouring of art and sculpture that glorified the sun god Aton but angered many Egyptians. The ruler’s immediate successors finally ended this religious unrest. King Tutankhaton (1356 BCE–1327 BCE) re-

**Perspectives on the Past**

**Personalities and Power**

**Hatshepsut**

**Hatshepsut (1479 BCE–1457 BCE)**

Was Hatshepsut the first great woman in history? Some historians claim she was. What do you think?

Hatshepsut was certainly one of the most outstanding pharaohs of ancient Egypt, achieving great power and influence during the New Kingdom. As was common in royal families, Hatshepsut originally married her half-brother, the pharaoh Thutmose II (1492 BCE–1479 BCE). When he died, the throne passed to his small son, Thutmose III (1479 BCE–1425 BCE). As the child’s step-mother, Hatshepsut served for a period as regent and co-ruler. Then, in a bold move, she seized the throne for herself and gained the backing of several high court officials and priests. She ruled Egypt as pharaoh in her own right for 22 years. Because a pharaoh was by custom male, Hatshepsut dressed in men’s clothes and attached a ceremonial beard to her chin. Statues usually depict her wearing the beard.

While ruling the nation, Hatshepsut ordered the construction of a temple in her honour at Deir el-Bahri. On the walls of the temple, reliefs tell of her birth as the daughter of the god Amun and of her right to rule Egypt. They also portray her being crowned during the reign of her father, Thutmose I, but this event was a fiction.

The reign of Hatshepsut was a peaceful period of efficient government, expanding foreign trade, and artistic

**Figure 4.7**

A sphinx bearing the face and features of Hatshepsut rebirth. Carved on the walls of Hatshepsut’s funeral temple is a record of a successful trading expedition sent south to Punt (in present-day Somalia), which opened up the possibility of trade in ivory, incense, ebony, and gold. New types of sculpture developed during her rule. A unique style of temple construction that employed terraces became popular; her cult temple at Deir el-Bahri was a fine example of this new architectural design.

Hatshepsut came to a mysterious end. During a revolt in the period of Thutmose III, she disappeared. Her statues, temples, and shrines were later mutilated, and her body was never found.
PERSPECTIVES ON THE PAST

Personalities and Power

Rameses II

(1279 BCE—1213 BCE)

What were the main accomplishments of Ramses II? Imagine that you could interview this famous pharaoh. What questions would you ask him? Do you think he deserves to be called "Rames the Great?"

The face of Ramses II, the most important ruler of the Nineteenth Dynasty, shows the large hooked nose that was typical of the Rameside kings. Ramesses II ruled Egypt for 67 years and lived into his eighties. He was married to more than 90 wives and fathered over 100 children! Archaeologists excavating his tomb describe him as one of the most colourful figures of the ancient world.

Rameses II came to power at a time when the great empire was crumbling. His reign represents the final period of grandeur in ancient Egyptian civilization. Egypt’s main enemy was the Hittite empire based in Anatolia. Ramesses challenged the Hittites early in his reign by leading his army north to Kadesh, but they drove him back. While he fought valiantly to maintain the empire and considered himself a great warrior, evidence proves that he exaggerated his claims to bravery and valor. Even when he was driven back by the Hittites, Ramesses II had inscriptions carved in temples all over Egypt stating that he had been victorious. In his vanity, he even had his name inscribed on monuments built by earlier pharaohs. Because of this desire to prove his magnificence to all future generations, many scholars refer to him as "Rames the Great."

When he attempted a second invasion of the Hittite empire, the attack ended in a stalemate. The two opponents made the first treaty of non-aggression in history: they simply agreed to not attack each other again and to help one another if attacked by another enemy.

Rameses launched an unprecedented building program of monuments and public buildings during his reign. In fact, he constructed more monuments than any other pharaoh, perhaps to ensure his own immortality. The buildings from his reign have left us with a magnificent legacy. Ramesses made Thebes the first monumental capital city of history, adding to existing temples in the city and at Karnak, and building dozens of others. Two huge temples at Abu Simbel, cut in rock for the pharaoh and his wife, Nefertari, are stunning examples.

The Egyptian Land of the Pharaohs

The Egyptians greatly resented Persian domination. Revolts and opposition to their presence marked much of the Persians’ occupation over the next two centuries. In 332 BCE, however, the Macedonian armies of Alexander the Great conquered Persia and marched into Egypt, launching a period in Egyptian history in which the people were ruled by Macedonians and administered in Greek. In fact, Greek became the language of government in Egypt for almost a thousand years.

Alexander ruled Egypt for only a few years before his death in 323 BCE. The Macedonian governor of Egypt at the time was Ptolemy, and in 305 BCE he declared himself Ptolemy I (305 BCE—282 BCE), king of Egypt. Over the next three centuries, a line of Ptolemies ruled Alexandria into the most brilliant metropolis of the Greek-speaking world. Alexandria was a city founded by Alexander the Great on the north end of the Nile delta.

The generations of Macedonian kings and their sister-wives, called Cleopatras, were kind but patronizing to the native Egyptians, and only one monarch, Cleopatra VII, took the time to learn the Egyptian language. Instead, the dynasty’s rulers spread Greek culture from their capital at Alexandria. They built temples to Greek gods, developed Egypt’s natural resources, and increased foreign trade. But the second and third centuries of Ptolemaic rule were marked by family strife and internal power struggles. The reign of this magnificent family line came to an end with the children of Ptolemy XII: two sons, both named Ptolemy, and a daughter, Cleopatra VII.

THE ROMAN PERIOD

When Cleopatra VII (51 BCE—30 BCE) and her brothers wrangled over the control of Egypt, their dispute drew Rome’s attention. After ruling first with one brother and then with the other, Cleopatra finally established her own power by forming an alliance with two Roman leaders, first with Julius Caesar from 48 BCE—44 BCE and then with Mark Antony from 41 BCE—30 BCE.

Cleopatra’s great ambitions came to an end in the civil wars fought among the Roman conquerors. In 31 BCE, Caesar’s nephew Octavian defeated Mark Antony at the battle of Actium. When Octavian marched victorious into Egypt the following year and Mark Antony and Cleopatra committed suicide, the reign of the Ptolemies was over. Egypt then became a province of Rome.

After Egypt was absorbed into the Roman Empire, Greek continued as the language of government. Few emperors of Rome during the first three centuries
on behalf of the Roman emperor, and native Egyptians were excluded from government positions. Roman law was also introduced into the country.

Roman culture brought many material changes to Egypt. The use of iron weapons and tools spread. Clear glass vessels, the terra-cotta lamp, the lathe, the split rib reed pen, and the key were all introduced into Egypt. The introduction of the ox-drawn wheeled cart and a wheel-driven threshing machine changed agriculture as well.

Rome's control of Egypt gradually weakened after 395 CE when the Roman empire split into eastern and western parts. By 642 CE, the Muslims from Arabia had conquered Egypt.

Egypt became a powerful empire because of the strong leadership of the pharaohs. Do you agree or disagree with this statement? Explain your answer.

4. In which of ancient Egypt's major historical periods would you have preferred to live? Write a personal journal entry explaining your choice.

GOVERNMENT

THE PHARAOH

The ancient Egyptians looked upon their king or pharaoh as a god, a descendant of the great sun god Re. They also believed that Horus, the powerful sky god represented by a hawk, entered the pharaoh when he or she sat on the throne. After death, the people often referred to the pharaoh as Osiris, an indication that they thought of their ruler as being one with the great god of the dead.

The actual word pharaoh comes from the Egyptian word meaning "great house." Sometime between 1554 BCE and 1304 BCE, the ancient Egyptians chose to address their king as pharaoh to show their great respect. Rather than use the ruler's own name, subjects spoke instead of the palace or "great house." The position of pharaoh passed to the eldest son of the king's chief wife. This distinction was important because many Egyptian kings had several other wives, called lesser wives. Some chief wives gave birth to daughters but not to sons, and several of those daughters claimed their right to the throne. At least four women ruled ancient Egypt.

THE BUREAUCRACY

All government administrators, ranging from personal staff to imperial officials, were subject to the approval of the pharaoh. The pharaoh's personal staff included a steward, who looked after the vast royal estates, a chamberlain, who was in charge of the daily affairs in the palace, and a first herald, who supervised the palace guard.

The highest-ranking official was the vizier, who served as the pharaoh's deputy in all the affairs of state. During the Old Kingdom, this office was usually held by a prince of royal blood, as were all important positions. The vizier had enormous responsibilities. He was in charge of almost all administrative affairs from collecting taxes to overseeing judges, scribes, and treasury officials. Eventually, the office got so complicated that, during the Eighteenth Dynasty, two viziers were appointed, one for Lower Egypt and one for Upper Egypt. By this time, commoners could also apply for these positions.

Working under each vizier, an overseer of the treasury kept track of taxes and tribute. Since the government collected taxes from farmers in the form of crops, and taxes from skilled workers in the form of goods they produced, the pharaoh's treasuries and temples actually served as warehouses. Therefore, an overseer of the granaries and of cattle worked very closely with the overseer of the treasury.

Other high government officials included an army commander and the governors appointed to rule conquered territories within the empire. The governors also regulated the garrisons of Egyptian soldiers left behind to keep the conquered people in check.

Ancient Egypt was divided into 42 provinces called nomes. Each of these local areas was governed by an official called a nomarch, appointed by the pharaoh. He was responsible for collecting the local taxes, maintaining law and order, raising troops, and organizing workers.

LAW AND JUSTICE

The ancient Egyptians did not look upon the law as a specialized area separate from their government. They had laws, they had punishments with varying degrees of severity, and they had tribunals or courts. Unlike the Mesopotamians, however, they did not develop extensive codes of law and did not view their laws as gifts from the gods.

The composition of a tribunal or court varied from case to case. In a village or town, the courts dealt with a wide variety of general matters, and local landowners were expected to sit in judgment.

The following instructions from a pharaoh to his vizier outline some of the goals for justice in ancient Egypt. In your own words, describe the pharaoh's general advice. Which of the goals would be acceptable for judges in the Canadian judicial system today? Which would be unacceptable?

Do not send a petitioner away before listening to him. Dismiss him only after telling him why you are dismissing his case, because it is said that a petitioner would rather that you pay attention to what he says than win his case.

Do not be angry with any man without good cause; be angry only when there is good reason to be angry. Inspire fear of yourself so that men are afraid of you because a true magistrate is one of whom people are afraid. But the reputation of a magistrate comes from his giving justice. If people are too frightened of a magistrate, then there might be something unjust about him.
when called upon. Each nome or province had its own court as well, with high officials headed the more important ones. Priests, soldiers, or government officials presided over local courts. For very serious cases, such as treason, a special commission might be appointed to prosecute the case.

The administration of justice within the kingdom was mainly the responsibility of the vizier. He judged most capital or high court cases. Although the pharaoh was the supreme judge in ancient Egypt, he or she only intervened personally in cases involving crimes punishable by death.

Penalties for crimes often included harsh physical punishment that ranged from a beating (for failure to do one’s duty) to death (for treason). If a person did not show up for communal work when summoned, he or she might be sentenced to a permanent work assignment in a state institution. If someone charged with a crime ran away and could not be caught, his or her family would be taken instead.

REFLECT AND ANALYZE

1. a) Provide evidence that the Egyptian pharaohs ruled with absolute power.
b) Discuss the advantages and disadvantages of this system of government.

2. Write a job description for a vizier in ancient Egypt. Then imagine you have been offered the job. What are the advantages and disadvantages of this opportunity?

3. Bureaucracy became more complicated in the Middle Kingdom and the New Kingdom. Suggest reasons why this was so.

4. Compare similarities and differences in the forms of law and justice in Egypt and Mesopotamia.

EGYPT:

Society and Culture

In the beginning, there was a formlessness, a primeval abyss—or chaos. Out of the waters of that chaos emerged a hillock of wet ground, and on this mound appeared Atum, the Creator. Atum produced the first divine couple, a pair of twins: Shu, the god of air, and his sister, Tefnut, the goddess of moisture.

Shu and Tefnut married and also gave birth to twins, Geb and his sister, Nut. Geb was the god of earth and Nut represented the heavens. Geb and Nut married, but Atum opposed the match. Atum ordered their father, Shu, to raise Nut into the sky away from Geb, dividing the heavens from the earth. The speckles on Nut’s body became the stars.

In spite of their separation, Geb and Nut had several children, including Osiris, god of vegetation along the Nile, Isis, goddess of female fertility, Seth, god of the desert, and Nephthys, goddess of the dead. This group of deities made up the Eunuch of ancient Egypt, or the original family of nine gods.

When Geb went to heaven, Osiris became pharaoh and took his sister, Isis, as his queen. Jealous of his brother’s position, Seth killed Osiris, cut his body into pieces, stuffed the pieces into a box, and set it adrift on the Nile. He then made himself pharaoh of Egypt.

Isis refused to accept her husband’s death as final, and searched for his remains with the help of her sister, Nephthys. When Isis finally found the box, she put the body together and restored Osiris to life. Thereafter, he became the god of the afterlife.

At the same time, Horus, son of Osiris and Isis, overthrew Seth and became pharaoh himself.

There are different creation stories associated with ancient Egypt. Because these myths seem to conflict with one another, students of Egyptian religion often find sorting things out rather difficult. For example, the creation story above combines two of the traditional myths, the khnum myth and the Osiris myth. Despite the sometimes mind-boggling complications, the myths can provide us with some interesting insights into Egyptian society and culture.

What basic questions does the creation myth above try to answer? What does it suggest about the relationships among the forces of nature, the gods, the pharaohs, and human beings? What does it tell us about the Egyptian view of life after death?
RELIGION

GODS AND GODDESSES

Religion was an integral part of Egyptian life. The ancient Egyptians believed that immortal beings influenced all aspects of nature and every human activity. Therefore, they worshipped many different deities. With a pantheon of more than 60 gods and goddesses, the Egyptians had one of the most polytheistic religions of any civilization. Yet they tolerated and even welcomed other beliefs. If visitors to the country could not find an Egyptian god or goddess to their liking, then the Egyptians allowed them to worship their own gods. In fact, they sometimes added these foreign deities to their own pantheon.

Many Egyptian gods were associated with the life-giving forces of nature. The most important godess was Isis, who represented female fertility and was worshipped as a devoted mother and wife. Other important deities had associations with death and the afterlife. Osiris, for example, ruled over vegetation and the dead, and represented the constant renewal of life along the Nile. The god Anubis escorted the dead to the entrance of the afterworld, helped ensure Osiris to life, and invented the elaborate Egyptian funeral rituals and burial practices. Figure 5.2 describes some of the other important gods and goddesses in the Egyptian pantheon.

Many deities were also associated with animals or pictured with human bodies and animal heads. A god or goddess took the form of the animal whose characteristics he or she embodied. For example, the Egyptians believed that a dog or cat represented loyalty, a crocodile or serpent inspired fear, and a hawk or falcon represented swiftness. Horus, god of the sky and lord of heaven, was often pictured with the head of a falcon. Anubis had the head of a jackal, an animal that protected at night and destroyed desert grave sites. Historians believe the Egyptians used the Jackal in religious writings and symbols to stave off its anger.

Each Egyptian city and town worshipped its own god in addition to the major deities. One of the most important was Amun, a sun god worshipped by the people of Thebes. Amun was originally a tribal god, but his cult spread from Thebes until he was worshipped all over Egypt. He took over much of the prestige and mythology of the original Egyptian creation god, Mm, and was also identified with the sun god Re. In time, Amun-Re became the chief deity of Egypt. Other local deities included Pahit, the creator god of Memphites and inventor of the arts. Thoth, the god of wisdom and writing in Hermopolis, and Khnum, the creator god of Elephantine.

Egyptian households worshipped specific household gods as well as the state gods. A household god could be any god with whom the people felt a connection.

RELIGIOUS BELIEFS AND PRACTICES

The ancient Egyptians believed that the creator god, Khnum, fashioned infants on his potter's wheel and placed them in their mother's womb. But for each human moulded, Khnum also created a spiritual double called the ka. The ka remained in the heart until death, when spirit and body separated. Another element also entered the body at birth and left it at death. This element, called ba, was like the personality or character of the individual. In Egyptian art, the ba often appears as a human-headed bird, sometimes along with a small lighted lamp. The ancient Egyptians believed that both the ka and the ba returned to the body of a person who died if the body was properly preserved and sustained in the tomb with food, drink, and earthly belongings. This remarkable belief in a spiritual life inspired the elaborate burial practices of the Egyptians.

Ancestor worship was another important part of Egyptian religion, and people took great care in maintaining the tombs of departed relatives. Many people also kept busts of their ancestors in the main room of the house, alongside the status of household gods. Priests of the major temples conducted daily religious services or rituals to honour the various state gods, but these ceremonies were closed to the general public. Instead, ordinary citizens worshipped at smaller local shrines, where they offered up prayers to their favourite gods, often acting as their own priests.

Religious festivals were important public events and tended to attract thousands of citizens. During a festival, a statue representing the god or goddess being honoured was carried in procession through the streets. The Festival of Osiris at Abydos, for example, re-enacted the betrayal and murder of Osiris by his brother Seth. It included several days of mourning, a funerary procession to the traditional site of Osiris' tomb, and a final return to the temple. The festivals were a welcome opportunity for people to celebrate and to honour their gods.
bad, depending on the influence of the planets, and recorded their movements in the calendar. Dreams could foretell events to come, the Egyptians believed, and special books were written to explain their meaning and significance.

**DEATH AND THE AFTERLIFE**

Most of us know something about the fascinating burial practices of ancient Egypt. When we think of Egypt, we often think of mummies, great stone temples, and elaborate burials. Can we conclude that the Egyptians were obsessed with death? In fact, almost the opposite is true. Egyptian burial practices were a way to ensure that the person who had died could continue to enjoy living in the world beyond.

For a person to pass on to the afterlife, the body had to be preserved in a recognizable form. During the Predynastic Period, corpses were covered with a skin or matting, and buried in shallow graves in the desert. Here, the hot, dry sand acted as a powerful desiccating agent. That is, it preserved the body by removing the moisture and preventing decay.

When burial became more elaborate and the Egyptians began to place corpses in burials chambers, they had to find a new way to preserve the bodies. Although evidence is scanty, historians believe that Egyptians first thought they could stop decomposition simply by keeping the corpse covered. Bodies discovered from the Old Kingdom, for example, had arms and legs tightly wrapped in linen bandages. Later evidence indicates that the Egyptians learned to remove the internal organs to prevent decay.

Yet there seems to have been no planned or consistent method of preserving a body during the Old Kingdom or the Middle Kingdom. Only in the New Kingdom did the Egyptians fully understand the basic requirements for preserving a corpse.

By the time of the New Kingdom, the journey to the afterlife was associated with the story of Osiris, who had been restored to life from death and who stood as judge over the dead. If Osiris judged the deceased worthy, the person enjoyed rebirth in the next world. If not, the soul was punished in the netherworld.

**INNOVATIONS**

**The Egyptian Art of Mummification**

For the wealthy, the Egyptians perfected the practice of mummification to give the soul the use of its body in the afterlife. The process was a fascinating mix of science and religion. What scientific knowledge did the Egyptians need to develop the process?

The mummification process was a long one. It took a total of 70 days from the time of death until the burial. When death occurred, the body was handled over to an embalmer.

**Removing the Internal Organs**

The embalmer removed the brain through the nostrils with a hook-like instrument and made an incision on the lower left side of the abdomen to extract the internal organs. The heart, considered by ancient Egyptians to be the seat of understanding, remained in the body.

**The Drying Process**

The corpse was then packed in mounds of dry natron, a natural salt with a high proportion of sodium bicarbonate. After about 40 days, the natron had absorbed the body fluids, preserving the body from decaying further. Rather than discarding the internal organs, the embalmer treated them with natron separately and kept them in a special cache.

**Packing and Sealing the Body**

After the drying period, the embalmer packed the cavity of the body with linen, sawdust, or even dry lichen, and plugged the eye sockets with linen pads or, in later periods, with artificial eyes. The embalming incision was closed and covered by a stone tablet or a plate of lead, metal, or wax that usually bore a representation of the Wedjat eye of Horus, a powerful protective amulet (charm). The embalmer then massaged the body with lotions and coated it with resin.

**Wrapping the Mummy**

Approximately 15 of the 70 days were spent bandaging the mummy. The process was time-consuming because the wrappings had to be tight to maintain the shape of the body. First the head, toes, fingers, and limbs were wrapped individually. Then, they were wrapped with the entire torso. While the torso was being wrapped, rolls and pads were inserted to round out the finished outline of the body. Before the final layers of bandages, a funeral mask was fitted over the head and shoulders so that the soul could identify the body when it returned to the burial chamber. The funeral mask was usually made of linen or papyrus stiffened with plaster, or with precious metals if the deceased was a member of royalty. Amulets were placed on the mummy and within the bandages to offer the person protection from evil spirits on the journey into the afterlife.

The embalmed internal organs were placed in four containers called canopic jars and came under the protection of four minor gods called the sons of Horus: the human-headed god, Imset, guarded the liver; the baboon-headed god, Hapi, guarded the lungs; the jackal-headed god, Duamutef, guarded the stomach; and the falcon-headed god, Qebersenepet, guarded the intestines. The jars themselves were protected by four goddesses Isis, Nepthys, Neith, and Selket.

**The Burial**

For the tomb burial, the mummy was placed inside a coffin or series of coffins enclosed within a box called a sarcophagus. The sarcophagus, the canopic jars, and various belongings and objects associated with daily life were buried as well. The tombs of royalty usually included furniture and precious materials.
The Great Pyramid of Khufu (Cheops), pharaoh of the Fourth Dynasty, is one of the most impressive structures of all. It was built about 2600 BCE from more than two million stone blocks averaging 2.3 tonnes in weight, with the largest blocks weighing as much as 15 tonnes. Standing about 147 m high, the pyramid covers an area of approximately five hectares. Each side of the pyramid is equal to the length of about two football fields.

From the entrance, located on the north face, a corridor leads downwards at an angle of 25 degrees into the rock plateau beneath the pyramid. This low passage levels off and ends in a small, uncompleted chamber. The architect might originally have intended this room to be the king’s burial chamber, since the burial chamber in other pyramids was often located underneath the structure rather than inside. The corridor continues beyond this chamber and then ends abruptly.

For some reason, Khufu must have changed his mind about the location of his burial chamber. A second passage cuts off from the descending corridor and branches upward, before levelling off into a chamber built right in the centre of the pyramid. Today, this room is called the Queen’s Chamber although, in the second stage of its construction, it was likely intended as the king’s burial chamber rather than the queen’s.

Apparently, Khufu changed his mind about the location of his burial chamber for a third time, making interior modifications of the pyramid necessary once again. The final burial place is accessed through the main Gallery, the most magnificent corridor in any of the pyramids. The gallery walls are faced with polished limestone and are corbeled. That is, each section juts out about 7.5 cm beyond the course beneath to form a vaulted passage.

The king’s burial chamber is lined entirely with pink granite blocks and the smooth walls have neither inscriptions nor paintings. The chamber still holds a sarcophagus that must have been put in place before the chamber was completed. On the north and south walls, two very small openings lead to shafts that open to the outside. Although we are still uncertain, these shafts might have been constructed to provide ventilation for the chamber or a way out of the pyramid for Khufu’s soul, since the Egyptians expected his soul to join the stars.

Five small rooms or compartments lie above the ceiling of the King’s Chamber. The bottom four have flat roofs while the top one is pointed. These might have been constructed to absorb some of the enormous weight on the ceiling of the burial chamber.

To prevent grave robbers or vandals from entering the tomb, the builders took special precautions to seal it off. They inserted three huge granite stones in the heart of the pyramid to plug the bottom of the descending corridor after the funeral of the pharaoh. How did they accomplish this unusual feat without trapping any workers inside? The builders likely stored these sealing blocks in the Grand Gallery during construction.

Once the pharaoh’s coffin was placed inside his sarcophagus, a crew of workers probably levered the three stones into the lower end of the passageway. Then, in the dark, they may have lowered themselves through a narrow vertical shaft to the abandoned burial chamber below, walked up the descending corridor to the entrance of the pyramid, and stepped outside. The descending corridor was then blocked and the completed facing stone set in place to seal the pyramid.

The Valley of the Kings

During the New Kingdom, royal burials were in the Valley of the Kings, the royal necropolis (cemetery) of ancient Thebes. By the early twentieth century, archaeolo-
THEN AND NOW
The Discovery of the Tomb of Tutankhamen

One archaeologist believed that the Valley of the Kings still contained hidden secrets, despite the ravages of the grave robbers. Howard Carter was convinced that the tomb of the pharaoh Tutankhamen remained hidden in the valley. Why was the day of Carter's discovery marked by both caution and suspense? Why is the discovery of Tutankhamen's tomb still considered one of the greatest archaeological discoveries of all time?

Tutankhamen had become pharaoh at age nine in about 1354 BCE, and ruled until his untimely death at age 18. The boy-king's funeral was held in the Valley of the Kings.

Later pharaohs destroyed or removed all monuments built by, or in honour of, Tutankhamen and other rulers who had at any time accepted Aton as Egypt's chief god. In the years that followed, archaeologists learned little about Tutankhamen.

In Carter's view, signs pointed to a yet undiscovered tomb. A cup bearing the name of the pharaoh had been found under a rock. A small mud-filled pit tomb containing pieces of gold foil with pictures and inscriptions of the pharaoh had been located. Finally, a selection of pottery jars used for funerary rites, bearing the seal of Tutankhamen, had also been discovered.

Carter began his personal search in 1916 after he found a financial backer, the British Earl of Carnarvon. Unfortunately, World War I interrupted the enterprise and work did not really begin until 1919. Carter seeded Carnarvon's financial backing because the Egyptian government allowed only one archaeological team to work in the valley each year (to prevent rival archaeologists from tearing the necropolis apart), and charged a very expensive fee. By 1922, this annual fee cost Carnarvon over half a million dollars in today's currency. He even considered abandoning the project.

In November 1922, Carter decided to make one last attempt to find the tomb. This time, he employed a crew to dig in the only remaining unexplored spot in the valley—beneath a group of huts used by the laborers who had built the nearby tomb of Ramesses VI. Carter had considered this unexplored area an unlikely location because he had believed that officials of the necropolis would never have allowed structures to be built over the tomb of another pharaoh.

When the first hut was removed, the crew discovered a staircase. Sixteen steps led down to a doorway that contained the seals of a royal necropolis, the jackal god Anubis. Carter was jubilant. He sealed in the staircase and posted guards. Then he sent a cable to Carnarvon, informing the earl of the discovery and telling him that he would await his arrival before exploring further.

When Carnarvon arrived, the staircase was cleared again. The crew removed the door, revealing a rubble-filled passageway. 7.5 m long, ending in another sealed door. The corridor was cleared. What lay beyond?

Diary of Howard Carter
November 26, 1922

This was the day of days, the most wonderful that I have ever lived through. Lord Carnarvon, his daughter, and my assistant stood beside me as I drilled a small hole in the upper left-hand corner of the door.

Darkness and blank space, as far as an iron test-tube could reach, showed that whatever lay beyond was empty. Widening the hole a little, I inserted the candle and peered in. At first I could see nothing, but a hot air escaping from the chamber causing the candle flame to flicker, but presently, as my eyes grew accustomed to the light, details of the room within emerged slowly from the mist, strange animals, statues of gold—everywhere the glint of gold.

For the moment—in any event it must have seemed for the others standing by—I was struck dumb with amazement and when Lord Carnarvon, unable to stand the suspense any longer, inquired anxiously, "Can you see anything?" it was all I could do to get out the words, "Yes, wonderful things...."

Tutankhamen's tomb was one of the few ancient Egyptian tombs to be discovered almost completely undisturbed. The four rooms contained more than 5000 objects, including many beautiful carved and gold-covered items, notably the magnificent gold mask of Tut that covered the head and shoulders of the royal mummy. Other items included luxurious chests, thrones, chariots, swords, trumpets, statues, toys, and jars containing precious oils. Most items are now displayed in the Egyptian Museum in Cairo.

GEMMA L. CAMPBELL

REFLECT AND ANALYZE
1. How did the Egyptians attempt to protect the tombs from grave robbers?
2. Compare the Egyptian pyramids with the ziggurats of Sumer or with the monuments of another civilization. Consider using diagrams, models, and charts in your answer.
3. Today, there is a great deal of controversy surrounding the opening of tombs to the public and the removal of objects for public display. Even the paintings on tomb walls have been damaged by the moisture from the bodies of thousands of visitors. Should the tombs be open to the public? Why or why not? Are we any different from the grave robbers of the past? Provide your answer in a short report.
SOCIAL ORGANIZATION

The pharaoh, as a living god, stood at the pinnacle of the social pyramid in ancient Egypt. The people viewed the pharaoh as the owner of all lands and citizens, the bestower of all public offices, the leader of all armies, and the high priest of all gods. The nobles and military leaders held the highest positions in the bureaucracy or administrative departments of ancient Egypt. Important families controlled the most influential offices and passed these positions along to family members from generation to generation. A bureaucrat might oversee the property and storehouses of a god, serve as a steward to the pharaoh, or supervise engineering and construction works for the government.

The priests and scribes were the educated class of ancient Egypt. Although the pharaoh was high priest of every god, he or she could not be in all areas of the empire at once. Religious functions were therefore delegated to the priests.

Scribes were highly respected members of Egyptian society because of their ability to read and write the Egyptian script called hieroglyphics. Called the “white cliff class” because of their dress, they ranked among the more important officials of the kingdom. They collected taxes, kept records, wrote reports, educated the young, and organized rations for the army. Their role as teachers was one of their most important because education was highly valued. As most military leaders, government administrators, and high-ranking priests came from the ranks of the scribes, anyone hoping to move up the social ladder needed an education.

A wide variety of skilled craftpeople earned a living in ancient Egypt, including weavers, sandal-makers, mat-makers, incense moulders, potters, brick-makers, jewelers, carpenters, stoneasons, silver-smiths, and goldsmiths. Some lived and worked in the cities while others were employed by the palace of a pharaoh or a wealthy noble. These craftpeople produced many of the goods that Egyptian traders carried into foreign territory.

The fellahin or peasant farmers were the common folk. They made up the majority of the population. We know very little about them, except that most were illiterate, and all were attached to the estate of the pharaoh, a temple, or a rich landowner. The pay they received was just enough to live by. If they were fortunate enough to be granted a plot of land to farm, they lost a large portion of any profit through rent and taxes.

REFLECT AND ANALYZE
1. Which social classes served in the bureaucracy of ancient Egypt? Could craftpeople or farmers become bureaucrats? Why or why not?
2. Why were the scribes held in such high regard within Egyptian society? What roles did they have?
3. What was corvee duty? In your opinion, was corvee duty forced labour or a civic duty? Explain.

EVENDAY LIFE

THE FAMILY

Egyptian boys customarily shaved their heads except for one long lock of hair that they braided on the side. This lock of hair was associated with boyhood and was traditionally cut off when a youth came of age. Coming of age, or entering manhood, occurred at about the same time a young Egyptian got married, often when he was 20 years of age or in his late teens. His bride was usually younger.

Marriage partners were selected from within the same social class and often within the same family. It was not uncommon for uncles to marry nieces, or cousins to marry cousins. Marriage between brothers and sisters did occur in ancient Egypt, but was not as common as many people believe. Parents arranged some marriages, and certainly couples needed their parents’ approval, but many Egyptian marriages were based entirely on love.

A private legal contract was drawn up to establish each partner’s rights to possessions. Once the man and woman agreed to this marriage settlement, they were considered married. No religious or civil ceremony took place, as we might expect, but family parties and festivities celebrated the event.

Since the family was so important in ancient Egypt, a new baby gave a couple added prestige within both their family and the community. A male child was most desired because sons had the responsibility of carrying out the funeral ceremonies for parents and providing their spirits with food and drink in the afterlife. If a couple was childless, they appealed to Hathor and Isis, the female fertility and childbirth deities.

THE ROLE OF WOMEN

Women in ancient Egypt did not share equal rights with men. They could not hold office in government unless they belonged to the royal family. They could not choose professions such as carpentry and sculpture, and they probably could not become scribes. Most of the evidence that we have about the role of women in ancient Egypt comes from tomb paintings, which never show women doing heavy physical labour, writing, or creating works of art. However, they played a vital role in domestic life, and some women in royal and noble families rose to positions of great power. Female pharaohs such as Hatshepsut are evidence of this fact.

During the New Kingdom, the status of women improved as they gained property rights. If a daughter received an inheritance from her father, she could keep it after she married and leave it to anyone she wished. A wife was expected to tend to her husband’s comfort, prepare his food, keep his house and clothing in order, and be a good mother to his children. But if the couple divorced, the woman’s property rights were protected. She was entitled to one-third of the couple’s assets at the time of the marriage breakdown. Obtaining a divorce was quite easy. One party in the marriage simply had to repudiate the other.
if a husband was cruel, and his wife divorced him, she kept the children and he was required to help support them.

Although polygamy (the practice of having more than one spouse at a time) was legal in Egypt, it was not very common. When a man did have two or more wives, the first wife received formal recognition as the head of the household.

EDUCATION

Early childhood education was left to parents. They taught children respect for their elders, but left them free to enjoy typical childhood activities such as playing with toys, participating in games and gymnastics, or fighting mock battles with stick weapons. The children of the wealthy also learned archery and horseback riding.

For both boys and girls, formal education was largely vocational. Girls stayed in the home with their mothers, aunts, and sisters, and learned the skills they needed to run a household. Boys were taught the skills for a particular occupation, usually their father’s. Therefore, most became farmers. Children born into a family of tradespeople served an apprenticeship period in the family trade or craft, during which they were taught by their father or another close relative. If parents lacked skills in a craft but wanted their sons to do better, they placed the boys with master craftsmen. Young people who aspired to a profession, such as medicine, were placed with a doctor after they finished their basic schooling.

A formal education was essential to success because the key to advancement was the ability to read and write. Therefore, children of priests and administrators began attending a scribal school at about the age of five. Historians are not certain whether these schools were run by the temples, the state, private tutors, or all three. They also do not know whether female students could attend or not.

A student attended school with pen, ink, and ostraca, smooth fragments of broken pottery or stone used as slates. (Papyrus—strips of papyrus reed pressed together into sheets—was far too expensive to be used in education.) Students sat and listened to their instructors and repeated what they were taught. They took down dictation and spent long periods of time copying texts.

During the Middle Kingdom, the schools used a basic text called the Kowtjet, which means “completion” in ancient Egyptian. This popular text was used for over a thousand years, probably because the language was quite simple and the vertical columns made the writing easier for young people to copy. The Kowtjet presented model letters, useful phrases and expressions, and interesting pieces of advice for future scribes. The visual aid also used an advanced text called the Miscellaneous. It was a collection of short compositions in the form of letters, written on rolls of papyrus. The letters described how the country was administered and what life was like for the members of the upper middle class of Egyptian society.

The scribal school also offered a basic course in simple mathematics, literature, ethics, and history. Foreign languages grew in importance during the New Kingdom.

Graduates from a scribal school either took a position as a master or attended a specialized school, where they learned the particular information and skills that they would need to work in the royal palace, a government department, the army, or a temple.

REFLECT AND ANALYZE

1. What was the curriculum offered in a scribal school? Why did the Egyptians consider these subjects important?

2. In your experience, how is classroom instruction today different from classroom instruction in ancient Egypt?

3. Discuss the role of women in ancient Egyptian society.

URBAN AND RURAL LIVING

CLOTHING AND COSMETICS

Many of us today will find the ancient Egyptian attitudes to personal appearance fascinating. As discoveries of combs, mirrors, and razors testify, personal grooming was important to all classes of Egyptians. People washed at least twice a day because of the hot, dry, and dusty conditions. Many wore dark wigs, sometimes for protection against the sun and sometimes for special occasions. These wigs were often held in place with a perfumed wax. Cosmetics were also widely used. Women wore red lip powder, painted their fingernails, outlined their eyes, and colored their eyebrows with grey, black, or green paint. Men often wore as much makeup as women, and both sexes used perfume.

Clothing ranged from the simple to the elegant. Women of the lower classes wore simple woven tunics. Farmers working in the fields wore a kilt of white cotton or linen, If the weather was extremely warm, they may have worn nothing at all.

Elegant dress was limited mainly to the upper class. Many wealthy Egyptians wore white linen garments, woven from flax, and leather sandals. Women wore long straight dresses with shoulder straps, made of very fine material, and often added colourful shawls and caps. Men wore skirts that were drawn tight in the back and pleated in the front. Some also wore shirts, coats, or caps, and many completed their attire with a coloured, shoulder-length head-dress. Both sexes wore necklaces, rings, and bracelets.

HOMES

The homes of the ancient Egyptians also reflected differences in social class. For the wealthy, the countryside offered an ideal retreat. In the less densely populated rural areas, they built large estates or villas. Each estate consisted of a main house surrounded by magnificent flower and vegetable gardens, and fruit and shade trees. It also included a variety of outbuildings, such as servants’ quarters, kitchens, stables, workshops, and storerooms. The entire compound was surrounded by a mud-brick wall.

Since stone was reserved for the building of temples, the walls of the main house were constructed of mud bricks. The roof was made of wooden beams covered with papyrus and clay. At the heart of the house was a central room, or living room, that people reached through an entrance hall and an antechamber. Bedrooms, dining rooms, and the women’s quarters were organized around this main room. Most villas contained a bathroom and toilet. A staircase led to the roof where the family spent a great deal of time during hot weather.

The interior brick walls were plastered with mud and painted with colourful scenes. Furnishings included wooden stools, chairs, beds, and chests. Wet mats placed on the floors helped cool the inside air. Light shone from candles and from lamps with wicks all set in jars or hollowed-out stones filled with oil.

Towns were smaller than those in the country and were usually occupied by an extended family. Their surrounding walls, which contained a single gate, tended to be higher, demonstrating a desire for security and privacy. While many of the city gardens were small, most still had shade trees and a pool.

Living conditions were quite different for the farmers and common people. Farmers in the countryside lived in humble dwellings of one or two rooms, similar in design to the large villas, but much smaller. Like the wealthier homes, these houses were built of mud bricks and palm trunks, and were surrounded by walls. Similarly, they contained a staircase to the roof where the family sought relief during the hot weather. Roofs on the roof trapped cool breezes blowing from the north, and a spout attached to the house drained off any water.

In the cities, the common people lived in smaller homes that were built much closer together and had no gardens. A door from the street led into a small room that served as the father’s workroom. A second room was divided into a bedroom and a kitchen. Steps led from the kitchen to the roof. Middle-class town homes were also narrow, but sometimes contained a second or third floor.
What did the ancient Egyptians eat? Wheat bread and beer made from barley were the main items on the menu of the common people. Fruit, vegetables, fish, milk, cheese, butter, ducks, and geese added variety. Wealthy Egyptians regularly ate beef, antelope, and gazelle and enjoyed fancy cakes and baked goods, often with a glass or two of grape, date, or palm wine. Food was prepared in clay ovens over charcoal or wood fires.

THE ECONOMY

AGRICULTURE

Agriculture was the most important economic activity in ancient Egypt. In fact, the majority of the population took part in farming. Most farmers worked as laborers on large estates owned by the royal family, the temples, or wealthy landowners, but some were able to rent fields and control production themselves.

As payment for their efforts, laborers received a small portion of the crop, usually wheat or barley. This they used to feed their families. But since ancient Egypt had no monetary system, they also used these small payments of grain to trade or barter for other goods or services.

The agricultural cycle began with the annual flooding of the Nile, which took place in late August and September. The river flooded too much, the water could destroy the dykes and irrigation canals, and delay planting.

When the floodwaters drained, the agricultural year began in earnest. As water was vital, the farm laborers first repaired all damaged dykes and irrigation canals. They then redefined the boundary lines of the fields by replacing any dissimilar field markers. This important task made sure that the tax assessors could correctly calculate what each landowner owed in taxes to the government.

October was the month for ploughing and planting. Hard soil was broken up manually with a hoe, but farmers generally used a wooden plough pulled by a pair of oxen or donkeys to prepare the soil for planting. Seeding often took place at the same time as ploughing. A young man or boy walked along in front of the plough spreading the seed, which was then dug under.

During the growing season, farmers had the backbreaking jobs of moving water from the irrigation canals onto existing fields and developing new irrigation works for land farther away from the river. To build these new canal networks, they dug small ditches that were separated from the main canals by sluices.

One sure sign of the approaching harvest was the appearance of the tax assessor, who arrived to estimate the potential corn yield and calculate the amount of taxes the landowner owed. Soon after that visit, the men went to work in the fields, cutting the grain with their sickles and then carting it away in large baskets for threshing. Family members of farm laborers were allowed to glean or pick up any grain left on the ground when the crop was harvested. Sometimes the laborers would drop part of the yield on purpose for gleaners who came from very needy families.

While grain crops were the most important in ancient Egypt, farmers grew other crops as well. Irrigated gardens produced lettuce, beans, onions, figs, dates, grapes, melons, and cucumbers. Caster seeds and sesame seeds provided oil for cooking and for skin lotions. The papyrus plant was grown to make paper, mats, baskets, footwear, and rope. Part of the date and grape crops were crushed to make wine—a very important industry in ancient Egypt. Many farms raised domestic animals such as cattle, ducks, geese, goats, and pigs for meat, and bred donkeys for beasts of burden.

INDUSTRY

Craftpeople operated small shops in the towns and cities, close to a pharaoh’s palace, a wealthy noble’s estate, or a temple. Taking advantage of resources and materials close at hand, they produced most of the manufactured goods for the home and export markets. Furniture-makers used local woods to make chairs and beds. Weavers used local flax to make linen and other textiles. Potters used local clay to produce bowls, vases, and plates, and brickmakers used mud from the banks of the Nile River to mould their bricks. Some products, such as rope, baskets, mats, and sheets of writing material, were made from plants. Other urban craftpeople included carpenters, stonemasons, silversmiths, goldsmiths, boat-builders, and jewellers, who produced bric-a-brac and pendants for the wealthy.

In rural areas, mining was an important industry. Egypt had rich supplies of minerals such as limestone, sandstone, and granite, which were used in the construction of pyramids and monuments. The Egyptians also mined for copper, gold, tin, and gems such as turquoise and amethysts.

TRADE

Trade played an important role in the Egyptian economy as far back as the Old Kingdom. Merchants working for the pharaoh or rich nobles began crossing the desert by caravan, venturing up and down the Nile, and sailing to lands bordering the Aegean, Mediterranean, and Red seas. Their purpose was to exchange Egyptian goods for those of their neighbours. With them they took barley and wheat, vines from the eastern delta region, papyrus...
Scholars, gold, and other ornaments. In return, they acquired silver, iron, horses, cedar logs, ivory, leopard skins, copper, cattle, and spices. Trading ventures brought the Egyptians into contact with people from Lebanon, Cote, Syria, Palestine, and other parts of Africa and Asia. But trade proved to be more than just an exchange of goods—it allowed for an exchange of ideas and a sharing of cultures. As people from different societies met, they enriched each other's civilizations.

Merchants traveled on the Nile by barge or by boat. The earliest boats were made of papyrus reeds and were moved by poles. Later boats were powered by oars.

Longer journeys became common when the Egyptians invented sailcloth and began to rely on the wind for power. By about 3000 BCE, wooden planks were sewn to build ships.

**Perspectives on the Past**

Although Egypt was one of the largest and most powerful empires in the ancient Middle East, it was not the only civilization in the region. Two of the small but important civilizations that the Egyptians encountered were the Phenicians and the Israelis.

**The Phenicians**

The Phenicians came from the land of Canaan, a territory between ancient Egypt and Syria. Today, Canaan is made up of the countries of Lebanon, Israel, and Jordan. About 3000 BCE, Semitic groups known as the Canaanites migrated to this region from the Arabian Peninsula. The Phenicians settled in the northern part of Canaan. Because they had limited space for farming, the Phenicians turned to the sea to earn a living, and from their coastal cities they sailed throughout the Mediterranean Sea. Voyaging as far east as India, they traded textiles and handicrafts such as metal and glass ornaments, jewelry, vases, and weapons. They also transported Babylonian and Egyptian luxury goods to ports of the Mediterranean world such as Greece. From Greece, these advances spread to Europe and served as a cornerstone of contemporary learning.

One of the most significant Phenician developments was an alphabet of 22 letters, with each letter standing for a single consonant sound. The Greeks added vowel sounds and the Romans made even more changes later, transforming the Phoenician alphabet into the one we use today.

**The Israelis**

The Israelis or Hebrews were the ancestors of the Jewish people. Living in a faraway land between the civilizations of ancient Egypt and Mesopotamia, they absorbed influences from both.

The early history of the Hebrews is told in the holy books known to the Jews as the Torah and to Christians as the Old Testament of the Bible. The Bible tells how Abraham, a tribal leader, led his followers out of the land of Ur in Mesopotamia in obedience to his god Yahweh. Yahweh promised that he would give Abraham's descendants a land of their own in Canaan. Hebrews think that Abraham's migration took place somewhere around 1800 BCE.

Abraham's grandson Jacob, also known as Israel, gave his name to the followers of the god Yahweh. Thereafter, they were called Israelites. Jacob had 12 sons, each of whom became a leader of one of the 12 tribes of Israel. The youngest son, Joseph, led a tribe into Egypt, where they were enslaved until about 1280 BCE.

Moses, another important Israelite leader, led his people out of captivity in Egypt and the Israelites wandered through the desert for 40 years, preparing to occupy the land of Palestine. During this period, Yahweh gave Moses stone tablets on which were carved the Ten Commandments.

After Moses led the Israelites to Canaan, they had to fight a series of battles to establish themselves in their new land. Under the rule of their early kings, the Hebrew nation prospered. Saul became their first ruler in 1055 BCE. King David (1012 BCE–972 BCE), who replaced him, established a capital at Jerusalem, and united and strengthened the Hebrew nation. Solomon (975 BCE–933 BCE) built a beautiful temple in Jerusalem and earned great respect among the people of the Middle East. When Solomon died, his kingdom split into the kingdom of Israel in the north and the kingdom of Judah in the south. The kingdom of Israel lasted for 250 years until it was destroyed by the Assyrians in 722 BCE. In 586 BCE, Nebuchadnezzar destroyed the temple in Jerusalem, enslaving the Hebrews and destroying the kingdom of Judah.

The Hebrews were later freed by the Persians, and when some of them returned to Palestine, they began to rebuild their temple. Although Israel was no longer an independent state, Hebrew religious traditions had enormous influence on other religions such as Christianity and Islam.

**REFLECT AND ANALYZE**

1. Develop a chart of the Egyptian agricultural cycle, identifying the activities associated with each stage.
2. What were the principal industries in ancient Egypt?
3. How can it be said that the entire economy of ancient Egypt was linked to the Nile? Use a sketch diagram or a chart in your answer.

**The Arts**

Some of the most significant information that we have about life in ancient Egypt comes from the arts. Paintings, sculpture, architecture, and translations of writings offer a fascinating picture of daily life and beliefs.

**Writing**

Hieroglyphics, developed by the Egyptians about 3000 BCE, were originally a collection of picture signs, possibly borrowed from the Mesopotamians. Each pictogram was designed to represent an entire word or idea. They were carved on stone monuments and painted on the walls and coffins of tombs. Scribes drew them on papyrus sheets, using red pens and ink made from a mixture of vegetable dyes, water, and gum. Writing in hieroglyphics took considerable time and effort.

The nature of hieroglyphics evolved greatly over the centuries. The more than 700 signs in use during the New Kingdom, the vast majority represented sounds rather than objects. New and simpler versions of writing developed as well. A cursive form of writing called
literature

Ancient Egyptian literature included adventure stories, fairy tales, poems, and love stories. Among the non-religious or secular works were popular collections of wise sayings that offered practical advice on how to succeed in life. One of the oldest books in the world, for example, written about 250 B.C.E., is called Instructions of the Scribe Pahinu. In a, Pahinu tells his son how to succeed as an official in the household of the pharaoh.

The following excerpts give us a sampling of his advice. Do you agree or disagree with his views?

Do not let your heart be pulled up because of your knowledge. Do not be confident because you are a wise man. Take counsel with the ignorant as well as with the wise.

If you, as a leader, have to decide on the conduct of a great many people, seek the most perfect manner of doing so, that your own conduct may be blameless.

Do not repeat slander; you should not hear it, for it is the result of bad temper. Repeat a matter once, not what is heard.

Be active while you live; doing more than is commanded. Activity produces richer, but riches do not last when activity slackens.

painting and sculpture

Many of ancient Egypt's finest paintings and other works of art were created for tombs and temples. Artists covered the walls with bright, imaginative scenes of daily life and guides for the afterlife. The Egyptians included these images to present a perfect world so that the good life would continue forever. Egyptian art followed certain conventions established early in the Old Kingdom that remained unchanged for thousands of years. Representations of people, scenes, and objects in paintings aimed to reflect balance, harmony, and the

ancient Egyptian hieroglyphics, the middle script is written in demotic (the last cursive form of the Egyptian language), and the bottom script is written in upper-case Greek letters.

The French linguist Jean-François Champollion used the stone to decipher hieroglyphics and rediscover the Egyptian language. Born in southwest France in 1790, Champollion was a brilliant linguist and Egyptologist. He mastered a dozen languages, including Coptic, a language used by Egyptians between 300 BCE and 1500 CE.

Patiently, Champollion compared the three sections of the stone. He then compared them to inscriptions from tombs and temples in Egypt. Slowly, he came to the conclusion that hieroglyphics were not just pictures representing whole or part words, but symbols that stood for sounds as well.

When he found the name of Ptolemy in the Greek section of the stone, he realized through his knowledge of Coptic that the Egyptians would have pronounced the name as Ptolomys. He compared this pronunciation to a cartouche (hieroglyphic inscription of a king's name) in the upper section of the stone, and to the inscription on a monument from Egypt.

Thanks to this painstaking work, Champollion discovered the hieroglyphic form of the names Ptolomys and Cleopatra in 1822. Comparing these two names, he concluded that he had found the hieroglyphics for three of the common sounds: p, t, and l. This humble beginning of discovering three sound values led to the discovery of 12.

As more and more cartouches were collected, dating from 300 BCE to 100 CE, Champollion's ability to decipher hieroglyphics increased. He moved farther and farther back in history until he was able to decipher the cartouches of Thutmose and Ramses.

Jean-François Champollion died in 1832 at the age of 42, but his contribution in unlocking some of the mysteries of ancient Egypt was monumental.
ideal. Images of old age, sickness, or imperfection rarely appeared. People were always portrayed in profile with the hips at a three-quarter turn and the shoulders shown at full width. Since the Egyptians believed that these scenes could come to life in the next world, tomb owners had themselves depicted as young and attractive in pleasant settings. Egyptian sculpture tended to depict subjects such as religious festivals, military victories, and important people and gods. These works of art ranged in size from small statues, such as those found in the tomb of Tutankhamen and in temples, to colossal monuments, such as those carved to honour Ramses II. The small sculptures or figurines were created from wood, ivory, alabaster, bronze, gold, and turquoise. A favourite subject was cats, which the Egyptians considered sacred and valued for protecting grain supplies from mice. Large sculptures, such as the large stone sphinxes of the Old Kingdom which represented kings or gods, were made of limestone. Most sculptures seem rather rigid because the figures look straight ahead and are seldom seen involved in any activity. The artists intended to capture the grandeur and ideal character of the subject for eternity—not to portray the person (often the pharaoh) in a life-like way. Thus the sculptures reflected some of the basic values and beliefs of Egyptian society.

**ARCHITECTURE**

Although we most often associate Egyptian architecture with the pyramids, the people in ancient Egypt also built magnificent limestone temples that were used for religious rites and funeral ceremonies. Typically, these temples had three main sections: a small shrine, a great hall, and an open courtyard with a monumental gateway. Ornamentation and design of the large hall often incorporated columns carved to look like palm tree or papyrus reeds.

One of the most magnificent examples of Egyptian temple architecture, and one of the greatest artifacts of the ancient world, is the temple at Karnak, dedicated to the god Amun and situated on the northern edge of Thebes. The pharaohs Seti I and Ramses II built the temple during the New Kingdom. Successive rulers added on to the structure, extending it to over two hectares in size. Large pillared gateways connected the ten additions to the original temple; six additions at the front and (as space ran out) four at the side.

Ramses II enlarged the temple at Karnak to demonstrate his vast wealth. Since the main purpose of the temple was to celebrate religious festivals, Ramses had a sacred lake built beside it to supply holy water.

**Figure 5.19**
The pillars of the temple of Karnak

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**REFLECT AND ANALYZE**

1. How did the Egyptian system of hieroglyphics evolve over the centuries? Why did these changes take place?
2. What characteristics of Egyptian art show that they wanted to depict a perfect world? What was the purpose of this art?
3. Study an example of an Egyptian painting, noting the stance and proportion of the figures, the colours, and the scale. Then create your own illustration for a tomb painting, showing a scene from daily life. Keep in mind some of the basic goals and characteristics of painting in ancient Egypt.

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**THE SCIENCES**

**TECHNOLOGY**

The ancient Egyptians showcased their technological expertise most dramatically in the construction of the pyramids. How did they quarry, transport, cut, hoist, and fit the huge stone blocks they needed to build the pyramids, without wheels or pulleys? How and where did they acquire the knowledge they needed to design and construct these monumental structures so precisely? Historians

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**PERSPECTIVES ON THE PAST**

**Building the Great Pyramids**

How did the ancient Egyptians build the pyramids? The traditional theory suggests that construction took as long as 20 years, involved the labour of thousands, and incorporated four stages. Do you think that this traditional theory offers a believable account of how workers built these monumental structures? Why or why not?

Investigate an alternative theory presented by Erich von Daniken in his 1968 book, *Chariots of the Gods*. Do you find this theory realistic?

During the first stage, or planning stage, the builders selected a site, levelled it, and determined the location of true north. The chosen site was on the west bank of the Nile since religion associated death with the setting sun.

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It was above the flood level of the river, yet close enough to transport the large stone building blocks. The site was also close to the capital so that the pharaoh could keep an eye on progress. During levelling, workers removed sand and gravel down to the bedrock. They then surrounded the area with a low mud or brick wall and constructed a grid of shallow cross-criss-cross trenches. Water was poured in to find its own level, and workers took depth measurements as several potters. Then they drained the water away, levelled the area to the height of the markers, and filled it with rubble to complete the base.

The mining stage involved quarrying the limestone from nearby Giza or from the Turc Quarries across the Nile in the Arabian hills. Harder stone, such as dolerite and granite, came from as far away as Aswan and was more difficult to mine because of its consistency. It seems unlikely that the Egyptians could have cut this stone without tempered (hardened) copper chisels and saws.

During the third stage, the transportation stage, workers had to transport the stones, which weighed an average of 2.3 tonnes each, without the use of wheels or
Figure 5-22. The most difficult aspect of the transportation stage was moving the large stones across land. Hundreds of workers would have been needed. Many men were required to pull a single sledge bearing one of these massive stone blocks. Possibly a man at the front poured water on the ground to lubricate the track. A causeway may have linked the site to the Nile to make it easier for sledges to carry the huge stones to their destination and serve as a route for the pharaoh's funeral procession.

Figure 5-23. As the pyramid rose in height, so too did the supply ramps. It would have been impossible to move the full pyramid during the stage of construction. The gradient of the ramp was maintained at a constant 1:2 ratio as the pyramid grew, so that sledges could still be pulled up the ramp and the blocks put into place. The supply ramp became higher and longer as new levels of stone were added.

Figure 5-24. Ancient Egyptian number symbols.

The ancient Egyptians used a numeral system like ours with ten as the base. Seven different symbols—representing 1, 10, 100, 1 000, 10 000, 100 000, and 1 000 000—were used to form any required number. For example, the first two symbols, in various combinations, could represent all numerals between 1 and 99. For writing large numbers or recording dates, this numeral system became very cumbersome because so many symbols were required.

Although the ancient Egyptians understood geometry and could calculate the area of triangles, trapezoids, rectangles, and circles, their mathematics could be likened more to simple arithmetic. At the time, the Babylonians were ahead of the Egyptians in this science. The use of fractions seems to have presented particular problems.

**TIME**

The ancient Egyptians developed a calendar based on astronomical observation that enabled them to date much of their history. Rather than use astronomical signs, they measured out the year according to the annual flooding of the Nile River. The flooding began around June 20, soon after the star Sirius reappeared on the eastern horizon after months of being out of sight. The calendar itself is a distant ancestor of our own. It contained 365 days, which were divided into 12 months of 30 days each with an extra five days added at the end. These extra days were celebrated as the birthdays of the gods. Each day was divided into 24 hours, 12 for day and 12 for night.

The Egyptian calendar did not allow for smaller units of time such as the 60-minute hour or the 60-second minute. In fact, an Egyptian hour varied in length from season to season. Since a day-time hour was considered the twelfth part of the time from sunrise to sunset, day-time hours were longer than night-time hours in the summer and shorter in the winter.
**Reflect and Analyze**

1. According to traditional theory, what problems did the ancient Egyptians have to overcome to construct the Great Pyramid at Giza?
2. What disadvantages can you see in the ancient Egyptian systems of measuring and recording time?
3. Why can we not describe ancient Egyptian medicine as a “pure science”? What similarities and differences can you see with modern medicine? Explain.

**Looking Back**

In 1278 BCE, the Egyptians signed a peace treaty to end a costly war with the Hittites of Asia Minor. Egypt then entered into a long period of decline. Over time, the Egyptians lost their once mighty empire to invaders. Mycenaean Greeks, known to the Egyptians as “the people from the sea,” swept into the delta in about 1100 BCE. Libyans and Nubians attacked from the deserts. Then, in turn, came the Assyrians, the Babylonians, the Persians, the Greeks, and the Romans. Trade and commerce deteriorated. The flow of gold from Nubia was lost around 1100 BCE, and tribute from conquered lands ceased. As the treasury emptied, the pharaohs and their governments could not stop the empire’s decline, and its glory passed.

Ancient Egypt, however, holds the record as the world’s longest continuous civilization, and its legacy is impressive. When Upper Egypt united with Lower Egypt, the first nation in the world was born, and the concept of central government began.

Modern religions owe much to the ancient Egyptians as they were among the first to believe in a life after death. Modern science owes them a debt of gratitude as well. People in ancient Egypt were the first to develop a yearly calendar of 365 days. They created papyrus, one of the earliest forms of paper. They made careful studies of drugs, diseases, and medicines, and were the first to use geometry. Finally, Egyptian art and culture have fascinated other civilizations for centuries, and that fascination continues today.

**Making Connections**

1. In groups, develop a list of the influences Mesopotamian and Egyptian civilizations have had on our society today. Identify specific examples of these influences around you wherever possible.
2. Create a bulletin-board display comparing Egyptian pyramids and Sumerian ziggurats. Consider purpose, method of construction, and materials used. Include an evaluation of each buildings’ technological and architectural merits and its importance within the civilization.
3. How did religious beliefs shape the cultures of Mesopotamia and Egypt? In a short report, consider the influences of religion on government, law, art, and daily life in each civilization.
4. What practical advances did the Mesopotamians make in writing, mathematics, and architecture? How were these advances similar to achievements in ancient Egypt? How might you explain these similar advances in both civilizations?
5. Compare Hammurabi’s law code with the Ten Commandments of Moses.
6. The civilizations of both Mesopotamia and ancient Egypt included large empires. What methods did these civilizations use to hold these empires together? Which civilization was more successful in maintaining a unified empire? Explain.

**Digging Deeper**

7. Choose one of the following people and investigate further how he helped to unravel the mysteries of ancient Egypt and Mesopotamia.
   - Leonard Woolley
   - Howard Carter
   - Henry Rawlinson
   - Jean-François Champollion
   Write a short news report outlining the significance of this person’s discovery and explain his interest in ancient Egypt or Mesopotamia.

8. Do some further research into the discovery of the tomb of Tutankhamen, Ramses II, the Royal Tombs at Ur, or another major archaeological find in ancient Egypt or Mesopotamia. Assemble a picture collage of some of the most significant artifacts discovered, or develop a portfolio of illustrations and descriptions.
9. On a large sheet of paper, design a plan for a Mesopotamian city. Refer to the plan of Babylon in Figure 2-12 on page 39 as a starting point. Include the following elements:
- river
- canals
- a palace and gardens
- temples
- the city wall and moat
- houses and gardens
- roads and paths
- farms
Write or record on audiotape a guide to your city.

10. Do further research on the Epic of Gilgamesh or the Egyptian Tales of Sinhue (Sinbad the Sailor). What truth might there be in these stories? What role did they serve? Stage short scenes from one of these tales for the class.

11. The people of ancient Egypt and Mesopotamia demonstrated genius in the field of science and technology. Support this statement in a short essay or seminar presentation.

12. Debate: The invention of writing and a system of keeping records is the most significant achievement to come out of ancient Egypt and Mesopotamia.