

Chapter 10

The Pyramids and the Great Sphinx at Giza

Objective

To learn about how Old Kingdom pharaohs prepared for life after death.

Mystery

Why did the pharaohs build pyramids? How did the ancient Egyptians build such monumental structures?

Discussion and Research Projects

1. What did the pharaohs believe would happen to them when they died?
2. Why did the pharaohs believe it was important to preserve their bodies?
3. Where were the pharaohs of the first and second dynasties buried?
4. What did the pyramid built by King Djoser in the third dynasty look like?
5. What were the first pyramids made of?
6. Why are the Giza pyramids so famous?
7. What was placed at the top of the pyramids?
8. What covered the Giza pyramids when they were completed?
9. What is found inside pyramids?
10. How do you think the huge limestone blocks were moved up the Giza pyramids during construction?



11. Many engineering problems had to be overcome when building the Giza pyramids. Find out why some of the early pyramids collapsed under their own weight and how this problem was solved at Giza.
12. What does the Giza Sphinx represent?
13. Why are New Age seekers interested in the Sphinx?

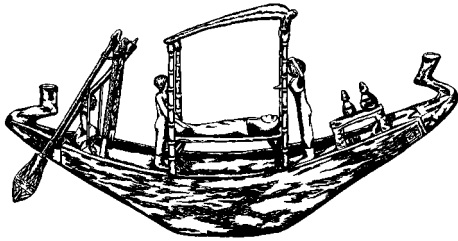
Creative Projects

1. Use **Activity Sheet 25** to learn about the evolution of pyramid styles.
2. Make a model of the Giza plateau. Include the three pyramids, the Sphinx and the ceremonial causeways.
3. Do a drawing of a pyramid under construction.
4. Pretend you are a journalist. Interview the chief architect and builder of the Great Pyramid. Ask him how long it took to build, what difficulties were encountered, and what was learned about the construction of pyramids.

FACT SHEET: The Pyramids and the Sphinx

The King Lives

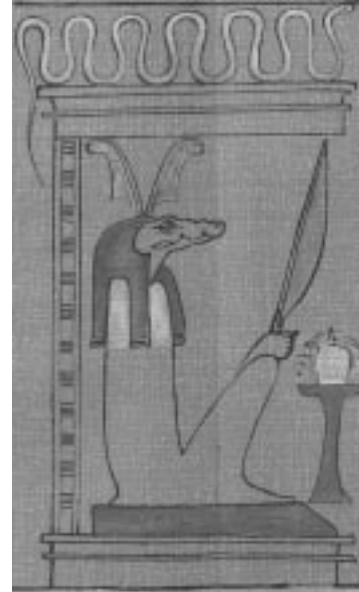
The Egyptians believed that when a king died, he travelled to the underworld, where his deeds on earth were judged. If his heart was pure and light as a feather, he became one with Osiris. As the deceased pharaoh lived on in the afterworld, a new pharaoh received his divine mandate in a coronation ceremony. In this way, the station of the king was passed from one generation to another. The expression “the king is dead, long live the king” encapsulates the principle of kingship: the physical body of the king dies but lives into eternity; the office of the king lives on, being passed from one generation to the next.



Bark carrying a deceased person to the burial grounds on the west side of the Nile

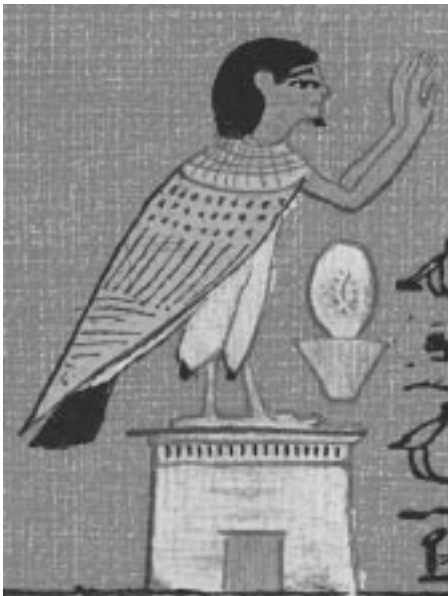
*Drawing: Catherine Fitzpatrick
Photo: Harry Foster (CMC S98 3507)*

In preparation for the journey to the afterworld, the kings of the Old Kingdom built pyramids as tombs to house their bodies. They believed that when they died their bodies and souls would be reunited in the afterworld, and they would thus attain eternal life.



A guardian of the gates in the underworld. The deceased had to correctly recite a magic spell before being allowed to pass through the gates that led to paradise.

Photo: Harry Foster (CMC S98 3546)



Ba bird with a human face standing on a tomb. The ba represented an aspect of the soul, a person's personality.

Photo: Harry Foster (CMC S98 3577)

The First Pyramids

The Pyramid Age began during the Old Kingdom (2575–2134 B.C.), when the first pyramid was built by King Djoser in the third dynasty. Construction of pyramids continued until 1640 B.C. During the first and second dynasties, Egyptian kings were buried in mastabas. The deceased were laid to rest in an underground chamber at the bottom of a shaft, and a flat-topped building was placed over them.

King Djoser established a powerful centralized administration based in the city of Memphis, not far from the present-day city of Cairo. One of his officials, the famous architect and scholar Imhotep, designed the Step Pyramid, a pharaoh's tomb at Saqqara that looks like a stairway to heaven. This tomb is an elaboration of the original mastabas, with its central burial chamber.



The Step Pyramid was built by the pharaoh Snefru. It looks like a stairway to heaven.
CMC ECD98-025 #15



The Bent Pyramid was built by the pharaoh Snefru. During construction, the engineers realized that the top half had to be bent inward to prevent the whole structure from collapsing.
CMC S97 10630

In the fourth dynasty, the pharaoh Snefru built the first geometrically true pyramids at Dahshur, south of Saqqara. He started by adding a smooth casing over the steps of two pyramids built by his predecessors. He then built two pyramids of his own.

The pyramids built during the fifth dynasty had a core of rubble and mud bricks, and a limestone facing. When the limestone was removed, the core collapsed.

Why the pharaohs chose a pyramid for their tombs is still a mystery. Perhaps the shape originated from the creation story, in which the world is conceived as a flat plane with four corners representing the north, east, south and west. When the sky rose up, forming an invisible central axis like a pole or tree in the centre, the world took on the shape of a pyramid. The pyramid may also represent the primeval mound that rose out of chaos and provided a resting place for the sun god, Re. Its peak may symbolize the point where sacred energy from the sky world enters the human world. Another theory suggests that when Re became more important in the Egyptian religion, the pyramid (like the obelisk) represented a ray of the sun.



The site of the Giza pyramids is one of the seven classic wonders of the ancient world, the only one that has survived the passage of time.
CMC S97 10296

Giza Pyramids

The most famous pyramids are found at Giza. They were built by three pharaohs — Cheops (or Khufu *), Chephren (Khafre*) and Mycerinus (Menkaure*) — during the second half of the third millennium B.C. This site is one of the seven classic wonders of the ancient world, the only one that has survived the passage of time. The other six are the Mausoleum at Halicarnassus (in Bodrum, Turkey), the statue of Zeus at Olympia (Greece), the Colossus of Rhodes, the Temple of Artemis at Ephesus (Turkey), the Hanging Gardens of Babylon, and the Pharos of Alexandria.

* The pharaoh's Greek name is followed by his Egyptian name in brackets.



The Great Pyramid at Giza built by the pharaoh Cheops. It was once encased in polished white limestone, so that when the sun hit it, it appeared to be made of gold.

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The corridor that leads to the burial chamber in the Bent Pyramid

CMC ECD98-025 #55

The Great Pyramid of Cheops, the largest of the three at Giza, is estimated to comprise 2.5 million limestone blocks with an average weight estimated at 2.5 tonnes (2.75 tons). The king's burial chamber is located in the middle of the pyramid, high above the ground, and a series of relieving chambers were built above it to prevent it from collapsing. The entire structure was encased in a fine white polished limestone brought from the hills at Tura, on the opposite side of the Nile. This highly prized material has been removed and used to decorate mosques in Cairo.

When completed, the Great Pyramid stood 146.6 metres (481 feet) tall, and its base was 230.3 metres (756 feet) square. The capstones (pyramidions) of all the pyramids were made of solid polished granite. For conservation reasons, they have been removed to the Egyptian Museum in Cairo, where they are on display.

The Great Pyramid is open to the public, but it is sometimes closed for conservation reasons. After climbing a number of steps, one enters through a narrow passage on the north side. This passage leads to a sloping corridor with a low ceiling where one is obliged to bend over while climbing up a ramp. The ramp leads to a passage with a high ceiling called the Grand Gallery, from where stairs lead to the king's burial chamber. Good walking shoes and light clothes are advised for anyone entering the pyramid. The climb is strenuous and the narrow passages tend to trap the heat.

Pyramid Construction

Pyramids were constructed by work gangs over a period of many years. The Pyramid Age spans over a thousand years, starting in the third dynasty and ending in the Second Intermediate Period. The Greek historian Herodotus was told that it took 100,000 men 20 years to build the Great Pyramid at Giza. Scholars today, however, think it may have been built by only 20,000 men over 20 years.



Ramps were used to haul stone blocks on wooden sleds up the sides of the pyramids

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A pyramid's large square base creates a very stable structure. A number of astronomical observations were used to precisely align its corners with the four cardinal points. Approximately eighty percent of the building materials are found in the lower half. This means that relatively few stone blocks were hauled to the upper levels. Since pyramids are solid, no walls or pillars were required to support the structure. Despite its simple design, a pyramid is an incredible engineering feat. Several theories attempt to explain how pyramids were constructed, but for now, the mystery has yet to be solved.



Water was sprinkled under the sleds to lubricate the ramps, making it easier to move the heavy stone blocks. Re-enactment scene from the film Mysteries of Egypt.

CMC ECD98-020 #6

One theory suggests that causeways were used to haul the stone blocks on wooden sleds up the side of the pyramids. The ramps were lubricated with water to reduce friction when hauling the blocks. As few as 10 men were needed to drag a stone block up a ramp. There may have been several ramps on each side of the pyramid at different levels, and a ramp may have been coiled around the pyramid as it grew in height. Once a stone block reached its desired level, wooden rockers may have been used to manoeuvre it into position.

Another theory suggests that a wooden crane with a counterweight on one end may have been used to lift the blocks from one level to the next. This theory has been disputed, since the Egyptians did not have access to trees strong enough for this type of work. The enormous weight of the stone blocks would undoubtedly break a wooden crane before the blocks could be lifted.

Another possibility involves the use of pulleys to hoist the blocks up the ramps and fulcrums to manipulate the blocks into place. Pulleys were used on ships at the time.

The pyramids were probably not built by slaves because slave labour was not widely used in Egypt at the time. Peasant farmers, however, were required to spend a number of weeks working on construction projects. Since the fields were under water during the summer, wages earned in building the gigantic pyramids supplemented the family's income.

Pyramids did not stand alone; they were part of a funerary complex. The complex included a landing stage where boats docked, a mortuary temple, a processional causeway linking the mortuary temple to the pyramid, an open court, solar barks (buried beside the pyramid), and mastabas and smaller pyramids where the family of the king and nobles were buried.



Bas-relief of Re-Horakhty
CMC ECD98-007 #63

The Giza Sphinx

The Great Sphinx at Giza, near Cairo, is probably the most famous sculpture in the world. With a lion's body and a human head, it represents Re-Horakhty, a form of the powerful sun god, and is the incarnation of royal power and the protector of the temple doors.

The Sphinx is the oldest and longest stone sculpture from the Old Kingdom. During the eighteenth dynasty, it was called Horus of the Horizon and Horus of the Necropolis, the sun god that stands above the horizon. In later times, many sphinx images were carved in smaller sizes or in cameos with the faces of the reigning monarchs. The face of the Great Sphinx is believed to be that of Chephren, the fourth-dynasty pharaoh who built the second-largest pyramid in the Giza triad. In the image of the sphinx, the pharaoh was seen as a powerful god.

Carved out of a natural limestone outcrop, the Sphinx is 19.8 metres (65 feet) high and 73.2 metres (240 feet) long. It is located a short distance from the Great Pyramid. Between the enormous paws is a stele that records a dream Thutmose IV had when he was a prince. He dreamt that he stopped to rest in the shadow of the Sphinx during a hunting expedition in the desert. While asleep, the Sphinx spoke to him, saying that he would become king if he cleared away the sand that all but buried the Sphinx. When he became king, Thutmose IV cleared the sand and erected a stele that tells the story of his dream. After the work was completed, a chapel was built next to the Sphinx to venerate this sun god.

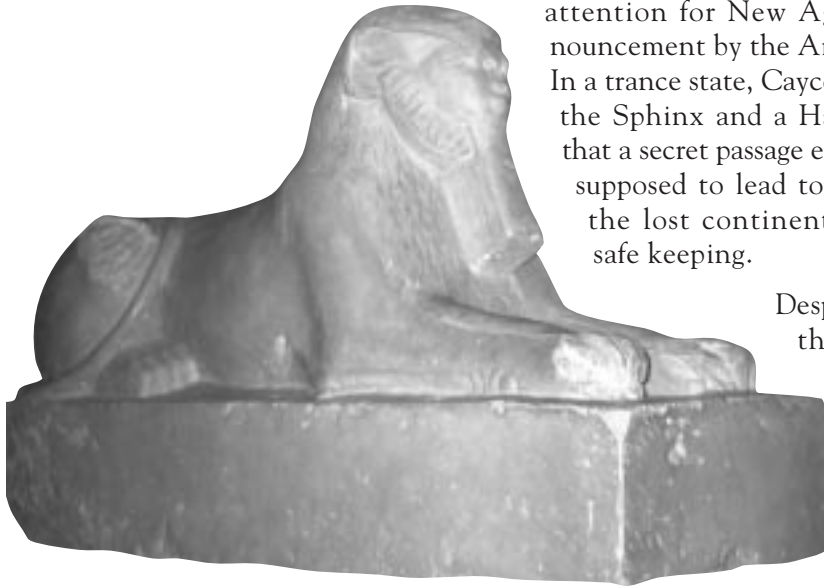


The Great Sphinx at Giza
Photo: Adham Mostafa (CMC S97 10252)

Down through the ages, attempts have been made to protect the Sphinx from the effects of wind and sand erosion. A restoration project is currently under way to replace the stone casing that once protected this monument.

Sphinxes sometimes had a female face. For example, a sphinx of Queen Hatshepsut was sculpted with her face and a pharaoh's beard. Queen Tiy, wife of Amenhotep III, was the first to have a truly female sphinx sculpted in her likeness. Besides a female face without a beard, her sphinx had breasts and wings.

The Sphinx differs from other deities in that it has an animal body and a human head, whereas most other deities have human bodies and animal heads. One explanation for this anomaly is that the Sphinx is the earthly representation of the constellation Leo, which has a lion's body. Images of the sphinx are found in various sizes and shapes, as the collection at the Egyptian Museum in Cairo and the temples throughout Egypt attest.



The Giza Pyramids and Sphinx have been the focus of attention for New Age seekers, following a pronouncement by the American psychic Edgar Cayce. In a trance state, Cayce spoke of vaults at the base of the Sphinx and a Hall of Records. He suggested that a secret passage exists under the Sphinx. This is supposed to lead to a tomb where the annals of the lost continent of Atlantis are hidden for safe keeping.

Despite the intrigue surrounding this psychic reading, modern archaeologists have not yet found evidence of a secret passage under the Sphinx. This story, however, continues to stir the imagination and contribute to the mystique of ancient Egypt.

Sphinx bearing the features of Queen Hatshepsut. She ruled as a pharaoh for 20 years.

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