

During Egypt's Old Kingdom the pharaohs established a stable central government in the fertile Nile Valley. Perhaps the greatest testaments to their power were the pyramids and other tombs built to shelter them in the afterlife.

Kings of the Dead

Ancient Egyptians believed that when the pharaoh died, he became Osiris, king of the dead. The new pharaoh became Horus, god of the heavens and protector of the sun god. This cycle was symbolized by the rising and setting of the sun. Some part of a dead pharaoh's spirit, called his *ka*, was believed to remain with his body. And it was thought that if the corpse did not have proper care, the former pharaoh would not be able to carry out his new duties as king of the dead. If this happened, the cycle would be broken and disaster would befall Egypt. To prevent such a catastrophe, each dead pharaoh was mummified, which preserved his body. Everything the king would need in his afterlife was provided in his grave—vessels made of clay, stone, and gold, furniture, food, even doll-like representations of servants, known as *ushabti*. His body would continue to receive food offerings long after his death.

Tombs Fit for Kings

To shelter and safeguard the part of a pharaoh's soul that remained with his corpse, Egyptians built massive tombs—but not always pyramids. Before the pyramids, tombs were carved into bedrock and topped by flat-roofed structures called mastabas. Mounds of dirt, in turn, sometimes topped the structures. The pyramid shape of later tombs could have come from these mounds. More likely, Egyptian pyramids were modeled on a sacred, pointed stone called the *benben*. The benben symbolized the rays of the sun; ancient texts claimed that pharaohs reached the heavens via sunbeams.

Who Built the Pyramids?

Contrary to some popular depictions, the pyramid builders were not slaves or foreigners. Excavated skeletons show that they were Egyptians who lived in villages developed and overseen by the pharaoh's supervisors. The builders' villages boasted bakers, butchers, brewers, granaries, houses, cemeteries, and probably even some sorts of health-care facilities—there is evidence of laborers surviving crushed or amputated limbs. Bakeries excavated near the Great Pyramids could have produced thousands of loaves of bread every week. Some of the builders were permanent employees of the pharaoh. Others were conscripted for a limited time from local villages. Some may have been women: Although no depictions of women builders have been found, some female skeletons show wear that suggests they labored with heavy stone for long periods of time. Graffiti indicates that at least some of these workers took pride in their work, calling their teams "Friends of Khufu," "Drunkards of Menkaure," and so on—names indicating allegiances to pharaohs. An estimated 20,000 to 30,000 workers built the Pyramids at Giza over 80 years. Much of the work probably happened while the River Nile was flooded. Huge limestone blocks could be floated from quarries right to the base of the Pyramids. The stones would likely then be polished by hand and pushed up ramps to their intended positions. It took more than manual labor, though. Architects achieved an accurate pyramid shape by running ropes from the outer corners up to the planned summit, to make sure the stones were positioned correctly. And priests-astronomers helped choose the pyramids' sites and orientations, so that they would be on the appropriate axis in relation to sacred constellations. From stone pusher to priest, every worker would likely have recognized his or her role in continuing the life-and-death cycle of the pharaohs, and thereby in perpetuating the glory of Egypt.

STEPPING TOWARD A TRUE PYRAMID

Intended to hold his mummified body, Pharaoh Djoser's Step Pyramid at Saqqara began as a traditional, flat-roofed mastaba. But by the end of his 19-year reign, in 2611 B.C., it had risen to six stepped layers and stood 204 feet (62 meters) high. It was the largest building of its time. Extensive use of stone—here and there carved to resemble wood, reeds, or other softer materials—made the tomb more durable than its mud-brick forebears. Such pioneering techniques led many ancient historians to credit the chief architect, Imhotep, with inventing stone architecture. The Step Pyramid complex was enclosed by a 30-foot (10-meter) wall and included courtyards, temples, and chapels covering nearly 40 acres (16 hectares)—the size of a large town in the third millennium B.C. As in earlier mastaba tombs, the Step Pyramid's burial chambers are underground, hidden in a maze of tunnels, probably to discourage grave robbers. The tomb was nevertheless plundered, and all that remains of Djoser, the third king of Egypt's 3rd dynasty, is his mummified left foot.

FIRST PYRAMID OF A PROLIFIC BUILDER

Builder of several pyramids, Pharaoh Snefru, secured access to monument-building stone via military victories outside Egypt. Likely influenced by the Step Pyramid of Djoser, Snefru, the first king of the 4th dynasty began a seven-level stepped pyramid some 35 miles (56 kilometers) south of Saqqara. By the time his workers had reached the fourth or fifth level, Snefru upped the ante to eight steps. The first Egyptian pyramid with an aboveground burial chamber (just above the first step level), the Maidum tomb may represent an effort to raise the chamber closer to the sun god. Another innovation is the archlike design of the burial chamber's walls. The pyramid was temporarily abandoned 15 years into Snefru's reign—probably when he moved his court north from Memphis to Dahshur. Before Snefru's death the three lowest steps were filled in to form the smooth edges of a classic pyramid. Today only the three highest steps are visible above the shifting sands, fallen debris, and sloping base.

A FLAWED EFFORT

This first Egyptian attempt at a smooth-sided pyramid was likely designed to have very steep sides. But a lack of stability probably influenced the architects to aim for a new angle halfway through construction. Built after he abruptly shifted his court north to Dahshur, this second pyramid by Snefru had an unprecedented two burial chambers, each with a separate entrance. Perhaps because of the awkward angles in the Bent Pyramid, the pharaoh commissioned a third pyramid nearby and sent workers back to Maidum to finish his first pyramid.

THIRD TIME'S THE CHARM

Soon after the bend in the Bent Pyramid began to take shape, Snefru ordered another pyramid to be built nearby, the Red, or North, Pyramid. It would be Snefru's third attempt at a classic, smooth-sided pyramid, and it was a charm—an elegant precursor to the Great Pyramids at Giza. The Red Pyramid boasted a single burial chamber that was accessed through two smaller chambers. Snefru may have been buried here, and it seems likely that his son, Pharaoh Khufu, hurriedly finished construction after his father's death. It is also possible that Snefru was buried in Mastaba 17, a tomb near the Maidum Pyramid. There archaeologists discovered a red granite sarcophagus, which still contained human remains. The sarcophagus was shipped to the British Museum in 1910, but before it could be studied more closely, the remains were lost.

WONDER OF THE WORLD

Khufu, son of Snefru and second ruler of the 4th dynasty moved the royal necropolis to Giza, north of modern-day Cairo. According to ancient Greek historian Herodotus, Khufu (aka Cheops) enslaved his people to build his pyramid. But archaeologists have since disproved his account (see "Who Built the Pyramids?"). On the Giza Plateau, Khufu's builders oriented his pyramid almost perfectly north. The largest pyramid ever built, it incorporates about 2.3 million stone blocks, weighing an average of 2.5 to 15 tons each. It is estimated that the workers would have had to set a block every two and a half minutes. The pyramid has three burial chambers. The first is underground, carved into bedrock. The second, aboveground chamber was called the queen's chamber by early explorers. We now know it was never intended to house one of Khufu's wives but perhaps a sacred statue of the king himself. The third is the king's chamber, which held a red granite sarcophagus placed almost exactly at the center of the pyramid. The king's chamber is accessed via the 26-foot-high (8-meter-high) Grand Gallery, which was sealed off from thieves by sliding granite blocking systems. The Great Pyramid was the centerpiece of an elaborate complex, which included several small pyramids, five boat pits, a mortuary temple, a causeway, a valley temple, and many flat-roofed tombs for officials and some members of the royal family.

A MORE COMPLEX COMPLEX

Though Khafre's pyramid is shorter than his father Khufu's nearby Great Pyramid, Khafre made up for it by building at a higher elevation and surrounding his pyramid with a more elaborate complex. Within the burial chamber, explorers discovered a small pit cut in the floor—perhaps designed to hold the first canopic chest in a pyramid. Canopic chests held jars carved in the shapes of protective spirits. These jars, in turn, held the preserved liver, lungs, stomach, and intestines of the deceased. The brain would have been discarded, and the heart left in the body. Outside the pyramid all the typical elements of a pharaonic mortuary temple are seen in one place for the first time: entrance hall, colonnaded courtyard, niches for royal statuary, storage chambers, and interior sanctuary. Later pyramids would be significantly smaller, with greater emphasis on these mortuary temples. Khafre's necropolis also boasted an unprecedented profusion of statues, among them the Sphinx. Carved from bedrock in front of Khafre's pyramid, the Sphinx depicts the pharaoh as a human-headed lion, wearing the headdress of the pharaohs. The great statue is the embodiment of Khafre, the third ruler of the 4th dynasty, as the god Horus.

CUT SHORT

Perhaps there wasn't enough room left at the Giza Plateau. Maybe the cost of building was too high. For whatever reason, this last of the three Great Pyramids was considerably smaller. But following the trend begun at his predecessor Khafre's complex, Menkaure's mortuary temple was much more elaborate than the one at Khufu's pyramid. Sixth ruler of the 4th dynasty, Menkaure, built himself a pyramid one-tenth the size of Khafre's. And unlike the other Great Pyramids, whose walls were made of limestone, Menkaure's pyramid was sheathed in granite on the bottom levels and in the burial chamber—a costlier, more difficult stone to work with. Menkaure died unexpectedly, and work on his pyramid complex was abandoned. Menkaure's heir, Shepseskaf, likely later completed the complex using mud brick.

LONG REIGN, SHORT TOMB

After Pharaoh Menkaure, pyramids were built—often shoddily—on a much smaller scale and often of inferior materials. And the focus of pyramid building moved from Giza to Saqqara, site of the first Egyptian pyramid, and Abusir. This trend continued under the last of the great ancient Egyptian pyramid builders. At six years old, Pepi II became the second ruler of the 6th dynasty. By the time of his ascension to the throne, the Old Kingdom, pharaonic power, and tax revenues were on the wane. And by the end of his 94- or 64-year reign (scholars differ on the number), the kingdom was plagued by foreign and domestic conflicts as well as by famine and unrest caused by drought. Pepi II's long reign is juxtaposed by his short pyramid, which was probably finished in the 30th year of his reign—perhaps 60 years before he died. Inside the pyramid, Pepi II's burial chamber protects a black granite sarcophagus under a ceiling sparkling with painted stars. Pyramid Texts—a late Old Kingdom development—are carved into the walls. As incantations to assure the ascension of a pharaoh's soul, these texts would have been one more effort to perpetuate the glory of Egypt.