

## **THE PYRAMIDS**

Pyramid (architecture), ceremonial structures used as tombs or temples that were built by the people of certain ancient civilization, notably the ancient Egyptians, the Aztecs, and the Maya, and certain other ancient peoples of the northern Andean region of South America. The Pyramids of Egypt are of an exact pyramidal form, having four triangular sides that meet at a point at the summit. Pyramids in Central and South America by contrast are flat-topped, and usually have steps leading to the summit.

The Egyptian pyramids were built as royal tombs, and were designed to hold the body of the pharaoh. Those in Central and South America were temples on the summit of which religious rituals were performed, although they sometimes also served as the tombs of important rulers.

### Pyramids in Egypt

In Egypt, the first pyramids were built in about 2700 bc. They probably developed from the mastaba, a low, rectangular tomb with a flat roof, originally built in mudbrick and later in stone. These gradually increased in size and complexity until they looked like a stepped pyramid—that is, a pyramid with sides that rose in giant steps. The most famous example of a step pyramid is the pyramid of Djoser at Saqqara, which was built in about 2630 bc. It was six steps on each side, each step 60 m (200 ft) high. Over time, the step pyramid developed into the true pyramid with smooth sides.

The largest and most famous pyramids of ancient Egypt are those that held the bodies of the pharaohs Khufu, Khafre, and Menkaure at Giza, near modern Cairo. The Great Pyramid of Khufu has a volume of some 2.6 million cu m (91.8 million cu ft), and it is believed that 2.5 million blocks of stone, each weighing an average of 2.5 tonnes, were used to build it. Each side of the pyramid is 230m (750 ft) long, and it is 146 m (480 ft) high.

## The Pyramid Complex

The pyramids of ancient Egypt were usually planned as part of a group of different buildings known as a pyramid complex or mortuary complex. A typical complex consisted of the main pyramid itself; smaller pyramids, often built for the pharaoh; a mortuary temple; a causeway leading to the temple where the cult of the pharaoh was honoured; mastaba tombs for relatives of the pharaoh and important officials; funerary pits for lesser officials; and an enclosure wall. The best example of a pyramid complex is that at Giza where boat pits also formed part of the complex.

### Building a Pyramide

The pyramids were built by farm labourers, who made up 90 per cent of the population of ancient Egypt. Working on the pyramids probably under the supervision of skilled workers, was a kind of tax that everyone had to pay. The work took place during the three or four months of the year when the Nile was in flood, when fields were underwater and no farming could be done. The way that the pyramids were built is not known for certain. After a site had been chosen, always on the west bank of the Nile (for spiritual reasons), the ground was carefully surveyed. The orientation of the pyramid—the precise angle that it was to stand at—would be worked out by astronomers. Building could then begin. The stone blocks were set in place in such a way as to create terraces so that workmen could stand on the pyramid as it was being built. The passageways and chambers inside the pyramid were constructed as building progressed. The terraces on the outside were later filled in and the pyramid was covered with a smooth layer of limestone. Much of the stone used to build pyramids from local quarries and transported on barges on the Nile. Only the fine limestone, used for making up the outer casing of the pyramids, and the granite that was used for specific chambers, were brought from further away.

The first stone blocks were probably set in place with simple cranes and levers. As construction progressed and the pyramid grew taller, ramps were built so that blocks of stone could be hauled up with ropes. When the pyramid shape was completed the tip of the pyramid was covered in a dark-coloured stone, and

the smooth outer casing of contrasting white limestone was added , working from the top of the bottom so that the ramp and scaffolding were gradually cleared . The limestone was polished to make it shine brightly in the sun and reflect moonlight .

#### Inside a Pyramide

The interior of Egyptian pyramids consisted of passageways leading to rooms built either underground or deep inside the pyramid , where the pharaoh's body , with rich gifts for the afterlife , was laid to rest . The passageways were designed to be confusing , and some led to dead ends . This was to prevent grave-robbers who managed to break into the pyramid from finding their way to the burial chambers . The entrance to the pyramid was also camouflaged .

The entrance to the pyramide was generally in the north side and the basic plan consisted of a descending passageway leading down to an underground burial chamber . The Great Pyramid of Giza is different ; it has three burial chambers , two above ground within the body of the pyramid , and one below ground . A descending passageway leads into a further passage that in turn leads to a room known as the Queen's Chamber , that was probably intended to house a statue of the pharaoh . An ascending passageway leads into a chamber known as the Grand Gallery . A high step at the top of the gallery forms a passageway leading to the principal burial chamber , a large room built entirely of granite that today contains only a massive granite sarcophagus.

#### The Funeral Rite

After embalming and mummification , the body of the pharaoh was placed in a sarcophagus and carried to the pyramid on a sledge or ceremonial boat in ritual procession led by priests and followed by mourners . Once inside the pyramid , priests placed the sarcophagus in the burial chamber and also saw that the pharaoh was provided with all that he might need in the afterlife : this might take the form of vessels containing food and wine , and gold or other precious objects . The walls of the burial chamber were sometimes painted with scenes of daily life , or with spells that would ensure the safety of pharaoh's soul.

Workmen then sealed the chamber and as they left the pyramid they sealed the entrance hiding it completely by filling it with the same limestone slabs that covered the rest of the pyramid .

The Egyptian pyramids were designed to keep the mummified body of the pharaoh for ever . However , tomb-robbers often found their way into the burial chamber , wher they stole the treasures intended for the pharaoh's afterlife and sometimes disturbed the body . Because of this problem the ancient Egyptians gradually stopped building pyramids and from about 1570 bc , started burying their dead in secret underground tombs such as those in the Valley of the Kings .