

How and why was the pyramid of giza built



**ASSIGN
BUSTER**

There is a great mystery as to how the Pyramid of Giza was built with precise measurements and details before the end of Pharaoh Khufu's reign. The Great Pyramid of Giza is located 10 miles west of Cairo on the northern edge of the Giza Highland. It was built in 2560 BCE making it the oldest of the three pyramids. It stands at 454 feet (138 meters) high which is slightly larger than Lighthouse of Alexandria also in Egypt. Its base is estimated to about 90, 000, 000 cubic feet which equals to 13 acres. The slant from the base to the tip is at the angle of 51°. The pyramid contains over 2.

3 million limestone blocks, each stone can weigh 2.5 ton on average. Each limestone block is placed together with no more than a fiftieth of an inch apart. How the ancient Egyptian was able to construct this pyramid is outstanding even with modern engineering and scientific methods, people today would not be able to build this pyramid. There have been reports that the Japanese have attempted the construction twice, a two different ways of constructing an 18 meters scale model of the pyramid in the late 70's early 80's using the same basic tools as the Egyptians. Although they failed and had to use the technology in the 1970/80, they used jackhammers, bulldozers, trucks, and a helicopter. Not even that worked.

BibliographyWebsites1. Bible History. "How Was the Great Pyramid of Giza Built." Bible History Online. Web. July-Aug 2011.

http://www.bible-history.com/resource/ff_giza.htm2." Construction of the Great Pyramid of Giza in Egypt - World Mysteries - Mystic Places."

WorldMysteries.com. Web.

<https://assignbuster.com/how-and-why-was-the-pyramid-of-giza-built/>

July-Aug 2011. http://www.world-mysteries.com/mpl_2_1.htm. 3. “Egyptian Pyramid Construction Techniques.” Wikipedia, the Free Encyclopedia.

Web. July-Aug 2011. http://en.wikipedia.org/wiki/Egyptian_pyramid_construction_techniques.

4.??? Great Pyramid of Giza.” Wikipedia, the Free Encyclopedia. Web.

July-Aug 2011. http://en.wikipedia.org/wiki/Great_Pyramid_of_Giza. 5. Great Pyramid Mystery to Be Solved by Hidden Room” National Geographic. 28 Oct.

2010. Web. 22 Aug. 2011. <http://news.nationalgeographic.com/news/2008/11/081114-pyramid-room.html>.

6. Great Pyramid of Giza Research Association. Web. July-Aug. 2011.

<http://www.gizapyramid.com/overview.htm>. 7.??? How Long Did It Take to Build the Great Pyramid in Giza ” Self Help Articles for Self Improvement.

Web. July-Aug 2011. <http://www.selfhelparticles.net/build-great-pyramid-giza>.

8. “The Giza Plateau.” Science and Spirituality. Web. 07 Sept.

2011. http://www.soulsofdistortion.nl/SODA_chapter8.html. 9.??? National Geographic: Egypt Pyramids–Facts, Photos, Diagrams.” National Geographic.

<https://assignbuster.com/how-and-why-was-the-pyramid-of-giza-built/>

Web. July-Aug. 2011. <http://www.nationalgeographic.com/pyramids/pyramids.htm>.

10. “National Geographic: Egypt Pyramids–Facts, Photos, Diagrams.” National Geographic. Web. July-Aug. 2011.

<http://www.nationalgeographic.com/pyramids/pyramids.html#who> 11. “Where Was Khufu Buried.” Web log post.

Blogspot. Web. July-Aug. 2011. <http://famouspharaohs.blogspot.com/2010/10/where-was-khufu-buried>.

html. Published Text12. Agyptens Rainer Stadelmann gewidmet, pp. 53??” 62. Edited by Heike Guksch and Daniel Polz. Mainz: Philipp von Zabern, 1998 http://www.gizapyramids.org/pdf%20library/hawass_fs_stadelmann.pdf13. Archaeology May-June 2007. Magazine. 22 Aug.

2011. <http://www.archaeology.org/0705/etc/pyramid.html> 14. Bell, Art. “INSIDE THE GREAT PYRAMID OF GIZA.” AFTER DARK Mar.

1995. Europa. com. Web. 7 Sept. 2011. <http://www.europa.com/~edge/giza.html>.

15. Hawass, Zahi. ??? Pyramid Construction. New Evidence Discovered at Giza.??? In Stationen. Beitrage zur Kulturgeschichte 16. Petrie, William Matthew Flinders. “Chap.

<https://assignbuster.com/how-and-why-was-the-pyramid-of-giza-built/>

19. Mechanical Methods of the Pyramid Builders. ??? The Pyramids and Temples of Gizeh, by W. M. Flinders Petrie,...

London: Field and Tuer, 1883. 173-77. Print. 17. Petrie, William Matthew Flinders. “ Chap. 21. Theories compared with facts.

??? The Pyramids and Temples of Gizeh, by W. M. Flinders Petrie,... London: Field and Tuer, 1883. 182-85.

Print. 18. Petrie, William Matthew Flinders. “ Chap.

22. History of the Great Pyramid, and its Design.. ??? The Pyramids and Temples of Gizeh, by W. M. Flinders Petrie,.

.. London: Field and Tuer, 1883. 208-22. Print. 19. Silverman, David P. Ancient Egypt.

New York: Oxford UP, 2003. 174-77. Print. Videos20. The Bob??™s Room. Dir. Jean-Pierre Houdin. Documentary[http://www.](http://www.3ds.com/company/passion-for-innovation/the-projects/khufu-reborn/clues/)

3ds. com/company/passion-for-innovation/the-projects/khufu-reborn/clues/

21. The Grand Gallery Counterweight. Dir. Jean-Pierre Houdin.

Documentary[http://www. 3ds. com/company/passion-for-innovation/the-](http://www.3ds.com/company/passion-for-innovation/the-projects/khufu-reborn/clues/)

projects/khufu-reborn/clues/ There are many theories behind the construction but there is no definite information proving any one of those theories completely correct due to the lack of evidence.

The reason behind the absence of evidence is that the Egyptians recycled most of the materials and tools used, although a ramp , a secret room and a spiral structure has been discovered with the use of excavating and thermal

<https://assignbuster.com/how-and-why-was-the-pyramid-of-giza-built/>

imaging. One method of construction has been revealed, although it is not certain what the use is. A series of holes have been found around the base of the pyramid about 40cm in diameter, they were spaced 5 meters apart and 9.5 meters from the base. There are several theories of the purpose of the holes. B. GRDSELOFF believes it was used as sockets for the purification tent.

Another theory involves G. GOYON, V. MARAGIOGLIO, and C. RINALDI who believes it was used as reference points for the ground layout. M.

LEHNER has the same beliefs as G. G, V. M, and C. R but adds it was used to layout the square base. / .

Although R. STADELMENN believes it is a reference found in private tombs to the positions of trees. French architect Jean-Pierre Houdin theorizes that the pyramid was built from the inside out and believes other Egyptologists have been approaching this subject wrongly Houdin stated ??? The idea that the pyramids were built from the outside was just wrong.

How can you resolve a problem when the first element you introduce in your thinking is wrong???. The proof of Houdin's inside out theory lies on the northeastern edge, two thirds of the way up the pyramid. A hidden L shaped room, in the past; Egyptologists did not take any notice of this room. The 1986 French team had also made this discovery as well as a spiraling feature inside the outer walls. Houdin and Bob Brier plan on setting up a ??? cooled infrared camera based on an SUV and to take images of the three [pyramid] faces every hour???. ??” Houdin. They are yet to be approved by the Egyptian authorities. Another theory proposes one large ramp sloping against one of

<https://assignbuster.com/how-and-why-was-the-pyramid-of-giza-built/>

the face, the advantages of this is that only one side of the pyramid is concealed and the other 3 are cleared, this is to ensure a smooth operation and to survey the progress in case the pyramid starts twisting or if any corner is out of place.

The disadvantage of this is that the ramp would be extremely long if the gradient of the ramp was a reasonable angle at 1m every 6m . If this was the case calculations show the ramp would extend to about 828 meters (height [138m] x angle [1×6] = 828 meters). An alternate way is a spiral ramp.

The benefits of this theory are all faces and corners are clear at all times, it is easier to manage the progression and to manage the structure. Although the downside of this is that the spiral is that it makes it more difficult to construct as it must be transferred further and to withstand the sharp 90 degree turns. The Pyramid of Giza was built with 4 stone materials, they were: 2. 3 million Blocks of limestone this was used for the main structure, each block weighed from 2 to 70 tons , it has been estimated that the total weight equaled 5. 5 million tons. The casing was made from Tura Limestone . It was hauled across the Nile from Tura which is 3747 miles away. 8, 000 tons of granite stone was used in the King's Chamber.

It was imported from over 500 miles away from the site in the village, Aswan . 500, 000 tons of mortar was used, this was made up of mud and clay, or clay and sand. This was used to bind together the blocks of limestone and granite stones. The workers also used mortar as a leveling bed .

Archaeologists and Architects theorized the ancient Egyptians transported each block individually via the Nile River from the nearby quarries. The reason behind this theory is that they believe they floated the blocks underneath a platform or boat as they would not have been able to transport the blocks in the amount of time given. To construct this pyramid has taken an estimate of 100,000 skilled men 20 years to complete, by 2,560 BCE it was completed. The architect behind the design of the Great Pyramid is believed to be Hemon or Hemiunu which was Khufu's vizier of the time. It has been calculated that to complete the pyramid in 20 years the workers would have had to move 12 blocks every hour into the specific position set. During the fourth dynasty construction of the pyramids at Giza, builders had set up a village, very similar to those of Deir el Medina, this was built so workers did not have to travel far to work on the pyramid, and this assisted the workers to finish the pyramid in 20 years.

The purpose of the pyramid to be built was to serve as the Pharaoh Khufu's tomb. Although due to the absence of evidence in the pyramid, indicates the body of Khufu is not in the pyramid, many Egyptologists believed he was placed in the head of the Sphinx or in a nearby separate building closer to the Nile River. In conclusion, there is no direct answer on the method of construction of the Great Pyramid. The main reason why there is not much evidence found, is that the Egyptians recycled anything they could, such as tools and wooden structures; this is the most likely explanation for the absence of evidence. Tests such as Houdin's inferred images are still waiting for approval from the Egyptian Authorities to continue the research and excavation to find any more evidence of construction.