

My Drift

Title: Ancient Pyramids

Written by: Jerry D. Petersen

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Did you ever wonder how ancient civilizations were able to build these large pyramids?

The Great Pyramid of Giza is the oldest and largest of the three pyramids in the Giza pyramid complex bordering present-day Giza in Greater Cairo, Egypt. It is the oldest of the Seven Wonders of the Ancient World, and the only one to remain largely intact. It was built over a twenty-year period during the reign of the king Khufu (2589-2566 BCE) of the 4th Dynasty. Yes, the three pyramids in the Giza pyramid complex were built a long time ago – About 4600 years ago if my arithmetic is correct.



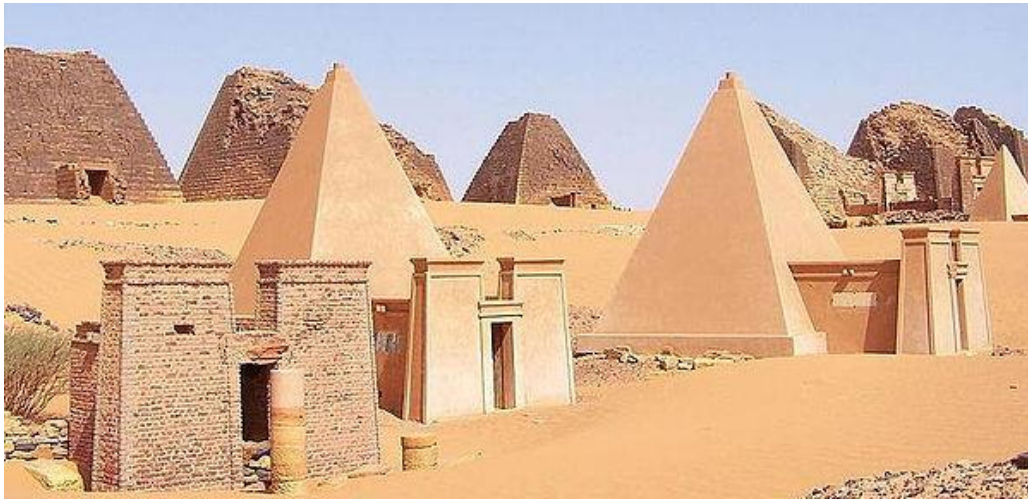
Giza Pyramid Complex

Did you know that there are 138 Egyptian pyramids? Most were built as tombs for the country's pharaohs and their consorts during the Old and Middle Kingdom periods.

Did you know that Egypt is not the only country with pyramids? There are at least 20 countries with ancient pyramids. Egypt has the most famous pyramids, but these other countries also have pyramids. In fact, Sudan has more pyramids than Egypt!

Sudan

The red sandstone pyramids of a region once known as Nubia, now in Central Sudan, were built about 800 years after their more famous Egyptian cousins. Similar in workmanship, the Nubian Pyramids are much smaller in size and greater in number. They were also built as tombs for the kings and queens of the region. In fact, Sudan probably has the greatest number of pyramids of any country around the world. Surprise! Sudan has at least 220 pyramids.



The Nubian Pyramids

Peru



Chavin de Huantar

Chavín de Huántar is an archaeological site in Peru, containing ruins and artifacts constructed beginning at least by 1200 BCE and occupied by later cultures until around 400–500 BCE by the Chavín, a major pre-Inca culture. The site is located in the Ancash Region, 160 miles north of Lima, at an elevation of 10,430 feet. The Chavin civilization was centered on the site of Chavin de Huantar, the religious center and the capital of the Chavin culture. The temple is a massive flat-topped pyramid surrounded by lower platforms. It is a U-shaped plaza with a sunken circular court in the center. Inside of the temple, the walls are decorated with sculptures and carvings.

Mexico

Like Egypt, Mexico also has multiple sites and at least 30 pyramids where history has been immortalized by gigantic stone structures. Here are two that stand out from the rest.



Teotihuacan – The Pyramid of the Sun



Great Pyramid of Cholula

Teotihuacan is the third largest pyramid in the world. Made in a stepped style, the pyramid was originally painted over with lime plaster and brilliantly colored murals. The structure had a temple on top at one point in time, and it is thought that it was used primarily for worship.

The **Cholula** temple-pyramid complex was built in four stages, starting from the 3rd century BC through the 9th century AD, and was dedicated to the deity Quetzalcoatl. It has a base of 1,480 feet by 1,480 feet and a height of 217 feet. It is the largest pyramid as well as the largest monument ever constructed anywhere in the world, with a total volume estimated at over 4.45 million cubic meters, even larger than that of the Great Pyramid of Giza in Egypt, which is about 2.5 million cubic meters. However, the Great Pyramid of Giza is higher at 455 feet. The Postclassic Aztecs believed that Xelhua built the Great Pyramid of Cholula.

Other countries with pyramids include:

- **Iraq (Ziggurat of Ur)**
- **Guatemala (Mayan Pyramids of Tikal)**
- **Italy (Pyramid of Cestius in Rome)**
- **China (The Pyramid Mausoleum of the First Qin Emperor)**
- **Spain (Pyramids of Guimar)**
- **Bolivia (Akapana Platform Pyramid)**
- **India (Brihadisvara Temple at Thanjavur)**
- **Indonesia (Borobudur Buddhist monument in Central Java)**
- **Greece (Pausanias (2nd century AD) pyramids at Hellenikon)**
- **Nigeria (Nsude Pyramids in the Nigerian town of Nsude)**

How many pyramids exist in the world? About 5 thousand pyramids have been found on every domestically inhabited continent around the planet although they seem to be concentrated within certain areas. Pyramids are still being discovered as humans explore the planet and technology and search methods advance. Many pyramids have disappeared due to decay, being covered with vegetation, destroyed by war or just time. So, the exact number of ancient pyramids will remain unknown.



The Great Pyramid of Garut in Indonesia

What is the definition of a Pyramid? A pyramid is a structure whose outer surfaces are triangular and converge to a single point at the top, making the shape roughly a pyramid in the geometric sense. The base of a pyramid can be any polygon shape which include triangles (3 sides), quadrilaterals (4 sides), pentagons (5 sides), and hexagons (6 sides).

Note: Although all pyramids are similar, for the rest of this article, we will be learning mostly about the most famous pyramid – The Great Pyramid of Giza.

Why did these ancient civilizations build pyramids? All pyramids were probably built for religious purposes. The Egyptians were one of the first civilizations to believe in an afterlife. They believed that a second self, called the ka, lived within every human being. When the physical body expired, the ka enjoyed eternal life. Those fortunate enough to pass the “Judgment of Osiris” wanted to be comfortable in their lives beyond earth. The Great Pyramids were simply grand tombs of powerful pharaohs.

Wait a second here. What is the “Judgment of Osiris”? Maat, in ancient Egyptian religion, is the personification of truth, justice, and the cosmic order. The daughter of the sun god Re, she was associated with Thoth, God of Wisdom. The ceremony called the “Judgment of Osiris,” named for Osiris, the God of the Dead was believed to focus upon the weighing of the heart of the deceased in a scale balanced by Maat as a test of conformity to proper values. If they passed, their ka would enjoy eternal life.

The Great Pyramid of Giza is an Engineering Wonder!

The Great Pyramid of Giza was built 4600 years ago yet it remained as the tallest man-made structure until the 19th century. That means it stood its place as the tallest structure for 3800 years! The baffling thing about these ancient pyramids is the Egyptians ability to build something so gigantic with prehistoric building methods. And not only were they able to build them but some of the engineering (inside and outside) is miraculous even by today’s standards.

The Great Pyramid of Giza –Outside and Inside - General Information



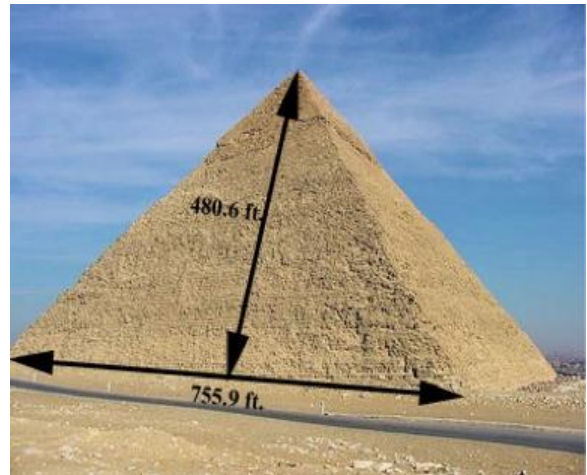
Majestic Front View



Up Close Side View

Outside Info:

- The base of the Great Pyramid of Giza is a perfect square taking up an area greater than 13 acres.
- The pyramid has corners each facing a different cardinal exact direction - North, East, South, and West. The alignment of the Great Pyramid is nearly perfect, only 0.067 degrees counterclockwise from perfect cardinal alignment.
- Looking from the front, the Great Pyramid of Giza points very precisely to the north.
- The pyramids of Egypt are all built to the west of the Nile River. This is because the western side was associated with the land of the dead.
- The outside of the Great Pyramid is made of approximately 2,300,000 blocks of limestone that average about 2.5 tons (5,000 pounds) each.
- The pyramid has 210 stone layers.
- The total weight of the pyramid is about 5,750,000 tons.
- The volume is roughly 88,000,000 cubic feet.
- The Pyramid is about 481-feet high and each base side is about 756-feet long.

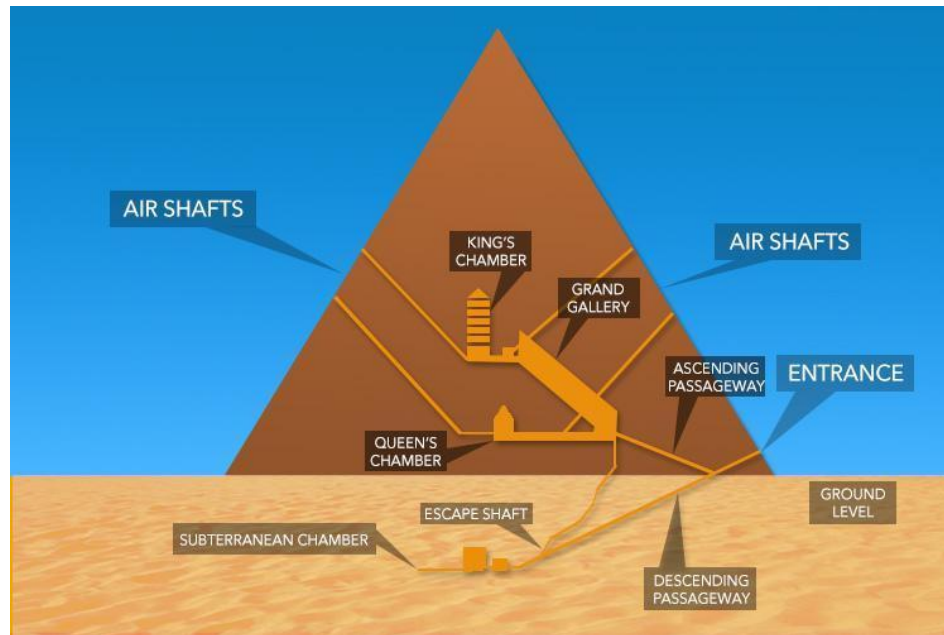


The Great Sphinx was sculpted nearby to stand watch over the pyramids. It stands 65 feet tall and consists of a human head atop the body of a lion. Many believe that the Sphinx was a portrait of King Chefren (Khafret) who was placed in the middle Pyramid. The lion symbolized immortality.



The super adhesive mortar made to fix the stones in place has been analyzed over and over again. But, the exact combination of the ingredients is still a mystery. Almost 5,000,000 tons of mortar was used and the strength is more than the stones itself. Well, maybe some of the ingredients come from another planet.

Inside Info:



What's Inside the Great Pyramid of Giza

The pyramids have multiple chambers. The highest of these is the King's Chamber. Below the King's Chamber is the Queen's Chamber. The Grand Gallery links these two chambers. An ascending passageway connects the Grand Gallery and the entryway. A descending passageway links the subterranean chamber with the entryway. Some pyramids also contained other chambers, depending on the pharaoh's instructions and beliefs.

Inside the King's chamber of the Great Pyramid lies a red granite coffer, which all seems perfectly normal until you realize it is made out of one solid piece of granite that is far too large to have fit down the passageway you just squeezed through. Its dimensions are 6 feet 6 inches long, 2 feet 3 inches wide, 3 feet deep and weighs 15 tons. This realization led the archaeologists to believe that the great pyramid was built around the coffer and not brought in after construction.



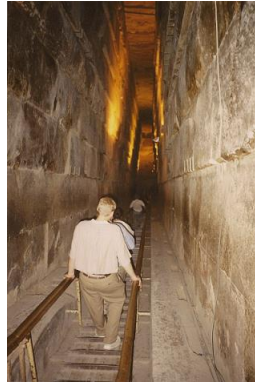
Red Granite Coffer

Alright, I must not be too bright. **What is a coffer?** The dictionary says a coffer is a strong chest or box used for keeping money or valuables safe. I should know that!

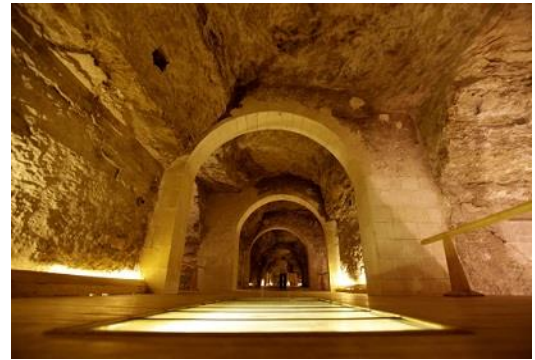
The point here is the fact that much of the inside of the pyramid was built before the construction of the outside walls.



Inside the Queen's Chamber



Passageway to King's chamber



The main corridor inside the "Serapuem" Tomb

Say hello to the most effective ancient air conditioning in the world. Egypt is a land that faces scorching hot temperatures during the day, but that has never affected the temperature inside the pyramids. Despite the changing temperatures outside in the desert, the temperature inside these mysterious structures stays at 20 degrees Celsius or 62 degrees Fahrenheit. Did you know that this is the average temperature of the earth? How the ancient Egyptians managed to achieve this high-tech design is yet to be discovered? Alien help?

You Can Take It with You!

Egyptians who ranked high in status often wanted to take their most prized possessions with them in death, so the ka could enjoy them in its next life. Gold, silver, and bronze artifacts were loaded into the interiors of the great tombs. Fine linens and artwork adorned the secret chambers.

In the early days, dead nobles were often interned with their living slaves and animals. Because this practice eventually proved too cruel and costly, artists instead depicted scenes of human activity on the inside walls. Some pyramids were even equipped with a rest room for the pharaoh.

The Curse of Pharaoh Protected the Pyramids

While the Sphinx was meant to protect the dead pharaohs from spiritual disturbance as they transit to gods, the curse of Pharaoh is said to have provided protection to the pyramids, and everything in it, including pharaoh's family and belongings. This might explain why many archeologists and researchers looking to unveil the mysteries of the pyramids have been stuck with bad luck and sometimes even death. Some experts say that the illnesses are caused by bacteria, but the Egyptians know that it is more than that.

Yes, great precautions were taken to protect the tombs from looters. Egyptians believed that a defiler of a pharaoh's resting place would be cursed for eternity. The entrance to the inner chambers was carefully hidden. The pharaoh's mummy was placed in a huge coffin called a sarcophagus, which was made of the hardest known granite stone blocks. There were traps and curses put in the tombs to try and keep robbers out. But despite such warnings and precautions, tombs were raided over the years by grave robbers.



The Curse of Pharaoh

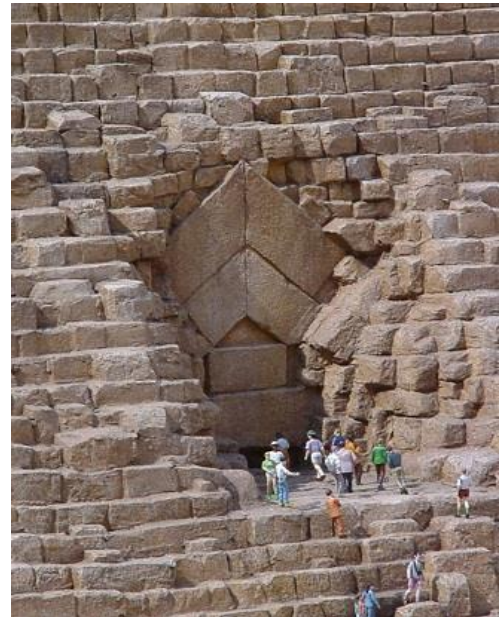
The pyramids, however, have stood the test of time. Although their outer limestone layers have long since been stripped or passed into dust, the pyramids still stand. They remain as time capsules cast forward by a once-great civilization.

Great Pyramid of Giza Doors

There exists a total of 3 swivel doors in the Great Pyramid of Giza. One of the enormous doors is a 20-ton swivel door that is so well balanced that it can only be opened from the inside with just one hand! When it is closed, the fit is so perfect that it blends in with the wall, making an impression that it is not even there!

Even with all the modern tools available today, engineers have not been able to build a similar door as perfect as this one.

Did Aliens help build these doors?



The Orion Correlation Theory

Orion's Belt is one of the most familiar group of stars in the night sky, along with the Big Dipper and the Southern Cross. It is formed by three massive, bright stars located in our galaxy, in the direction of the constellation Orion. The basis of this theory concerns the proposition that the relative positions of three main Ancient Egyptian pyramids on the Giza plateau was by design correlated with the relative positions of these three stars in the constellation of Orion which make up Orion's Belt.



The Pyramids of Giza and Orion's Belt

Who Built the Pyramids?

Though some popular versions of history held that the pyramids were built by slaves or foreigners forced into labor, skeletons excavated from the area show that the workers were probably native Egyptian agricultural laborers who worked on the pyramids during the time of year when the Nile River flooded much of the land nearby.

The ancient Greek historian Herodotus wrote that it took 20 years to build the pyramids and required the labor of about 90,000 men. This included 30,000 more skilled workers inside the pyramid and 60,000 less skilled workers on the outside.

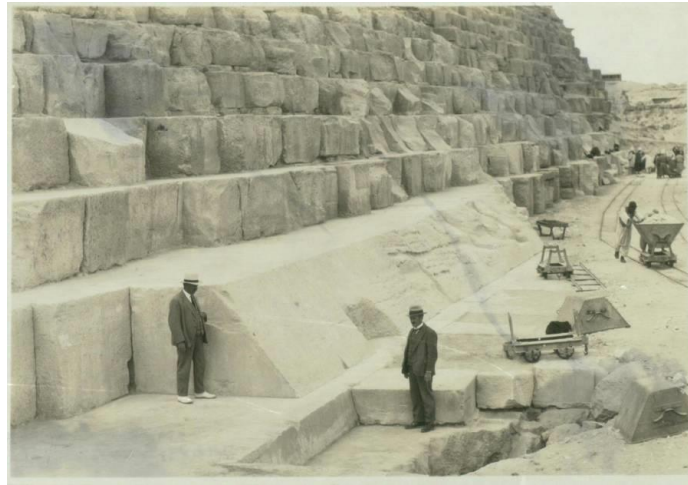
Many people believe Aliens from outer space built the Great Pyramids of Egypt. How could a civilization that lacked electricity, rock cutting tools, pulleys, bulldozers, forklifts, trucks and the wheel had not even been invented yet, build such massive structures? It must have been built by super intelligent Aliens. Right?

Wrong. Although I believe in UFOs and other life out there in the Universe, evidence shows that Egyptians built the pyramids in Egypt. But maybe they had a little help from Aliens with the engineering!



Alien Spaceships over Pyramids

Okay, how in the World did Ancient Egyptians build the Pyramids?



Some of these Stone Blocks weighed up to 90 tons

Where did they get the stone blocks for the pyramids? Quarries for many different types of stones lie along the Nile. Most stones were transported on barges down the Nile and then taken about 80 miles across the desert to the pyramid sites. Granite for the King's Chamber in Khufu's pyramid was brought over more than 500 miles from Aswan and white limestone for the outer casing from Tura, a few miles south of Giza.

How did they cut the stones? Iron and steel tools were not invented yet, so workers used copper and stone-cutting tools to carve out, chisel, and shape the blocks.

How did they transport these giant blocks from the quarry across the desert to the pyramid sites?



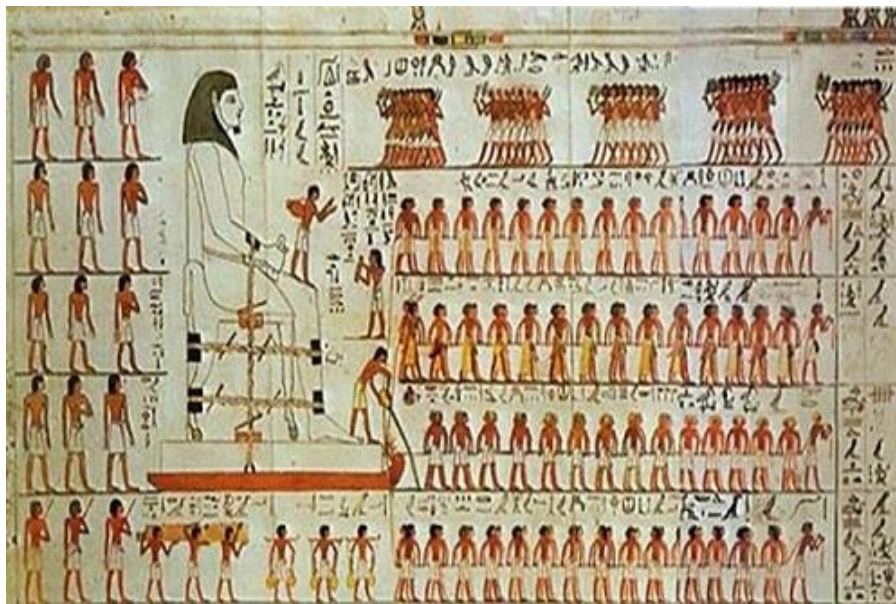
Giant Wooden Sled



Up to 200 men pulled each sled with the massive blocks across the desert

For centuries scientists have been trying to figure out exactly how they accomplished this feat. First, they concluded that ancient Egyptians used giant wooden sleds (like in the pictures above) to move the massive stone blocks across the desert.

When scientists and researchers tried to re-create moving large heavy stone blocks across the hot dry desert, they found that the sand would pile up in front of the sled making it very difficult for the sled to move easily. So how did ancient Egyptians do it? Recently, researchers picked up on clues from the ancient Egyptians themselves. A wall painting discovered in an ancient tomb (see picture below) depicts 172 men hauling an immense statue using ropes attached to a sled. In the drawing, a person can be seen standing on the front of the sled, pouring water over the sand. This was the answer they were looking for! Additional tests showed that the sled moved much more easily (the force required was reduced by a full 50 percent) when the right amount of water was added to the sand.



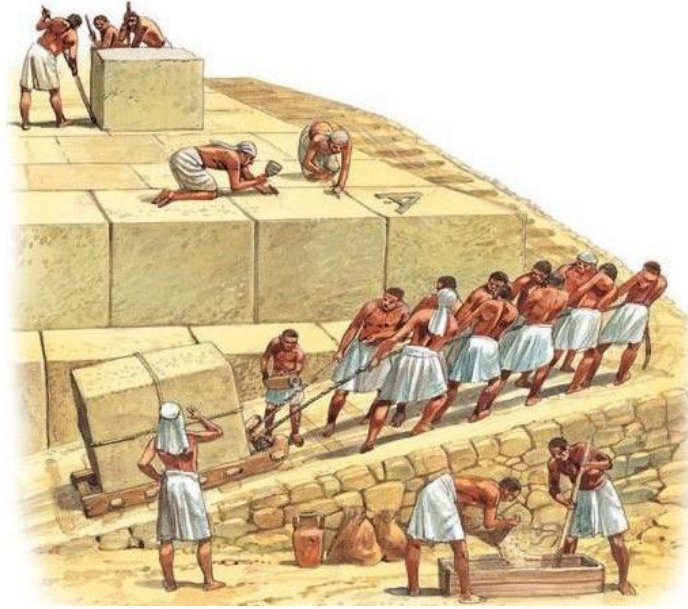
Wall Painting discovered in an Ancient Tomb

How did they move, lift, and assemble these giant blocks to build the pyramid?

Stacking the blocks into the towering iconic shape structures large enough to be seen from space is often marveled at as a feat of mystery. Let's try to solve this mystery.

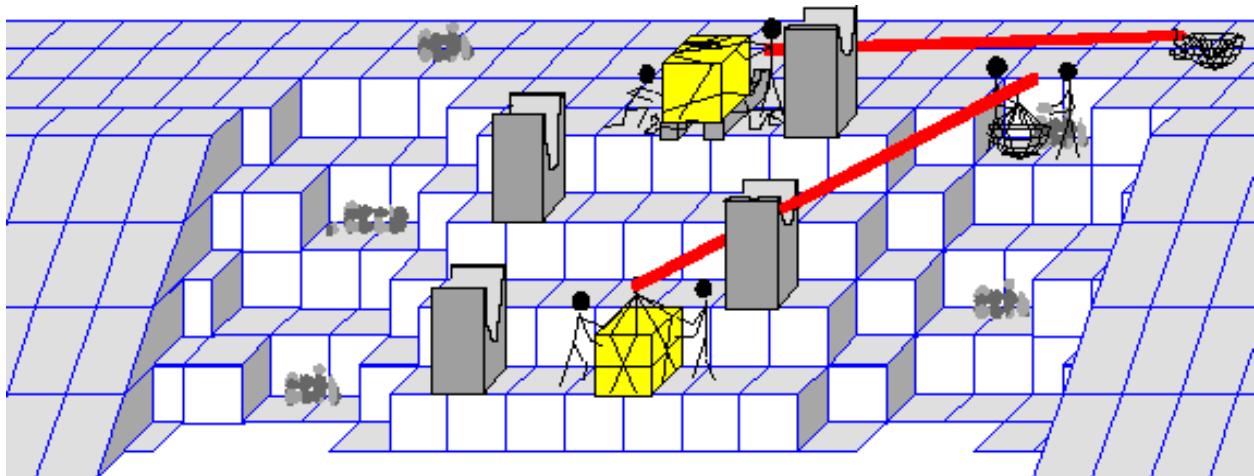
Best theory on how construction proceeded in building the pyramids follows:

1. They started at the center of the base tier level and worked out from there.
2. The largest and heaviest blocks lie on the base level, and the blocks become smaller on each higher level.
3. They built ramps but these were feasible only up to the fifth level, and that a different method would be necessary for the next 205 levels to reach the top.
4. Workers pulled the blocks up the ramps on sleds. The ramps were constructed with either wooden logs or long granite slabs so that the sled could be pulled more easily up the 20-degree incline.



A System of Ramps around the Pyramid

5. The ramps up to the fifth level remained in place but for the rest of the pyramid construction, a system using levers and counterweights was used to elevate and place the blocks.



System using Levers and Counterweights

6. Stone blocks with special grooves would be installed on the extension as fulcrums over which long wooden tree trunks would be placed. These timbers would have diameters of about one foot and would be 20 to 25 feet in length. The short arm of a timber would be attached to a block, while the longer arm would have a net-basket attached to it. Weights would be incrementally added to this end, thus raising the block.
7. To bind the rocks together, the Egyptians used a mysterious very strong gypsum mortar.

Conclusion. I think we now have some idea how ancient Egyptians were able to build these complex pyramids without cranes and other modern machines.

Many questions and mysteries remain on how this feat was accomplished. Did you know that there were no compasses? People back then used the stars to tell directions. But are the stars that accurate? Remember how precise the pyramid directions are.



Did Ancient Aliens Help Build the Great Pyramids of Giza?

I don't know. Researching and writing this article created more questions in my mind than it answered. Maybe ancient aliens did help build the Great Pyramid of Giza?

What do you think?

By the way, HAPPY NEW YEAR!! This is my first article of 2020.

Bigdrifter44@gmail.com

Bigdrifter.com