

Building the Pyramids Name: _____ Prd: _____ Score: _____ /15

Directions: Highlight the answer in the text on the left *before* answering the questions on the right.

The **pyramids of Egypt** are one of the *great "wonders of the world."* Most of the buildings of the ancient world have crumbled..but some of the majestic pyramids still stand today! They line the western side of the Nile River in northern Egypt where the sun sets every night. These pyramids had a square base & sides shaped like triangles that met at a point at the top.

How were these enormous buildings built? And why? For 1000s of years after the fall of Egypt, people were not really sure. But now we know...

The year was c. 2670 B.C., & on the west side of the Nile at Giza gangs of men were straining to pull great blocks of stone weighing *more than 2 tons each* up high ramps. *Egypt did not have horses or wheels yet*, so everything was done by hard manual labor. Stones were tied on flat wooden sleds & pulled up the sides with ropes. Some historians think oil *may have been used* to make the surface more slippery (reducing friction). These sleds moved inch by inch...slowly...The sun was hot, but the men did not rest. Finally, the heavy stones had to be lifted up & set into place.

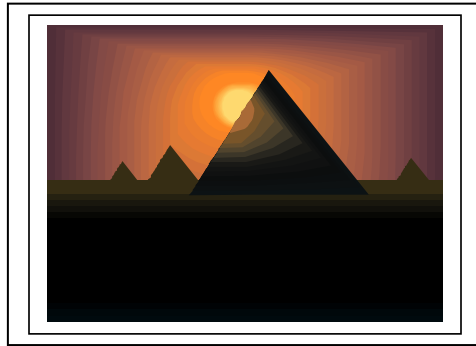
These men were working on the Great Pyramid of Giza. It was, & *still is*, the *largest* stone building in the world. It is made up of more than 2 million stone blocks & is as tall as a modern 35-story building. *Five* of Europe's largest cathedrals *could fit inside* the area of its base! Suppose that its stones were cut into cubes measuring 1 foot by 1 foot. If placed in a row, these cubes would extend *2/3rds of the distance around the earth's equator*. *Whoosh!*

Pyramids were built as tombs, or resting places, for Egypt's kings or **pharaohs**. The pharaoh was believed to be a *living god on earth* who owned the nation & everything in it. Everyone in Egypt, then, had to serve the god-king.

The pharaoh **Cheops**, also known as **Khufu**, ruled from 2680 to 2657 B.C. & drafted 100,000 workers a year to build his Great Pyramid. *It took 20 years to finish.*

Egypt's pyramids are often *called* one of the great "_____ of the _____."

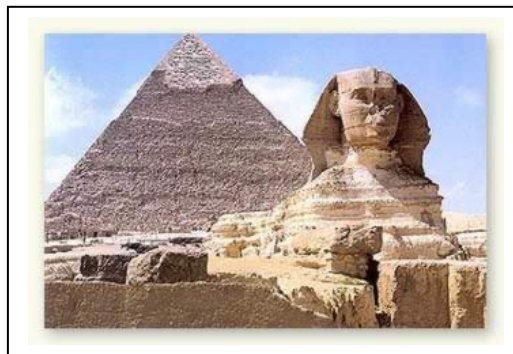
Pyramids were *built on* the _____ side of the Nile River *where the sun sets*...



Making Inferences: *Why* would it take 20 years to build *just one structure* like the pyramids?

(What was *missing from* Egypt at this time...?)

What was *the largest stone building* in the world? the _____ of _____



Pharaoh is *another* word for Egyptian _____.

- | | |
|------------|------------------|
| a. emperor | c. king |
| b. tomb | d. resting place |

Khufu was *also known as* _____.

- | | |
|------------------|-------------------|
| a. King Tut | c. pharaoh Cheops |
| b. Great Pyramid | d. pyramid Giza |

How was the Great Pyramid built? First, an area was chosen that was close to the Nile *because* many of the heavy building stones *could only be transported from limestone quarries by ship*. Fortunately, at flooding time, the distance between the Nile & the location of the pyramid was *reduced to 1/4th* of a mile.

The pyramid had to be built on a foundation of solid rock. So the next job of the builders was to remove the desert sand that covered the bedrock. Then the foundation had to be made level. How accurate were these ancient Egyptians in this operation? The base of the Great Pyramid was *off level by ONLY 5/8ths of an inch!* (Applause, applause! Go Egyptian architects!)

The next step was to make sure that the base of the pyramid formed a square that was near perfect. The measuring cords used by the builders were made of palm or **flax** fibers because both fibers stretched when used. Despite this elastic feature, the difference between the longest & shortest sides of the Great Pyramid was *only 7.9 inches*. And each side was more than 750 feet long, the error was remarkably small! Such accuracy could *only* have been achieved by the use of astronomy.

Meanwhile, other workers were cutting blocks from rocky desert cliffs. Sometimes they were a long way from Giza. The stones would then be put on logs & rolled to the edge of the Nile. There they were loaded onto barges & rowed down the river. At Giza, they were mounted on sleds & pulled up ramps on each side of the pyramid. When put in place, each stone fit on top of the stone below!

The Great Pyramid was solid stone *except* for the pharaoh's room & the low, narrow tunnels leading to it. The tunnels were about a yard square & *blocked* with large stones so that the pharaoh's mummy would be safe. But sadly, tomb robbers were able to break in...& *many* times the mummy, jewelry, **unquents** (oils) & other treasures were lost to eternity.

Why were pyramid sites built *close to rivers*?



Why would Egyptians *use cords made of flax*?

- | | |
|------------------------|----------------------|
| a. It was inexpensive. | c. It was abundant. |
| b. It stretched. | d. It doesn't say... |

It appears that **Egyptians *built* these pyramids with the use of** _____.

- | | |
|--------------|-----------------|
| a. astronomy | c. the Hittites |
| b. geography | d. meter sticks |

Fill in the blanks: The process of getting great stones from the quarry to Giza:

- 1) **put on** _____,
rolled to _____ River
- 2) **loaded onto** _____ & rowed
down _____
- 3) **mounted on** _____; then **pulled up**
_____ **to the top of the pyramid**

What was the **purpose of blocking** the tunnels within the pharaoh's tomb?

What would robbers *steal from the tombs*?

Why did Cheops & other pharaohs build their tombs in the shape of pyramids?
A sentence written in one of these tombs gives us a clue. It says, "A staircase is laid for the pharaoh so that he may mount up to heaven on it."



The pyramids, sloping high up to the sky, were "stairways to heaven." From them, Egyptians believed the pharaohs could join the sun-god, Ra, & travel with him across the heavens! Any time they wished, they could venture back to their tombs. And there, it is thought, they could enjoy the food & drink which was left for them by priests. Egypt's god-kings built the pyramids to use in their everlasting life after death!



Why did the Egyptians **build** their tombs in the shape of a pyramid? _____

Why did priests leave food & drink **in** the tomb of their pharaohs? _____

BONUS: What rock group in the 1960's sang "Stairway to Heaven"? _____

(...maybe ask your parents? ☺)

Great Pyramid of Giza in the 19th century ↓ (c. 1800)

