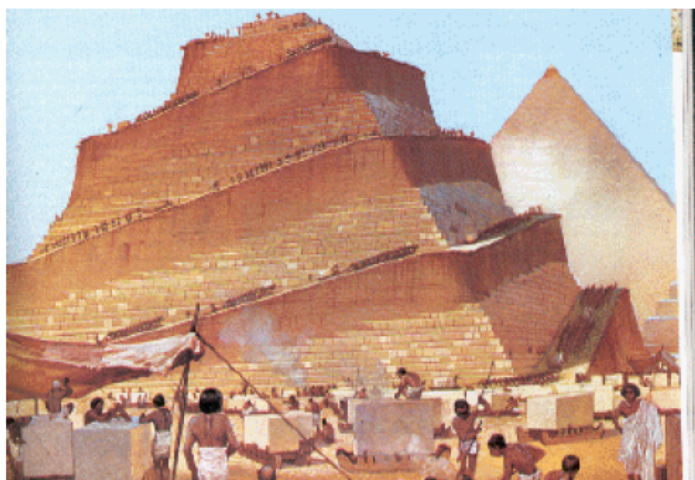


## How the Pyramids were Built



The pyramid blocks were hewn from quarries using stone and copper tools. There are examples of each stage of block extraction at existing ancient quarries. Granite was quarried using pounding stones of dolerite, some of which have been found laying about the quarries. The blocks were transported to the pyramid site from remote quarries using barges, and from local quarries using wooden sleds. The Egyptians did not use the wheel during the Pyramid Age, an invention that would have been of limited use on softer ground under heavy loads. The sleds were dragged manually, sometimes with the help of beasts of burden, over smoothed roads. Some of the existing pathways were equipped with transverse wooden beams to lend support to the sled. A lubricant may have been poured upon the road to reduce friction.

How the massive blocks were raised to the height of the rising pyramid is not understood for certain. Earthen ramps were used at least in the initial stages of construction. Extant ramps have been found at the pyramids of Amenemhat I and Senwosret I at Lisht, as well as at several other sites. Traces of disassembled ramps at pyramid sites are even more common. The ramps were made of brick or earth and rubble dressed with brick for strength. They were built up as the pyramid progressed upward, and removed as the pyramid was finished downward.

The ramps likely took the form of an inclined plane at the beginning of work, but the configuration in later stages has long been a matter of conjecture. Some Egyptologists propose a straight, gently sloping, linear ramp, some propose a steep staircase ramp, and others propose a ramp that spiraled up the four sides of the

pyramid. In most ramp scenarios, the volume of the ramp exceeds the volume of the pyramid structure itself, raising the possibility that the stones of the upper reaches were placed using levers, or perhaps a modified ramp of some sort.

But whatever the configuration of the ramps, the fact remains that the Egyptians successfully completed the most massive building projects in all of history. There is nothing magical or supernatural in the means by which they achieved their goals. By all indications, they retained their knowledge of construction throughout their history, but they were limited after the Fourth Dynasty not by the lack of technology but rather by the lack of the abundant resources that were previously available. More than two thousand years later, the Romans would move huge stones, some weighing nearly 1,000 tons, using similar techniques at Baalbek.

More impressive than the mechanics of moving huge masses of building material are the logistics involved: choreographing teams of foremen, multitudes of workers, and a profusion of supplies, all within the rigid constraints of a blueprint for design and a timetable for completion. It is hard to imagine that such a feat could be possible, but the pyramids themselves provide mute testimony that it was not only possible but actually accomplished. There remains no known written record hinting at how the pyramids were built, nor have any reliefs depicting the procedure been found. Most of what Egyptologists believe to be true of the methods involved is based on tangible archaeological evidence. Some is based on theory and is open for debate. What is known for certain is that the Egyptians used simple but effective tools to quarry the stones, to move them to the pyramid site, and to place them in the desired location.

### Questions 1-11

Decide if the statements below are Yes No or Not Given.

- Yes - the statement agrees with the claims of the writer
  - No - the statement contradicts the claims of the writer
  - Not Given - it is impossible to say what the writer thinks about this
1. The wheel, although not invented at that time, would have aided the pyramid builders.
  2. It is possible that Ancient Egyptians could have lubricated their roads to aid transportation.

3. The building of roads dates back to the pre-dynastic period of Ancient Egypt.
4. The method of construction used for pyramid building has still not been confirmed completely.
5. Ramps made from earth are believed to have been used at the outset of building.
6. Egyptologists agree that ramps were built straight similar to a staircase.
7. The building work of the Ancient Egyptians is unrivalled.
8. The knowledge of large pyramid building died out by the fourth dynasty.
9. Some reliefs show how the pyramids were constructed.
10. The Ancient Egyptians had various theories to use for the construction of the pyramids.
11. There is an open debate as to whether the pyramids were built by the Ancient Egyptians.

Answers can be found on my blog: [www.ieltsliz.com](http://www.ieltsliz.com) on the main reading page.

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