

# Egypt: Engineering an Empire



Long before the glory of Rome and the marvels of today's modern day skyscrapers, one of the world's most amazing civilizations flourished in Egypt. Like most great civilizations, ancient Egypt's grandeur can be attributed to a mix of natural bounty and human ingenuity. The rich waters of the Nile provided the resources and pathways to build dynamic trade routes, while Egypt's architects dedicated themselves to harnessing the power of the Nile to engineer the stunning structures which have achieved world renown. Over the course of generations and centuries, these architects built dams, pyramids, temples, fortresses, and tombs that have become models of engineering innovation. Students will learn how ideas travel from being virtually inconceivable to becoming reality through dedication, careful thinking, and daring experimentation.

*Egypt: Engineering an Empire* delves into the techniques and tools architects masterminded to create the structures and landscapes that continue to fascinate us today. The story opens in 3032 B.C. as the

Nile's flooding tests the dams of the city of Memphis, and follows through the enthralling development of Egyptian cities over the course of centuries. Powerful Egyptian pharaohs and pedigreed queens enlisted their architects and thousands of laborers to pour their sweat and talents into enacting their visions. With commentary from historians and colorful maps, this two-hour documentary offers a fresh perspective on this amazing culture of long ago and the influence of its inventions in today's cities and cultures.

## curriculum links

*Egypt: Engineering an Empire* would be useful for History, Global Studies, Social Studies, Science and Technology, and Engineering classes. It would be an excellent program for interdisciplinary courses and lesson plans. It is appropriate for middle school and high school students and fulfills several National Standards guidelines as outlined by the National Council for History Education including: (1) Human Interaction with the Environment; and (2) Civilization, Cultural Diffusion and Innovation.

## vocabulary

Using the dictionary at [www.merriamwebster.com](http://www.merriamwebster.com), an Internet resource such as [www.history.com](http://www.history.com), or an encyclopedia, students should define or explain the significance of the following terms:

<b>catastrophic</b>	<b>empire</b>	<b>subterranean</b>
<b>coalition</b>	<b>façade</b>	<b>symmetrical</b>
<b>divine</b>	<b>inconceivable</b>	<b>unprecedented</b>
	<b>obelisk</b>	

## discussion questions

1. What role do you think the Nile River played in Egypt's prosperity? Do you think ancient Egypt could have become a majestic civilization without the Nile?
2. What were some of the ways Egyptians harnessed the power of the Nile? What was the primary route of transportation they developed, and what were the techniques ancient Egyptians used to develop them?
3. How would you describe the power structure of ancient Egypt? What does it mean to describe Egyptian kings and queens as "divine"? What powers did they believe this enabled them?
4. What were some examples of the challenges laborers faced in constructing Egypt's monuments? What do you think motivated them?

## discussion questions (cont.)

- This documentary reveals the ways many Egyptian engineering feats were marked by failure initially. Give some examples of mistakes or failures engineers and workers encountered and the solutions they developed. What if the Egyptians had simply abandoned these tasks?
- Why were pharaohs' tombs so significant in ancient Egypt? What were some of the hallmarks and notable characteristics of Egyptian tombs?
- Why was the reign of Queen Hatshepsut important among the long line of Egyptian leaders? What were some of the key innovations that resulted from her reign?
- What are some of the connections between Egyptian engineering and the expansion of its empire?
- By building such grand monuments, what messages do you think the Egyptians wanted to send to their enemies, to their gods, and to the generations that followed them? Could some monuments achieve all of these goals at the same time? Discuss.
- Why are Egyptian obelisks considered one of the most amazing architectural feats ever achieved? Do you think they could be constructed today?

## extended activities

- Throughout this documentary, many architectural innovations and structures are introduced. In small groups, choose one of these structures and create a plan for how you would build it if you were given the task today. Be sure to include details for materials needed, the techniques you would employ, and the number of people required to construct it. Then, build a replica of these monuments in 3-D PowerPoint presentations, or in drawings.
- Egyptian obelisks stood as some of the most significant monuments adorned with symbols rich in meaning. Design an obelisk of your own to record the history of your city, school, or country. Include a short essay describing the symbols you have chosen and what they represent. Also include an explanation of who you imagine will view your obelisk and what messages you would like to transmit to them. If possible, create art projects that depict your obelisks, and share them with your larger class or group.
- This documentary covers an extensive time period in ancient Egypt. In small groups, construct a timeline which traces the eras of Egyptian history discussed in this documentary. Then, on a larger timeline, plot ancient Egypt along a broader timeline that includes the other empires and cultures you have studied. These timelines could be illustrated with images and additional facts about ancient Egypt.

## websites & books

### websites

Britannica's Egypt page: [britannica.com/eb/article-9106015](http://britannica.com/eb/article-9106015)

Collection of the greatest buildings in the world: [www.greatbuildings.com](http://www.greatbuildings.com)

History for Kids website on Egyptian architecture: [www.historyforkids.org/learn/egypt/architecture/egyptarchit.htm](http://www.historyforkids.org/learn/egypt/architecture/egyptarchit.htm)

The BBC's site on Egyptian history: [www.bbc.co.uk/history/ancient/egyptians/](http://www.bbc.co.uk/history/ancient/egyptians/)

Official website for the Egyptian presidency and relevant histories: [www.presidency.gov.eg/index.html](http://www.presidency.gov.eg/index.html)

### books

Andrew, Ian and Dugald Steer. *Egyptology* (Candlewick, 2004).

Arnold, Dieter. *The Encyclopedia of Ancient Egyptian Architecture* (Princeton, 2003).

Homung, Erik. *History of Ancient Egypt: An Introduction* (Cornell, 1999).

Shaw, Ian. *The Oxford Illustrated History of Ancient Egypt* (Oxford, 2002).

Somers, Clark and R. Engelbach. *Ancient Egyptian Construction and Architecture* (Dover Publications, 1990).