Program Summary

Follow the Stars of the Pharaohs to discover how ancient Egyptians studied the skies to tell time, create workable calendars, and align gigantic monuments. Explore the connection they felt with the stars and other astronomical phenomena.

Not only does this 40 minute program include images of the Egyptian ruins as they appear today, but some of the most spectacular temples and tombs of the ancient world have been digitally recreated to reveal their original splendor. Stars of the Pharaohs is narrated by John Rhys-Davies, best known for his roles as Sallah in Raiders of the Lost Ark and Gimli in the Lord of the Rings films.

Tennessee Science Standards

See www.adventuresci.com to find specific Grade Level Expectations (GLE).

STANDARD 6 – THE UNIVERSE
Conceptual Strand 6: The cosmos is vast and explored well enough to know its basic structure and operational principles.

STANDARD 11 – MOTION
Conceptual Strand 11: Objects move in ways that can be observed, described, predicted, and measured.

STANDARD 12 – FORCES IN NATURE
Conceptual Strand 12: Everything in the universe exerts a gravitational force on everything else; there is an interplay between magnetic fields and electrical currents.

Objectives
1. Name one significant star pattern to the Egyptians and describe its story or why it was important.
2. Recount the Egyptian explanation for day and night
3. Name and describe one Egyptian pharaoh or historic site.

Pre-Visit Activities
1. Locate Egypt and the River Nile on a map or globe. What other countries are nearby? Compare the size of Egypt to the land area of the United States.
2. Have students investigate different aspects of modern and ancient Egypt and compare and contrast to the United States: climate, population, ethnicity and origin of the people/demographics, foods, life span, industry, government, religions, etc.
3. Compare and contrast living in or near a desert as in Egypt compared to Tennessee? Are there deserts in the United States? Identify other deserts around the world.

Post-Visit Activities
1. Download the monthly star chart from our website www.SudekumPlanetarium.com. Encourage students to locate the constellations and any planets visible in the evening sky. Are Orion or the Big Dipper visible in the evening sky? The stars seen from Egypt are the same seen from Middle Tennessee.
2. Have students investigate other cultures’ constellations and interpretation of the stars of Orion and the Big Dipper.

Vocabulary

axis
burial chamber
cardinal points
celestial
Cheops Pyramid
civilization
commune
cosmology
“Decans”
decipher
firmament
humanity
illuminate
immortal
“Imperishables”
mortal
mummy
mutilated
Nile
orbit
Pharaoh
Polaris
resurrection
ruins
seasonal
shrine
Sirius
Thuban
Valley of the Kings
zodiac

Apopis
Aton
Ay
Denderah
Greb
Horus
Khufu
Meskhetia
Nerfertiti
Nut
Osiris
Ra/Amun
Ramesses II
Shu
Tutankhamun
3. Have students explore the history of the pharaohs themselves: how many were there, how long did they rule, how was power transferred, were they peaceful rulers or despicable dictators, were there any women pharaohs?

4. Have students investigate mummies. How were the remains prepared and mummified? Why were people mummified? Were just pharaohs mummified or were other people afforded the same honor? In what way was mummification successful at preserving remains?

5. Have students research and report on different aspects of Egyptian building practices. How were the pyramids built so large and to such exacting standards? Look at obelisks, other temples, and historic sites such as Abu Simbel, Temple of Luxor, Temple at Carnac, and others.

Exhibit Connections

Space Chase
The movement of the Earth around the Sun can be seen in the Earth-sun orrery in the Solar System Survey.

The movement of the Moon around the Earth and the phases of the Moon seen from the surface of the Earth can be explored at the Earth-Moon orrery in the Solar System Survey.

Locate Cairo, Egypt and the Pyramids on the Giza Plateau on the Tilt-a-World Table in the Solar System Survey. The latitude of the Great Pyramid complex is approximately 30 degrees north and 31 degrees east.

Resources

Books
New Patterns in the Sky by Julius Staal
The Stars by H. A. Rey
365 Starry Nights by Chet Raymo

Websites
Monthly star charts and related articles - www.SudekumPlanetarium.com

Paper Plate Astronomy
http://analyzer.depaul.edu/paperplate/

Egyptian Pyramids: Facts, Photos, and more
http://www.nationalgeographic.com/pyramids/pyramids.html

Encyclopedia Mythica – Egypt
http://www.pantheon.org/areas/mythology/africa/egyptian/articles.html

Egyptian history
http://www.egyptancienthistory.com/

Ancient Egypt
http://www.ancientegypt.co.uk/menu.html

StarDate - daily astronomy radio program
http://stardate.org/teachers/classroom.html