

Stars of the Pharaohs

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>