The Great Space Adventure

A Pre-Visit Information Guide for Teachers

Meets Next Generation Science Standards: 1-PS4-2, 1-ESS1-1,2, 2-PSA1-1, 2-ESS2-3, 4-ESSA-2

This may be the first visit to the Planetarium for many of your students. We have found that both cognitive and affective learning can be increased when teachers use structured activities before and/or after the visit to create a context for the experience and link with the classroom instruction. In this guide we have provided some interesting facts about the Cormack Planetarium and include background information about the astronomy content that will be presented in***"The Great Space Adventure."*** We encourage teachers to conduct pre-visit and post-visit classroom discussion and activities with their classes to make the most of their field trip experience.

ABOUT THE CORMACK PLANETARIUM:

- In a planetarium, objects in the universe are projected, as they exist at any time in space.
- These celestial objects are projected onto a dome-shaped ceiling so it appears that one is looking up into the night sky.
- Our Star Projector is capable of displaying images of over 7,000 stars…many more than anyone can see without the aid of a telescope. Planets, comets, satellites and the Milky Way and Andromeda Galaxy can also be projected.

THE GREAT SPACE ADVENTURE:

If you thought space exploration was just for astronauts, think again! Discover what you can see from right here on 'Spaceship Earth' as we whiz through the solar system at breakneck speed! Students will find out what they can see with just their own two eyes and how they can become space explorers in their own backyard.

'The Great Space Adventure' will demonstrate for students the concepts of rotation and revolution and how they connect to our own experiences of seeing the sky. Spectacular video imagery will then take students on a whirlwind journey through our solar system to understand what makes each planet unique. This show is a great introduction to the Sun-Earth-Moon group as well as our solar system, especially for children in the lower and middle elementary grades.

SUGGESTED CONCEPTS TO REVIEW INCLUDE:

ROTATION	REVOLUTION	ORBIT
ROCKY PLANET	GAS GIANT PLANET	DWARF PLANET
ASTEROID BELT	SOLAR SYSTEM	MOON

HELPFUL INFORMATION: VISIBLE PLANETS

In ancient times, early astronomers noticed that some bright stars in the sky moved differently from the others. They called these the 'planetai', or wanderers. They were later discovered to be not stars, but smaller bodies that orbit the Sun. The planets look like bright stars, but their position moves relative to the background stars over weeks or months.

Only the five planets closest to Earth are visible without the use of a telescope – Mercury, Venus, Mars, Jupiter, and Saturn. These are the 'visible planets'; the planets Uranus and Neptune were not discovered until after the invention of the telescope. One or more of the visible planets can usually be seen in the night sky, if one knows where to look. The planets are often brighter than stars, and appear to 'twinkle' less.

Up to date information about what planets are visible in the night sky may be found at:

http://www.skyandtelescope.com/observing/ataglance

ACTIVITIES:

Teachers are encouraged to conduct pre-visit and post-visit classroom discussions and activities with their classes to make the most of their experience. Consider having students act out the motion of the Sun, Earth, and other planets with this kinesthetic solar system model that introduces the concepts of rotation and revolution:
http://ofcn.org/cyber.serv/academy/ace/sci/cecsci/cecsci067.html

WEBSITES

Kids' Astronomy Website on our Solar System:
http://www.kidsastronomy.com/solar_system.htm

NASA's Solar System Site for Kids:
http://solarsystem.nasa.gov/kids/index.cfm