



# Eyes on the Skies

## A Pre-Visit Information Guide for Teachers

Meets the following RI GSE requirements: ESS2(7-8)-7, ESS2(7-8)-8, ESS2(9-11)-5

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 **"Eyes on the Skies."** 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.

### EYES ON THE SKIES

For thousands of years, and all across the globe, people have looked to the night sky. The motion of the sun, moon, stars and planets has given people valuable information that has helped them in innumerable ways. The sky can be used as a clock, a calendar, a compass, and more. Join us as we meet four groups of people across the globe to see how they have used the night sky and discover the amazing traditions of astronomy around the world.

We start by traveling to Polynesia. Students will see how the sky looks different from the southern latitudes as they find out how Polynesians sailors use the sky to navigate from island to island. We will then travel to Central America to meet the Ancient Maya and discover how the Mayan calendar system related to the visible motion of the sun, moon, and planets. Continuing our journey in the Canadian Arctic, we will see how Inuit peoples tell myths about the sky and learn how they interpret the phenomenon of the aurora borealis. Finally, we will meet the Dogon people of Mali to learn how they use the stars to tell the time of year to help them plant and harvest their crops.

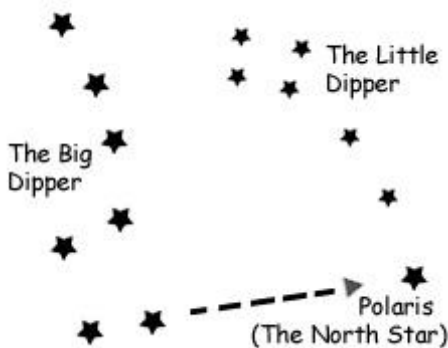
During these travels, students will learn about the visible objects of the night sky and their motion. Students will also gain a greater understanding of the contributions of different cultures to the universal science of astronomy and understand how cultures differ around the world in their interpretations of natural phenomena.

## **SUGGESTED CONCEPTS TO REVIEW INCLUDE:**

AURORA BOREALIS	ECLIPTIC	PLANETS
CARDINAL DIRECTIONS	MAYA	POLARIS
CONSTELLATIONS	MOON	RETROGRADE MOTION
CULTURE	ORBITS	STAR CLUSTERS

## **HELPFUL INFORMATION: FINDING THE NORTH STAR**

As you observe the night sky over time, you will notice that the stars in the North don't appear to move across the sky with the other stars. Instead, they move in circles around Polaris, the North Star. If you have trouble finding the North Star, use this diagram to help.



**Find the Big Dipper. Locate the two stars at the front of the bowl. Draw an imaginary line through these stars. The star at the end of that line is Polaris, the North Star. It is found at the end of the handle of the Little Dipper, and is located directly above the Earth's North Pole.**

## **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. Have the students observe the sky over the course of several nights to notice what is visible to them. Have them create their own night sky constellation and write a myth to explain its significance.

## **WEBSITES**

Cultural Astronomy Digital Library:

[http://ecuip.lib.uchicago.edu/diglib/science/cultural\\_astronomy/](http://ecuip.lib.uchicago.edu/diglib/science/cultural_astronomy/)

Mythology of the stars, planets and constellations:

<http://windows2universe.org/mythology/stars.html>

For more links visit our website at:

[www.providenceri.com/museum](http://www.providenceri.com/museum)