

One World, One Sky

Description

When the lights go down, the “stars” will shine inside the Nathan and Fanny Shafran Planetarium. The concepts of day and night will become clearer as students observe sunrise and sunset within the planetarium. Students will be delighted to see Sesame Street characters Big Bird and Elmo enjoy an imaginary and interactive trip to the Moon. Outside the Museum, students will discover how the Planetarium was designed as an astronomical instrument to locate Polaris, the North Star.

Objectives

- A planetarium can show the movement of the Sun, the Earth and other objects in space.
- We live on planet Earth.
- The Earth’s rotation causes day and night.
- The star closest to the Earth is the Sun.
- A Moon revolves around the Earth.
- Astronauts visited the Moon.

Ohio’s Learning Standards

Pre-Kindergarten: Earth and Space Science – Observations in Nature

- The sun and moon are visible at different times of the day and night.

Pre-Kindergarten: Earth and Space Science – Explorations of the Natural World

- Recognize familiar elements of the natural environment and understand that these may change over time.
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Kindergarten: Earth and Space Science – Daily and Seasonal Changes

- Weather changes are long-term and short-term.
- The moon, sun and stars are visible at different times of the day or night.

Before Your Museum Visit

If this will be your first trip to the Museum for your students, you may want to review the following:

- What is a Museum?
- What is our purpose for visiting The Cleveland Museum of Natural History?
- How should we handle objects at the Museum?
- Introduce the vocabulary and additional resources provided below.

Vocabulary

astronomer – a scientist who studies space

astronaut – a scientist trained to make flights in space and conduct research about it

axis – an imaginary line around which a body moves; the Earth rotates on its axis once every 24 hours

constellation – an imaginary picture drawn on the sky to show a group of stars

day – the period of light between dawn and nightfall or sunrise and sunset

Earth – the name of the planet on which we live

gravity – the invisible force of attraction of a celestial body upon objects at or near its surface, drawing them toward the body

moon – the satellite of Earth made of rock

night – the period of darkness between sunset and sunrise

orbit – the path of a celestial body as it revolves around another body; the Earth orbits the Sun

planet – a body of rock or gas that orbits the Sun and reflects its light

planetarium – a room or building containing a special projector for showing images of celestial objects

Polaris – the name given to the North Star

revolution – orbital motion about a point; the Earth revolves around the Sun

rotate – to turn around an axis or center

solar system – the Sun and all the celestial bodies that orbit around it

space – the area in which our Earth, the Sun, the Moon and the stars exist

Sun – the name of the star closest to the Earth

telescope – an instrument used for viewing distant objects



Extension Activities

Make observations and discuss about the day time and night time sky.

1. Discuss planet Earth and what makes our planet unique.
2. Discuss what an Astronaut is and where they have visited other than Earth.

Online Resources for Teachers and Students

Click the link below to find additional online resources for teachers and students. These websites are recommended by our Museum Educators and provide additional content information and some fun, interactive activities to share with your class.

CMNH Educators regularly review these links for quality. Web addresses often change so please notify us if any links have issues.

Cleveland Museum of Natural History <https://cmnh.org/edlinks>

Educator Resource Center (ERC)



Educator Resource Center
CLEVELAND MUSEUM OF NATURAL HISTORY
Celebrating 30 years of supporting science education

The Educator Resource Center offers educator workshops, thematic teaching kits, animal dioramas, and more for loan to area teachers.

Contact the ERC at 216-231-2075 for information on individual or school membership.

Visit the Museum's ERC website for more information on workshops
<https://www.cmnh.org/ERC>

Hours

- Tuesday through Friday, 2 to 5 PM
- Wednesday, 2 to 6 PM
- Saturday, 9 AM to 1 PM
- Closed Sunday and Monday

Materials for Loan

If you're interested in additional resources be sure to check out the following ERC materials or browse ERC materials online at <http://l4u.cmnh.org>

Related ERC kits for this topic include:

All About the Earth, Sun and Moon: Start a revolution for students with hands-on activities including globes and models of Moon phases, eclipses and more!

Earth, Sun and Moon Model: Teachers can use this 3-D model to explore and engage students in exploration of the Earth, Sun and Moon.

