

Reasons for the Seasons

Grade 5

Teacher's Guide



Lake Erie Nature & Science Center

Description

In this planetarium-based field trip, students will explore the planetary reasons for the seasons.

Length: 60 minutes. **Adult chaperones recommended:** 4-6

Content Standards

Subject	Gr	Standard	Objective/"I can" Statements
Earth/Space	5	<ul style="list-style-type: none">• The sun is one of many stars that exist in the universe .• Most of the cycles and patterns of motion between the Earth and sun are predictable.	I can explain that the earth, moon and sun move in predictable cycles and explain how they contribute to the seasons on Earth.

Pre-trip Activity

Build sundials out of everyday materials.

Vocabulary

axis	rotation
climate	latitude
orbit	season
revolution	

Book

- Secrets of the Seasons: Orbiting the Sun in Our Backyard by Kathleen Weidner Zoehfeld. Random House, 2014.

Post-Trip Activities at School

- Have students represent the sun, moon and Earth and their orbits graphically and to scale. Use actual data and measurements for the representation.

Extension Activities

- Solar energy collection is most effective in areas that receive direct sunlight for long periods of time. Explore and Explain why solar panels would be a good idea or not based on your location. Resource:
 - The National Atlas mapping project provides maps that show areas within the United States that are effective in generating solar energy. This can be a starting resource for the Designing Solutions section listed in the classroom examples.
- Use fractions lessons related to the seasons to calculate the amount of direct sunlight that different parts of the Earth receive during different seasons.