Unit 1-Sun, Moon and Stars

Content Area: **Science**
Course(s): **Science 1**
Time Period: **Marking Period 1**
Length: **MP 1**
Status: **Published**

Essential Questions

- What is the pattern of the sun's movement?
- Does the Moon create its own light?
- What causes the seasons?
- What are the patterns of the moon?
- Where do the stars go during the day?

Big Ideas

- Patterns of movement of the sun, moon, and stars as seen from earth can be observed and predicted.

Cross-Curricuar Integration

Integration Area: Mathematics

1.DL.1.A.1 1. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another

1-ESS1-1. Use observations of the sun, moon, and stars to describe patterns that can be predicted.

Activity:

Students will complete a graph of their favorite seasons

CSDT Technology Integration

8.1.2.IC.1: Compare how individuals live and work before and after the implementation of new computing

technology

Activity: Students will watch the first moon landing video.

Science and Engineering

Planning and Carrying out Investigations

- Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.

Analyzing and Interpreting Data

- Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

Science and Society

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Enduring Understandings

New Jersey State Learning Standards

Earth's Place in the Universe

1-ESS1-1 Use observations of the sun, moon, and stars to describe patterns that can be predicted.

- ESS1.A: The Universe and its Stars: Patterns of the motion of the sun, moon, and stars in the sky can

be observed, described, and predicted

1-ESS1-2 Make observations at different times of year to relate the amount of daylight to the time of year.

- ESS1.B: Earth and the Solar System Seasonal patterns of sunrise and sunset can be observed, described, and predicted.

Focus Areas

Knowledge

- How the Sun appears to travel across the sky and that this is due to the Earth's motion, not the Sun's.
- The Moon appears to grow and shrink in the sky based on how much reflected sunlight we can see.
- The four cardinal directions.
- Moons are objects that revolve around planets.
- The Moon shines because it is reflecting sunlight.
- Because the Sun is so close, its brightness keeps us from seeing other stars during the day.
- Seasons are caused by the Earth's tilt.
- The Sun appears to be higher in the sky during the summer and lower in the winter.

Skills

- Make predictions about the Sun's location at various times of the day.
- Label a compass rose.
- Explain how moons are different than planets.
- Make predictions about the Moon's phases.
- Explain how the Sun's presence during the day keeps other stars from being seen.
- Explain how the Earth's tilt causes the seasons.
- Compare and contrast the Sun's location in the sky during the summer and winter months.

Understandings

- Use observations of the sun, moon, and stars to describe patterns that can be predicted.
- Make observations at different times of year to relate the amount of daylight to the time of year.

Resources

Primary Resources

- Mystery Science

Scientific Inquiry

Core

- Could a Statue's Shadow Move
- What does your shadow do when you're not looking (Mystery Science)
- How Can The Sun Help You If You Are Lost? (Mystery Science)
- Why do you have to go to bed early in the summer
- Why do Stars Come Out at Night? (Mystery Science)
- How Can Stars Help You If You Are Lost? (Mystery Science)

Supplemental

- Four Seasons Activity
- Reasons for the Seasons Activity
- All About the Sun
- All About the Moon
- Moon Phases Activity
- All About Stars
- Space Fact Craft
- Neil Armstrong DBQ