Unit 1: Finding the Moon

Content Area: **Science**
Course(s): **Science 1**
Time Period: **September**
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Status: **Published**

Enduring Understandings

Observable, predictable patterns in the solar system occur because of gravitational interactions and energy from the Sun.

The Sun is a star that can only be seen during the day.

The Moon is not a star and can be seen sometimes at night and sometimes during the day.

The Moon appears to have different shapes on different days.

The appearance of the Moon changes in a cycle that takes about a month.

Note: Observing and understanding the predictable patterns of movement of the Sun and Moon are important at this grade level. Students will identify specific moon phases at a later grade level.

Essential questions

To what extent are the properties of objects in our solar system predictable?

What do we see in the sky?

Why does the moon shine?

What causes the patterns of the moon?

What is the Moon like?

Content

Additional Resources

National Science Digital Library, Science Digital Literacy Maps

- Common Themes: Patterns of Change

http://strandmaps.nsdl.org/?id=SMS-MAP-2436

- The Physical Setting: Solar System

http://strandmaps.nsdl.org/?id=SMS-MAP-1282

- National Science Digital Library Science Refreshers
- http://nsdl.org/refreshers/science/*Science Curriculum Topic Study*

Seasons, p. 185, Earth, Moon, and Sun System, p. 194

Related Literature

- The Magic School Bus Lost in the Solar System

Joanna Cole. Scholastic Trade, 1999.

- The Moon Book

Gail Gibbons. Holiday House, 1998.

- A Moon in Your Lunch Box

Michael Spooner. Bt Bound, 1999.

- Man on the Moon

Anastasia Suen. Puffin, 1997.

Internet Resources

- Earth and Moon Viewer

http://www.fourmilab.ch/earthview/vplanet.html

- Orea Cookie Moon Phases

http://analyzer.depaul.edu/paperplate/Oreo%20Moon%20phases.htm

- NASA Kids

http://kids.msfc.nasa,gov

- The Nine Planets: The Moon

http://www.seds.org/billa/tnp/luna.html

- Interactive Story

www.beaconlearningcenter.com/WebLessons/AsTheEarthTurns/default.htm

- Lunar Calendar

http://www.sciencenetlinks.com/Esheet.php?DoclD=124

Videos

Skills

Discuss how a lunar eclipse is the effect of the Moon directly passing behind our Earth into its shadow. With Earth in the middle, the Sun, the Moon, and Earth are all aligned.

Compare and contrast the moon and sun.

Create a model of the room with clay, play dough, computer software, legos, etc.

Create and complete a moon journal with parents, charting moon phases and movement.

Find patterns in the moon cycle.

Use direct observations, charts and graphs available through the media, or simulations to develop a generalized set of rules describing when the Sun and Moon are visible.

Continue to frequently ask students to view the moon at different parts of the school year. Analyze these observations.

Compare and contrast daytime and nighttime skies.

Explore the belief of some students that the Moon is visible only at night and the Sun is visible only during the day.

Discover that the Moon reflects light from the Sun.

Read about the Moon's surface.

Standards

SCI.1	Space Systems: Patterns and Cycles
SCI.1-ESS1-2	Make observations at different times of year to relate the amount of daylight to the time of year.
SCI.1-ESS1-1	Use observations of the sun, moon, and stars to describe patterns that can be predicted.