

Grade 6 Sky Science ~ Specific Learner Outcomes

Checklist of Understanding

1. Recognize that the Sun and stars emit the light by which they are seen and that most other bodies in space, including Earth's Moon, planets and their moons, comets, and asteroids, are seen by reflected light.	<input type="checkbox"/> I can name objects in the sky that emit light. <input type="checkbox"/> I can name the objects in the sky that are seen by reflected light.
2. Describe the location and movement of individual stars and groups of stars (constellations) as they move through the night sky.	<input type="checkbox"/> I can describe the location of stars and constellations in the night sky <input type="checkbox"/> I can describe how stars move throughout the night sky.
3. Recognize that the apparent movement of objects in the night sky is regular and predictable, and explain how this apparent movement is related to Earth's rotation.	<input type="checkbox"/> I can demonstrate the movement pattern of objects in the night sky <input type="checkbox"/> I can explain how the Earth's rotation is related to movement of objects in the sky.
4. Understand that the Sun should never be viewed directly, nor by use of simple telescopes or filters, and that safe viewing requires appropriate methods and safety precautions.	<input type="checkbox"/> I can describe a safe way to view the sun <input type="checkbox"/> I know that the sun should NEVER be viewed directly.
5. Construct and use a device for plotting the apparent movement of the Sun over the course of a day; e.g., construct and use a sundial or shadow stick.	<input type="checkbox"/> I can describe how the length of a shadow changes over the course of a day. <input type="checkbox"/> I can name a device for tracking the movement of the sun over the course of a day.
6. Describe seasonal changes in the length of the day and night and in the angle of the Sun above the horizon.	<input type="checkbox"/> I can describe how the length of day and night for change with the seasons. <input type="checkbox"/> I can illustrate how the angle of the Sun changes over the course of the year.
7. Recognize that the Moon's phases are regular and predictable, and describe the cycle of its phases.	<input type="checkbox"/> I can describe the phases of the Moon and how long its cycle takes.
8. Illustrate the phases of the Moon in drawings and by using improvised models. An improvised model might involve such things as a table lamp and a sponge ball.	<input type="checkbox"/> I can draw, label and model the phases of the Moon in relation to its location of the Earth.
9. Recognize that the other eight known planets, which revolve around the Sun, have characteristics and surface conditions that are different from Earth; and identify examples of those differences.	<input type="checkbox"/> I can name all 8 planets in order from the sun <input type="checkbox"/> I can give examples of how the other known Planets differ from Earth.
10. Recognize that not only Earth, but other planets, have moons; and identify examples of similarities and differences in the characteristics of those moons.	<input type="checkbox"/> I can name and describe moons that exist on other planets <input type="checkbox"/> I can name similarities and differences between Earth's Moon and the moons of other Planets.
11. Identify technologies and procedures by which knowledge, about planets and other objects in the night sky, has been gathered.	<input type="checkbox"/> I can name several devices that gather information about planets and other objects in the night sky.
12. Understand that Earth, the Sun and the Moon are part of a solar system that occupies only a tiny part of the known universe.	<input type="checkbox"/> I understand that our Earth, Sun and Moon are part of a solar system that is very small compared to the rest of the known universe.

Student Name: _____

Date of Unit Test: _____

Parent Signature: _____

Date: _____

Sky Science Study Guide

1. Sun
 - a. The sun and stars emit (give off) light by which they are seen. Do other celestial bodies emit light? How is it that it looks like Earth's moon, other planets and their moons, comets and asteroids are shining in the night sky?
 - b. Why can we look directly at the Sun? What other safety precautions should we take regarding the sun?
2. Describe the seasonal changes in the length of day and night and in the angle of the sun above the horizon.
 - a. Tilt of the earth in relation to the sun
3. Understand how BIG our solar system is and that we (the Earth, the Sun and the Moon) occupy only a tiny part of the known universe.
4. Recognize that the other planets which revolve around the sun, have characteristics and surface conditions, that are different from the Earth, and identify examples of these characteristics.
 - a. Correct order of the planets; including Pluto (dwarf planet)
 - b. Provide at least two major characteristics of each planet that's unique to it.
 - c. Inner planets and outer planets and where is the asteroid belt?
 - d. Able to read a chart about planets and pull specific information from it. (you already have a chart – make sure you can read and understand what it is telling you).
5. Our Moon
 - a. Does the Moon rotate on its own axis?
 - b. Does the Moon revolve around earth? How?
 - c. What are the major moon phases and draw them.
 - d. Recognize that the Moon's phases are regular and predictable. Demonstrate an ability to draw the cycle of the phases.
 - e. Understand which part of the cycle the Moon is in from drawings and models.
6. Constellations
 - a. What are they?
 - b. How do constellations move across the night sky? Be able to demonstrate how a group of stars move in a drawing, with and without Polaris being present.
 - c. How does the movement relate to Earth's rotation?
7. Technology
 - a. Identify technologies and procedures that have gathered information on planets and other objects in the night sky.