

Earth Sun Moon Unit Outline

Objectives and GLE's:

- ☺ Understand how the earth rotates and how its movement affects us
- ☺ Distinguish the difference between night and day and will understand what causes it
- ☺ Explain the Earth's revolution around the sun
- ☺ Learn that the moon revolves around the Earth
- ☺ Explain why we cannot see the moon shine during the day
- ☺ Describe the different changes in the moon and what the moon's surface is like
- ☺ Understand that Earth is the planet we live on and that it is the only planet with life

Day	Activity
1	Earth Sun Moon Video
2	<p><i>FOCUS: What do you see in space?</i> <i>Objective: SWBAT create a journal that they will be able to use daily to review the topic they have learned for the day. Students will be able to see different objects in space.</i></p> <p><i>Materials: Space LogBooks</i></p> <ol style="list-style-type: none"> In Space Journals, students will illustrate "Day" and "Night". Answer Focus question in the journal.
3	<p><i>FOCUS: What is out in Space?</i> <i>Objective: SWBAT learn information about Earth.</i></p> <p><i>Materials:</i> <i>Book: "The Magic School Bus: Lost in the Solar System"</i></p> <ol style="list-style-type: none"> Students write "Out in Space" in their journals Read "Magic School Bus" and write down at least 4 facts learned <ul style="list-style-type: none"> ***There are nine planets in space ***The nine planets make up the solar system ***Earth is the only planet we know of where people, plants, and animals can live. ***Jupiter is the biggest planet. Students draw and label 5 objects in space in their Space Journals
4	<p><i>FOCUS: What is the moon's Shapes?</i> <i>Objectives: SWBAT understand that the moon is always round, that the sun lights up the moon, different shapes of the moon are called "phases"</i></p> <p><i>Materials: Chart paper, Crayons, Moon in Motion Book</i> <i>Book: "Moon Phases"</i></p> <ol style="list-style-type: none"> Ask students to draw the different moon shapes on the board Explain that the moon is always round. It appears to change shapes b/c we are only able to see the part of the moon that the sun lights up. These shapes are called phases of the moon.

Earth Sun Moon Unit Outline

	<p>4. Make Moon Flip books 5. In Space Journal have students draw all the different phases in correct order</p> <p><i>FOCUS: Moon Calendar</i></p> <p><i>Materials: Moon Calendar</i></p> <p>1. Pass out Moon Calendar and explain extra credit option.</p>
5	<p><i>FOCUS: What is a Moon's Phase?</i> <i>Objective: SWBAT develop a better understand of the moon's phases.</i></p> <p><i>Materials: String, Star Stickers, Clad/Moon Patterns</i> <i>Book: "The Moon Seems to Change" by Franklyn Branley</i></p> <p>1. Students cut out clad/moon patterns. Put stickers on the clad to represent nighttime. Students put the 4 main phases and attach to the clad to make a mobile. Hang in the classroom. 2. Journal Question: "I like the moon the best when it looks like this..." 3. Phases of the Moon Quiz (pg D44-D51)</p>
	<p><i>FOCUS: Earth Sun Moon Web Quest Project</i></p> <p><i>Materials: Earth Sun Moon Web Quest</i></p> <p>1. Pass out web quest and explain extra credit options.</p>
6	<p><i>FOCUS: Why does the Moon shine?</i> <i>Objectives: SWBAT learn that the sun is actually a giant star, why the moon does not shine during the day, and that the sun makes the moon shine.</i></p> <p><i>Materials: Flashlight, Black Construction Paper, Tape</i> <i>Book: "Moon" by Steve Tomecek</i></p> <p>1. Why can't we see the moon during the day? 2. Shine light on black paper w/lights off. Turn lights on, what happens? 3. Phases of the Moon Lesson Vocabulary/Interpret Illustrations (pg D44-D51)</p>
7	<p><i>FOCUS: What size is the Moon?</i> <i>Objectives: SWBAT understand that the closer they are to an object, the larger it looks, that the sun is actually much larger than the moon, and that the moon is located much closer to the earth than the sun is located.</i></p> <p><i>Materials: index cards, scissors</i></p> <p>1. Which is larger, the Moon or the Stars. The moon is actually smaller. It appears larger b/c we are closer to it. 2. Make a frame w/index card. Have students use the frames and walk towards an object. What happens to the object in the frame?</p>
8	<p><i>Foas: What are Moon Craters?</i></p>

Earth Sun Moon Unit Outline

	<p><i>Objectives: SWBAT learn how the moon's surface looks and compare what they are able to observe about the moon with what the surface actually looks like</i></p> <p><i>Materials: Crayons, paper, plastic cups, half-filled w/flour, marbles</i> <i>Book: "If You Decide to Go to the Moon." By Faith McNulty</i></p> <ol style="list-style-type: none"> 1. In Journals, have students draw & color what they think the moon looks like. 2. Explain that the surface of the moon contains broad, flat areas, areas like mountains, and billions of craters. These craters are formed when solid objects fly through space and crash into the moon. 3. Have students drop marbles into their cups and draw a picture of their craters. Label their Journal "Craters form when something hard crashes into the moon" 4. Lesson 5 Interpret Illustrations "How are Earth & the Moon Different?"
9	<p><i>FOCUS: What is the Moon's Surface?</i></p> <p><i>Objectives: SWBAT understand the texture of the moon's surface and how it differs from earth's surface; relate the bumpiness of the mixture to the surface of the moon.</i></p> <p><i>Materials: cardboard circles, dried beans, packing pieces, pasta, aluminum foil, glue</i></p> <ol style="list-style-type: none"> 1. The surface of the moon is covered with craters, ridges, mountains, and valleys. Cover the cardboard circles with glued objects. Then cover the objects w/aluminum foil. 2. "The moon's surface is full of craters" and explain what they discovered from the experiment. 3. Moon Rock Treats: 24 ounces of white baking chocolate, 1 cup of peanuts, 1 cup of mini pretzels, 1-10 ounce bag of M&M's, 1-10 bag of mini marshmallows, paper baking cups, and spoon. Melt the chocolate and stir in the remaining ingredients. Spoon into baking cup. Let the mixture cool until it sets. ***Do this activity while the Moon's dry.
10	<p><i>FOCUS: What causes Day and Night?</i></p> <p><i>Objectives: SWBAT understand that Earth rotates on its axis. This rotation creates night and day.</i></p> <p><i>Materials: Cups, Globe, index card, flashlight</i> <i>Book: "Day & Night" by Margaret Hall</i></p> <ol style="list-style-type: none"> 1. Cut out person and tape it on the globe where we live. Turn off lights and shine the flashlight on the globe. Rotate globe so the person is first in the light (day) and then in the dark (night). 2. If it is day for us, where is it night. 3. Complete Lesson 4 Vocabulary "How Earth Moves"
11	<p><i>FOCUS: What causes the Seasons?</i></p> <p><i>Objectives: SWBAT understand that Earth revolves around the sun. This revolution causes our seasons to change.</i></p>

Earth Sun Moon Unit Outline

	<p><i>Materials: darkened room, lamp, chalk, globe, and paper star, "Musical Movers" Worksheet</i></p> <p><i>Book: "Why Do the Seasons Change?" by Melissa Stewart</i></p> <ol style="list-style-type: none"> 1. Put the lamp in the middle of the floor and draw a circle around it with chalk. (The lamp is the sun). Place paper star (North Star) on the North Wall. Place globe on the circle with North Pole pointing towards the star. Take the globe $\frac{1}{4}$ of the way around the circle. This is one season. Keep going until all four seasons are represented. 2. Journal Topic: "When the Earth moves around the sun, the seasons change." 3. Complete "Musical Movers" worksheet
12	<p><i>FOCUS: Movement in Space?</i></p> <p><i>Objectives: SWBAT understand the positions of the earth, sun, and moon, and the revolutions of these three objects in space</i></p> <p><i>Materials: Moon, Sun, Earth Posters, Open Area, Out-of-This-World Orbits Worksheet, Solar System in Motion Song</i></p> <ol style="list-style-type: none"> 1. Position sun in the center of the open area, Position Earth about two yards away from the sun. Position Moon by walking around the earth while earth walks around the sun. Repeat with three more students. 2. Journal Topic: "The sun is the center of our Solar System. The Earth and Moon revolve around the sun." 3. Create "Out of this World" Orbits 4. Sing Solar System in Motion
13	<p><i>FOCUS: Earth Sun Moon Bingo</i></p>
14	<p><i>FOCUS: Earth Sun Moon Review</i></p>
15	<p><i>FOCUS: Earth Sun Moon Common Assessment</i></p>