

THE SUN AND EARTH'S ROTATIONS

Subject

Basic science

Prepared By

[Instructor Name]

Grade Level

5

Overview

This lesson plan covers teaching content for;

- 1.The sun
- 2.Relationship between the sun and the earth
- 3.Earth's rotation and revolution and its effects

Objectives

Students should be able to;

1. Students will be able to identify the sun as the center of our solar system,
2. Provide details about the sun,
3. And demonstrate the rotation in regards to seasons, daytime and nighttime.

Activity Starter/Instruction

1. Label the chart or board with the topic question: What do we know about the Sun?
2. Each student will need a science journal to record thoughts, observations, and findings over the coming weeks. There are a number of ways to create journals if you are not providing ready-made ones. For example: • have students make folders from construction paper. They can then insert loose leaf paper (both lined and drawing paper) into the folders. • Fold sheets of large paper in half. Either staples the sheets together or punches holes and ties the sheets together with string or yarn.

Guided Practice

Day 2/ Lesson 2: 15 Mins

1. Explain that the Earth spins around once every day. Place a floor lamp in the middle of the demonstration area and turn it on. Mention that the lamp acts as the Sun and of course, the Sun is always "on" and always shining. If young students express confusion at this, tell them this demonstration will

Teacher Guide

Day 1/ Lesson 1: 15 Mins

1. Explain that over the next few days, students will be learning more about the Sun and what it does for the Earth and other objects in space. But first, before they start learning new things, they will share what they already know about the Sun. If necessary, briefly review the ground rules for a brainstorming session: • everyone gets a chance to contribute, and all ideas are recorded on the chart or board. • There is no right or wrong ideas in a brainstorming session.
2. Listen to everyone's ideas. You may repeat an idea and expand on it, or you may disagree and give your reasons for disagreeing.
3. Give students a few minutes to think about the question, and then invite them to share their prior knowledge.
4. Record their list of ideas on the chart or board you have prepared for this purpose. If necessary, use some of these prompts: • what does the Sun look like? • What is it? • What else do you know about the Sun? • What does the Sun do for the Earth?

Materials Required

-white cardstock
-1 flashlight
-science journal
-glue
-paint
-scissors
-map
-table lamp or bulb
-globe

Additional Resources

- <http://montana.pbslearningmedia.org/resou>
- <https://www.pbslearningmedia.org/resource>
- <https://www.pbslearningmedia.org/resource>
- <https://study.com/academy/lesson/gravity-l>
- <https://study.com/academy/lesson/earths-r>
- <https://study.com/academy/lesson/earths-r>
- <https://www.cpalms.org/Public/PreviewResc>

Additional Notes

- The Sun appears to move across the sky, But things are not always as they appear.
- The Earth rotates from West to East, making the Sun APPEAR to move from East to West.

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- show them how the Sun is still shining, even at night.
2. Show students their approximate location on a map, and tape a cotton ball, very small figurine or sticker onto the area on the globe used for demonstration.
 3. Ask a volunteer to help. The volunteer will hold the globe while the teacher holds a clock. Use a clock with hands that are easy to move, such as a time-teaching clock.
 4. Ask the volunteer to please hold the globe so that the figurine (or whatever you choose to use) is in the direct light of the lamp, or "Sun". Announce that it is high noon and show high noon on the clock. Notice together how the figurine is getting the most light of anywhere on the globe.
 5. Explain to the class that it will take 12 hours for the figurine to travel just halfway around. As you move the clock to 1:00, the volunteer should move the globe a little. Do this together hour by hour so the class can see what is happening.
 6. By the time you are at 6:00, your volunteer student should have moved the figurine 45 degrees. Stop at this point so students can observe the angle of the light on the figurine. Discuss how this angle is similar to the angle of light near dusk. Notice the long shadow of the figurine which is like the long shadows people see as evening approaches.
 7. Continue for the next six hours to midnight and stop again. Notice how there is no light on the figurine, and ask the kids what they think anyone located here on the globe would be
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5. Explain that students will be keeping journals throughout their investigations. They may record their discoveries, data, thoughts, and ideas by writing and by drawing, the way that working scientists do. Then have participants make their first entries in the journals. Give them these instructions: • Label the journal page with today's date and the question "What do I know about the Sun?" • Record everything you know about the Sun both in writing and drawings.
6. If time permits, invite students to share their journal entries. Often they learn a great deal from each other's strategies for recording.

Guided Practice

Day 3/ Lesson 3: 15 Mins

1. Discuss how all the while the Earth is spinning round and round, it is also moving around the Sun.
2. Use a smaller globe, if necessary, and walk around the lamp while spinning the globe.
3. Let children take turns holding the smaller globe and walking around the lamp. They will also enjoy using their bodies as the Earth and walking around the lamp and spinning at the same time. Doing these things themselves will cement the lesson in their minds.

doing at this time. (Answer: Sleeping, of course.)

8. Continue another six hours and ask them to take notice of how the Sun is rising on the spot on the globe with the figurine. Hour by hour, back to high noon.
9. Point out again that this demonstration showed the rotation of the Earth on its axis over the course of one day.

Assessment Activity

1. To assess student's knowledge of the movements of the Sun, Earth and Moon and the timeframes associated with those movements.
 2. To assess student's representations of the Sun Earth and Moon in terms
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Assessment Activity

	<p>of demonstrating the rotation and revolution of the Earth around the Sun and the Moon around the Earth. Also their reflections on what relationship this has with the causes of day and night.</p>	
	<p>Summary</p> <ol style="list-style-type: none"> 1. Students use hands on investigations and activities to explore how the spinning Earth impacts the Sun's position at different parts of the day as well as investigate the cause of the different phases of the Moon. 2. What causes day and night? Teacher captivates student's interest about this topic by covering what they know and introducing new ideas. 3. Students partake in hands-on, activity based experiences to explore the Sun-Earth-Moon system and their relating movements. This will include how the rotations and revolutions of the Earth and Moon impact day and night. 	