

Topic: day, night

Overview

In this lesson students will be introduced to the concept of day and night. In this lesson, students will view a Unitedstreaming clip relating to day and night. Students will then complete an independent, self-guided website that leads them through the rotation of the earth around the sun.

Grade 1

Time Allotment

Two 45-minute periods

Learning Objectives

On completion of this lesson students will be able to:

- Describe the relationship between the sun and the Earth through group discussion and the completion of a website activity.
- Create a model demonstrating night and day.
- Recognize that the sun is the source light and does not move by participating in a flashlight activity.

This lesson addresses Va. Science SOL 1.6.

Media Components

- **This is Our World.** Discovery Channel School. (2001). Retrieved March 8, 2007, Unitedstreaming. www.wvpt.unitedstreaming.com/index.cfm
Segment Used: Segment 5: Day and Night (01:08)
- Claymation software
- Teacher Presenter Station (LCD projector and computer) with speakers.
- Computer with Internet Access for each student.
- Digital Cameras with connecting cables to the computer.
- Photo Story, Movie Maker, or another program for organizing pictures.
- Bookmark website:
<http://www.beaconlearningcenter.com/WebLessons/AsTheEarthTurns/default.htm>. This is an interactive website for students. The students listen and follow along as two children explore day and night and the earth's rotation. As the website progresses students have to answer questions correctly to move to the next page.

Materials and Student Handouts

- 1 box (such as a tissue box).
- Either a picture of the globe or a small ball of the globe.
- Blue, green and yellow clay for each group of students. (2-4 students per group)
- Flashlights – 1/ 2 students
- Digital Cameras 1/ 2-4 students

Teacher Preparations

- Download, preview, and cue video
- Preview As the World Turns Website and bookmark it for student use.
- Plan for the use of Claymation and Photo Story for the Culminating Activities.
- Ensure that you have Photo Story, Movie Maker, or some other program available for organizing photos.
- Divide students into groups of 2-4

Introductory Activity

Focus: I have a mystery box for you today! I want you to ask questions to guess what is inside of my mystery box! (Inside of the box the teacher should have placed either a picture of the Earth or a small ball of the Earth. Students need to be made aware that what is in the box is a representation of the real object.)

Activity: Students are going to ask questions to try and narrow down what is inside of the mystery box. As students make their guesses the teacher should record their questions and whether the answer was yes or no. This can easily be recorded in a two column chart. The teacher can also help to guide students in their guesses.

Follow-up: Once students have guessed that the Earth is in the mystery box the teacher can review the questions that helped the students to make this discovery. Review what a globe shows, the seven continents, and where we are on the Earth.

Additional information about how to use the mystery box can be found at <http://cela.albany.edu/literacycorner/activities/mysterybox.htm>

Learning Activities

1. Focus: Did you know that right now on our Earth there are boys and girls that are sleeping because it is night time where they live? Today we are going to talk more about the Earth and what causes day and night. I have a short video clip for you to watch. As you watch this video clip, I want you to watch to see what is happening on the other side of the globe.

Play: Play the video segment from the beginning.

Pause: Pause the video at 0:39. You will see a picture of the globe with one side lit up and the other side dark. The clip will say “But what about the other side of the globe?”



Follow-up: What is happening in the other side of the globe? (It is night time.) Where is the light on the globe coming from? (The sun.)

2. Focus: What do you think will happen when the Earth turns? (Students make predictions). Let’s watch and find out.

Play: Play the video from 0:39.

Pause: Pause the video at 0:50. You will see a picture of the girl looking at the globe with one side lit and the other side dark. The girl will say “Now it is darker on the North America side.”

Follow-up: What happened when the Earth rotated? (It became dark in North America).

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3. Focus: We have just one more clip to view. I want you to watch to see what the sun does.

Play: Play the video from 0:50.

Stop: Play the video until it stops at 1:08.

Follow-up: Does the sun move to cause day and night? (No, the earth rotates).

4. Focus: Now I am going to allow you to continue to explore what happens to cause day and night. You are going to be able to work by yourself to complete a website activity. Let's practice together first. (Demonstrate the first 2 pages together to familiarize students with the website). Now you can begin to complete the activity. (Walk students through how to access the website where you have it saved). Watch as Audrey and Kyle play together. I want you to be able to tell me what causes day and night.

Activity: Students are going to log on to

<http://www.beaconlearningcenter.com/WebLessons/AsTheEarthTurns/default.htm>. This is a self-guided interactive website for students. The teacher can direct students to the audio lesson where everything is read to the students or the text lesson where students have to read the directions themselves.

Follow-up: Review! Hold up a globe and shine the light on North America. Is it day or night? (Day) Am I going to move the sun or the Earth to make it night in North America? (Move the Earth.) What causes day and night? (The Earth rotates.) Students can then practice creating day and night with a partner and a flashlight just like Kyle and Audrey did in the video.

Culminating Activities



Focus: Yesterday we talked about the Earth's rotation to cause day and night. Let's refresh what we talked about yesterday by re-watching our short video clip. (Re-play the video clip from yesterday. Play from the beginning to the end.)

Activity: Today you are going to create your own video to show day and night. Students are going to use Claymation to create a video. Place students into groups of 2-4 (depending on your class). Students are to use clay to create the sun and the Earth. Their Earth can simply show a place for North America. Students should then photograph multiple pictures to demonstrate the earth's rotation. Each picture should demonstrate a very slow motion to keep the animation smooth. The Claymation project should illustrate the Earth rotating and revolving around the sun to show day and night. Once students complete their pictures, the teacher should assist in importing the photos into Photo Story. Each photo should be set at 6-10 frames per second to help with a smooth transition.

Follow-up: Students can share their Claymation projects with the class. As the videos are played, a discuss of what is happening when the video demonstrates day (the sun shining on North America) versus night (North America is away from the sun).

Assessment

- Claymation projects can be used for assessment.
- Informal assessment takes place while students complete the website portion of the lesson.

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Community Connections

- Adding students Claymations to the class website for parents to observe.
- Webcam with a class in another time zone.

Cross-Curricular Extensions

Language Arts/English

- Students practice reading through the completion of the website. Students could also create a writing assignment describing the cause of day and night.

Social Studies

- Review the seven continents and compare the time of day in other continents with North America.

About the Author

Shannon Jakeman is a first grade teacher at Guy K. Stump Elementary in Augusta County, Virginia.

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