

Essential Understanding(s)

In this lesson, students will learn that the Earth rotates on an axis, making one full rotation every 24 hours. Different sides of the Earth are exposed to the sun during the course of these 24 hours, with half of the planet being exposed to sun while the other half is deprived of light. It is this rotation that causes day and night.

Core Knowledge Content Guidelines	Language Arts Skill Guidelines
<ul style="list-style-type: none"> Vocabulary- Earth, Sun, rotate, axis, sunrise, sunset, horizon. (Review: planet, star.) The Earth rotates (spins) When it is day where you are, it is night for people on the opposite side of the Earth 	<ul style="list-style-type: none"> Use basic capitalization and punctuation in sentences to convey meaning. Participate in age appropriate activities involving listening and speaking.



Content Objectives	Language Arts Skill Objectives
<ul style="list-style-type: none"> Use domain vocabulary accurately to describe what causes night and day. Explain what causes day and night. Explain what happens during sunrise and sunset. 	<ul style="list-style-type: none"> Write sentences that begin with a capital letter and end with a punctuation mark. Look at the speaker during group discussions.

Assessment & Criteria for Success

Product or Performance Assessment



Criteria for Success

Match a picture that illustrates night or day (based on the location of a marked area on Earth and the location of the Sun) with the term day or night. Write a sentence to explain why the picture depicts night or day.

- Matches the picture illustrating day with the term day.
- Matches the picture illustrating night with the term night.
- Writes a sentence(s) that includes the following points:
 - When a side of earth faces the sun it is day.
 - When a side of earth does not face the sun, it is night.
- The sentence begins with a capital letter and ends with a punctuation mark.

Activities and Procedures

Check the type of lesson you are developing:

- Direct instruction Non–direct instruction (include inquiry, discovery, etc.)

(A) Anticipatory Set

- Review previously learned content and vocabulary (e.g. astronomy, earth, sun, moon, stars, and atmosphere).
- Remind students of key concepts about the sun and its relationship to Earth.

(B) Framing the Learning

- Purpose of lesson is to learn more about how the earth moves and how that affects us living on earth.
- Review the objectives of the lesson and itinerary of lesson

(C) The Instructional Input

- Using a globe (the Earth), demonstrate how the **Earth** rotates on its axis. Use the terms **rotate** and **axis** as you demonstrate the process and ask students to explain what these words mean.
- Place a lamp (the Sun) in the middle of the room and walk in a circle around the lamp while rotating the globe on its axis. Through questioning support students with discovering that the Earth’s rotation on its axis creates the experience of **day** and **night**.
- **(CCC*)** Discuss *Saying & Phrase*: A.M. and P.M.
- Draw a line on chart paper and label the sky above and ground below. Explain that the line represents the **horizon**—where the sky and ground appear to meet. Draw the sun above the horizon. Explain that this represents **sunrise**, the sun coming up over the horizon. Ask what they think **sunset** is (the sun going down below the horizon).

(D) Practice and Application

Students practice and apply what they learned through 3 centers:

- Center # 1: (Partner work at computer) Students listen and follow along to the story *As the Earth Turns* with a partner (<http://www.beaconlearningcenter.com/WebLessons/AsTheEarthTurns/default.htm>) and complete activities together.
- Center # 2: (Teacher table) Provide students with a toothpick, Styrofoam ball, and marker. Direct students to mark a small “x” in the upper portion of the ball. Remind students of the axis. Explain that they are going to pretend the toothpick represents the Earth’s axis. Model for students how put the toothpick through the ball on an angle. Holding the toothpick, they will turn their earth representation its axis while watching the path of the “x.” Students will talk to their partner about what happens to the “x” as the Earth turns on its axis. Place a small lamp in the middle of the table and give each student the opportunity to rotate and make a revolution around the lamp. Ask students to describe what is happening where the “x” is as they rotate their earth representation.
- Center #3: (Differentiated Independent work) Student write about A.M. and P.M. using related vocabulary and draw a representation of their writing.

(E) Summary & Closure

- Students group in triads. Student (1) summarizes how the Earth moves; Student (2) summarizes the Earth’ movement in relation to the Sun; Student (3) summarizes sunrise and sunset.
- Students complete exit card (Appendix A)
(Review Exit Card to determine what needs to be re-taught)

Comprehension Questions

1. Describe what we see at sunrise each day. (sun coming up over the horizon)
2. Describe what we see at sunset each day. (sun going down below the horizon)
3. What is the path earth travels in a path around the sun, and that it takes one year to go all the way around the called?(an orbit or revolution)
4. If it is daytime now, what is it like on the other side of the Earth? (nighttime) How do you know? (that side of the Earth is not facing the Sun)

Support & Enrichment

- Center #3 writing activity on A.M. and P.M. is differentiated:
 - (Prompt #1) Explain what time of day is A.M.? What time of day is P.M.?
 - (Prompt #2) What is the cause of A.M. and P.M.?
- Center #2 includes audio and text. Students who are not able to read the text independently can listen and follow along.

Materials & Resources

- Globe (1)
- Lamps (1 desk lamp and 1 standing lamp)
- Chart paper (2 pieces)
- Markers (1 per student)
- Styrofoam balls (1 per student)
- Toothpicks (1 per student)
- Computer center (or laptops) with internet access
- Appendix A (1 per student)

*CCC - Cross-curricular connection

Name: _____

Is it day or night?

Directions: Think about what happens in the sky during the day and at night. Look to see where the red X is in each example. Paste the word under the picture to tell whether it is day or night where the red X appears. Write a sentence explaining how you know.



I know it is

because



I know it is

because
