

# DAY 2: Modeling a Solar Eclipse

## Materials

- A ball (representing Earth)
- A small ball (representing the Moon)
- A flashlight or lamp
- A darkened room or area



## Conduct an Investigation

1. Gather the materials needed for the model: a ball to represent Earth, a smaller ball to represent the Moon, a flashlight or lamp that represents the Sun, and a darkened room or area.
2. Follow your teacher’s instructions to set up the materials in the center of the room.
3. Dim the lights.
4. Observe the model and discuss what you think will happen when the Moon moves between Earth and the Sun.
5. Take turns with your classmates to participate in the model, moving the Moon and shining the light from the flashlight or lamp on the Earth.



## Communicate Information

1. What happens when the Moon blocks light from reaching the Earth?

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2. Describe the difference in appearance of the types of eclipses. What causes the different types of eclipses?

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**Objective:** Students will create a model to demonstrate how a solar eclipse occurs.

### Teacher Notes

Begin the lesson by reviewing what the students have learned about solar eclipses so far. Explain that today, they will create a model to demonstrate how a solar eclipse occurs.

### Materials

For best results, use balls or cardboard circles of varying sizes for this activity.

### Conduct an Investigation

**Steps 1–2.** Gather and set up the materials in the center of the classroom, ensuring that each student can see the model clearly.

**Step 3.** Dim the lights or move to a darkened area of the classroom where the model can be easily seen.

**Step 4.** Instruct the students to observe the materials and predict what will happen when the small ball (representing the Moon) moves in between the Sun and the ball that represents Earth.

**Steps 5–6.** As one student shines the flashlight (representing the Sun) on Earth, have a second student move the Moon between the Earth and Sun. As students observe and discuss, explain that this model represents a solar eclipse, in which the Moon blocks the Sun's light from reaching the Earth.

Encourage the students to take turns participating in the model, moving the Moon, and shining the light. Discuss the different types of solar eclipses, such as total, partial, and annular, and how the positioning of the Moon and Earth affects how an eclipse appears on Earth. Allow time for questions and further discussion about solar eclipses.

Lastly, wrap up the activity by summarizing the main points and reinforcing what the students have learned about solar eclipses through the modeling activity.