

# ECLIPSES



## SNAPSHOT:

In this 2-3 day lesson, students will explore what happens during solar and lunar eclipses. Students will experiment with physical models to develop a better understanding of how the positions of the Sun, Earth and Moon create eclipses, and conclude the lesson by creating Flipgrid videos to explain and showcase their understanding of eclipses.



## STUDENTS WILL BE ABLE TO:

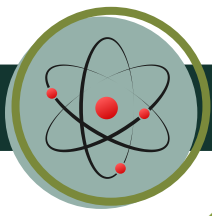
- ◆ Describe a solar eclipse.
- ◆ Describe a lunar eclipse.
- ◆ Create a model showing the correct positions of the Sun, Earth, and Moon during a solar and lunar eclipse.
- ◆ Create a Flipgrid video explaining and showing correct understanding of eclipses.



## ISTE STANDARDS FOR STUDENTS:

- ◆ **Creative Communicator**
  - ◆ 6c: Students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.
- ◆ **Empowered Learner**
  - ◆ 1c: Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.





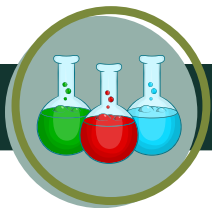
## NEXT GENERATION SCIENCE STANDARDS:

- ◆ **MS-ESS1-1:** Develop and use a model of the Earth-Sun-Moon system to describe the cyclic patterns of lunar phases, eclipses of the Sun and Moon, and seasons.



## ESSENTIAL QUESTION:

What is a solar and lunar eclipse?



## MATERIALS:

- ◆ [Video](#) of Solar Eclipse
- ◆ 2 balls for each small group, 1 to represent the Earth and 1 to represent the Moon
- ◆ Flashlight to represent the Sun (1 per group)
- ◆ [Understanding the Earth-Sun-Moon System](#) Notes (slides 13-16)
- ◆ Coloring utensils
- ◆ [Doodle Note Template](#)
- ◆ [Flipgrid rubric](#)
- ◆ [Rise Model Template](#) for peer feedback (optional)
- ◆ **Technology:**
  - ◆ [Flipgrid](#)



## VOCABULARY:

- ◆ Eclipse
- ◆ Solar eclipse
- ◆ Lunar eclipse
- ◆ Total eclipse
- ◆ Partial eclipse

[\(Vocabulary: click for digital flashcards\)](#)



## ENGAGE:

[Show this video](#) (up to 2:58) of a solar eclipse.

Discuss the following questions with your students:

- ◆ What do you think was happening in this video?
- ◆ What do you know about eclipses?
- ◆ This is called a solar eclipse. Do you know what happens during a lunar eclipse?
- ◆ Facilitate group discussion and welcome all ideas and hypotheses.



## EXPLORE:

Organize students into small groups. Give each group a ball to represent the Moon, a ball to represent the Earth and a flashlight to represent the Sun. Instruct students to use the items to model a solar and lunar eclipse.

After students have completed the task, have a class discussion.

- ◆ How did your group arrange the Sun, Earth, and Moon to create a solar eclipse?
- ◆ How did your group arrange the Sun, Earth, and Moon to create a lunar eclipse?
- ◆ Which eclipse do you think is more common?



## EXPLAIN:

Review slides 13-16 on this [Google Slides Presentation](#). Students should create doodle notes based on the information in the presentation. (More information on the benefits of Doodle Notes [HERE](#))

- ◆ [Doodle Note Template](#)



## ELABORATE:

Students will record a [Flipgrid](#) video explaining the difference between a lunar and solar eclipse. Students may want to include an image, drawing, model, or their doodle notes in their video.

Students need to include the following in their explanation:

- ◆ What is a solar eclipse?
- ◆ What is a lunar eclipse?
- ◆ How does the position of the Moon, Sun, and Earth change with each eclipse?





## EVALUATE:

Each student should watch and respond to two assigned classmates' Flipgrid videos. Their responses should include constructive criticism. Students can use the optional [Rise Model](#) to help them create meaningful feedback.

Once students have had the opportunity to utilize their peers' feedback on their video, students can choose to make changes to the video before their final submittal to the teacher. Teachers can assess students' understanding with this [rubric](#).

