



# The Moon Seen From EARTH!

## Eight Phases of the Moon



Brenda Rivera, Patricia Turner

Published by *Oklahoma Young Scholars/Javits*

This work is licensed under a [Creative Commons CC BY-SA 4.0 License](https://creativecommons.org/licenses/by-sa/4.0/)

<b>Grade Level</b>	1st Grade	<b>Time Frame</b>	40-minute sessions
<b>Subject</b>	Science	<b>Duration</b>	2 sessions
<b>Course</b>	Earth Science		

### Essential Question

When can we observe the Moon in the sky, and does it always look the same?

### Summary

In this lesson, students explore the changes that happen from night to night in the sky, especially the Moon's changing appearance. Students learn that as the Moon orbits the Earth, the Moon appears to change shape, which is a predictable pattern. In this lesson, students use a Moon card sort, view and listen to books and videos that explain the predictability of the Moon's phases and get creative making a Moon Phase model using Oreo cookies.

### Snapshot

#### Engage

Students listen to a fiction book, such as *There Was An Old Astronaut Who Swallowed the Moon*, and discuss what is real and what is made up. They also talk about what they know and like about the Moon or space.

#### Explore

Students sort pictures of the things in the sky into groups. Then using just the Moon cards, they place them in the order they think they might see the Moon during the month.

#### Explain

Students watch a video about Moon phases and revise the order of their moon phase cards. Then, working as a class, they create an anchor chart to show the pattern of how we see the Moon and add names to each phase.

#### Extend

Students create a model of the Moon's phases using Oreo cookies. Finally, they review their learning by sharing with a partner to answer to focus questions.

#### Evaluate

Students take a picture of their Oreo Moon phases with their tablets and then record themselves explaining the Moon phases.

## Standards

*Oklahoma Academic Standards (1st Grade)*

**1.ESS1.1:** Use observations of the sun, moon, and stars to describe patterns that can be predicted.

**1.ESS1.1.1:** Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted.

## Attachments

- [I Used to Think, But Now I Know—The Moon Seen From Earth - Spanish.docx](#)
- [I Used to Think, But Now I Know—The Moon Seen From Earth - Spanish.pdf](#)
- [I Used to Think, But Now I Know—The Moon Seen From Earth.docx](#)
- [I Used to Think, But Now I Know—The Moon Seen From Earth.pdf](#)
- [Moon Phase Labels—The Moon Seen From Earth - Spanish.docx](#)
- [Moon Phase Labels—The Moon Seen From Earth - Spanish.pdf](#)
- [Moon Phase Labels—The Moon Seen From Earth.docx](#)
- [Moon Phase Labels—The Moon Seen From Earth.pdf](#)
- [Moon and Sky Card Sort—The Moon Seen From Earth.docx](#)
- [Moon and Sky Card Sort—The Moon Seen From Earth.pdf](#)
- [Oreo Moon Phases—The Moon Seen From Earth - Spanish.docx](#)
- [Oreo Moon Phases—The Moon Seen From Earth - Spanish.pdf](#)
- [Oreo Moon Phases—The Moon Seen From Earth.docx](#)
- [Oreo Moon Phases—The Moon Seen From Earth.pdf](#)

## Materials

- *Book: "There Was An Old Astronaut Who Swallowed the Moon" by [Lucille Colandro](#)*
- Moon Card sort (attached; one per pair of students)
- Moon Phase Labels (attached)
- Oreo Moon Phase template (attached)
- I Used To Think, But Now I Know (attached)
- Chart paper
- Oreo Originals (not the thin ones; eight per student)
- Plastic knives or craft sticks
- Zip-locked plastic bags

15 minutes

## Engage

### Teacher's Note

Most young students will not fully understand Moon Phases, but they should show some beginning understanding of how the Moon changes each day over four weeks, getting bigger then smaller in a pattern that repeats each month. They should be able to draw several different shapes of the Moon and know that it can be seen at night and sometimes during the day. Students need to understand that the Moon does not produce its own light, but it gets its light by reflecting the Sun's light, making it appear bright in our sky.

Once students finish constructing the "Different Phases of the Moon" model, they should be able perform the following objectives:

- Explain the different phases of the moon;
- Record how the moon changes its shape every night when looked at from Earth;
- Understand how the moon changes its shape throughout the month;
- Understand how the moon rotates around the Earth and how sunlight affects the light of the moon;
- Explore the science behind the moon phases and the cycle that happens every four weeks.

### Focus Questions

The following are focus questions that students should be exploring throughout the lesson and are reviewed by students in the Extend part of the lesson.

- What do we observe about the shape of the Moon?
- What do you notice about the part of the Moon we can see? Does it get bigger or smaller?
- Is the black part (the part we can't see) always there?
- Can you predict what the Moon will look like tomorrow?
- What pattern does the Moon have?
- How long does it take for the Moon to complete its cycle or return to the New Moon?
- There are 12 months in the year; how often does the Moon complete its pattern?
- Can we sometimes see the Moon during the day?

Start the lesson by asking students what their favorite thing is about the moon or about outer space.

After this short conversation, introduce the "Old Lady Book Series" and tell them that this book is about an Old Lady that was an astronaut! Read or watch online the book [There Was An Old Astronaut Who Swallowed the Moon](#) by Lucille Colandro.

### Embedded video

<https://youtube.com/watch?v=b4eITz8f07A>

As you read, stop and talk about what things in the book students think are real and what ideas are not real or are just for fun.

20 minutes

## Explore

Divide the class into pairs. Give each team a [Card Sort](#) bag containing the pictures of the moon, fake moons, and other things they see in the sky. Have students sort them into categories of their choosing. As you monitor the class, ask students why they sorted the cards the way they did.

Have them sort their cards into two piles: Moon cards and others. Have students keep only the moon cards, placing the others back in the baggies. Then have them sort the moon pictures into pictures of the actual moon and fake moons. Have students share how they knew the difference between the real and fake moons. Once students have shared their perceptions, put the fake moons in the bag.

Have students take the "real" moon cards and place them in the order they think they would see them appear during the month. There is no need to correct students' work at this time. Ask students to share why they placed the moons in the order they did.

30 minutes

## Explain

Show the class the video about the Moon phases: "[Why Does the Moon Change?](https://www.youtube.com/watch?v=yXe0yxzYkjo)"

**Embedded video**

<https://youtube.com/watch?v=yXe0yxzYkjo>

Continue to emphasize that the pattern of how we see the moon is predictable and happens every month. The actual names of the phases are not as important as understanding that this is a predictable pattern.

25 minutes

## Extend

### Teacher's Note

For the Oreo activity, explain to students that the Oreos are not to be eaten until the end of the activity. You will also want to discuss the safety precautions of using a plastic knife to cut the Oreo filling. Model how to cut the filling with the knife and twist each cookie apart. It works best if the cookies are pre-bagged with 8 Oreos for each student and the work is done on a flat surface.

If you don't want to do the Oreo activity, another option is to use a readily available worksheet. Use the cut-and-paste moon phase worksheet. Students could complete this at centers or as a class activity.

Give each student an Oreo Moon phase handout, a plastic knife, and a bag of Oreos.

Using the Moon phase Anchor Chart to help you model, start with the New Moon and have students place one of the dark sides of the Oreo in that spot; the other half, with the white cream, should be saved for the full Moon. Continue working through the phases as the class names them aloud and cuts their filling to match the next phase of the Moon. The class continues by placing each Oreo in the correct spot as you model the placement.

After the Oreo Moon cycle is complete, ask students to share their answers to the following focus questions with a partner.

- What have you observed about the shape of the Moon?
- What do you notice about the part of the Moon that we can see — the white part? Does it get bigger or smaller?
- Is the black part, the part we can't see, always there?
- Can you predict what the Moon will look like tomorrow?
- What pattern does the Moon have?
- How long does it take for the Moon to complete its cycle? Or get back to the New Moon?
- There are 12 months in the year. How often does the Moon complete its pattern?
- What did we learn about why we sometimes see the Moon during the day?

30 minutes

## Evaluate

Have students take a picture of their Oreo Moon phases with their tablets. Then, working with a partner, have students record themselves explaining the Moon phases. Model this and walk around the room, helping students explain themselves. This activity can then be uploaded through the Seesaw app if available. You could also print off their Oreo Moon charts and have students present their charts.

Finally, have students write a sentence using the [I Used to Think... But Now I Know](#) strategy. You may pass out the attached handout with this sentence stem printed.

## Resources

Cover image from *There Was An Old Astronaut Who Swallowed the Moon* by Lucille Colandro

- Colandro, L. (2019). *There Was An Old Astronaut Who Swallowed the Moon*. Cartwheel Books.
- Gibbons, G. (1997). *The Moon Book*. Holiday House.
- K20 Center. (n.d.). Anchor charts. Strategies. <https://learn.k20center.ou.edu/strategy/58>
- K20 Center. (n.d.). Card sort. Strategies. <https://learn.k20center.ou.edu/strategy/147>
- K20 Center. (n.d.) I used to think... butnow I know. Strategies. <https://learn.k20center.ou.edu/strategy/137>
- Ms. Sar's Read Aloud. (2021, February 26). Read Aloud "There Was An Old Astronaut Who Swallowed the Moon!" [Video]. YouTube. <https://www.youtube.com/watch?v=b4eITz8f07A>
- SciShow Kids. (2017, January 10). Why Does the Moon Change? [Video]. YouTube. <https://www.youtube.com/watch?v=yXe0yxzYkjo>
- Timeanddate. (2022, March 18). Moon Phases Explained (Animations and Timelapse) [Video]. <https://www.youtube.com/watch?v=3lrnNUqTmGU>