

Phases of the Oreo

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Unit: [Earth Science](#)

Course: Science 3rd Grade

Subjects: Science, Science Skills, Biology / Life Science, Earth and Space Science, Physical Science, Science Skills, Earth and Space Science, Science

Grade Level: Lower Elementary (K-2)

Objective: Students will create, identify, and label the different phases of the moon.

Length: 60 minutes

State Standard: (SCI.3.ES.4.b) Objects in the sky move in regular and predictable patterns. As a basis for understanding this concept Students know the way in which the Moon's appearance changes during the four-week lunar cycle

Assigned Files: [MoonPhasesCardHANDOUT](#) [StudentSamples MoonPhasesOreo](#)

Materials:

- 7 Oreos per student (plus extra to snack on)
- Black construction paper (1 per student)
- Glue
- White crayons/colored pencils

Launch:

Hand groups a deck of Phases of the Moon Cards. Have them sort the cards in order from New Moon --> Full Moon. When they have them in order bring them to the carpet to help you sort a class deck onto a chart.

Ask how does the moon change over the 1st half of its cycle?

How does it change of the 2nd half of its cycle.

Review the phases as a class.

Lesson:

State the objective: Today you will identify and order the phases of the moon.

We're going to be using oreo cookies to show the phases of the moon.

Discuss expectations of materials/food. We use the oreos to show our Science knowledge first, and then at the end we will be able to have some as a snack. Ways to be responsible with plastic knives, oreos, glue.

Ask: what is the 1st phase that we need to make?

Model using the plastic knife to scrape off the white to make a New Moon with the oreo.

Why don't we see the new moon when we look up into the sky?

Glue New Moon Oreo in between the Sunlight and the Earth (see sample). Label

"New Moon"

Ask students what the oreo would look like to show when the moon is on the opposite side of the earth? -Full moon

How would I show that? -Covered in frosting

Tell students they will be going back to their tables to make the 5 phases of the moon. When they have made them and think they have the right order, they should raise their hand before gluing. Excuses students from the rug to their desks to create the first half of their phases (New Moon --> Full Moon)

Halfway through: call for students attention. Ask them how the moon will change after the full moon. - It will appear smaller and it will be the "opposite" phase from the first part.

Have students finish the rest of their project.

Closing:

Restate objective: Today you identified and ordered the phase of the moon.

Ask them what the moon in the sky looked like last night.

Ask them to share a prediction about what phase the moon will enter next.

Extension:

Have students keep a phases of the moon log for the next 4 weeks to document the phases of the moon.

Reflection:

1. What went well?

Struggling students were able to use the "Phases of the Moon" card sort to support them when they got stuck in the oreo activity.

There was a lot of discussion at the tables about predicting the next phase.

Students shared a lot of ideas about why each moon phase looks the way it does.

2. What would you change?

Some students had difficulty scraping the phases. I discussed the full moon and the new moon, but more explicit modeling of scraping to make the other phases would have helped.

A colleague completed the same lesson with toothpicks and she said that it worked out better than knives.

I was lenient on the "halfway" checkpoint. Pausing to check in with the students would have cleared up any confusion that a few of my students had.

3. What needs explanation?

The sun should be drawn on the right-hand side of the page. Students' idea a crescent moon can only be created with the "sunlight" from the right side. (see student sample)