

## Using Cookies to Learn Phases of the Moon

### Purpose

- To build on current knowledge of moon phases
- Earth Patterns, Cycles, and Changes SOL 4.8: The student will investigate and understand the relationships among Earth, the moon, and the sun. Key concept: the causes for the phases of the moon

### Objectives

- The student will be able to display each phase of the moon by shaping the icing on one side of an Oreo cookie, using a labeled phases of the moon guide.
- The student will be able to correctly draw each phase of the moon, using their Oreo cookies, when provided a list of the moon phases in order.

### Procedure

#### a. Introduction

- To review the information in this lesson in which the students have already been introduced to, watch the Phases of the Moon video/song that they have previously seen.
- Tell students the purpose of this activity is to learn the phases of the moon and the order in which they occur.
- Ask/discuss with students why we see the moon at different phases.  
*The phases of the moon are caused by its position relative to Earth and the sun as it revolves around the Earth (we see it's lit surface; light reflected from the sun)*
- Present the cookie moon phases activity to students – explain that they will use cookies to represent each phase of the moon. The white icing will represent the reflected sunlight and the chocolate biscuit will represent the dark or unlit portions of the Moon.

#### b. Development

- Pass out “Oreo Cookie Moon Phases” worksheet to students (worksheet that displays a picture of what their Oreo cookie will look like at each moon phase). This will be their data sheet.
- Each student will receive 7 Oreo cookies. Explain to the students that they will only be using the side of the cookie that has icing on it, the other side they can eat or save for later. \*make sure students save one side without icing to use as a depiction of a new moon
- Using the side of the Oreo with no icing to scrape the side with icing, students will start with a full moon and go through the phases.
- Students will place their cookies on the data sheet in the correct location.

- Students must have a cookie on their data sheet for each moon phase. Once they have a cookie on each moon phase, the students will use their Oreo cookies to help them complete the blank “Oreo Cookie Moon Phases” worksheet.
- Once students have shaped the icing on their cookies and have a cookie for each phase of the moon on their data sheet, and they have completed the blank worksheet by drawing each moon phase, they will be allowed to eat their cookies. (The students must have their work checked before they can eat their cookies).

### c. Summary

- Discuss the activity with the students. Ask them to explain to you why we see the different phases of the moon.
- Ask students to recall the each phase of the moon.  
*Full moon, waning gibbous, first quarter, waning crescent, new moon, waxing crescent, last quarter, waxing gibbous*
- As students finish up eating their Oreo cookies, ask them questions about the moon phases. *How many phases does the moon have? Which phase comes first? Why is the quarter moon called a quarter moon?*

### **Materials**

- Oreo cookies (enough for each student to have 7 cookies each)
- Oreo Cookie Moon Phases – data sheet (with pictures)
- Oreo Cookie Moon Phases worksheet (without pictures)
- Phases of the Moon video/song

### **Evaluation Part A**

- Informal assessment of student understanding through group discussion and listening to students explain the moon phases when they complete the activity
- Completion of Oreo Cookie Moon Phases worksheet by drawing each phase of the moon in the correct location

### **Differentiation**

- The phases of the moon will be discussed orally and students will also have a picture representation of each phase.
- Students that may have difficulties may use the pictures to help them create each moon phase.
- Higher level students may be challenged by having them create each moon phase without using the pictures as a guide, or draw the moon phases after the Oreo activity without referring back to their Oreos.



