

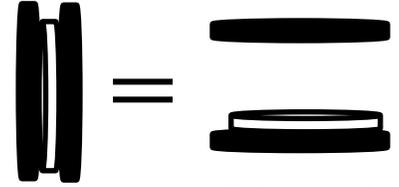
Name \_\_\_\_\_

## Moon Phases

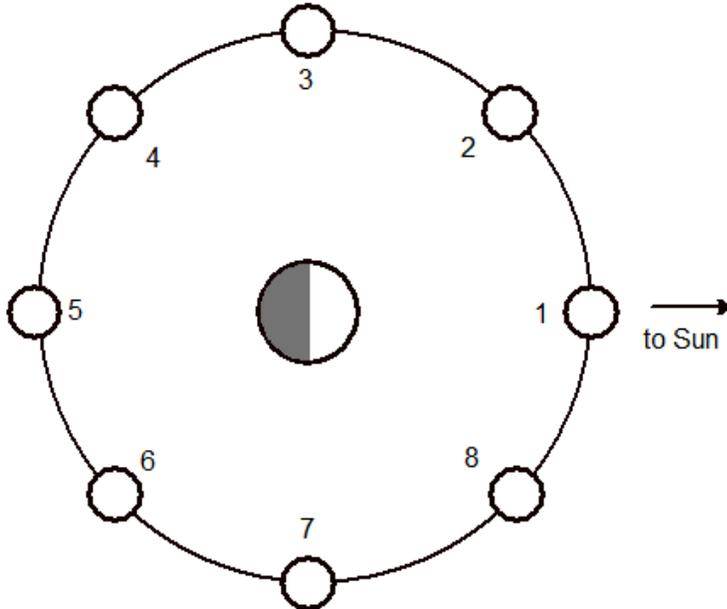
### Part 1

Procedure:

1. Your group will receive only **4** Oreo cookies... **BE CAREFUL NOT TO BREAK/DROP THEM!**
2. Separate the cookies carefully in half, twisting them apart; this will make 8 phases of the Moon.
3. The frosting will model the phase of the moon we observe (see) illuminated on Earth. Use the plastic knife to shape the frosting into the phases we observe on the surface.
4. Fill in the circles on the diagram to show your group's results. Then use the word bank, without any research, label where the group thinks each word should be



Twist apart in half to make 2 full circles



### Moon Phases

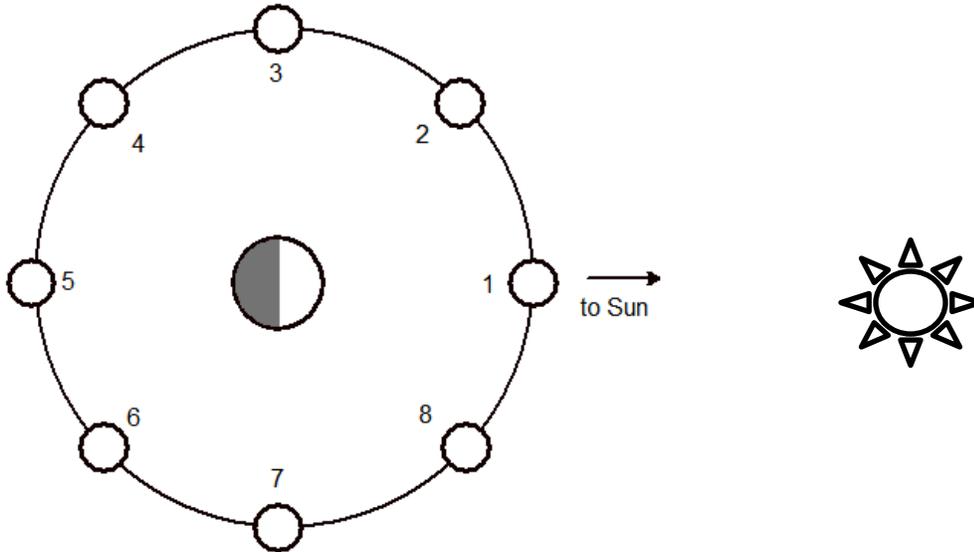
#### Word Bank

Full Moon  
New Moon  
Waxing crescent  
Waning crescent  
1<sup>st</sup> quarter  
3<sup>rd</sup> quarter  
Waxing gibbous  
Waning gibbous

5. At this point, raise your hand to have your group's model signed off by the teacher before moving on, **you may NOT eat the Oreos yet**, wait until the model is no longer needed.
6. How many phases of the moon did your group label correctly?
7. What pattern did your group decide to use to help create this model of the moon's phases?

## Part 2

1. Go to the following website, and complete ACTIVITY 3 - to research the actual the alignment of the sun, moon, and Earth for the moon's phases:  
[http://sunshine.chpc.utah.edu/Labs/LunarPhases/lunar\\_phases\\_main#part2](http://sunshine.chpc.utah.edu/Labs/LunarPhases/lunar_phases_main#part2)  
(There is a link on diximiddlescience.weebly.com)
2. While working through Activity 3, fix the original the model, to correctly show the moon phase's phenomenon.
3. Shade in the circles on the diagram to show the correct pattern of the Moons phases. Then use the word bank, to correctly label each part of the phases.



### **Moon Phases**

#### **Word Bank**

Full Moon  
New Moon  
Waxing crescent  
Waning crescent  
1<sup>st</sup> quarter  
3<sup>rd</sup> quarter  
Waxing gibbous  
Waning gibbous

1. Explain why the new moon cannot be seen in the sky.
2. Explain how your group's moon phase model would be different if the sun's rays were coming from the LEFT side.
3. Use this model to explain the differences between waxing and waning moon.
4. Why is a full moon observed at night?
5. Half of the moon is always illuminated by the sun. Explain why we do not always see this on Earth's surface.

**\*Once this worksheet is completed, you may eat the cookies used for the group's model.**