**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_**

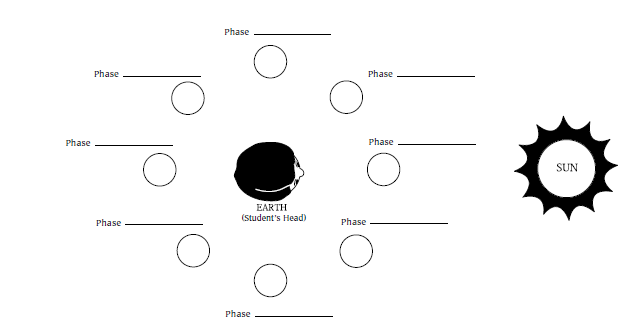
# **Unit 1: Worksheet 1 Activity 2 Part 2 - Moon Phases**

In this activity, you investigated what causes moon phases. Answer each question to demonstrate your understanding.

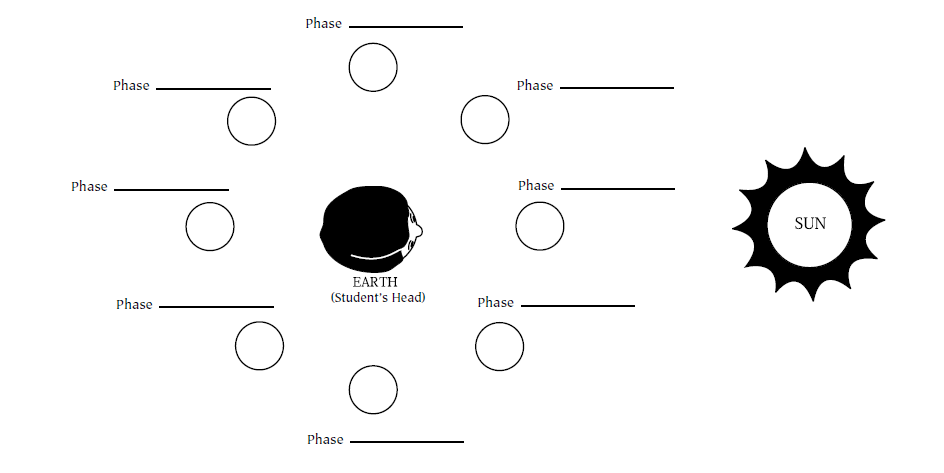


1. What do we call the different shapes the Moon seems to have? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Where does the Moon get its light? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What fraction of the Moon is always lit by the Sun? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. At the new moon, the lighted half of the Moon faces (towards, away from) the Earth. (circle one)
5. At the full moon, the lighted half of the moon faces (towards, away from) the Earth. (circle one)

The diagram below represents a model of the Earth-Moon-Sun system where each circle is a model Moon position. 



1. Darken the areas on each Moon in the figure above that are not illuminated by the Sun to create a top-down model of what you would see when looking down from above your head.
2. In contrast to the top-view model you created in Q6, use the diagram of the Earth-Moon-Sun system below to represent how the Moon appears to an observer located on Earth. Darken the areas on each Moon that would look dark (not illuminated by the Sun) at each position.



1. Use the **Moon Phase Information Sheet** to identify the phase name for each of the eight appearances of the Moon in your model above.
2. Explain how an observer on Earth can differentiate each of these pairs of Moon phases:
   1. Waxing Crescent vs. Waning Crescent
   2. First Quarter vs. Third Quarter
   3. Waxing Gibbous vs. Waning Gibbous
3. Create a verbal model (no pictures!) to explain what causes the phases of the Moon.