

The Moon's Motions: Analyzing Lunar Photographs

Geology/Earth Science

Mr. Traeger

Name: _____

Period: _____

Date: _____

Purpose

The purpose of this activity is to become familiar with the different phases of the moon. Students will also be introduced to the geometry of lunar and solar eclipses.

Materials

▪ Handout Sheet entitled "Lunar Photographs"	▪ Scissors
▪ Pencil	▪ Glue Stick

Part 1: Plotting Lunar Phases

1. Cut out each of the pictures in the "Lunar Photographs" handout. Arrange them in the sequence that you would expect to see the moon during the next several weeks. Label the phase, date, and time.

2. Draw a diagram next to each photograph showing the earth, moon, sun orientation as seen from overhead.

Photo and Phase, Date, Time	Draw orientation of earth, moon, and sun as seen from above.
1.	
2.	
3.	

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4.	
5.	
6.	

Part 2: Solar and Lunar Eclipses

1. Draw the geometry of a lunar eclipse as seen from the side. Make sure to include the sun, moon, earth, umbra, and penumbra.

2. Draw the geometry of a solar eclipse as seen from the side. Make sure to include the sun, moon, earth, umbra, and penumbra.

3. Why don't eclipses occur all the time? What special conditions are required for them to occur?