

Lab: Modeling Lunar Phases

Earth Science

Name: _____

Date: _____ Hr: _____

Analysis (Do NOT write out questions...only hand-written answers):

1. Explain how Earth's shadow cannot cause moon phases.
2. If one lunar revolution around Earth is *approximately* 28 days, how many days does it take to go:
 - a. Position 1 (New) to Position 5 (Full) ? _____ days
 - b. Position 1 (New) to Position 3 (First Qtr)? _____ days
 - c. Position 1 (New) to Position 2 (Wax Crescent)? _____ days

Use your moon phase chart below to answer the next questions.



3. Name each phase above _____

4. Based on your calendar above, on what day in October will we see a **Waxing Gibbous** moon? _____

Draw what it will look like from your backyard.

Sketch the position of the Sun, Earth and Moon in space during this phase

5. On what date in October will we see a **Waning Crescent** moon? _____

Draw what it will look like from your backyard.

Sketch the position of the Sun, Earth and Moon in space during this phase

6. Will there be a Full Moon on Halloween (Oct 31st)? _____ Explain why or why not.

7. WHAT CAUSES THE DIFFERENT PHASES OF THE MOON? (**CLEARLY** explain what you mean)

Conclusion:

Modeling Moon Phases Lab Rubric:

Lab Component	Points
Hypothesis was testable?	
OBSERVATIONS	/ 1
Space-View diagrams accurately drawn?	
Earth-view diagrams accurately drawn?	/ 4
ANALYSIS	/ 4
#1 - Correctly explain how Earth's shadow could NOT cause phases.	
#2 - Mathematically calculated days between moon phases?	/ 1
#3 - Correctly named phases from current moon calendar?	/ 3
#4 & #5 - Calculated BOTH dates, drew both diagrams for each	/ 2
#6 - Full Moon on Halloween? Explained answer?	/ 6
#7 - Accurate explanation for cause of Moon Phases?	/ 1
CONCLUSION	/ 2
Restated hypothesis, stated if it was accepted or rejected.	
Deductions	/ 1
Page 1 was not glued in/ attached incorrectly (-2) ; Analysis was not hand-written in lab book (-2); Lab was written out of order (-2)	
TOTAL POINTS	/ 25