Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_\_\_ Ast: \_\_\_\_\_

**Moon Study Guide**

**VOCAB**

 ***TIDES PHASES ORBIT LUNAR ROTATION ECLIPSE REVOLUTION***

1. The word, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, means “related to the moon”.
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ both refer to an object moving around another object in a path similar to a circle.
3. When an object spins around its own axis it is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. The reason the Moon has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is because its relative position to the Earth and the Sun changes as it orbits, causing different parts of the illuminated Moon to be visible from Earth.
5. When one celestial object blocks sunlight from another celestial object (casts its shadow on the other object), it is called an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. The Moon’s gravitational pull causes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which refers to the daily rise and fall of ocean water.

**ORBIT**

1. Why isn’t there an ECLIPSE twice a month when the Moon is either in front of or behind the Earth?
2. What shape is the Moon’s ORBIT, and where is the Earth located in relation to the Moon’s orbit?
3. How long does it take for the Moon to make one REVOLUTION around the Earth?
4. How long does it take for the Moon to make one ROTATION around its own axis (spin)?
5. Why do we always see the same side of the Moon from Earth?

**PHASES**

The sun-lit half of the Moon appears and then disappears from right to left over the course of one month…

1. What is the term for the moon as the visible lit portion grows from New Moon to Full Moon?
2. What is the term for the moon as the visible lit portion shrinks from Full Moon to New Moon?
3. When we see less than a quarter moon, it is called…
4. When we see more than a quarter moon, it is called…

**TIDES**

1. What causes ocean TIDES on Earth?
2. Where on Earth does HIGH TIDE occur?
3. When would you observe the strongest/highest HIGH TIDE (Where would the Sun, Earth, and Moon be located)?

**ECLIPSES**

1. What happens during a SOLAR ECLIPSE?
2. What happens during a LUNAR ECLIPSE?
3. Label the diagrams below as either “LUNAR ECLIPSE” or “SOLAR ECLIPSE”.

**PUTTING IT TOGETHER**

***Use the diagram below to answer the following questions:***

1. Which position represents the location of a “New Moon”?
2. Which position represents the location of a “Full Moon”?
3. Where on the diagram would the Moon be “WAXING”?
4. Where on the diagram would the Moon be “WANING”?
5. Where on the diagram would the Moon be “CRESCENT”?
6. Where on the diagram would the Moon be “GIBBOUS”?
7. Which position represents the location of the Moon during a LUNAR ECLIPSE?
8. Which position represents the location of the Moon during a SOLAR ECLIPSE?
9. If there is a high tide at midnight but no moon is visible, where is the Moon?
10. If high tide occurs at sunrise and again at sunset, where could the Moon be?
11. Where would the Moon be during the strongest/highest TIDE?