NAME: _____ CLASS: _____

Term 1 REVIEW

Quarter Final: Friday, October 25, 2019

**Study old tests and quizzes and access the Google Site for additional resources!!!**

## *Vocabulary*

1. orbit - the path an object follows as it moves around another object.
2. axis - the line on which an object rotates.
3. rotation - spinning motion.
4. gravity - an attractive force that exists between all objects that have mass.
5. mass - the amount of matter in a substance or object.
6. revolution - the motion of an object around another object.
7. phase - the lit part of the Moon or a planet that can be seen from Earth.
8. waning - the lit portion of the Moon's near side appears to be decreasing.
9. waxing - the lit portion of the Moon's far side appears to be increasing.
10. crescent - the shape of the lit portion of the moon when it is less than half.
11. gibbous - the shape of the lit portion of the moon when it is more than half, but less than full.
12. maria - large, dark, flat areas formed by ancient lava flows on the moon.
13. crater - bowl shaped regions on the moon formed by impacts of objects striking the surface.
14. highlands - oldest, most highly cratered elevated regions on the moon.

## *Motions in Space*

- The planets are held in an orbit around a star - the Sun.
- My Very Excellent Mother Just Served Us Nachos
- The inner planets (Terrestrial planets) have shorter orbits and it takes less time to complete one full revolution.
- The outer planets (Gas Giants) have much longer orbits and it takes more time to complete one full revolution.
- Earth takes 365 ¼ days to revolve around the Sun.
- Earth takes 24 hours to rotate on its axis.
- Due to our rotation, the Sun appears to rise in the east and set in the west.
- Students should be able to use a data chart and determine which planets have shorter and longer years and shorter and longer days. They should also be able to provide an explanation.

## *Gravity*

★ The Law of Universal Gravitation States that all objects that have mass are attracted to each other by a gravitational force. The strength of the force depends on the mass of each object and the distance between them.

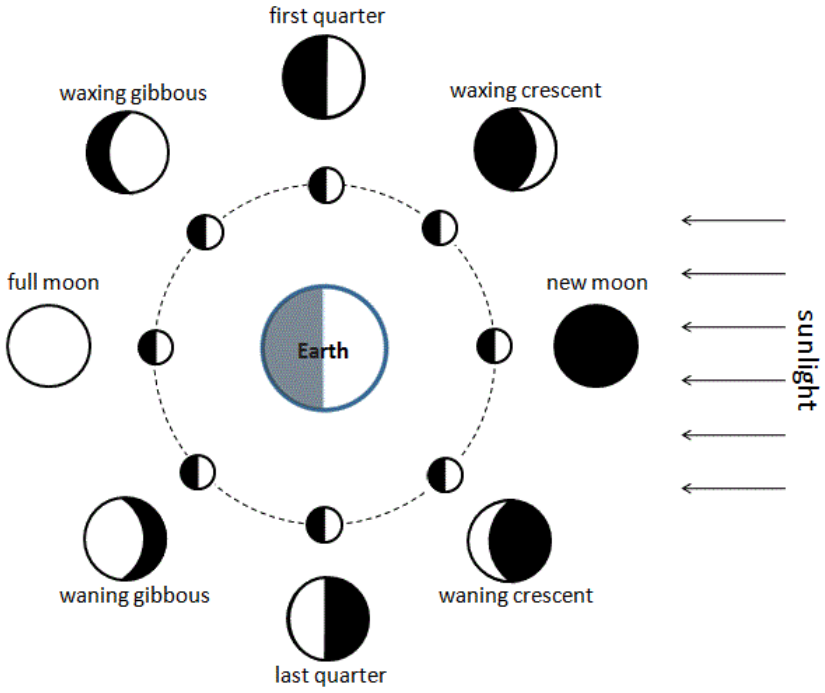
- ★ Objects with a greater mass will have a stronger gravitational pull. Objects with less mass will have a weaker gravitational pull.
- ★ Objects that are close together will have a stronger gravitational pull. Objects that are farther apart will have a weaker gravitational pull.
- ★ Due to its DISTANCE, the inner Terrestrial planets have a strong gravitational attraction to the Sun.
- ★ Due to its MASS, the outer Gas Giants have the strongest gravitational attraction to the Sun.

## *Moon Formation & Features*

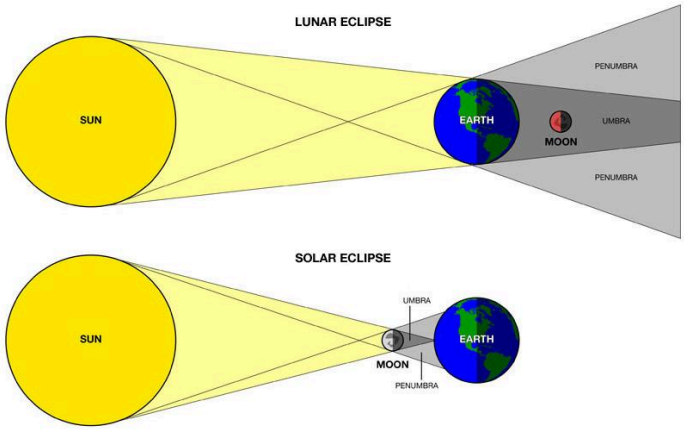
- ➔ We are able to see the Moon because it reflects light from the Sun.
- ➔ 50% of the moon is lit at all times. The amount of the lit portion we are able to see changes due to the Moon's revolution around the Earth.
- ➔ The Moon formed, an object from space collided with the Earth 4.5 billion years ago. The rock from the collision orbited the Earth. Overtime, the leftover rock started to combine into a sphere and formed the Moon.
- ➔ Motions of the moon
  - ◆ The moon revolves around the Earth (27.3 days).
  - ◆ The moon rotates on an axis (27.3 days).
- ➔ We never see the far side of the Moon because it completes one full rotation in the same time it completes one revolution.
- ➔ Because there is much less gravity on the moon, there is little to no atmosphere.
- ➔ Because the moon has little to no atmosphere, there are drastic changes in temperature between day and night.

## *Moon Phases*

- There are 8 lunar phases: new moon, waxing crescent, first quarter, waxing gibbous, full moon, waning gibbous, last quarter, and waning crescent.
- The moon's orbit is on a 5 degree angle in relation to the Earth's orbit so we are able to see a full moon even though it is "behind" the Earth.
- The moon orbits the Earth in a counterclockwise direction.
- Students should be able to name and identify the phases in order. The relative positions of the Earth, Moon and Sun determine what phase is visible from earth. Students should be able to diagram those relative positions for new, full, first, and third quarter.




## *Eclipses*




- Solar eclipse happens when the Moon is directly between the Earth and the Sun. (Sun, Moon, and Earth are perfectly lined up)
- Lunar eclipse happens when the Earth is directly between the Sun and Moon.(Sun, Earth, Moon are perfectly lined up)
- Solar eclipse can only happen during a new moon.
- Lunar eclipse can only happen during a full moon.
- A total solar eclipse is visible in the Moon's umbra. A partial solar eclipse is visible in the Moon's penumbra.
- A total lunar eclipse is visible in the Earth's umbra.