Name: _____ Summative Date: _____
Unit J Chapter 4 (1-3)
Study Guide

Vocabulary:

1. **Astronomical Unit –** the average distance between the Earth and the sun; approximately 150 million kilometers (symbol AU)
2. **Terrestrial Planet –** one of the highly dense planets nearest to the sun; Mercury, Venus, Earth, and Mars
3. **Prograde rotation –** the counterclockwise spin of a planet or moon as seen from above the planet's North Pole; rotation in the same direction as the sun's rotation
4. **Retrograde rotation –** the clockwise spin of a planet or moon as seen from above the planet's North Pole
5. **Gas Giant –** A planet that has a deep massive atmosphere such as Jupiter, Saturn, Uranus, or Neptune

Things to Know:

1. Know the order of the planets from sun to space – Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto.
2. Earth is a terrestrial planet. Venus has a high surface temperature because of the greenhouse effect of its atmosphere, where carbon dioxide traps most of the heat. Venus is considered Earth's twin because of their similar size and density. A day on Mercury is over two Earth months long. Jupiter is the largest planet in our solar system.
3. Telescopes made it possible for the discovery of additional planets. Scientist use the speed of light to measure distances within the solar system.
4. The inner planets are more closely spaced together than the outer planets. They are also small, dense, and rocky. The inner solar system are the first 4 planets closest to the sun and the outer solar system contains the five planets farthest from the sun.
5. Pluto is not a gas giant because it is rocky and dense. Pluto's moon is over half of its size. Mars may have had a warmer climate because it has features like dry riverbeds. A factor that makes life on Earth possible is that it has liquid water on its surface. As you go deeper into the atmosphere on Jupiter, hydrogen changes into a liquid, metallic state. Due to the extra energy that Saturn gives off suggests to scientists that it is still forming. Uranus is considered a gas giant because it has a deep, massive atmosphere.
6. Saturn is well known for its ring system. Jupiter has a Great Red Spot that is a storm that has been going on for hundreds of years. Neptune has belts of visible clouds. Uranus is tipped over on its side from a possible collision.
7. Know the planets of the inner solar system – Mercury, Venus, Earth, and Mars.
8. Rotation refers to the spinning motion of a celestial body, while revolution refers to the orbital motion of one body around another. So the rotation of a body is the amount of time that an object takes to spin on its axis once (one day), while the period of revolution is the amount of time an object takes to orbit around another body once (one year). Example Earth rotating once around on its axis is a day, while revolving around the sun once is a year.