This study guide belongs to: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Test Date: \_\_\_\_\_\_\_\_

**Unit 2: Astronomy Study Guide**

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| **solar system*** A group of objects (a system) in space that move around a central star(s)
 | **Sun*** the star at the center of our solar system
* Latin: Sol
 |
| **Mercury*** smallest planet
* nearest planet to the sun
* named after Roman God of travel

*\*fastest orbit* | **Uranus*** 7th planet from Sun
* rotates on its side, likely due to a large impact
* blue green color
* named after Greek god of the sky and heavens
 |
| **Venus*** 2nd planet from the sun
* hottest planet
* similar to size and mass of Earth
* named after Roman Goddess of love and beauty

*\*runaway greenhouse effect**\*was once like Earth* | **Neptune*** 8th from the sun
* no atmosphere (other than its own gaseous body)
* high methane content
* named after Roman god of the sea

*\*had a great dark spot, but no longer observed* |
| **Earth*** 3rd planet from the sun
* only planet in the solar system where life is known to exist

*\*only planet not named after Greek/Roman mythology**\*You are here!* | **Pluto*** Since 2006, no longer termed planet
* now called “Dwarf Planet”
* irregular orbit

*\*named after Roman god of the underworld* |
| **Mars*** 4th planet from the sun
* known as the "Red Planet" due to high levels of iron exposed to oxygen (crust)

*\*named after Roman god of war**\*was once like Earth* | **Inner Planets*** Small, rocky, *terrestrial* planets
* orbit closest to the sun
* include Mercury, Venus, Earth, & Mars
 |
| **Jupiter*** 5th planet from Sun
* has the most moons
* largest planet
* gas giant
* has a large red spot

*\*named after Roman King of gods**\*would be 6th planet, if Ceres was classified as a planet!* | **Outer Planets*** Jupiter, Saturn, Uranus, & Neptune
* called Gas Giants
* no surface
 |
| **asteroid*** a small rocky body orbiting the sun
 |
| **Saturn*** 6th planet from the sun
* yellow in color
* has large icy rings
* second largest planet

*\*could float in water (with a big enough tub!)*\**named after Roman god of agriculture* | **asteroid belt*** A loose grouping of asteroids and meteors
* between the orbits of Mars and Jupiter
* separates the inner and outer planets

*\*includes a large body called Ceres* |
| **(Earth) day:** * the time is takes for Earth to make one full rotation on its axis (24 hours)

*\*other planets have different day lengths* | **axis*** An imaginary line that runs through both geographic poles of a planet
 |
| **seasons*** caused by a combination of Earth’s tilted axis and its revolution around the Sun
* marked by particular weather patterns and daylight hours in an area

*\*result of the formation of the moon* | **astronomy*** the study of the moon, stars, and many other objects in space
 |
| **(Earth) year:** * 365 (and ¼) days
* the time required for the Earth to complete one full revolution around the Sun

*\*other planets have different year lengths!* | **nebula*** a cloud of gas and dust in space
* found in interstellar (between stars) [space](https://kidsastronomy.com/the-universe/outer-space/)
* “star nursery”

*\*plural = nebulae* |
| **rotation*** The spinning of an object on its axis
 | **constellation*** a group of stars that form a pattern

88 constellations recognized |
| **revolution** * The movement of an object around another object
 | **gravity*** The force that pulls two objects toward each other

*\* keeps us from flying/falling into space!* |
| **orbit*** (noun) The path an object takes as it moves around another object
* (verb) to revolve around an object
 | **moon:** * natural satellite that revolves around a planet
* Earth has 1

 *\*some frozen rocks in space also have moons!* |
| **satellite*** object that revolves around another object in space
* can be natural (moon) or man-made
 | **tides**The repeated rise and fall in the level of the ocean, caused by the gravitational pull of the moon |
| **moon phases:** * The different shapes the Moon appears to have in the sky when observed from Earth

*\*from the moon, Earth appears to have phases!* | **lunar cycle*** The time it takes for the Moon to complete one full orbit around Earth
* About 4 weeks/1 month (actually 29 1/2 days)
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**Study Tips**

* Look through ALL of your notebook pages for this unit
* Review my website videos and Quizlets! <http://newnham4th.weebly.com/unit-1-astronomy.html>
* Teach the material to a parent, sibling, or anyone else. If you can teach it, then you know it well!
* Study a little bit each day. Don’t wait until the last minute!

