**Space Motion and Inner Planets**

Space Movements

* Orbiting or Revolving
	+ When a celestial object or space craft moves in a curved path around another celestial object.
	+ Example: \_\_\_\_the moon orbits the Earth\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Rotation
	+ The act of \_\_\_rotating\_\_\_\_\_ or \_\_\_\_\_spinning\_\_\_\_\_ around an axis or center.
	+ Example: \_\_\_\_\_the earth rotates on its axis \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Gravity
	+ The force that attracts an object \_\_\_towards\_\_\_\_ another object with a \_\_mass\_\_
	+ Gravity depends on two factors: \_\_\_mass\_\_\_\_ and \_\_\_distance\_\_

		- The \_\_\_larger\_\_\_ the \_\_\_mass\_\_\_ the stronger the gravity.
		- The \_\_\_smaller\_\_\_ the \_\_\_distance\_\_\_\_\_ the stronger the gravity.
* Inertia
	+ A property of matter that states that an object will \_\_\_continue\_ doing whatever

	\_\_\_motion\_\_\_ it is currently doing unless \_\_acted on\_\_\_ by another force.

		- An object that is not moving will continue \_\_\_\_not moving\_\_\_\_\_.
		- An object that is moving will continue \_\_\_\_moving\_\_\_ at the \_\_same\_\_\_ rate.
		- An object moving will continue moving in a \_\_\_\_\_\_straight line\_\_\_\_\_\_.
* How Do Objects Move In Space?

	+ Gravity pulls objects towards the \_\_sun\_\_.
	+ Inertia keeps the object \_\_revolving\_ in space.
* Observing Motions in Space
	+ Constellations and the Sun \_rise\_\_ and \_\_set\_\_\_\_ on different sides of the planet

	due to the \_\_\_\_rotation\_ of Earth.
	+ Constellations and Stars seem to \_\_\_appear\_\_ and \_\_disappear\_\_\_ in the

	 night sky at different times in the \_\_year\_\_\_ due to the Earth moving in is

	\_\_orbit\_\_ around the \_\_\_Sun\_\_.
* The Planets In Order from the Sun are:
1. \_\_\_\_Mercury\_\_ 2. \_\_\_Venus\_\_\_ 3. \_\_\_Earth\_\_\_\_4. \_\_\_Mars\_\_\_\_\_

5. \_\_\_\_Jupiter\_\_\_ 6. \_\_Saturn\_\_\_\_ 7. \_\_\_Uranus\_\_\_ 8. \_\_\_\_Neptune\_\_\_\_

* Terrestrial Planets
	+ Terrestrial planets are four \_inner\_, \_\_\_\_rocky\_\_\_\_, \_\_dense\_\_ planets that orbit closest to the \_\_\_Sun\_\_.
* Mercury

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| Distance From the Sun | Length of Day | Length of Year | Tilt of Axis | Diameter | Density | Surface Temperature | Surface Gravity | Number of Satellites |
| 0.39 AU | 58d 15.5h | 88 days | 0 | 4,879km | 5.44g/cm3 | -184C to 427C | 38% | 0 |

* Mercury’s surface is heavily \_\_cratered\_\_ and can be described as \_\_Moon like\_\_\_\_.
* Mercury has the most extreme temperature changes in the solar system.
	+ During the day the temperature is \_427C\_\_ At night the temperature is -184C\_\_\_\_
	+ Mercury is the \_\_first\_\_ planet in the solar system.
* Venus

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| Distance From the Sun | Length of Day | Length of Year | Tilt of Axis | Diameter | Density | Surface Temperature | Surface Gravity | Number of Satellites |
| 0.72 AU | 243 d | 225 d | 177.4 | 12,104km | 5.20gm/cm3 | 465c | 89% | 0 |

* Venus is often called \_\_Earths twin\_\_\_\_\_\_\_
* The three things Venus has in common with Earth are
	+ Diameter, mass, gravity\_\_\_
* Venus is different in Earth in the direct is rotates.
	+ Venus rotates in a \_\_\_\_retrograde\_\_\_\_\_\_\_\_\_ motion.
* There are \_\_168\_\_ volcanoes on Venus.
* Earth

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| Distance From the Sun | Length of Day | Length of Year | Tilt of Axis | Diameter | Density | Surface Temperature | Surface Gravity | Number of Satellites |
| 1.0 AU | 23h56m | 365.3d | 23.45 | 12,756km | 5.52g/cm3 | -89c to 58c  | 100% | 1 |

* Life as we know it needs \_\_\_water\_\_\_ and \_\_\_energy\_\_\_\_\_\_\_\_\_
* Earth is unique in the fact that it has liquid \_\_\_water\_\_\_
* Earth is \_\_\_geologically\_\_\_ Active
	+ It has \_\_tectonic\_\_\_ plates that move around Earth’s surface causing continents to change position over long periods of time.
* Between 1969 and 1972 \_12\_\_\_ astronauts have landed on the Moon.
* Mars

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| Distance From the Sun | Length of Day | Length of Year | Tilt of Axis | Diameter | Density | Surface Temperature | Surface Gravity | Number of Satellites |
| 1.52 AU | 24h 37m | 1.88y | 25.3 | 6,792km | 3.93g/cm3 | -140c to 20c | 37% | 2 |

* Mars has an atmosphere that is \_\_100\_ times thinner than Earth.
* The chemical breakdown of the iron rich rocks called iron oxide that cover Mars’ surface gives Mars a \_orange-red\_\_ color.
* Mars contains the largest mountain and volcano in the solar system and it is called \_\_\_Olympus Mons\_\_\_\_