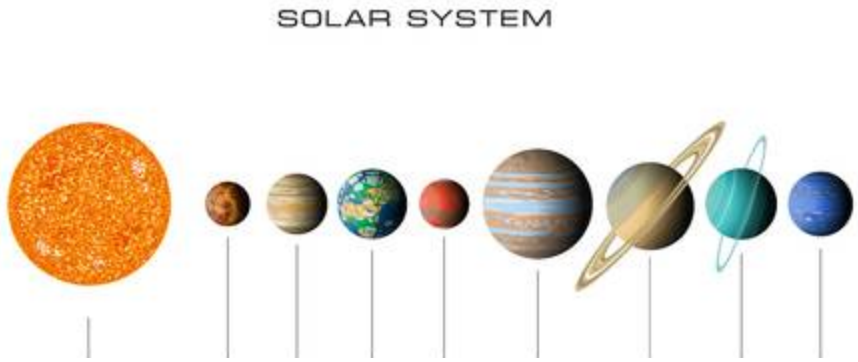
Solar System Practice Quiz **Name: _____**

1. Label the following diagram (not to scale) of the solar system with the following: (please write sideways at the end of the lines extending from the planets)

Earth - Jupiter - Mars - Mercury - Neptune - Saturn - Venus - Sun - Uranus



Sun - Mercury - Venus - Earth - Mars - Jupiter - Saturn - Uranus - Neptune
My - Very - Educated - Mother - Just - Served - Us - Nachos

2. Describe how the solar system was formed using the following vocabulary words appropriately in your description.

Nebula - Protoplanet - Protostar - Gravity - Nuclear Fusion - Star - Planet

A Nebula is a cloud of gas and dust that is present to begin the formation of a solar system. Gravity pulls matter closer together forming larger clumps called protostars and protoplanets. When enough matter is accumulated, a protostar will start Nuclear fusion and become a 'star'. A protoplanet becomes a planet when it is orbiting the star and clearing its orbit of debris.

3. Describe 2 pieces of evidence that the Sun and the eight major planets formed around the same time 4.5 billion years ago.

1. **Planets orbit in the same direction that the sun rotates.**
2. **All planets orbit on the same equatorial plane.**
3. **Gas giant planets are similar in composition as the Sun.**
4. **Images of young stars in the Universe show them circled by clumps of Gas and dust.**

4. What is one difference between a 'regular' planet and a dwarf planet?

A regular planet is able to clear its orbit around the Sun by pulling in objects with its gravity. A dwarf planet is typically not spherical in shape, although some larger ones are, but none of them clear their orbit.

5. According to Keplar's 3rd Law of Orbital Motion, the mean orbital radius (R) can be related to the period or time it takes to complete a single orbit around the sun (T), because $R^3=T^2$.

Calculate T, if R=11.86 AU SHOW YOUR WORK!

$R^3 = T^2$
$11.86^3 = T^2$ (11.86 x 11.86 x 11.86 if you don't know where the cubed button is)
$1668.2 = T^2$ (Square root of both sides)
40.8 Years = T (Be sure to include units on your answer)