Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_\_\_ Ast: \_\_\_\_\_

**SOLAR SYSTEM NOTES**

A: **SOLAR SYSTEM MODELS**

1. Describe the **GEOCENTRIC MODEL** of the Solar System that was used by astronomers prior to the 1600’s.
   1. What does the word, “GEOCENTRIC”, mean?
2. Describe the **HELIOCENTRIC MODEL** of the Solar System proposed by Copernicus and supported by Galileo’s observations in the early 1600’s.
   1. What does the word, “HELIOCENTRIC”, mean?

B: **FORMATION OF THE SOLAR SYSTEM**

1. What is a “**NEBULA**”?
   1. Why are nebulae called, “stellar nurseries”?
2. What is the distribution of mass in a **PROTOPLANETARY DISC** as a star begins to form in the center?
3. Describe the process called, **ACCRETION**, and how it develops “**PLANETESSIMALS**”.

C: **GRAVITY**

1. What two factors influence the **GRAVITATIONAL FORCE**?
2. List two ways that GRAVITY influences the Solar System.

D: **ASTRONOMICAL UNITS**

1. Why do we use AU to measure distances within the Solar System?
2. What is an **ASTRONOMICAL UNIT (AU)**? What is the actual distance in km?

E: **THE SUN**

1. Which two elements account for 99.9% of the Sun’s mass?
2. What process is responsible for producing the **RADIANT** and **THERMAL ENERGY** given off by the Sun?
3. How big is the Sun compared to Earth?

F: **PLANETS & DWARF PLANETS**

1. List the three characteristics required for a CELESTIAL BODY to be classified as a PLANET.
2. How are the 8 planets in our Solar System grouped?
3. How are **DWARF PLANETS** similar to planets? How are they different?

G: **INNER PLANETS**

1. List common characteristics of the **INNER PLANETS**
2. Why are the inner planets often referred to as the **TERRESTRIAL PLANETS**?
3. Complete the following table with information about the inner planets.

|  |  |  |
| --- | --- | --- |
| PLANET | INTERESTING FACT(S) | SIZE COMPARED TO EARTH |
|  |  |  |
|  |  |  |
|  |  | d = 12,800 km  m = 5.97x1024 kg |
|  |  |  |

H: **ASTEROID BELT**

1. Where is the **ASTEROID BELT** located?
2. Why are there so many **ASTEROIDS** in this region?
3. What is **CERES**?

I: **OUTER PLANETS**

1. List common characteristics of the **OUTER PLANETS**
2. What term is used to refer to Jupiter and Saturn?
3. What term is used to refer to Uranus and Neptune?
4. Complete the following table with information about the outer planets.

|  |  |  |
| --- | --- | --- |
| PLANET | INTERESTING FACT(S) | SIZE COMPARED TO EARTH |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

J: **KUIPER BELT & SCATTERED DISC**

1. Where are the **KUIPER BELT** and the **SCATTERED DISC** located?
2. What kinds of objects are located in these regions?
3. What are **COMETS**?
   1. What is unique about the orbit of most comets?

K: **PATTERNS IN PLANETARY CHARACTERISTICS**

1. As planets are further from the Sun…
2. How do the surfaces of the INNER PLANETS compare to the surfaces of the OUTER PLANETS?
3. How do the sizes of the INNER PLANETS compare to the sizes of the OUTER PLANETS?
4. Why is Venus sometimes called Earth’s “sister planet”?
5. How are Jupiter and Saturn similar?
6. How are Uranus and Neptune similar?

L: **SOLAR SYSTEM HUMOR**

1. The planets never hang out together. Do they dislike one another?
2. Why is the Sun “self-centered”?