Name _____ Date _____ Hour_____

Astronomy #3 - Study Guide ALTERNATE

Got It!	Not Yet
35 - 26	25 - 0

The Solar System

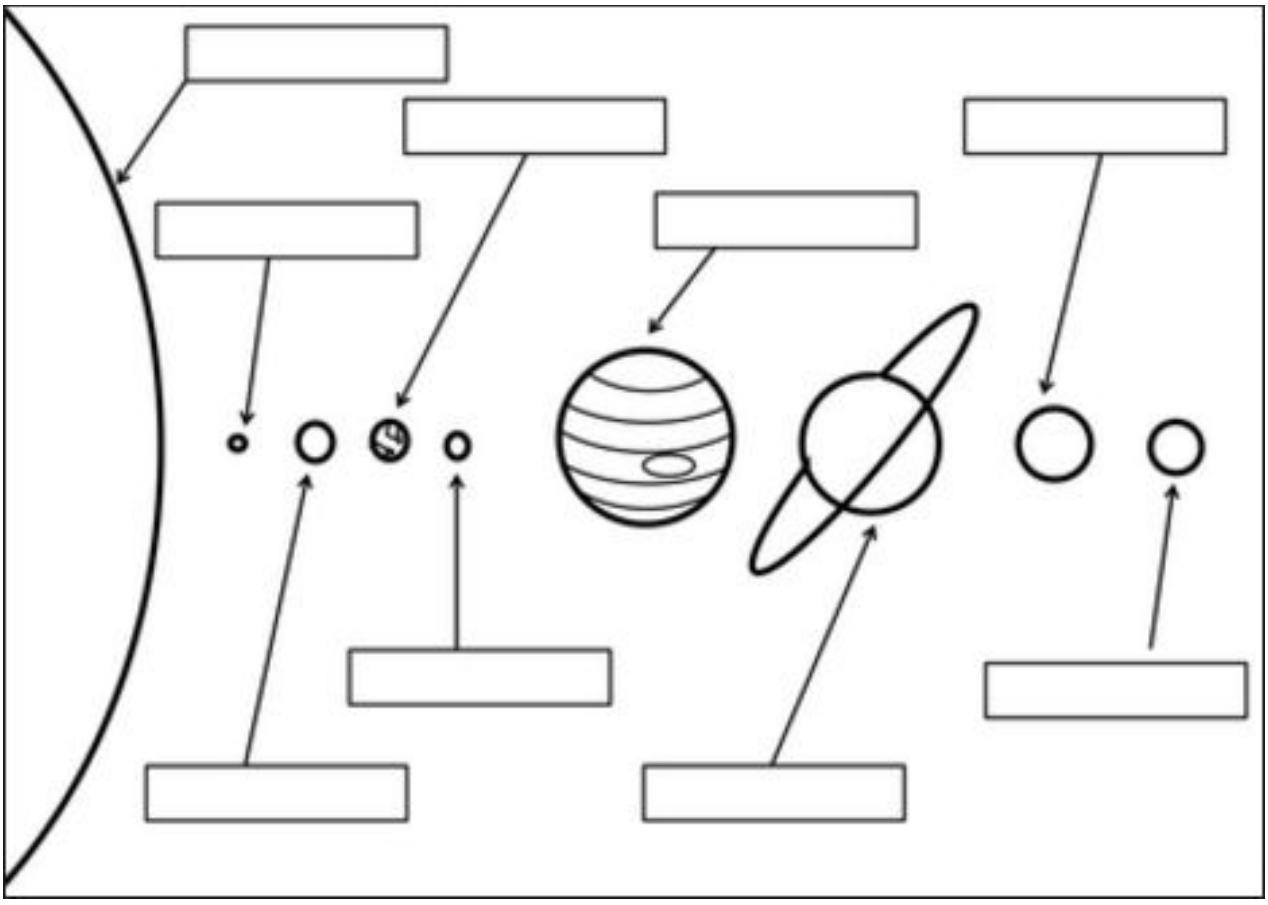
1. What are 5 celestial bodies found in our solar system? _____
_____

2. The _____ is at the center of our solar system, The other celestial bodies found here _____ or move around it.

3. Write the names of the planets, in order, from the center of our solar system (1-8) outward.

1.	**2.**	**3.**	**4.**
5.	**6.**	**7.**	**8.**

4. Use your answers from Question #3 to complete our solar system chart.



Place a check in the appropriate box for characteristics of Inner to the Outer Planets.

Characteristics	Inner Planets	Outer Planets
5. Smaller in comparison to the four other planets		
6. Can have rings		
7. Further from the sun		
8. Closer to each other		
9. Rocky planets		
10. Has many more moons compared to the others		
11. A.K.A. Gas Giants		

12. What are the names of the Inner Planets?

13. What are the names of the Outer Planets?

14. The inner and outer planets are classified into their groups based on two main characteristics which are _____ and _____

115-17. Identify three characteristics that are special to comets. Use the diagram below to help.

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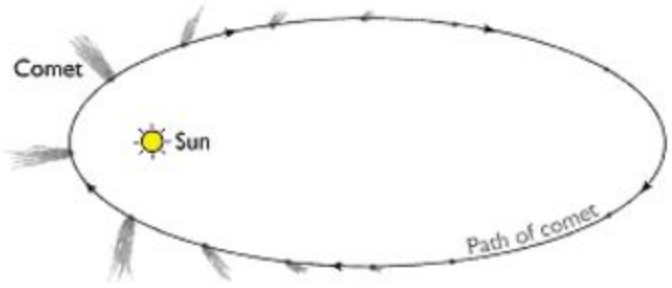
18. Use the diagram to explain the changes in speed a comet undergoes in its orbit.



19. Identify the position on the diagram where the comet would be moving the fastest.

20. Identify the position on the diagram where the comet would be moving the slowest.

21.. What Law explains the speed changes of a comet in its orbit? _____.

Complete the chart on Planets, Asteroids, and Comets. Where there is an asterisk (*) you may have multiple columns checked.

	Descriptions	Planets	Asteroids	Comets
*22.	a shooting star			
	orbits between Mars and Jupiter			
	small rocky bodies orbiting the sun			
23.	extreme elliptical orbits			
	get really close to the sun and then really far from the sun			
	can have moons			
24.	have somewhat elliptical orbits			
	have tails			
	orbit in the same plane as planets			
*25.	large bodies orbiting the sun			
	rotate while they revolve			
	orbit perpendicular to the planets			
*26.	has its own belt with many more like it			
	dirty snowballs			
	can have rings			

27. On the diagram below, follow the instructions given.

a. Draw in the Asteroid belt
b. Add a comet with its orbit around the sun
c. Shade in the Inner planets
d. Circle the Outer Planets
e. Cross out the Planet that doesn't fit the pattern.

Use the Solar System Data Chart to answer the questions below.

Solar System Data

Celestial Object	Mean Distance from Sun (million km)	Period of Revolution (d=days) (y=years)	Period of Rotation at Equator	Eccentricity of Orbit	Equatorial Diameter (km)	Mass (Earth = 1)	Density (g/cm^3)
SUN	—	—	27 d	—	1,392,000	333,000.00	1.4
MERCURY	57.9	88 d	59 d	0.206	4,879	0.06	5.4
VENUS	108.2	224.7 d	243 d	0.007	12,104	0.82	5.2
EARTH	149.6	365.26 d	23 h 56 min 4 s	0.017	12,756	1.00	5.5
MARS	227.9	687 d	24 h 37 min 23 s	0.093	6,794	0.11	3.9
JUPITER	778.4	11.9 y	9 h 50 min 30 s	0.048	142,984	317.83	1.3
SATURN	1,426.7	29.5 y	10 h 14 min	0.054	120,536	95.16	0.7
URANUS	2,871.0	84.0 y	17 h 14 min	0.047	51,118	14.54	1.3
NEPTUNE	4,498.3	164.8 y	16 h	0.009	49,528	17.15	1.8
EARTH'S MOON	149.6 (0.386 from Earth)	27.3 d	27.3 d	0.055	3,476	0.01	3.3

28. Scientists use the _____ unit to measure the distance from the center of the Sun to the center of the _____.

29. Rank the planets from the **SMALLEST mass** to the **LARGEST** mass in our Solar System.

_____, _____, _____, _____, _____, _____, _____, _____

30. Do the inner or outer planets have more mass? _____

31. What planet is the largest in terms of diameter? _____

32. Which planet has the largest period of revolution? _____
Smallest? _____

33. Which object in our solar system makes up 99.86% of the mass? _____

34. Which planet has the fastest period of rotation? _____

35. Which planet is called Earth's twin? _____ Which characteristic do they have that is similar? _____