

# The Solar System

The Planets	Mercury	Venus	Earth	Mars	Jupiter	Saturn	Uranus	Neptune
Distance to Sun (AU)	0.4	0.7	1	1.5	5.2	9.5	19.2	30.1
Revolution Time (years)	0.2	0.6	1	1.9	11.9	29.5	84	164.8
Mass (Earth=1)	0.1	0.8	1	0.1	317.8	95.1	14.5	17.2
Radius (Earth=1)	0.4	0.95	1	0.5	11.2	9.4	4.1	3.9
Density	5.4	5.3	5.5	3.9	1.3	0.7	1.2	1.7
Rotation Time	58.7dy	243dy	24h	24.6h	9.8h	10.6h	17.2h	16h
Moons	0	0	1	2	16	20+	15	8

## Distance to the Sun

1. Name the planets in order from the sun.

2. Which two planets are closer to the sun than the earth is? \_\_\_\_\_

3. Which planets are further from the sun than the earth is? \_\_\_\_\_

4. AU stands for "Astronomical Unit". What distance is 1 AU? \_\_\_\_\_

## Revolution Time

5. How long does it take for the earth to orbit once around the sun? \_\_\_\_\_

6. What is it called when a planet orbits once around the sun? \_\_\_\_\_

7. Which planet takes the shortest time to revolve once around the sun? \_\_\_\_\_

8. Which planet takes the longest time to orbit the sun? \_\_\_\_\_

## Mass

9. Which planets have a mass that is lighter than the earth? \_\_\_\_\_

10. Which planets have masses which are heavier than the earth's? \_\_\_\_\_

### **Radius**

11. Which planets are smaller than the earth? \_\_\_\_\_

12. Which planets are larger than the earth? \_\_\_\_\_

### **Density**

13. The earth is much denser than water, because it is mostly solid. Which planet is less dense than water (that is, has a density less than 1)? \_\_\_\_\_

### **Rotation Time**

14. Which planet rotates or spins on its axis once in 24 hours? \_\_

15. Which planet takes about the same time to rotate on its axis as the earth does?

16. Planets which are close to the sun and rotate very slowly are extremely hot on the lit side and extremely cold on the dark side. Which planets do you think would have great extremes of temperature on the different sides? \_\_\_\_\_

### **Satellites**

17. What is another name for a natural satellite? \_\_\_\_\_

18. Is there a relationship between the size of a planet and the number of moons it has? Explain. (Hint: Compare the Mass and Satellites data.) \_\_\_\_\_