Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_

**Study guide – 8th grade Chapter 2 Test: The Solar System**

1. Terms to know: meteor, meteorite, meteoroid, astronomical unit, rotation and revolution, lunar and solar eclipse (know where the Sun, Earth, and Moon are located), and the inner and outer planets (their location from the Sun and similarities and differences).

2. The further a planet is from the sun, the longer its period of revolution (time it takes to go around the Sun).

3. Planets orbit the sun in the shape of an ellipse, which is an elongated oval.

4. During a total solar eclipse, the sun’s corona is visible, which may cause blindness if viewed directly.

5. How do mass and distance impact the force of gravity?

The more massive an object, the stronger its gravitational force. The further away an object is from another object, the weaker the gravitational force between them. The opposite statements are also true.

6. We have seasons because the Earth is tilted on its axis. This means that summer days are longer than winter days.

7. The inner planets all have a solid outer layer while the outer planets consist mainly of H and He gas. These two elements are gases naturally on earth but on the outer planets become liquids due to the pressure from the gravitational forces of the massive planets. Scientists believe that the outer planets contain small solid cores.

8. Venus and Earth both experience a greenhouse effect because of heat trapped by their atmospheres.

9. All of the outer planets have ring systems and moons orbiting them.

10. Jupiter’s gravity prevented planets from forming in the asteroid belt.

11. Ceres is a dwarf planet located in the asteroid belt. Makemake, Pluto, and Haumea are all dwarf planets. Titan is Saturn’s largest moon.

12. Which of the following objects are larger than the dwarf planets? a. Earth, b. Luna (*Earth’s moon*), c. Mercury, d. A, B, & C

13. It is believed that comets originate in the Oort Cloud, beyond Pluto’s orbit.

14. Use the following table to answer the questions that follow.

**Average Distance of the Planets from the Sun**

|  |  |  |
| --- | --- | --- |
| **Planet** | **Average Distance (km)** | **Average Distance (AU)** |
| Mars |  227,920,000 | 1.52 |
| Jupiter | 778,570,000 | 5.20 |
| Saturn | 1,433,530,000 | 9.58 |
| Neptune | 4,495, 060,000 | 30.05 |

a. In A.U.s, how much farther is Saturn from the Sun than Jupiter? (average distance is 9.58-5.20) = 4.38 AU

b. About how many times farther is Neptune from the Sun than Jupiter? (30.05-5.20) = 25 times as far