

Chapter 25 The Solar System

Section 25.4 The Outer Solar System**(pages 810–815)**

This section describes the planets in the outer solar system. It also describes the dwarf planet Pluto, comets and meteoroids, and the edge of the solar system.

Reading Strategy (page 810)

Summarizing Copy the table on a separate sheet of paper. Fill in the table as you read to summarize the characteristics of the outer planets. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

The Outer Planets	
Outer Planets	Characteristics
Jupiter	Largest; most mass; most moons; Great Red Spot

Gas Giants (page 811)

- Circle the letter of each sentence that is true about Jupiter, Saturn, Uranus, and Neptune compared to the terrestrial planets.
 - Their years are shorter than the terrestrial planets.
 - They are colder than the terrestrial planets.
 - They are further from the sun than the terrestrial planets.
 - They are much larger than the terrestrial planets.
- Why are the outer planets called the gas giants? _____

- Describe the cores of the gas giants. _____

Jupiter (pages 811–812)

- The _____ is a huge storm on Jupiter.
- Circle the letter of each sentence that is true about Jupiter's moons.
 - Callisto and Ganymede are Jupiter's largest moons.
 - Scientists hypothesize that Europa could support life.
 - Ganymede has a metal core and rocky mantle.
 - Io is covered with ice.

Chapter 25 The Solar System

Saturn (pages 812–813)

6. Saturn has the largest and most visible _____ in the solar system.
7. Is the following sentence true or false? Saturn has the largest atmosphere and the lowest average density of all the planets in the solar system. _____

Uranus (page 813)

8. Is the following sentence true or false? Uranus gets its distinctive blue-green appearance from large amounts of methane in its atmosphere. _____
9. Uranus's _____ is tilted more than 90°.

Neptune (page 814)

10. Circle the letter of each sentence that is true about Neptune.
 - a. It has visible cloud patterns in its atmosphere.
 - b. It has only five known moons.
 - c. It has large storms in its atmosphere.
 - d. It has no rings.
11. The _____ in Neptune's atmosphere causes its bluish color.

Pluto (page 814)

12. Is the following sentence true or false? Pluto is both larger and denser than the outer planets. _____
13. Describe Pluto's probable composition. _____

Comets and Meteoroids (page 815)

14. A(n) _____ is made of ice and rock that partially vaporizes when it passes near the sun.
15. Chunks of rock, usually less than a few hundred meters in size, that travel through the solar system are called _____.
16. The radioactive dating of ancient meteoroids has allowed scientists to establish that the age of the solar system is _____.

The Edge of the Solar System (page 815)

17. The _____ contains tens of thousands of objects made of ice, dust, and rock that orbit the sun beyond Neptune.
18. The thick sphere of comets encircling the solar system out to a distance of about 50,000 AU is called the _____.