

Chapter 25 The Solar System

Section 25.1 Exploring the Solar System

(pages 790–794)

This section explores early models of our solar system. It describes the components of the solar system and scientific exploration of the solar system.

Reading Strategy (page 790)

Comparing and Contrasting After you read, compare the geocentric and heliocentric systems by completing the table below. 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.

Solar System Models			
	Location of Earth	Location of Sun	Developer(s) of Theory
Geocentric System	Center of universe		
Heliocentric System			Aristarchus, Copernicus

Models of the Solar System (pages 790–791)

- Is the following sentence true or false? In the Northern Hemisphere, the stars appear to circle around the North Star.

- Name the five planets besides Earth that ancient observers could see with the unaided eye.
 - _____
 - _____
 - _____
 - _____
 - _____
- Many ancient Greeks thought _____ was the center of the universe.
- Circle the letter of each sentence that is true about a geocentric model.
 - Earth is stationary at the center.
 - Objects in the sky move around Earth.
 - The sun is the center of the solar system.
 - The planets revolve around the sun.
- Name the center of the solar system in a heliocentric model.

- Is the following sentence true or false? The first heliocentric model was widely accepted by most ancient Greeks. _____

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7. Is the following sentence true or false? The sun, moon, and stars appear to move because Earth is rotating on its axis.

Planetary Orbits (page 792)

8. Planets move around the sun in orbits that are in the shape of a(n) _____.
9. The plane containing Earth's orbit is called the _____.
10. Name the two factors that combine to keep the planets in orbit around the sun. _____

Components of the Solar System (pages 792–793)

11. Circle the letters that identify objects in our solar system.
a. moons of the planets b. planets
c. the sun d. the stars other than the sun
12. Name two planets that were identified after the invention of the telescope in the early 1600s.
a. _____ b. _____
13. Is the following sentence true or false? All of the planets have moons. _____
14. Unlike the sun, planets and moons do not produce their own _____.
15. Is the following sentence true or false? The sun's mass is smaller than the combined mass of the rest of the solar system.

Exploring the Solar System (pages 793–794)

16. Name three examples of types of modern technology that scientists use to explore the solar system.
a. _____ b. _____ c. _____
17. Circle the letter that identifies the first person to walk on the moon.
a. Alan Shepard b. Yuri Gagarin
c. Chuck Yeager d. Neil Armstrong
18. An unpiloted vehicle that sends data back to Earth is called a(n) _____.
19. Describe the space shuttle. _____

20. Is the following sentence true or false? The International Space Station is a permanent laboratory designed for research in space.
