Name	Date	Section

Space Science Unit 1: The Universe Review

Vocabulary

Fill in each blank with the term that best completes the following sentences.

- 1. A large celestial body that is composed of gas and that emits light is a(n) ______.
- 2. A(n) ______ consists of one star or more than one star and all the objects in orbit around the central star.
- 3. A(n) ______ is a large group of stars, gas, and dust bound together by gravity.
- 4. A large, cold cloud of gas and dust in interstellar space is called a(n) ______.
- 5. The distance that light can travel in one year, also known as a ______, is about 9.5 trillion km.

Key Concepts

Read each question below, and circle the best answer.

- 6. While planets are smaller than stars, planets are generally larger than which of the following?
 - A. the stars they orbit around
 - B. the solar system
 - C. the galaxy they are contained within
 - D. the other bodies in a solar system
- 7. Where do stars form?
 - A. in a planet's core
 - B. in nebulae
 - C. on asteroids
 - D. in sun spots on the surface of the sun

- 8. What causes a supernova?
 - A. the collision of several small stars that forms a new giant star
 - B. the collapse of a giant cloud of gas and dust in a nebula
 - C. the expansion of a shell of gas around a star that creates a giant star
 - D. the collapse of the core of a high-mass star
- 9. The following table displays the average distance from Earth for four objects.

Object	Average Distance from Earth
Barnard's Star	6 light years
Andromeda Galaxy	2.4 million light years
Triangulum Galaxy	2.6 million light years
Planet Neptune	4.3 billion km

Which object is farthest away from Earth?

- A. Barnard's Star
- B. Planet Neptune
- C. Andromeda Galaxy
- D. Triangulum Galaxy
- 10. How do galaxies range in size?
 - A. from dwarf galaxies with approximately 100 million stars to giant galaxies with approximately 1 trillion stars
 - B. as large as the distance from Earth to the sun and back
 - C. from the smallest speck of dust to infinity
 - D. from as small as the Milky Way to as large as the universe
- 11. How do astronomers measure the brightness of a star?
 - A. by describing how large it is
 - B. by explaining how old the star is
 - C. by measuring the amount of energy it emits
 - D. by using apparent magnitude, a measure of the brightness of stars as they appear to an observer on Earth

12. The table below relates color and surface temperature for different stars.

Color	Surface Temperature (K)	
blue	Above 25,000	
blue-white	7,500–10,000	
white	7,500–10,000	
yellow-white	6,000–7,500	
yellow	5,000–6,000	
orange	3,500–5,000	
red	Below 3,500	

The color of the surface of a star can be used to determine temperature. Which color in the table is the coolest star?

A. blue C. yellow-white

B. red D. yellow

Critical Thinking

Answer the following questions in the space provided.

13. Below is a drawing of the Milky Way Galaxy. Describe the shape and composition of the Milky Way Galaxy.



14. Summarize the process by which a low-mass star becomes a giant.

ESSENTIAL QUESTIONS

Answer the following question in the space provided.

15. Study the diagram below.



What are characteristics of planets and stars and what is their relationship within solar systems, galaxies, and the universe? Use the drawing as a reference.