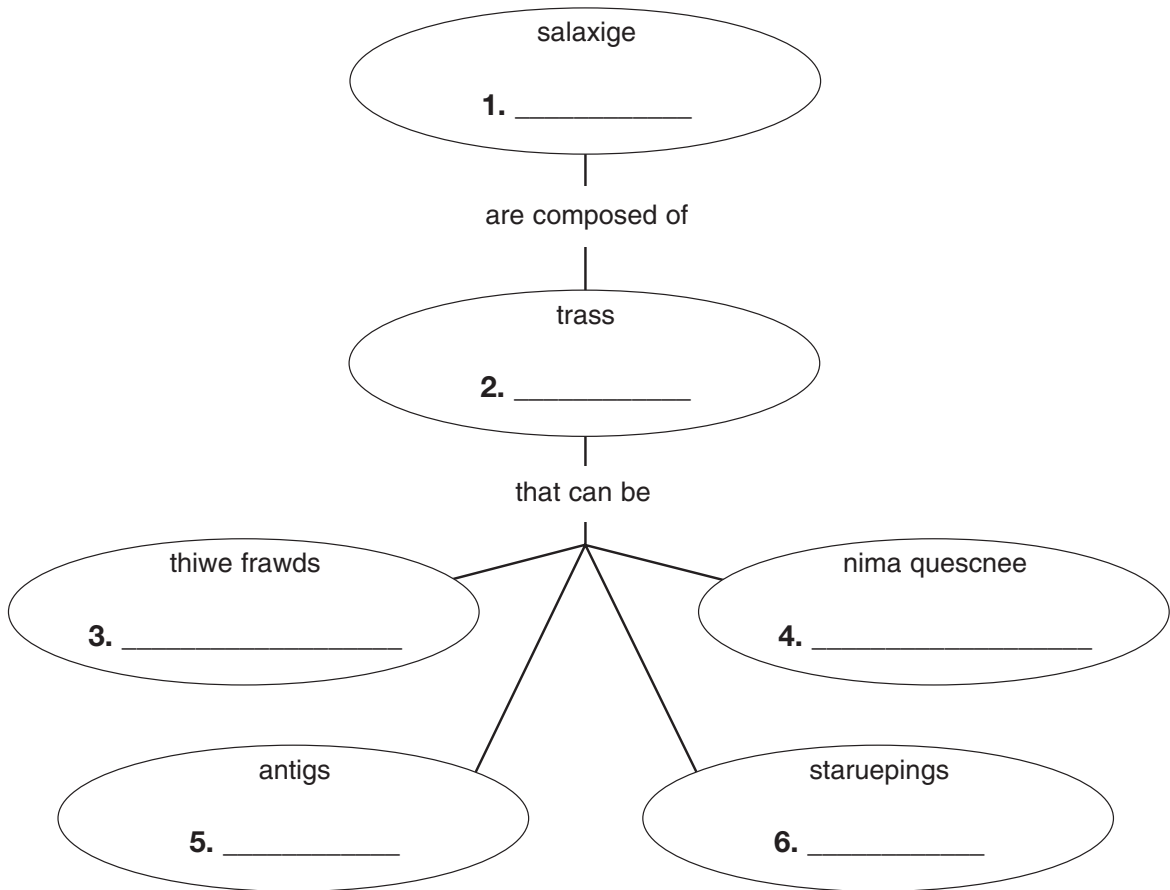


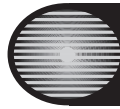
# Overview Stars and Galaxies

**Directions:** *Unscramble each term to complete the concept map below.*



**Directions:** *Use the terms from the concept map to complete the sentences below.*

7. Most stars are \_\_\_\_\_ stars.
8. In the late stages of their life cycle, stars can expand to become \_\_\_\_\_ or \_\_\_\_\_.
9. A \_\_\_\_\_ is a star that has contracted after using its supply of helium.
10. \_\_\_\_\_ are large groups of stars, gas, and dust held together by gravity.



Directed Reading for  
Content Mastery

## Section 3 ■ Evolution of Stars

## Section 4 ■ Galaxies and the Universe

**Directions:** Identify the stages in the life cycle of an average star. Use the words below to fill in the blanks.

**white dwarf**

**nebula**

**giant**

**main sequence**

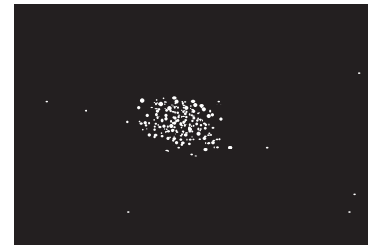
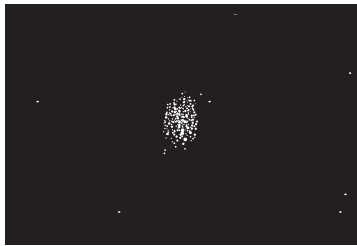
1. Star begins in a clouds of gas and dust. \_\_\_\_\_
2. Star continues to use hydrogen for energy; heat from fusion causes pressure that balances the pull of gravity. \_\_\_\_\_
3. Star's core is exhausted of hydrogen; its outer layers expand and cool. \_\_\_\_\_
4. Star's core is exhausted of helium; its outer layers escape into space leaving only the core; the core contracts, or gets smaller. \_\_\_\_\_

**Directions:** Identify the type of galaxy shown in each illustration. Use the words to fill in the blanks below.

**irregular**

**spiral**

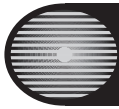
**elliptical**



5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

**Directions:** Answer the questions below on the lines provided.

8. In which galaxy is our solar system? \_\_\_\_\_
9. What is the name for the change in a star's spectrum when it moves away from Earth? \_\_\_\_\_
10. What is the theory that explains how the universe began with an enormous explosion? \_\_\_\_\_  
\_\_\_\_\_



## Chapter Review

# Stars and Galaxies

## Part A. Vocabulary Review

**Directions:** Match the terms in Column I with their descriptions in Column II. Write the letter of the correct description in the blank at the left.

### Column I

- \_\_\_\_\_ 1. white dwarf
- \_\_\_\_\_ 2. absolute magnitude
- \_\_\_\_\_ 3. apparent magnitude
- \_\_\_\_\_ 4. parallax
- \_\_\_\_\_ 5. constellations
- \_\_\_\_\_ 6. main sequence
- \_\_\_\_\_ 7. nebula
- \_\_\_\_\_ 8. giant
- \_\_\_\_\_ 9. light-year
- \_\_\_\_\_ 10. supergiant
- \_\_\_\_\_ 11. neutron star
- \_\_\_\_\_ 12. black hole
- \_\_\_\_\_ 13. sunspots
- \_\_\_\_\_ 14. chromosphere
- \_\_\_\_\_ 15. corona
- \_\_\_\_\_ 16. supernova
- \_\_\_\_\_ 17. binary system
- \_\_\_\_\_ 18. photosphere
- \_\_\_\_\_ 19. galaxy
- \_\_\_\_\_ 20. Big Bang theory

### Column II

- a. explanation for the beginning of the universe
- b. relatively cool star that has expanded to more than 700 times as large as our sun
- c. groups of stars whose positions in the sky seem to change as Earth moves
- d. distance that light travels in one year
- e. lowest layer of the Sun's atmosphere that gives off light
- f. classification of about 90 percent of the stars
- g. actual amount of light a star gives off
- h. two or more stars revolving around one another
- i. produced from an explosion that occurs when a star's core collapses
- j. star in which only neutrons can exist in its core
- k. earliest stage of a star's formation
- l. amount of a star's light observed on Earth
- m. large, cool expanding star in which helium fuses to form carbon
- n. object so dense that nothing, including light, can escape it
- o. layer of the sun's atmosphere above the photosphere
- p. large group of stars, gas, and dust held together by gravity
- q. apparent shift in position of an object when viewed from different places; used to determine distances
- r. small, hot star consisting of a hot, dense core contracting under the force of gravity
- s. dark, cooler areas of the Sun's surface
- t. outer layer and largest part of the Sun's atmosphere

**Chapter Review (continued)****Part B. Concept Review**

1. Sequence the colors of stars by temperature, labeling the hottest star number 1.

\_\_\_\_\_ blue  
\_\_\_\_\_ yellow  
\_\_\_\_\_ red

2. Identify the sequence of the evolution of stars by labeling the stages. Use 1 to label nebula.

\_\_\_\_\_ nebula  
\_\_\_\_\_ white dwarf  
\_\_\_\_\_ giant  
\_\_\_\_\_ main sequence star

**Directions:** Write the word **yes** in front of any characteristic of the Milky Way. Write the word **no** in front of any characteristic that does not match the Milky Way.

- \_\_\_\_\_ 3. spiral galaxy  
\_\_\_\_\_ 4. member of the Local Group  
\_\_\_\_\_ 5. 5.8 million light-years from the galaxy in Andromeda  
\_\_\_\_\_ 6. more than 400 billion stars  
\_\_\_\_\_ 7. elliptical galaxy  
\_\_\_\_\_ 8. 100,000 light-years in diameter

**Directions:** Answer the following questions using complete sentences.

9. How is the Sun different from other stars? How is the Sun similar to other stars?

\_\_\_\_\_  
\_\_\_\_\_

10. How is the Big Bang theory supported by the observed Doppler shift of galaxies?

\_\_\_\_\_  
\_\_\_\_\_

11. How does the Sun produce energy?

\_\_\_\_\_  
\_\_\_\_\_

12. Compare and contrast apparent magnitude and absolute magnitude.

\_\_\_\_\_  
\_\_\_\_\_

13. How are sunspots, flares, and prominences related?

\_\_\_\_\_