

Content Practice A**Chapter 22.2 Review****LESSON 2****The Sun and Other Stars**

Directions: On the line before each definition, write the letter of the term that matches it correctly. Each term is used only once.

- | | |
|---|-------------------------------|
| _____ 1. shell of cooler hydrogen above a star's core | A. nuclear fusion |
| _____ 2. sudden increases of brightness caused by violent eruptions on the Sun | B. stellar composition |
| _____ 3. elements, including helium and hydrogen gas, that make up a star | C. star |
| _____ 4. orange-red layer above the photosphere | D. radiative zone |
| _____ 5. appear as dark splotches on the Sun | E. convection zone |
| _____ 6. occurs when the nuclei of several atoms combine into one larger nucleus | F. photosphere |
| _____ 7. two stars that orbit each other | G. chromosphere |
| _____ 8. apparent surface of a star | H. corona |
| _____ 9. charged particles that stream away from the Sun | I. sunspots |
| _____ 10. large ball of gas held together by gravity with an extremely hot core | J. solar flares |
| _____ 11. zone above the radiative zone in which hot gas moves toward the surface | K. solar wind |
| _____ 12. wide outermost layer of a star's atmosphere | L. binary star system |

Key Concept Builder 

LESSON 2

The Sun and Other Stars

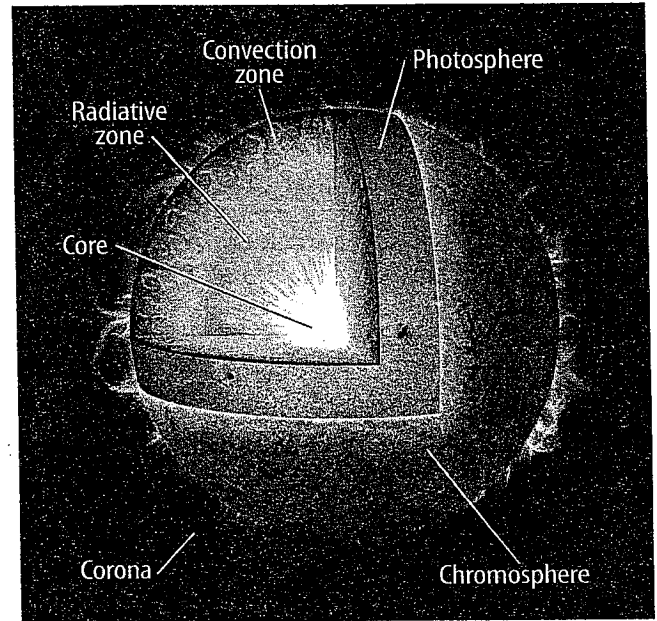
Key Concept How are stars layered?

Directions: Use the diagram to respond to each statement on the lines provided.

1. This layer of the Sun is a shell of cooler hydrogen above a star's core. _____

2. Over time, hydrogen in this layer of the Sun fuses into more complex nuclei. _____

3. This wide, outermost layer of the Sun has an irregular shape and a temperature higher than the chromosphere. _____



4. This layer of the Sun is above the star's core and contains cooler and less-dense hydrogen. _____

5. In this interior layer of the Sun, hot gas moves up toward the surface and cooler gas moves deeper into the interior. _____

6. Immediately above the photosphere of the Sun is this orange-red layer. _____

7. This atmospheric gas layer of the Sun is the apparent surface of a star. It is the dense, bright part you can see. _____

8. Stars fuse hydrogen into helium. The denser helium sinks to the inner part of this layer of the Sun. _____

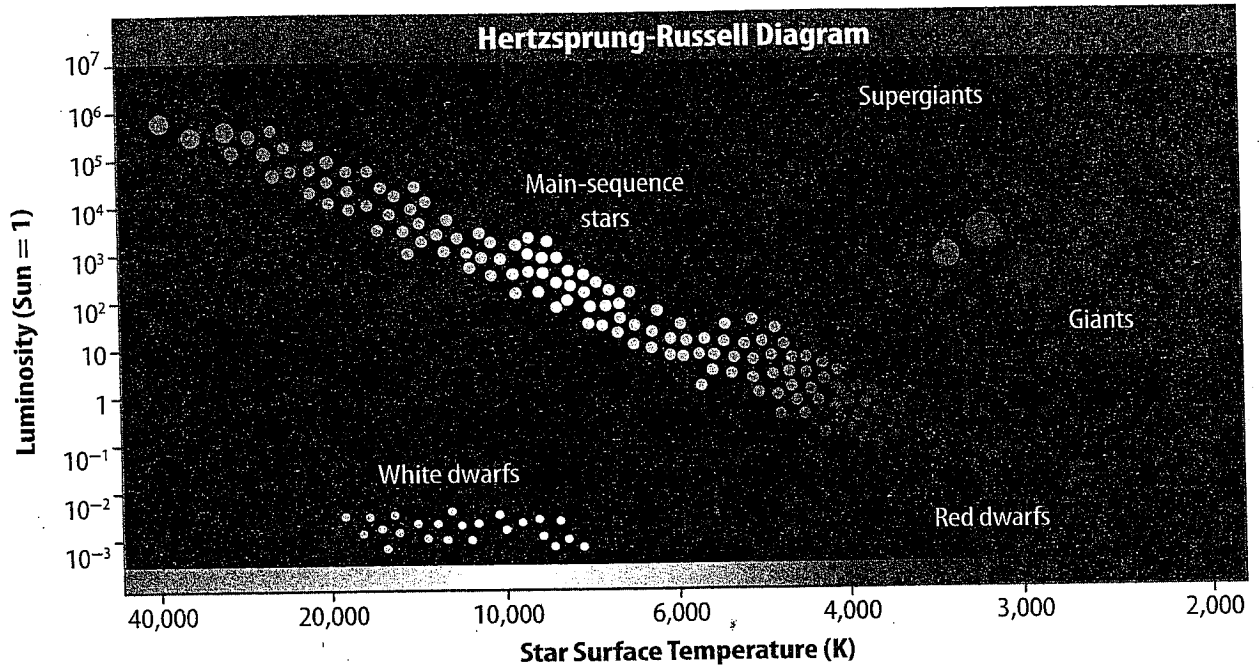
Key Concept Builder 

LESSON 2

The Sun and Other Stars

Key Concept How do scientists classify stars?

Directions: Circle the term in parentheses that correctly completes each statement. Use the diagram to answer questions 5–8.



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1. (Properties, Chromospheres) used to classify stars include temperature, color, and mass.
2. Blue-white stars are (hotter, cooler) than red stars.
3. Stars with intermediate temperatures are orange, (yellow, red), and white.
4. For most stars on the main sequence, greater mass means (lower, higher) temperature.
5. The stars with lower temperatures are shown on the (left, right) side of the diagram.
6. The largest and (hottest, coolest) stars are shown at the top right of the diagram.
7. Hot and dim stars that are not on the main sequence are (white dwarfs, red giants).
8. The red supergiants shown on the diagram are (hot, cool), luminous, and unusually large.

Lesson Quiz A**LESSON 2****The Sun and Other Stars****Matching**

Directions: On the line before each definition, write the letter of the term that matches it correctly. Each term is used only once.

- | | |
|--|---------------------------|
| _____ 1. shell of hydrogen above the core | A. chromosphere |
| _____ 2. apparent surface of a star | B. convection zone |
| _____ 3. orange-red layer above the photosphere | C. corona |
| _____ 4. area where hot gases move up and cold gases move down | D. photosphere |
| _____ 5. outermost layer of a star's atmosphere | E. radiative zone |

Multiple Choice

Directions: On the line before each question or statement, write the letter of the correct answer.

- _____ 6. Stars shine because
- A.** fusion takes place in their cores.
 - B.** their coronas reflect most visible light.
 - C.** they spend most of their time on the main sequence.
- _____ 7. Which group represents the interior layers of a star?
- A.** radiative zone, corona, photosphere
 - B.** core, radiative zone, convection zone
 - C.** chromosphere, convection zone, radiative zone
- _____ 8. Which features of the Sun change over short periods of time?
- A.** sunspots
 - B.** globular clusters
 - C.** convection zone particles
- _____ 9. The Hertzsprung-Russell diagram plots the
- A.** layers and energy output of stars.
 - B.** fusion rate and age of bright stars.
 - C.** luminosity and temperature of stars.
- _____ 10. Which star is the hottest?
- A.** a white dwarf
 - B.** a red supergiant
 - C.** a blue main sequence star