Name _____ Class _____ Date _____

Section 25.2 Stellar Evolution

(pages 707–714)

This section describes the evolution of stars from birth to burnout and death. It also discusses types of stellar remnants.

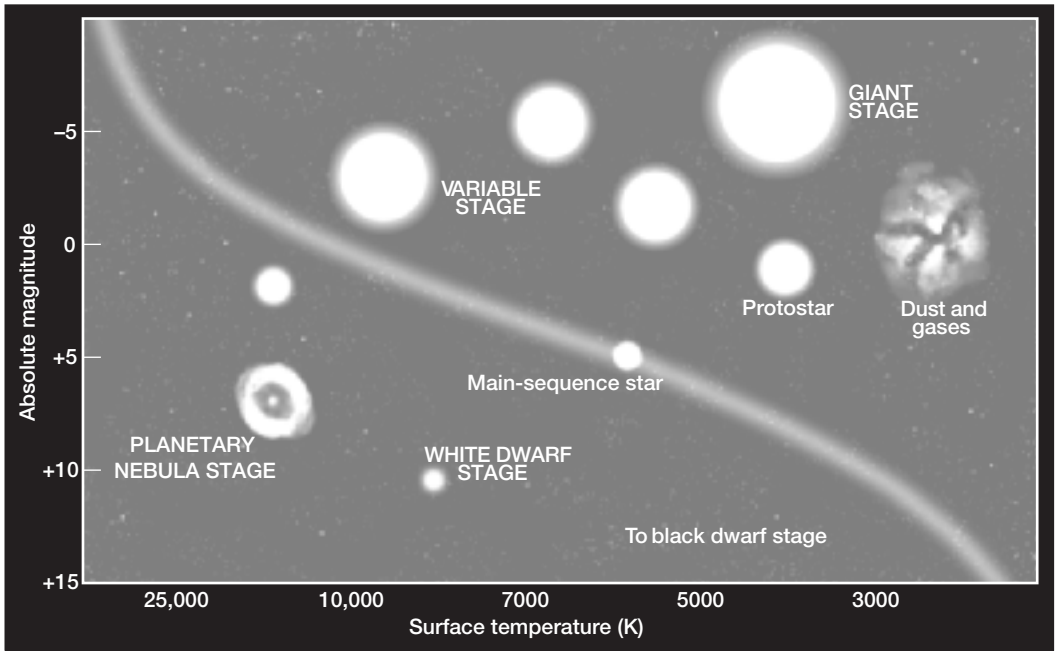
Reading Strategy (page 707)

Sequencing As you read, complete the flowchart to show how the sun evolves. Expand the chart to show the evolution of low-mass and high-mass stars. 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.

Star Birth (pages 707–709)

1. List in order the labeled stages shown on the figure that a medium-mass star goes through during its "life." (*Hint:* It may be helpful to draw arrows on the figure from stage to stage.)

a. dust and gases
b. protostar
c. _____
d. _____
e. _____
f. _____
g. _____
h. _____



2. A(n) _____ is a developing star not yet hot enough to engage in nuclear fusion. Circle the correct answer.

white dwarf protostar pulsar

3. Is the following sentence true or false? An average star spends 90 percent of its life as a helium-burning main-sequence star.

_____

Burnout and Death (pages 710–712)

4. Is the following sentence true or false? All stars eventually run out of fuel and collapse due to gravity. _____

Match each death description with its star.

	Death Description	Star
_____	**5.** forms a red giant, which then collapses into a red dwarf and forms a planetary nebula	a. low-mass star b. medium-mass star c. massive star
_____	**6.** blows up in a supernova explosion	
_____	**7.** does not form a red giant; collapses directly into a white dwarf	

Stellar Remnants (pages 712–714)

8. The stages the sun has gone through and will go through during its evolution are nebula, main-sequence star, _____, planetary nebula, _____, and black dwarf.

Match each description with its stellar remnant.

	Description	Stellar Remnant
_____	**9.** remnant of a supernova event; similar to a large atomic nucleus	a. black hole b. white dwarf c. neutron star
_____	**10.** small dense object formed from the remnants of a star at least three times as massive as the sun	
_____	**11.** remnant of a low-mass or medium-mass star	