

Evolution of Stars

Directions: *The following terms represent, in random order, different steps in the formation and life of a star.*

Number the steps in the space provided as follows: the first step 1, second step 2, and so on.

1. fusion reaction
2. big bang
3. giant star
4. nebula
5. white dwarf
6. protostar

Directions: *Answer the following questions by writing the letter of the correct answer on the line provided.*

7. Which of the following statements best explains why a star is on the main sequence?

- a. The star's mass is approximately equal to the mass of the sun.
- b. The gravitational force balances the force from nuclear fusion.
- c. The star has just undergone a supernova.
- d. The star's temperature lies in the main sequence range.

8. Which type of star is formed from a supernova?

- a. giant star
- b. supergiant star
- c. neutron star
- d. white dwarf star

9. The Hertzsprung-Russell diagram plots

- a. the temperature of the star on the horizontal axis and the mass on the vertical axis.
- b. the magnitude of the star on the horizontal axis and the temperature on the vertical axis
- c. the magnitude of the star on the vertical axis and the temperature on the horizontal axis.
- d. the mass of the star on the vertical axis and the temperature on the horizontal axis.

10. How is energy from the core of the Sun transmitted to the photosphere?

- a. nuclear fusion
- b. radiation and convection
- c. radiation
- d. convection

Section 1 ■ Observing the Universe

Section 2 ■ Evolution of Stars

Directions: *Match the type of device on the left with its description on the right.*

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| ___ 1. Refracting telescope | a. Uses a curved mirror |
| ___ 2. Radio telescope | b. Separates wavelengths |
| | c. Uses lenses |