

## Understanding Stars

### Fill in the blanks

1. What is a star made of (composed of?)

A mass of \_\_\_\_\_ and \_\_\_\_\_ gas

2. What is a nebula? Add this term to your glossary

A cloud of \_\_\_\_\_ and \_\_\_\_\_ where stars are \_\_\_\_\_

3. How is gravity involved in star formation?

Gravity \_\_\_\_\_ on the cloud causing it to \_\_\_\_\_ and start \_\_\_\_\_

4. The gas in a nebula keeps contracting due to gravity until the heat and pressure becomes high enough for \_\_\_\_\_ reactions between the hydrogen and helium atoms to begin in the core.

5. The change from protostar (pre-star) to star happens the moment

\_\_\_\_\_ starts.

6. The nuclei of 2 hydrogen atoms fuse together and change into one \_\_\_\_\_ nucleus. (This is nuclear fusion.) In the process part of the mass is turned into \_\_\_\_\_. The star begins to shine and give off heat.

7. The only thing that keeps a star from exploding into space is \_\_\_\_\_

8. What two forces are in equilibrium (balance) in a star? \_\_\_\_\_ and

\_\_\_\_\_

9. How are stars classified? \_\_\_\_\_ , \_\_\_\_\_

\_\_\_\_\_, and \_\_\_\_\_

10. What temperature units are used for stars? \_\_\_\_\_

11. Which colored star are the lowest temperature? \_\_\_\_\_

Medium temperature? \_\_\_\_\_

Highest temperature? \_\_\_\_\_

12. What determines a star's brightness? \_\_\_\_\_ and \_\_\_\_\_
13. What will our Sun turn into when it runs out of energy? \_\_\_\_\_ and then a  
\_\_\_\_\_
14. When a very large star (supergiant) runs out of fuel and explodes it is called a  
\_\_\_\_\_ (add this term to your glossary)

Answer the two questions below in complete sentences

15. How can a black hole form? Will our Sun change into a black hole?
16. Although a supernova means the end of one star's life, why does it mean the beginning of many others?