

## Stars

Read about stars and then answer the questions below.

Stars are giant spheres of superhot gas. Stars get so hot by burning hydrogen into helium in a process called nuclear fusion. This is what makes them so hot and bright. Our Sun is a star.

Stars start out in giant clouds of dust called nebulae. Gravity forces the dust to bunch together. As more and more dust bunches up, gravity gets stronger and it starts to get hot and becomes a protostar. Once the center gets hot enough, nuclear fusion will begin and a young star is born.

Once a star, it will continue to burn energy and glow for billions of years. This is how a star stays for the majority of its life and is called the "main sequence."

There are many different types of stars. Stars that are in their main sequence (normal stars) are categorized by their color. The smallest stars are red and don't give off much of a glow. Medium size stars are yellow, like the Sun. The largest stars are blue and are hugely bright. The larger the main sequence star, the hotter and brighter they are.

Smaller stars are called dwarf stars. Red and yellow stars are generally called dwarfs. A brown dwarf is one that never quite got large enough for nuclear fusion to occur. A white dwarf is the remnants of the collapse of a red giant star.

Giant stars may be main sequence stars like a blue giant, or stars that are expanding like red giants. Some supergiant stars are as big as the entire Solar System!

(From: <https://www.ducksters.com/science/star.php>)

1. What happens to a star once the center of it gets hot enough? \_\_\_\_\_

\_\_\_\_\_

2. How long does a star burn for? \_\_\_\_\_

3. What size star is the Sun and how do you know? \_\_\_\_\_

\_\_\_\_\_

4. Why does a star become a white dwarf? \_\_\_\_\_

\_\_\_\_\_

5. How big can a supergiant start get? \_\_\_\_\_

\_\_\_\_\_