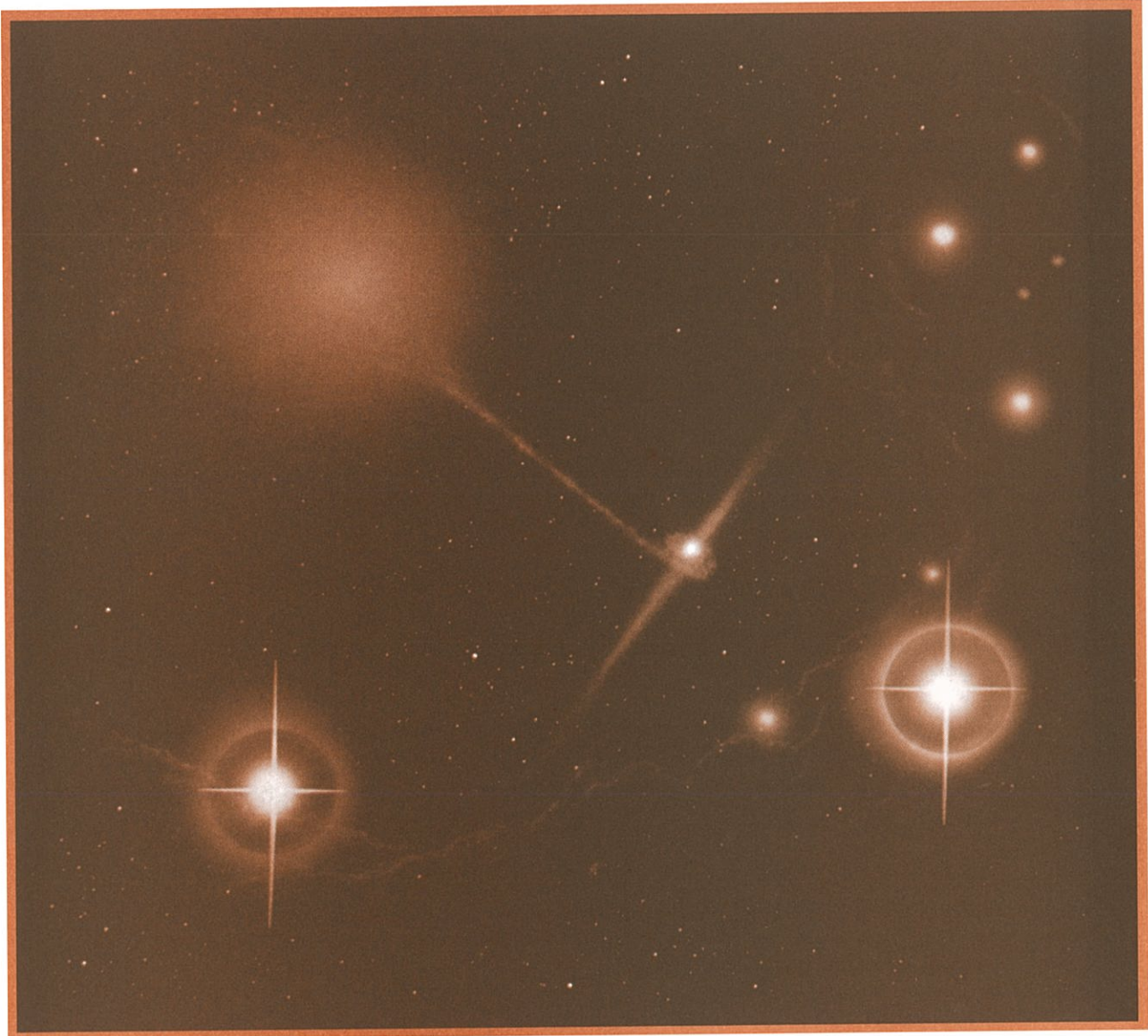


## What are stars?



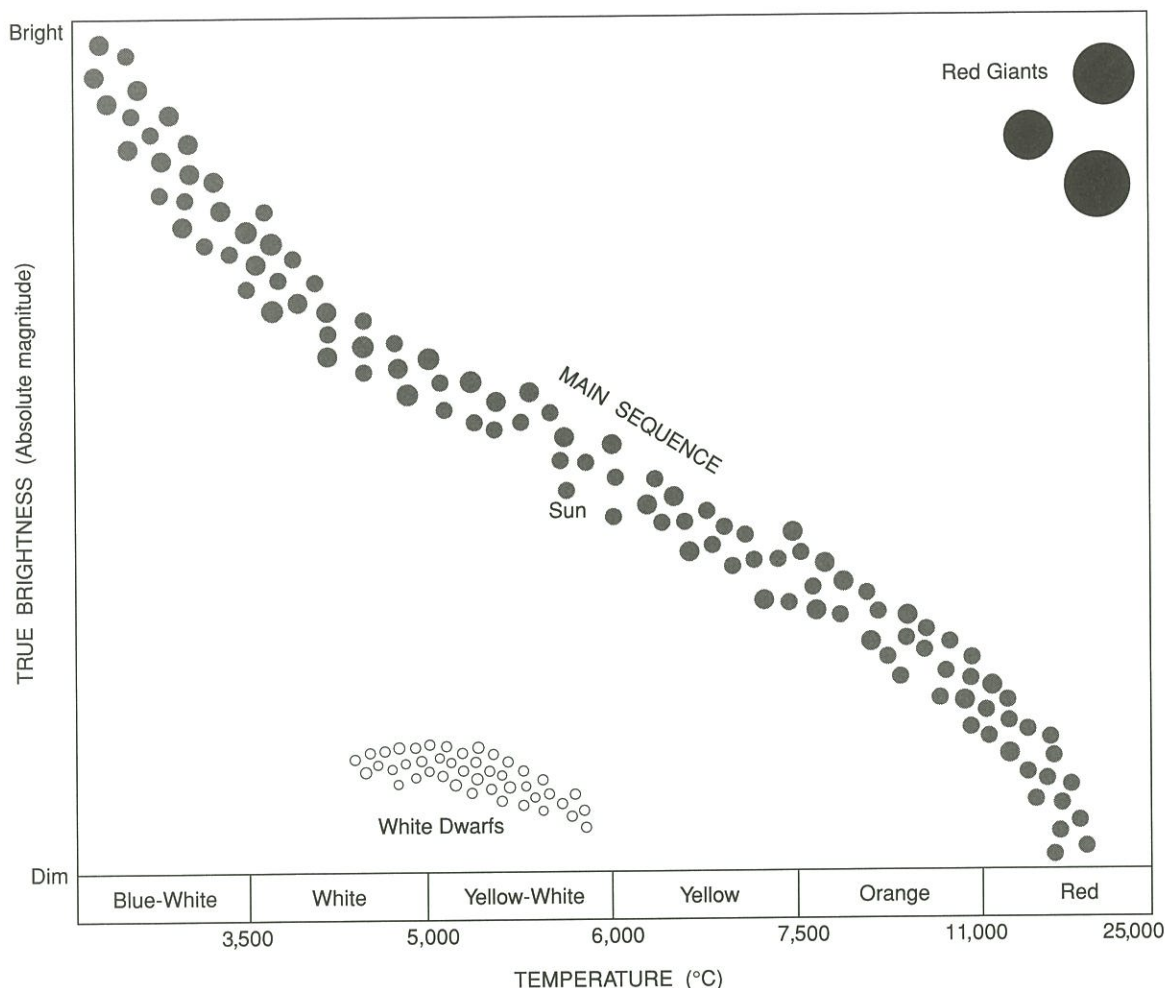
### KEY TERMS

**magnitude:** star brightness

**absolute magnitude:** true brightness of a star

**apparent magnitude:** brightness a star seems to have

## STAR STUDIES



**Figure A**

Look at Figure A. For the stars in the main sequence, the brighter a star is, the hotter it is as well. There is a relationship between the color of a star and its brightness.

The scientists who study stars have determined that while stars are not alive, they do have a life cycle similar to the life cycle of people. When stars are “born,” they are dim, cool, and red. As stars age, they get brighter and hotter.

The place of a star on the main sequence is determined by its age. The stars in the bottom left corner are the youngest and the stars in the upper right corner are the oldest.

When stars get very old, they stay very bright, but they get much cooler and larger. They become red giants. Red giants are very old stars.

Some red giants, the smaller ones, eventually shrink and get dimmer, but they get whiter as well. They become white dwarfs.

Therefore, where a star is on this graph tells us how old the star is.

## MATCHING

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Match each term in Column A with its description in Column B. Write the correct letter in the space provided.

	Column A	Column B
_____	1. star color	a) a yellow star
_____	2. true brightness	b) stars not on the main sequence
_____	3. red giants	c) depends on temperature
_____	4. apparent brightness	d) absolute magnitude
_____	5. the sun	e) depends on distance

## FILL IN THE BLANK

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Complete each statement using a term or terms from the list below. Write your answers in the spaces provided. Some words may be used more than once.

blue-white  
temperature  
red giants

absolute magnitude  
the sun  
starlight

yellow  
distance  
hot gases  
star

1. Stars are made up of very \_\_\_\_\_ .
2. Apparent brightness depends mostly on \_\_\_\_\_ .
3. The color of the hottest stars is \_\_\_\_\_ .
4. Large, cool stars that are not on the main sequence are \_\_\_\_\_ .
5. "Medium-hot" stars are \_\_\_\_\_ .
6. Star color depends mostly on \_\_\_\_\_ .
7. \_\_\_\_\_ is the light given off by stars.
8. The brightest star in our sky is \_\_\_\_\_ .
9. \_\_\_\_\_ brightness depends on size and temperature.
10. The true brightness of a star is called \_\_\_\_\_ .