

Name: _____

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Literacy support worksheet

6.2 The Earth is in the Milky Way

Pages 142–143

Stellar magnitudes, parallax and distances

1 What are stars?

2 Name three features that can make stars different from each other.

3 What two elements are stars made of?

4 Use the following word list to fill in the blanks in the paragraph below.

Word list: close, positive, dimmer

The apparent magnitude scale is a measure of how bright a star 'appears' to be. The more

_____ (and the less negative) the number, the _____ the star. A

star may appear to be quite bright because it is _____ to the Earth; it may not

actually be very bright.

5 The colour of a star is an indicator of its surface temperature. Complete the following sentences.

a 'The hotter the surface temperature of the star, the _____ the colour.'

b 'The colder the surface temperature of the star, the _____ the colour.'

6 What is one method of measuring stars using colour?

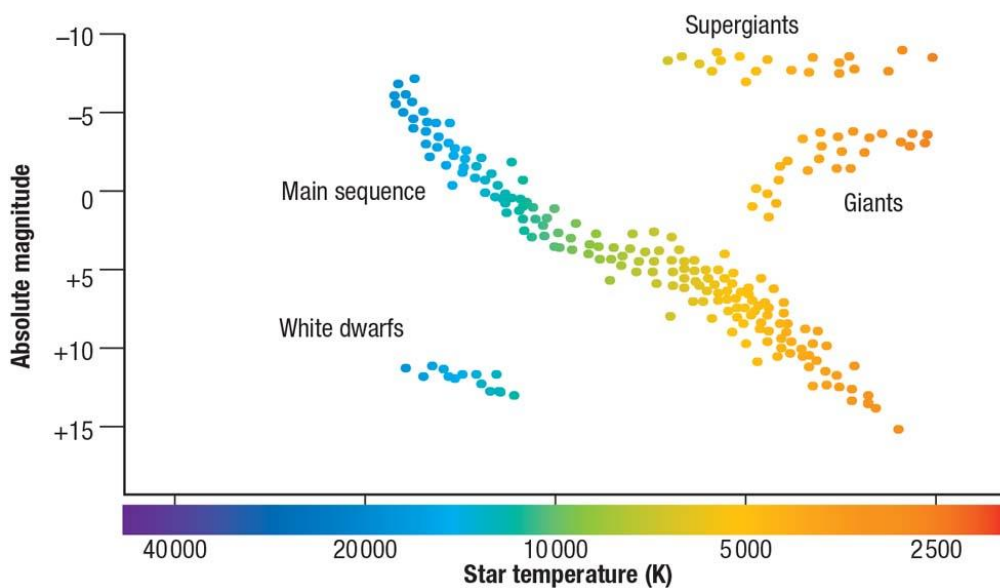
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- 7 How long does it take for the light from the Sun to reach:
- a the Earth?

b Proxima Centauri?

- 8 Our Sun has a surface temperature of about 5700 K and an absolute magnitude of 4.77. Use this information to show where our Sun would be positioned on the Hertzsprung–Russell diagram below.



Word detective – True or false

- 9 Read the statement and circle whether it is true or false.
- a Gases reacting at the core of a star provide energy to the star. T or F
 - b Nuclear fusion occurs when two atomic nuclei are repelled. T or F
 - c The Sun is the brightest object in the sky. T or F
 - d Luminosity refers to how bright a star appears to be. T or F
 - e Light-years measure the distance of stars from the Sun. T or F
 - f Proxima Centauri is the next closest star to the Earth, after the Sun. T or F
 - g Every night our stars and planets move across the night sky. T or F