



Stars and Brightness

Name: _____

Date: _____

Grade: Grade 5

Part A: Multiple Choice

Circle the best answer for each question.

1. Why might a giant star far away look dimmer than a small star nearby?

- A) Because distance makes light spread out and weaken
- B) Because giant stars do not produce much light
- C) Because small stars are always hotter than giants
- D) Because Earth's atmosphere blocks giant stars only

2. Two stars produce equal light. Star A is 5 light-years away, and Star B is 50 light-years away. Which appears brighter from Earth?

- A) Star B because it is older
- B) Star A because it is closer to Earth
- C) They look exactly equal in brightness
- D) Neither one can be seen from Earth

3. Which star color group has the highest surface temperatures?

- A) Red stars
- B) Orange stars
- C) Blue stars
- D) Yellow stars

4. Why does Polaris appear to stay nearly still in the night sky as Earth rotates?

- A) It moves with Earth at the same speed
- B) It only shines at night, never moving
- C) It is the largest star known
- D) It sits almost above Earth's North Pole

Part B: Fill in the Blank

Write the correct answer on each line.

1. Sirius looks bright partly because it is only about 8.6 light- _____ from Earth.
2. When a Sun-like star runs out of fuel, it can swell into a _____ giant.
3. Astronomers measure the huge distances between stars using _____ -years.
4. A star's true light output, no matter where viewers are, is called its _____.
5. Compared to a red giant, a white dwarf is much _____ in size.

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Part B: Fill in the Blank

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1. Sirius looks bright partly because it is only about 8.6 light- years from Earth.
2. When a Sun-like star runs out of fuel, it can swell into a red giant.
3. Astronomers measure the huge distances between stars using light -years.
4. A star's true light output, no matter where viewers are, is called its luminosity.
5. Compared to a red giant, a white dwarf is much smaller in size.