

Determine the average surface temperature or color for the stars below. After you have completed the questions, color the stars their appropriate colors. Use the chart to assist you.

Star Colors and Surface Temperatures	
Star Color	Average Surface Temp.
blue or blue-white	35,000 °C
white	10,000 °C
yellow	6,000 °C
red-orange	5,000 °C
red	3,000 °C

1. A blue star has an average surface temperature of:

2. A yellow star has an average surface temperature of:

3. What color is a star that has an average surface temperature of 10,000°C?

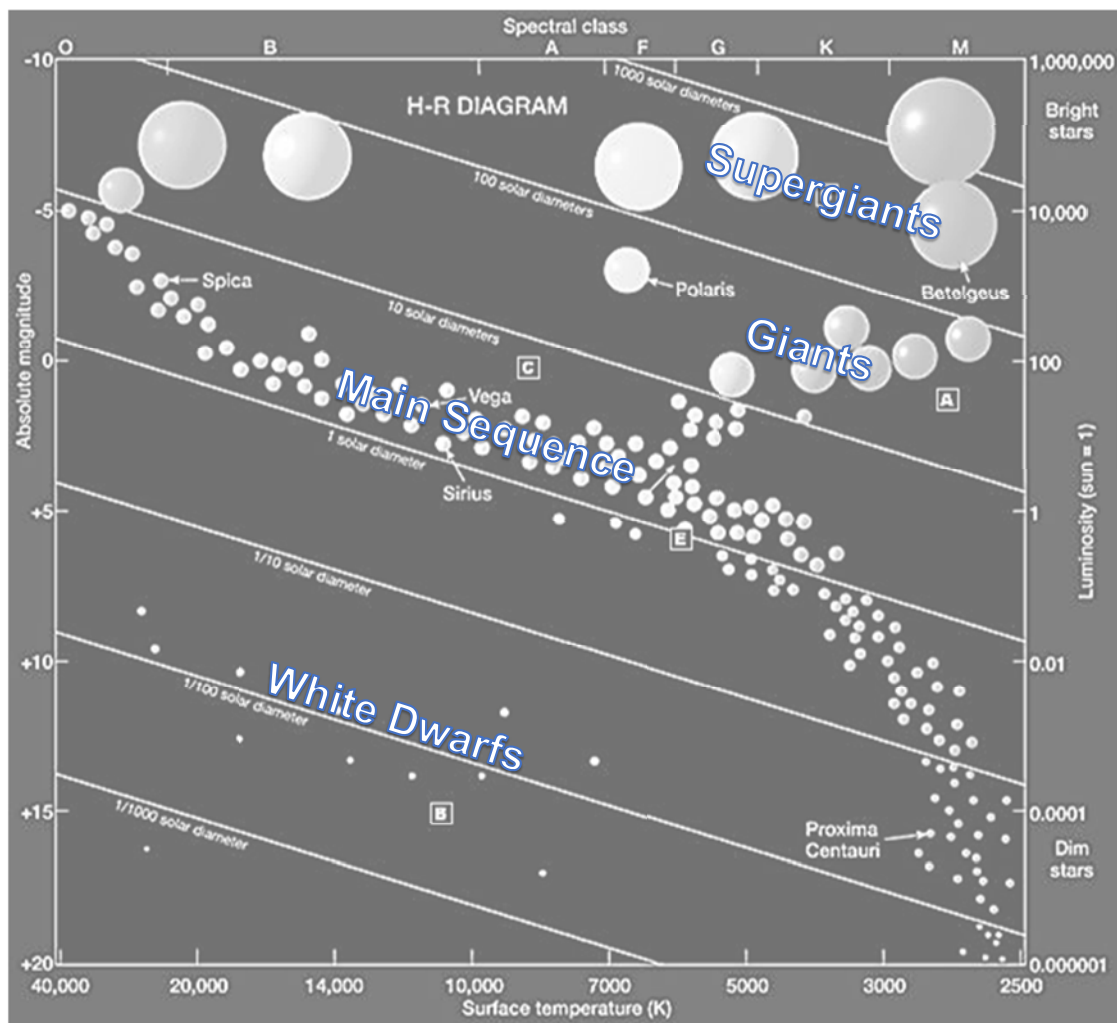
4. A red-orange star has an average surface temperature of:

6. What color is a star that has an average surface temperature of 3000°C?

5. What color is a star that has an average surface temperature of 35,000°C?

7. A red star has an average surface temperature of:

8. What color is a star that has an average surface temperature of 6000°C?



Use the Hertzsprung-Russell diagram above and the data listed below to determine the type and/or properties of the stars Zeta Eridani, Sirius B, Pollux, Epsilon Eridani, Procyon B, the Sun and Betelgeuse are. Complete the table.

Star Name	Surface Temperature (°C)	Absolute Magnitude	Star Type
Zeta Eridani	35,000		Main Sequence
Sirius B		+11	White Dwarf
Pollux	4,500	-2	
Epsilon Eridani	4,000		Main Sequence
Procyon B	6,600	+16	
The Sun		+5	
Betelgeuse	4,000	-8	

EARTH SCIENCE

Low-Mass Stars

10 Points

Overall Score:

Overall Grade:

Name _____

Group _____

Date _____

PART A

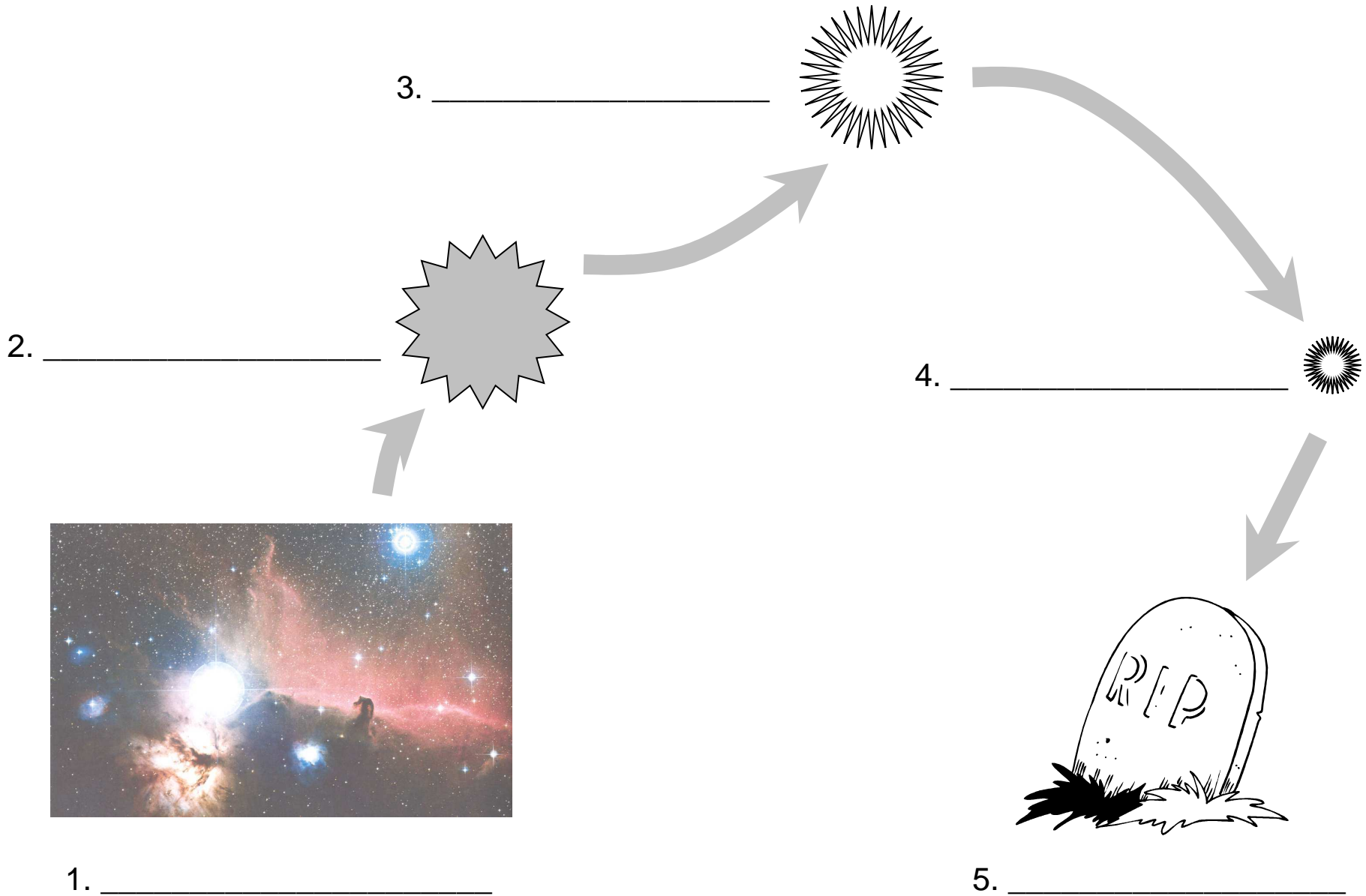
Match the following terms with their appropriate location on the back of this paper: *white dwarf, protostar, nebula, black dwarf, main-sequence star.*

PART B

Answer the following questions.

1. What is a nebula?
2. How does a protostar form from a nebula?
3. What is the difference between a protostar and a main-sequence star?
4. What element do low-mass main-sequence stars use as their nuclear fuel?
5. Why are low-mass stars dimmer and redder than larger main-sequence stars?
6. How many years will low-mass stars stay in the main-sequence before dying?
7. Why do low-mass stars last longer than more massive stars?
8. About how big is a white dwarf?
9. Why doesn't a white dwarf collapse into something that is infinitely small like a black hole?
10. What is the difference between a white dwarf and a black dwarf?

The Life and Death of a Low-Mass Star



EARTH SCIENCE

Medium Stars

10 Points

Overall Score: <input type="text"/>	Overall Grade: <input type="text"/>
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Name _____

Group _____

Date _____

PART A

Match the following terms with their appropriate location on the back of this paper: *white dwarf, planetary (ring) nebula, protostar, nebula, red giant, main-sequence star, black dwarf.*

PART B

Answer the following questions.

1. What elements can medium-mass main-sequence stars use as their nuclear fuel?

2. What is a planetary (ring) nebula and how do they form?

3. Is our Sun a medium-mass star? If so, what stage of development is our Sun currently in?

PART C

Construct an acrostic for medium-mass stars by listing 15 facts that begin with the first letters listed below.

M _____

E _____

D _____

I _____

U _____

M _____

M _____

A _____

S _____

S _____

S _____

T _____

A _____

R _____

S _____

The Life and Death of a Medium-Mass Star

