

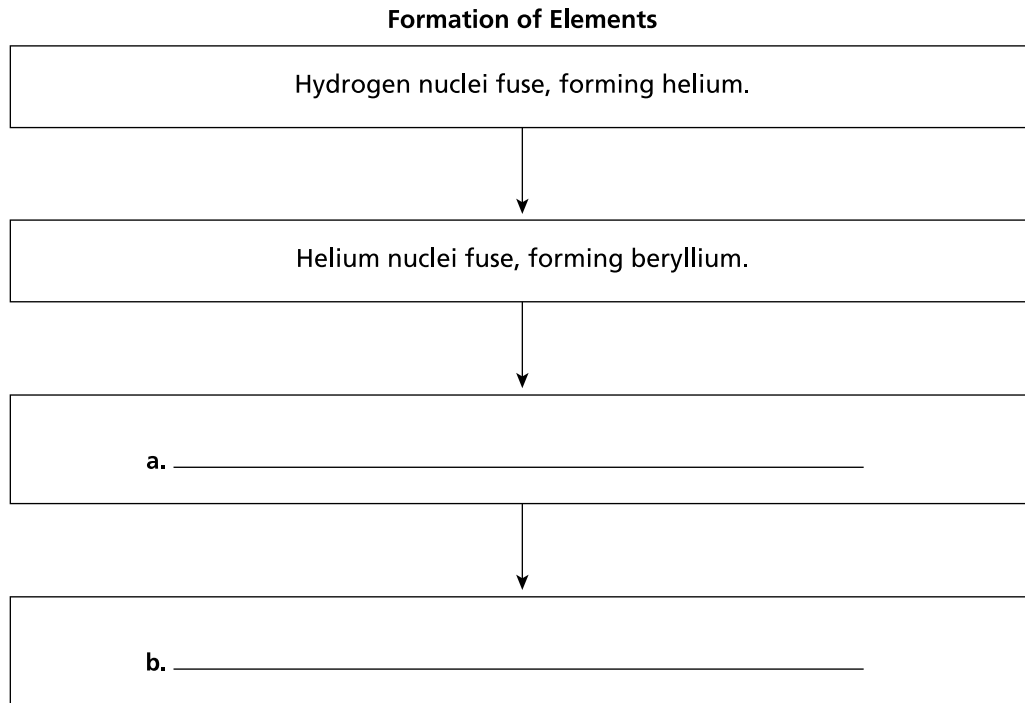
**Elements and the Periodic Table** ▪ *Guided Reading and Study*

## Elements From Stardust

*This section explains how elements form inside stars.*

### Use Target Reading Skills

*As you read about how elements are formed in stars, fill in the flowchart to show the steps in the process*



### How Elements Form in Stars

1. Describe plasma.

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2. The process in which two atomic nuclei combine to form a larger nucleus, releasing huge amounts of energy, is called \_\_\_\_\_.

3. What does nuclear fusion create inside stars?

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4. What is the fuel that powers the sun?

\_\_\_\_\_

5. Circle the letter of the element that is produced when hydrogen nuclei fuse.

- a. helium
- b. beryllium
- c. carbon
- d. oxygen

6. Two helium nuclei fuse to form a nucleus of \_\_\_\_\_.

7. What nuclei fuse to form oxygen?

\_\_\_\_\_

8. Is the following sentence true or false? Stars the size of the sun can produce elements heavier than oxygen. \_\_\_\_\_

9. What is a nebula and how does it form?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Elements From Large Stars**

10. In stars more massive than the sun, fusion continues until the core is almost all \_\_\_\_\_.

11. What is a supernova?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

12. A supernova provides enough energy for the nuclear fusion reactions that create the heaviest \_\_\_\_\_.