

Skills Worksheet

# Directed Reading

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## Section: Cellular Respiration

Complete each statement by writing the correct term or phrase in the space provided.

1. Cells harvest the energy in organic compounds to make ATP through a process called \_\_\_\_\_.
2. In this process, cells transfer energy from organic compounds to \_\_\_\_\_.
3. The primary fuel for cellular respiration is \_\_\_\_\_.
4. The first stage of cellular respiration is called \_\_\_\_\_.

Read the question, and write your answer in the space provided.

5. There are three main steps in glycolysis. What are the starting and ending products for each step?

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Complete each statement by writing the correct term in the space provided.

6. Glycolysis takes place without oxygen, so it is \_\_\_\_\_.
7. Metabolic processes requiring oxygen are \_\_\_\_\_. They release \_\_\_\_\_ energy than processes that don't require oxygen.
8. The first stage of aerobic respiration is the \_\_\_\_\_  
\_\_\_\_\_. It begins with \_\_\_\_\_,  
the end product of glycolysis. It can result in the production of up to  
\_\_\_\_\_ molecules.

**Directed Reading *continued***

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**Read the question, and write your answer in the space provided.**

9. What happens during the Krebs cycle when carbon-carbon bonds are broken or rearranged?

\_\_\_\_\_

10. What happens during the Krebs cycle as electrons pass down the electron transport chain? Where does this step take place?

\_\_\_\_\_

\_\_\_\_\_

11. How does the electron transport chain active during the Krebs cycle affect the hydrogen ion concentration in a mitochondrion?

\_\_\_\_\_

12. What is the role of ATP synthase in the Krebs cycle?

\_\_\_\_\_

13. How is water formed as a by-product of the Krebs cycle?

\_\_\_\_\_

\_\_\_\_\_

**Complete each statement by writing the correct term or phrase in the space provided.**

14. When oxygen is not present, the \_\_\_\_\_

\_\_\_\_\_ does not function.

15. Two types of fermentation are \_\_\_\_\_ and

\_\_\_\_\_ fermentation.

16. The role of fermentation in cellular respiration is to recycle \_\_\_\_\_

so that \_\_\_\_\_ can continue to be made by \_\_\_\_\_.

**Read the question, and write your answer in the space provided.**

17. Which is most efficient in producing ATP: glycolysis, fermentation, or the Krebs cycle? Why?

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