

Skills Worksheet

Directed Reading

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?

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***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?
