

Cellular Respiration

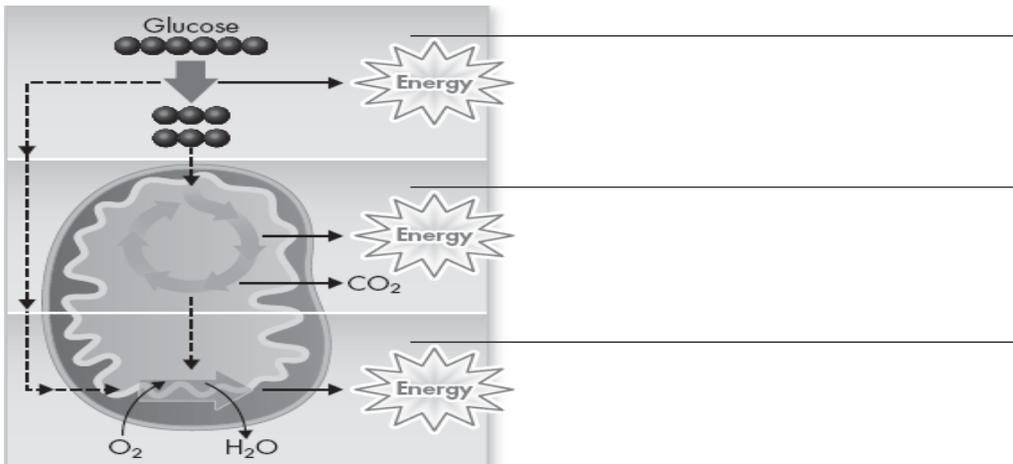
Name: _____

Period: _____

Cellular Respiration Guided Reading (Chapter 9)

Overview of Cellular Respiration:

1. Write the chemical equation for cellular respiration: _____
2. Write the equation for cellular respiration in words: _____
3. If cellular respiration took place in just one step, most of the energy would be lost in the form of light and _____.
4. Cellular respiration begins with a pathway called _____.
5. Cellular respiration continues with the _____ and electron transport chain.
6. The pathways of cellular respiration that require oxygen are said to be _____. Pathways that do not require oxygen are said to be _____.
7. Complete the illustration by adding labels for the three main stages of cellular respiration AND their locations.

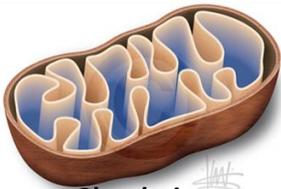


Comparing Photosynthesis & Respiration

Write True or change the underlined word to make the statement true.

9. The energy flow in photosynthesis and cellular respiration occurs in the same direction.
10. Cellular respiration removes carbon dioxide from the air.
11. Complete the table comparing photosynthesis and cellular respiration.

A Comparison of Photosynthesis and Cellular Respiration		
Aspect	Photosynthesis	Cellular Respiration
Function	energy capture	
Location of reactions	Chloroplasts	
Reactants		
Products		



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Glycolysis

12. What are two advantages of glycolysis? _____

Electron Transport and ATP Synthesis

13. In eukaryotes, the electron transport chain is composed of a series of electron carriers located in the _____ of the mitochondrion.

14. _____ and _____ pass high-energy electrons to the electron transport chain.

The Totals

15. How many ATP molecules per glucose molecule does a cell gain from each of the three stages of cellular respiration? _____

16. Besides glucose, what other kinds of molecules can be used to produce ATP in cellular respiration?

17. Where does the heat that warms your body come from? Explain your answer.

Fermentation

Write True or change the underlined word or words to make the statement true.

_____ 18. Fermentation is an aerobic process.

_____ 19. Fermentation occurs in the mitochondria of cells.

_____ 20. Alcoholic fermentation gives off carbon dioxide and is used in making bread

21. What causes humans to become lactic acid fermenters? _____

Energy and Exercise

22. What are three main sources of ATP available for human muscle cells? _____

23. During a race, how do your muscle cells produce ATP after the store of ATP in muscles is used? _____

24. Why does a sprinter have an oxygen debt to repay after the race is over? _____

25. A runner needs more energy for a longer race. How does the body generate the necessary ATP? _____

