

Reading Guide Packet: Ch 10: Cellular Respiration

Biology A

Name _____ Period _____

Ch 10.1: Cellular Respiration: An Overview

1. Where do organisms get energy?
2. What is *cellular respiration*?
3. Write the equation for cellular respiration in words and symbols.
4. What are the 3 stages of cellular respiration?
5. What is the difference between *aerobic* and *anaerobic* processes?
6. Why do *photosynthesis* and *cellular respiration* have opposite effects on gases in the atmosphere?

Reading Guide Packet: Ch 10: Cellular Respiration
Biology A

Ch 10.2: The Process of Cellular Respiration

7. What happens during the process of *glycolysis*?
8. What is the net production of ATP molecules when 1 glucose molecule undergoes *glycolysis*?
9. What is the *electron carrier molecule* that is a reactant of *glycolysis*?
10. What are 2 advantages of *glycolysis*?
11. Where does *glycolysis* take place?
12. What happens during the *Krebs cycle*?
13. Where does the *Krebs cycle* take place?
14. How many ATP molecules are produced in the *Krebs cycle* from each molecule of glucose?

Reading Guide Packet: Ch 10: Cellular Respiration

Biology A

15. What happens during the *electron transport chain* process?

16. What is the total number of ATP molecules produced by *glycolysis*, the *Krebs Cycle*, and the *electron transport chain* from each glucose molecule?

17. Use your answers to questions 8, 14 and 16 to determine how many ATP molecules are produced by the *electron transport chain* from each glucose molecule.

Ch 10.3: Fermentation

18. What happens during the process of *fermentation*?

19. What organism carries out *alcoholic fermentation*?

20. In humans, what cell type is best adapted for carrying out *lactic acid fermentation*?

21. For a short, quick burst of energy at the beginning of a race, what would be an athlete's sources of this energy?

22. What is the only way for this athlete to continue to generate a supply of ATP for a longer race? Approximately how much time elapses before this process needs to begin supplying the ATP?