

Biology Name \_\_\_\_\_

### Cellular Respiration Study Guide

1. Most eukaryotic cells produce only about \_\_\_\_\_ ATP molecules per glucose molecule.
2. What is the process by which glucose is converted to pyruvic acid?
3. At the beginning of aerobic respiration, pyruvic acid breaks to a molecule called \_\_\_\_\_ in both eukaryotes.
4. The breakdown of pyruvic acid to the formation of oxygen is called \_\_\_\_\_.
5. With every revolution of the Krebs Cycle, how many ATP molecules are made? \_\_\_\_\_.
6. What is the main product of the Krebs Cycle? \_\_\_\_\_.
7. The conversion of pyruvic acid to acetyl-CoA and oxygen is called \_\_\_\_\_.
8. The release of energy from food molecules in the absence of oxygen is \_\_\_\_\_.
9. What is the topography of the electron transport chain? \_\_\_\_\_.
10. What is the first pathway of cellular respiration called? \_\_\_\_\_.
11. Where does glycolysis occur? \_\_\_\_\_.
12. What do you call cellular respiration in the presence of oxygen? \_\_\_\_\_.
13. What products \_\_\_\_\_ and \_\_\_\_\_ in the presence of oxygen? \_\_\_\_\_.
14. In cellular respiration, most energy is transferred to the \_\_\_\_\_ that is used in other ways.
15. How many molecules are converted per \_\_\_\_\_ molecules in the presence of oxygen?
16. Glycolysis begins with glucose and produces \_\_\_\_\_.
17. In the first step of aerobic respiration, pyruvic acid breaks from glycolysis and produces CO<sub>2</sub>, H<sub>2</sub>O, H<sup>+</sup>, and \_\_\_\_\_.
18. What happens to electrons as they are transported along the electron transport chain? \_\_\_\_\_.
19. Where is the electron carrier in the reactions of the Krebs cycle? \_\_\_\_\_.