Name:

**Cellular Respiration Study Guide**

1. Define aerobic –
2. Define anaerobic –
3. Provide examples of activities that require energy:
4. How is the amount of energy measured?
5. What is the chemical equation of cellular respiration?
6. What is being oxidized?
7. What is being reduced?
8. What are the 3 steps of cellular respiration?
9. Where does glycolysis occur?
10. What is the input of glycolysis?
11. What is the output of glycolysis?
12. Draw and label the steps of Glycolysis.
13. How do the 2 pyruvate molecules prepare to enter the Kreb’s Cycle?
14. What is the released during the oxidation of pyruvate?
15. Compare and contrast *Substrate-level Phosphorylation* and *Chemiosomosis*.
16. What is the purpose of Glycolysis and the Kreb’s Cycle?
17. What is another name of the Kreb’s Cycle?
18. Where does the Kreb’s Cycle occur?
19. Draw and label the steps of the Kreb’s Cycle. REMEMBER you do not need to know specific names of the molecules, but you do need to know how many carbons are at each step!
20. What is the input of the Kreb’s Cycle?
21. What is the output of the Kreb’s Cycle?
22. What are the 2 parts of Oxidation Phosphorylation?
23. How many ATP are produced in Oxidative Phosphorylation?
24. What is the final electron acceptor in Oxidative Phosphorylation?
25. What molecules donate electrons in Oxidative Phosphorylation?
26. What is the input of Oxidative Phosphorylation?
27. What is the output of Oxidative Phosphorylation?
28. Why do we need to breathe oxygen?
29. What would happen if the mitochondria’s membrane was permeable to hydrogen ions?
30. When does Fermentation occur?
31. Describe Lactic Acid Fermentation.

*Who completes Lactic Acid Fermentation?*

1. Describe Alcohol Fermentation.

*Who completes Alcohol Fermentation?*