

Cellular Respiration Questions
Chapter 6
Honors Biology
Lindemulder

Name: _____

Date: _____ Hour: _____

1. Explain how photosynthesis and cellular respiration are necessary to provide energy that is required to sustain your life.
2. Explain why breathing is necessary to support cellular respiration.
3. Describe how cellular respiration produces energy that can be stored in ATP.
4. Explain why ATP is required for human activities.
5. Describe the process of energy production from movement of electrons.
6. List and describe the three main stages of cellular respiration.
7. Describe the major steps of glycolysis and explain why glycolysis is considered to be a metabolic pathway.
8. Explain how pyruvate is altered to enter the citric acid cycle and why coenzymes are important to the process.
9. Describe the citric acid cycle as a metabolic pathway designed for generating additional energy from glucose.
10. Discuss the importance of oxidative phosphorylation in producing ATP.
11. Describe useful applications of poisons that interrupt critical steps in cellular respiration.
12. Review the steps in oxidation of a glucose molecule aerobically.
13. Compare respiration and fermentation.
14. Provide evidence that glycolysis evolved early in the history of life on Earth.
15. Provide criteria that a molecule must possess to be considered a fuel for cellular respiration.
16. Discuss the mechanisms that cells use to biosynthesize cell components from food.