

Name: _____ Class period: _____ Date: _____

Photosynthesis and Cellular Respiration Study Guide

ATP (Adenosine Triphosphate)

1. What are the 3 parts of the ATP molecule?
2. How is the energy stored in ATP released?
3. What is the difference between the structure of ATP and ADP?

Photosynthesis

4. What is the purpose of photosynthesis?
5. Photosynthetic organisms capture the sun's energy with what?
6. Why do chlorophyll pigments make plants look green?
7. Where in the plant cell does photosynthesis take place?
8. Write the balanced equation of photosynthesis.
9. Is photosynthesis an endothermic or exothermic reaction? Explain your reasoning.

10. Draw a diagram of the light-dependent reaction of photosynthesis (include the location, reactants, and products).

11. Draw a diagram of the light-independent reaction of photosynthesis (include the location, reactants, and products).

12. What are the 3 factors that affect photosynthesis?

19. Draw a diagram of the Electron Transport Chain (include the location, reactants, products, and whether it is anaerobic or aerobic).

Carbon Cycle

20. Draw a diagram of the carbon cycle showing how carbon moves between the atmosphere, biosphere, geosphere, and hydrosphere.

Fermentation

21. What is the purpose of fermentation?
22. What are the two types of fermentation and what do they produce?
23. What organisms undergo each type of fermentation?