

Organic Compounds, Photosynthesis & Respiration Review Questions

See notes, handouts etc. on select parts of the following chapters: 3, 6 & 7

1. Write the chemical equation for photosynthesis.
2. Write the chemical equation for cellular respiration.
3. What are the reactants in photosynthesis? The products?
4. What are the reactants in cellular respiration? The products?
5. Describe 3 things that you could do to increase the rate of photosynthesis.
6. What role does the pigment chlorophyll play in photosynthesis? Why is this pigment green?
7. What organisms undergo photosynthesis? Respiration?
8. What organelles (inside of cells) are sites of photosynthesis? Respiration?
9. What is the function of adenosine triphosphate (ATP) for all cells?
10. What is released when ATP is broken down by enzymes?
11. Describe at least two differences between aerobic and anaerobic respiration. *Make sure to include energy production.*
12. Consider the food chain. You can trace the energy back from the animal at the top of the chain. Where does the energy originate?
13. Name the byproducts of photosynthesis that are returned to the atmosphere. Name the byproducts for respiration that go into the atmosphere. *(These are "waste" products!)*
14. What is the function of stomata on leaves? How are guard cells associated with them?
15. What distinguishes organic compounds from inorganic compounds?
16. What are the four types of organic compounds?
17. Identify the monomer (subunit) that makes up each organic compound.
18. Identify the type of organic compound for each of the following items:
 - a. Sugars, sucrose, glucose, cellulose
 - b. Hemoglobin
 - c. Enzymes
 - d. DNA
 - e. Steroids, waxes

Organic Compounds, Photosynthesis & Respiration Review Questions

See notes, handouts etc. on select parts of the following chapters: 3, 6 & 7

19. Pyruvate is another name for pyruvic acid. What process produces this compound from breaking down glucose?
20. What is the function of ATP for all cells?
21. What are the two byproducts of fermentation that we discussed in class?
22. Describe at least two differences between aerobic and anaerobic respiration (fermentation). *Make sure to include energy production.*