

## Photosynthesis

Name \_\_\_\_\_ Per \_\_\_\_\_

*Read Section 8.2, pp. 222 - 227 and answer the following questions.*

1. What is the main idea of this section?
  
2. Write down the chemical equation for photosynthesis.
  
3. Carefully read the Overview of Photosynthesis on pg. 222.
  - a. What are the two phases of photosynthesis (also see blue headings on 223 and 226)?
  
  - b. What are the two products of the first phase?
  
  - c. What is the product of the second phase?
  
  - d. What three other organic compounds also come from the end products of photosynthesis?
  
4. Which plant organelle captures light for photosynthesis and where are these organelles typically found?
  
5. Name the three main parts of a chloroplast, describe what each is like, and describe what happens in each part.
  
6. Hypothesize the effect of light absorption if a plant did not have chlorophyll *b*. See Figure 8.6.

7. On page 224, what is split to start the electron transport chain? What process splits it?
8. On page 224, what is the major waste product of the electron transport chain?
9. Summarize the function of water during chemiosmosis.
10. On page 226, what raw material joins with other organic molecules during carbon fixation?
11. On page 226, for what two main things do plants use the sugars formed during the Calvin cycle?
12. Based on page 227, describe how the environment may impact photosynthesis. Include in your answer how God has modified plants to cope with these situations.