

## HS-LS1-5: Photosynthesis Notes

HS-LS1-5. Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy. [Clarification Statement: Emphasis is on illustrating inputs and outputs of matter and the transfer and transformation of energy in photosynthesis by plants and other photosynthesizing organisms. Examples of models could include diagrams, chemical equations, and conceptual models.] [Assessment Boundary: Assessment does not include specific biochemical steps.]

Directions: Working independently, use your textbook to answer the following questions using complete sentences.

p. 204-207 8-2 Photosynthesis: An Overview

Define photosynthesis:

What does the root word *photo* mean?

What does the root word *synthesis* mean?

What does the root word *chemo* mean?

What do you think *chemosynthesis* means?

Write the chemical equation for photosynthesis:

Write the word equation for photosynthesis:

Explain what both equations are illustrating:

Where does the water come from?

Where does the carbon dioxide come from?

Where does the energy needed for the reaction to take place come from?

What happens to the energy (where does it go, what does it become, how is it used)?

Where does the oxygen go?

Where do the sugars go?

Create your own model to illustrate the process of photosynthesis. Your model should include the following labeled items: sunlight, a green plant, carbon dioxide ( $\text{CO}_2$ ), water ( $\text{H}_2\text{O}$ ), oxygen ( $\text{O}_2$ ), sugars ( $\text{C}_6\text{H}_{12}\text{O}_6$ )