

Biology Unit 4  
Vocabulary Activity

Name \_\_\_\_\_  
Date/Hour \_\_\_\_\_

Photosynthesis – Use Chapter 6 from the textbook to answer. Write the correct term from the list below in the space next to its definition.

- |                        |                          |                 |
|------------------------|--------------------------|-----------------|
| autotrophs             | chemiosmosis             | light reactions |
| C <sub>4</sub> pathway | chlorophyll              | photosynthesis  |
| Calvin cycle           | electron transport chain | pigment         |
| CAM pathway            | granum                   | stomata         |
| carbon fixation        | heterotrophs             | thylakoids      |
| carotenoids            |                          |                 |

- \_\_\_\_\_ 1. the process by which light energy is converted to chemical energy
- \_\_\_\_\_ 2. organisms that use energy from sunlight or inorganic substances to make organic compounds
- \_\_\_\_\_ 3. organisms that get energy by consuming food
- \_\_\_\_\_ 4. stack of thylakoids
- \_\_\_\_\_ 5. a substance that absorbs light
- \_\_\_\_\_ 6. the primary pigment involved in photosynthesis
- \_\_\_\_\_ 7. absorb wavelengths of light different from those absorbed by chlorophyll
- \_\_\_\_\_ 8. the series of molecules down which excited electrons are passed in a thylakoid membrane
- \_\_\_\_\_ 9. incorporation of carbon dioxide into organic compounds
- \_\_\_\_\_ 10. a series of enzyme-assisted chemical reactions that produces a three-carbon sugar molecule
- \_\_\_\_\_ 11. CO<sub>2</sub> fixed into four-carbon compounds
- \_\_\_\_\_ 12. water-conserving process of carbon fixation
- \_\_\_\_\_ 13. the process that relies on a concentration gradient of protons
- \_\_\_\_\_ 14. a series of reactions that involve pigments
- \_\_\_\_\_ 15. small pores in leaves
- \_\_\_\_\_ 16. disk-shaped structures inside chloroplasts

Photosynthesis - Use Chapter 6 of the textbook to answer. In the space provided, write the letter of the stage that best matches the phrase. Answers may be used more than once.

- A. Stage 1 of photosynthesis (light dependent reactions)
- B. Stage 2 of photosynthesis (light independent reactions)

- \_\_\_\_\_ 1. Light energy is stored as ATP and NADPH.
- \_\_\_\_\_ 2. Organic compounds are formed using carbon dioxide.
- \_\_\_\_\_ 3. Calvin cycle
- \_\_\_\_\_ 4. Excited electrons are passed along an electron transport chain.
- \_\_\_\_\_ 5. Pigment molecules absorb energy.
- \_\_\_\_\_ 6. Water is split.

Photosynthesis - Use Chapter 6 of the textbook to answer. In the space provided, write the letter of the term or phrase that best completes each statement or best answers each question.

- \_\_\_\_\_ 7. Yellow and orange plant pigments are known as which of the following?
  - a. chlorophyll
  - b. electron transport chains
  - c. carotenoids
  - d. thylakoids
- \_\_\_\_\_ 8. The rate of photosynthesis decreases as the
  - a. oxygen concentration decreases.
  - b. carbon dioxide concentration decreases.
  - c. light intensity increases.
  - d. All of the above
- \_\_\_\_\_ 9. In the first stage of photosynthesis, hydrogen ions are pumped
  - a. into a photosystem.
  - b. out of the chloroplast.
  - c. into the thylakoids.
  - d. Both (a) and (b)
- \_\_\_\_\_ 10. Products of the Calvin cycle are
  - a. three-carbon sugars.
  - b. used to produce organic compounds.
  - c. used to regenerate the initial five-carbon compound.
  - d. All of the above