

Skills Worksheet

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Directed Reading

Section: Photosynthesis

Study the following stages of photosynthesis. Determine the order in which the stages take place. Write the order of each stage in the space provided.

- _____ 1. Energy stored in ATP and NADPH powers the formation of organic compounds, using carbon dioxide.
- _____ 2. Energy is captured from sunlight.
- _____ 3. Light energy is converted to chemical energy, which is temporarily stored in ATP and NADPH.

Read each question, and write your answer in the space provided.

4. Where does the energy for human metabolism come from?
5. Write the chemical equation that is used to summarize photosynthesis.

Complete each statement by writing the correct term or phrase in the space provided.

6. Light-absorbing substances are called _____
7. Pigments found in plants include chlorophyll *a*, chlorophyll *b*, and _____ .
8. Electrons that leave chlorophyll molecules are replaced by electrons from split _____ molecules.
9. ATP and _____ are produced in the second stage of photosynthesis.
10. The series of molecules through which excited electrons are passed down a thylakoid membrane is called a(n) _____ chain.

Name

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Directed Reading *continued*

11. ATP is made from ADP by adding a(n) _____ group to a molecule of ADP.

Read each question, and write your answer in the space provided.

12. What is the role of the Calvin cycle in photosynthesis?

13. What are three environmental factors that affect photosynthesis?