

## Photosynthesis

## Vocabulary Review

**Matching** In the space provided, write the letter of the definition that best matches each term.

- 1. photosynthesis a. clusters in the thylakoid membrane of chlorophyll and other pigments
- 2. chlorophyll b. the region of the chloroplast outside the thylakoid membranes
- 3. pigment c. electron carrier
- 4. adenosine triphosphate d. process in which plants use the energy of sunlight to make high-energy carbohydrates
- 5. thylakoid e. reactions that use ATP and NADPH to produce high-energy sugars
- 6. photosystems f. light-absorbing molecules
- 7. stroma g. the basic energy source of all cells
- 8. NADP<sup>+</sup> h. reactions that produce oxygen gas and convert ADP and NADP<sup>+</sup> into the energy carriers ATP and NADPH
- 9. Calvin cycle i. saclike photosynthetic membranes in chloroplasts
- 10. light-dependent reactions j. principal pigment of plants

**Answering Questions** In the space provided, write an answer to each question.

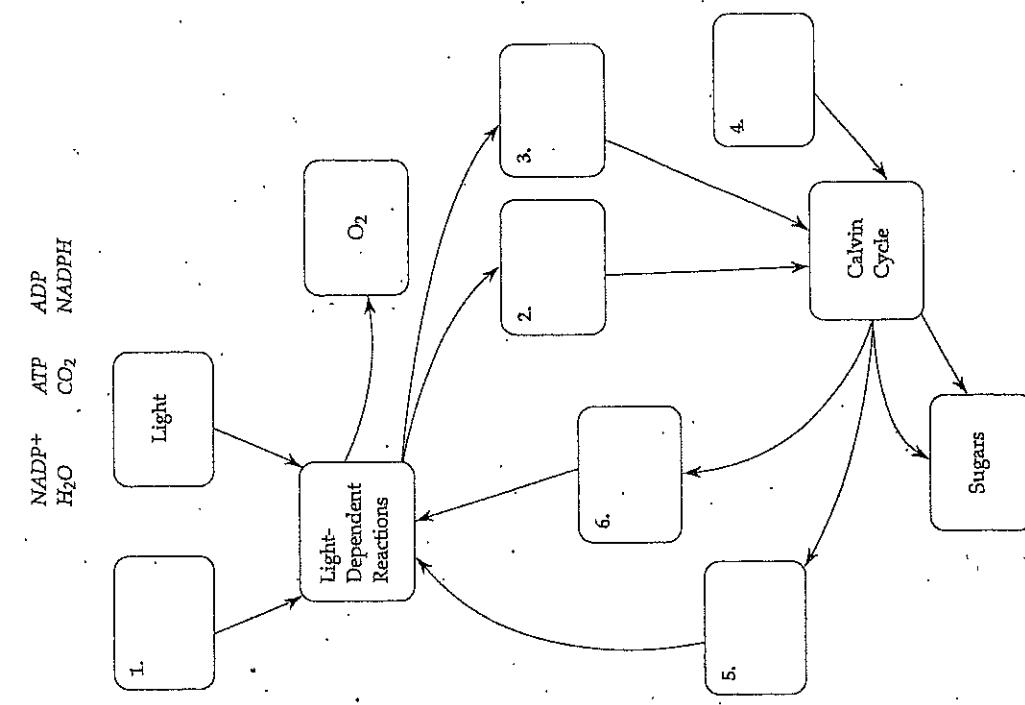
11. What is an organism that obtains energy from the food it consumes? \_\_\_\_\_
12. What is an organism that is able to make its own food? \_\_\_\_\_
13. What is released when the chemical bond is broken between the second and third phosphates of an ATP molecule? \_\_\_\_\_
14. What are the reactants of the equation for photosynthesis? \_\_\_\_\_
15. What are the products of the equation for photosynthesis? \_\_\_\_\_

## Chapter 8 Photosynthesis

## Graphic Organizer

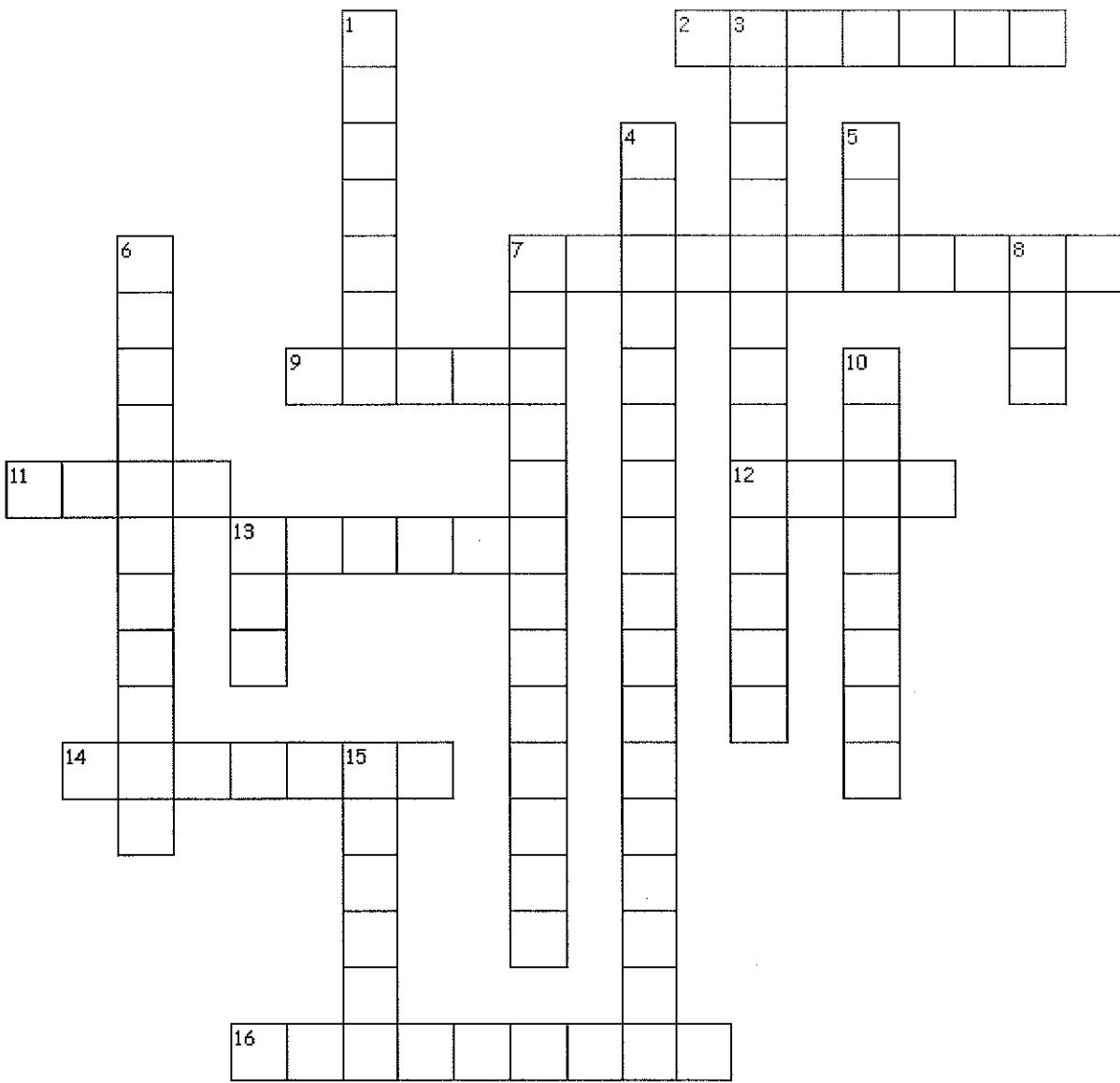
### Flowchart

The following flowchart represents the reactions of photosynthesis. Fill in the missing information using the formulas listed below.



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### Across

2. Any light trapping molecule                    7. Organelle where photosynthesis takes place  
 9. Liquid needed for the light dependent reactions                    11. Part of leaf that uses diffusion to move water  
 12. Part of glucose molecule where energy is stored                    13. Gas made by photosynthesis  
 14. Main energy storage molecule made                    16. Cells that surround the stoma and help close them

### Down

1. Gas exchange openings in bottom of leaf                    3. Where light independent reactions takes place  
 4. Name of plant cell type with chloroplasts                    5. Supply of energy needed to make bonds in glucose  
 6. Another name for the light independent reactions                    7. Gas needed by plant to make glucose  
 8. # of C atoms needed to make glucose                    10. Source of all energy stored  
 13. # of glucose made by 1 round of photosynthesis                    15. Part of chloroplast where Calvin Cycle takes place