

**CHAPTER REVIEW**Chapter **8****Photosynthesis****I. Vocabulary Review**

*Match each item in Column I with the most appropriate item in Column II. Write the letter for that item in the blank at the left.*

- | Column I   | Column II               |
|--|-------------------------|
| _____ 1. nature's light catcher  | a. photosynthesis       |
| _____ 2. light energy is absorbed by green plants and converted into chemical energy | b. cellular respiration |
| _____ 3. set of chemical reactions forming simple sugars                             | c. catabolic reaction   |
| _____ 4. converts stored energy in glucose to usable energy                          | d. chloroplast          |
| _____ 5. builds up complex molecules   | e. Haber process        |
| _____ 6. breaks down complex molecules to release energy                             | f. anabolic reaction    |
| _____ 7. makes ammonia from nitrogen and hydrogen                                    | g. nitrogen fixation    |
| _____ 8. changes nitrogen gas to compounds that plants can use                       | h. chlorophyll          |
| _____ 9. tough, rigid structure in plants  | i. cellulose            |
| _____ 10. green, energy-absorbing pigment  | j. Calvin cycle         |

**II. Concept Review**

*In the blank at the left, write the letter of the choice that best completes the statement or answers the question.*

- \_\_\_\_\_ 11. What happens to the chemical energy in food when the food is digested?
- The energy is used immediately.
  - The energy is stored in energy-storing molecules.
  - Some of the energy is used immediately and some is stored for later use.
  - Digestion does not release chemical energy.
- \_\_\_\_\_ 12. The carbon cycle, nitrogen cycle, and phosphorus cycle all illustrate the \_\_\_\_\_.
- law of conservation of energy
  - law of conservation of matter
  - Haber process
  - Calvin cycle
- \_\_\_\_\_ 13. What happens when energy-storing molecules are formed?
- Energy is released.
  - Glucose is broken down.
  - Energy is stored.
  - Hydrogen is released.
- \_\_\_\_\_ 14. What kind of reaction is cellular respiration?
- anabolic reaction
  - catabolic reaction
  - light reaction
  - nitrogen fixation

### Chapter Review 8 (continued)

- \_\_\_\_\_ 15. Reactions that build up complex molecules \_\_\_\_\_.
- a. are anabolic reactions
  - b. are catabolic reactions
  - c. can be either anabolic or catabolic
  - d. are neither anabolic nor catabolic

### III. Skills/Process Review

*Answer the following questions in phrases or complete sentences.*

16. Explain how cellular respiration is related to photosynthesis. \_\_\_\_\_

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17. A well-cared for houseplant stands on the floor in front of a window with northern exposure; its leaves are turning yellow and falling off. What could be wrong with it? \_\_\_\_\_

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18. What is the advantage of adding fertilizer containing nitrogen and phosphorus to the soil?

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19. Explain how a low metabolism could contribute to weight gain? \_\_\_\_\_

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### IV. Feature Review

20. **Science and Society: Technology: Industrialized Agriculture** Summarize the advantages and disadvantages of subsistence farming methods. \_\_\_\_\_

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