

Note-taking Cell Processes

Name _____

Date _____

Class _____

Directed Reading for
Content Mastery

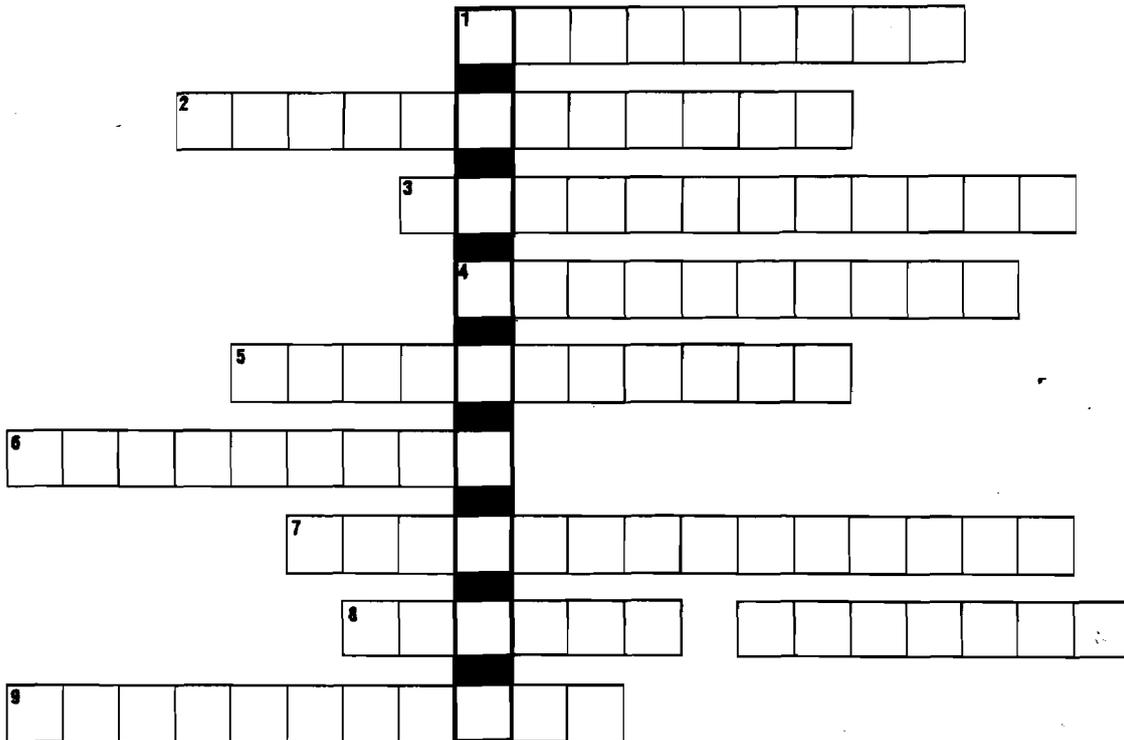
Section 3 ■ Energy for Life



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Directions: Use the information below to identify the terms that match the descriptions that follow. Use the terms to complete the puzzle. The letters in the vertical box should spell out a word related to the study of chemical reactions.

Metabolism is the total of all chemical reactions in an organism. Organisms can be producers or consumers. Some **producers** use **photosynthesis** to make their food. Photosynthesis requires **carbon dioxide**, water, sunlight, and **chlorophyll**. **Consumers** eat the food made by producers. Both consumers and producers can release energy through **respiration**. Respiration takes place in the **mitochondria**. Some yeasts use **fermentation** to release energy.



- organisms that eat producers
- Respiration takes place here.
- an energy-releasing process that takes place in some yeasts and bacteria
- the total of all chemical reactions in an organism
- This energy-releasing process takes place in the mitochondria.
- the process that some producers use to make food
- a gas that is important in photosynthesis
- the green pigment found in chloroplasts

The word in the vertical box is:

6 organisms that make their own food

SECTION

3

Reinforcement

Energy for Life

Directions: Answer the following questions on the lines provided.

1. How do producers make their own food?

2. Fill in the following equation for photosynthesis.

_____ + water + carbon dioxide + chlorophyll → _____ + _____

3. What are the end products of respiration?

4. How does yeast cause bread to rise?

5. How do your muscles continue to get energy during high levels of activity when there is not enough oxygen?

Directions: For each of the following, write the letter of the term that best completes each statement.

- _____ 6. Fermentation releases energy without using _____.
 a. oxygen b. glucose c. energy d. carbon dioxide
- _____ 7. What process occurs in the mitochondria?
 a. fermentation b. photosynthesis c. respiration d. metabolism
- _____ 8. During respiration some energy is released as _____.
 a. chemical energy c. heat
 b. radiant energy d. carbon dioxide
- _____ 9. When muscles are overworked, soreness is caused by a buildup of _____.
 a. glucose b. carbon dioxide c. lactic acid d. energy
- _____ 10. The green plant pigment that traps light energy from the Sun is called _____.
 a. glucose b. chlorophyll c. oxygen d. water
- _____ 11. During photosynthesis, plants produce glucose and release _____.
 a. carbon dioxide b. energy c. oxygen d. water
- _____ 12. The energy used by all living things starts with _____.
 a. producers b. consumers c. respiration d. sunlight
- _____ 13. The total of all chemical reactions in an organism is called _____.
 a. metabolism b. respiration c. enzymes d. photosynthesis