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Lesson Check: Photosynthesis and Cellular Respiration

1) Chloroplasts are the location of photosynthesis.

- True
- False

2) Sucrose molecules break down during cellular respiration.

- True
- False

3) Water is a product of cellular respiration.

- True
- False

4) Cellular respiration is the process in which organisms break down food to release _____.

- **A)** energy
- **B)** nutrients
- **C)** sugar
- **D)** oxygen

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Lesson Check: Photosynthesis and Cellular Respiration

5) Where does cellular respiration occur?

6) Which organisms use cellular respiration as a way to convert energy into usable form?

- **A)** seedless plants only
- **B)** only photosynthetic organisms
- **C)** only mammals
- **D)** all organisms

7) Photosynthesis is the process in which plants use energy from light to produce _____.

- **A)** new cells
- **B)** organelles
- **C)** food
- **D)** none of the above

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Lesson Check: Photosynthesis and Cellular Respiration

8) Photosynthesis uses all of the following except _____ to make food.

- **A)** carbon dioxide
- **B)** chemical energy
- **C)** light energy
- **D)** water

9) Carbon dioxide is used by plants for _____.

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Lesson Check: Photosynthesis and Cellular Respiration

10) Carolyn observed a freshwater plant, *Elodea*, in a small aquarium filled with freshwater on her desk. In one five-minute period, Carolyn counted 32 bubbles that formed on the plant's leaves and were released into the water. She then moved the aquarium from her desk to a sunlit window and observed the *Elodea* again. In a second five-minute period, Carolyn observed 194 bubbles form and be released by the *Elodea* into the water.

a. Describe how the bubbles released by the *Elodea* signify that the plant is cycling matter. Provide evidence to support your answer.

b. Explain why the number of gas bubbles produced by the *Elodea* in a five-minute period increased when the aquarium was moved from the desk to the sunlit window.

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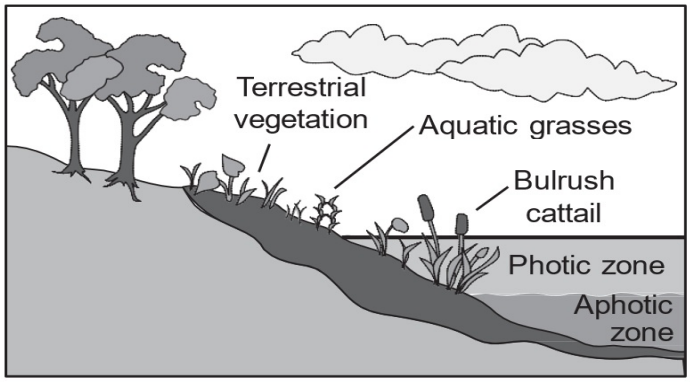
11) The diagram illustrates plants and two different zones of a deep lake.



In the upper part of the photic zone, organisms carry out both photosynthesis and cellular respiration. Deep in the aphotic zone, only cellular respiration occurs.

Which statement is the **most likely** reason photosynthesis does not occur in the deepest aphotic zone?

- **A)** Sunlight for photosynthesis does not reach the deepest aphotic zone.
- **B)** Water pressure limits the survival of animals in the deepest aphotic zone.
- **C)** Not enough soil is present to support plant growth in the deepest aphotic zone.
- **D)** Not as much dissolved oxygen from the surface reaches the deepest aphotic zone.

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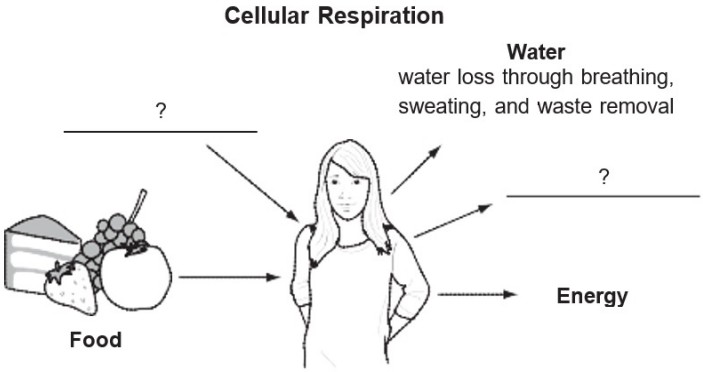
12) The diagram shows a partial model for respiration in the human body.



a. Identify the two missing parts of this model.

Lesson Check: Photosynthesis and Cellular Respiration

b. Describe cellular respiration, as represented by this model.