**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_**

**8th grade: Chapter 11 Test - Plant Processes**

1. Complete the following analogy. Water is to xylem as liquid sugar is to phloem.

2. Terms to know: photosynthesis, cellular respiration, gravitropism, phototropism, and photoperiodism.

3. Which of the following do plants NOT do with the energy produced through cellular respiration?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | eat | c. | reproduce |
| b. | Repair tissue | d. | grow |

4. The reactants of cellular respiration are oxygen and glucose.

5. Photosynthesis occurs in most plants such as protists and algae. Animals do not undergo photosynthesis.

6. The plant structure that allows water to enter are the roots.

7. All organisms undergo cellular respiration.

8. After sugar is broken down in a plant, energy is released.

9. Cellular respiration produces energy in the form of adenosine triphosphate (ATP).

10. Where does photosynthesis occur? In the chloroplasts.

11. Where does cellular respiration occur? mitochondria (found in cytoplasm).

12. In plants, oxygen, water vapor, and carbon dioxide pass into and out of the openings of leaves.

13. Most plants reflect green colored light.

14. Understand the role/function of the following chemical hormones found in plants: ethylene, cytokinins, and auxin. Ethylene - a plant hormone that helps stimulate the ripening of fruit. Cytokinins - slow the aging process of flowers and fruits in some plants. Auxin - cause the cells on the dark side of the stem to grow longer, which plant to grow towards light.

***Study the following reactions. Complete the reactants vs. products section.***

I. **Photosynthesis:** [CO2 + H2O + light energy → C6H12O6 + O2]

carbon dioxide + water + light energy → glucose + oxygen

REACTANTS (left) = carbon dioxide + water + light energy

PRODUCTS (right) = glucose + oxygen

II. **Cellular Respiration:** [C6H12O6 + O2 → CO2 + H2O + ATP]

glucose + oxygen → carbon dioxide + water + energy

REACTANTS (left) = glucose + oxygen

PRODUCTS (right) = carbon dioxide + water + energy