## Photosynthesis Unit Test Review Questions Name \_\_\_\_\_

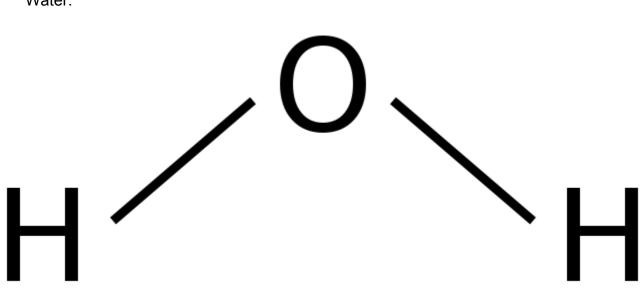
- 1. What is the process that produces glucose/sugars from carbon dioxide and water?
- 2. What kinds of organisms perform photosynthesis? What kinds of organisms do not?
- 3. The reactants of photosynthesis are...
- 4. The products of photosynthesis are...
- 5. The energy source plants use to accomplish photosynthesis is...
- 6. Photosynthesis occurs in the \_\_\_\_\_ of the plant, and in the

## \_ of the plant cells.

- 7. Where do plants store food they do not immediately use?
- 8. How does a perennial plant or tree (one that lives for many seasons) survive through the winter months, after its leaves have fallen off?
- The green chemical pigment that captures the sun's energy like a solar panel is called \_\_\_\_\_\_.
- 10. Inside the plant, glucose is combined with other nutrients/minerals to produce:
- 11. Glucose storage molecules are called \_
- 12. What process breaks down glucose to releases ATP energy for the plant?
- 13. Where does a plant get the carbon dioxide it needs for photosynthesis?
- 14. Where does a plant get the water it needs for photosynthesis?
- 15. What happens to the oxygen produced by photosynthesis?
- 16. How do you know that plants use energy?
- 17. What is the role of plants and the food they make in the food chain?
- 18. Chlorophyll in the plant transforms solar/light energy into \_\_\_\_\_\_ energy that the plant can use.
- 19. Plants are \_\_\_\_\_\_ in the food chain, because they make their own food.
- 20. What are three functions of plant roots
- 21. What are three functions of the plant stem?
- 22. How is the Law of Conservation of Matter demonstrated in the photosynthesis reaction?
- 23. What are three pieces of evidence that determine that photosynthesis is a chemical reaction?
- 24. What cell structure is a doorway for gases to enter and exit the leaf? Which gases enter from and which gases exit the leaf to the atmosphere.
- 25. Draw the molecules of the reactants of photosynthesis. (just one of each)

## ANSWER KEY TO PHOTOSYNTHESIS REVIEW QUESTIONS

- 1. photosynthesis
- 2. plants and some kinds of bacteria perform photosynthesis. Animals, insects, viruses and most bacteria do not.
- 3. carbon dioxide and water
- 4. glucose and oxygen
- 5. sunlight
- 6. leaf, choloroplast
- 7. roots, stem, leaves and fruits
- 8. Plants draw energy from the food they have stored over the winter when they cannot do photosynthesis.
- 9. chlorophyll
- 10. carbohydrates (including sugars and starches), cellulose, proteins and lipids
- 11. starches
- 12. cell respiration
- 13. air/atmosphere
- 14. moisture in the soil, through the roots
- 15. excess oxygen is released through the stomata
- 16. plants use energy to grow and reproduce
- 17. plants provide food for all organisms in a food chain: herbivores that eat plants and the carnivores that eat the herbivores.
- 18. chemical energy
- 19. plants are producers
- 20. roots anchor the plant in the ground, absorb water and minerals from the soil and store food.
- 21. stems hold the plant up, transport water and nutrients, and store food
- 22. In photosynthesis, the Law of Conservation says that the 6 Carbon atoms, 12 Hydrogen atoms and 18 Oxygen atoms present in the reactants are still present in the products; they are just rearranged into new molecules. No atoms are lost or gained in the reaction.
- 23. formation of a gas (Oxygen), change in energy (absorbs light), new substance formed (glucose and oxygen gas)
- 24. stomata; carbon dioxide enters, water vapor and oxygen gas exit
- 25. Carbon dioxide: O=C=O



Water: