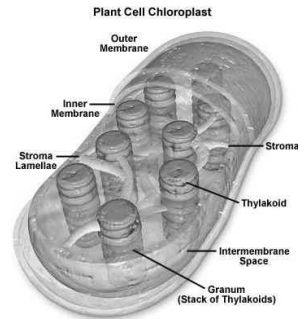


Photosynthesis Review

Name _____
Date _____
Period _____

Chloroplasts

Photosynthesis is a process in which sunlight energy is used to make glucose. The site of photosynthesis is in the chloroplast - a organelle found in the leaves of green plants. The main functions of chloroplasts are to produce food (glucose) during photosynthesis, and to store food energy. Chloroplasts contain the pigment, chlorophyll. Chlorophyll absorbs most of the colors in the color spectrum, and reflects only green and yellow wavelengths of light. This is why we see leaves as green or yellow - because these colors are reflected into our eyes.



1. What is photosynthesis? _____
2. Where does photosynthesis occur? _____
3. What are chloroplasts and where are they found? _____
4. What are the two main functions of chloroplasts? _____
5. Why do most leaves appear green? _____
6. What is the primary pigment found in the chloroplast? _____

Photosynthesis

Glucose is another name for sugar. The molecular formula for glucose is $C_6H_{12}O_6$. Plants make sugar by using the energy from sunlight to transform CO_2 from the air with water from the ground into glucose. This process, called photosynthesis, occurs in the chloroplast of the plant cell. During this process, oxygen (O_2) is created as a waste product and is released into the air for us to breath. The formula for photosynthesis is:



This formula says that carbon dioxide (CO_2) and water (H_2O) molecules are combined with the energy from sunlight to produce sugar ($C_6H_{12}O_6$) and oxygen (O_2). The reactants in photosynthesis (what is used) are CO_2 , water and sun. The plant gets water from the ground through its roots. The plant collects carbon dioxide from the air. Much of the carbon dioxide comes from living organisms that exhale it, but some also comes from factory smokestacks and car fumes.

7. What is the formula for photosynthesis? _____
8. What three things are used to make sugar in photosynthesis? _____
9. Where does the water come from? _____
10. Where does the water enter the plant? _____
11. What are some sources of CO_2 ? _____
12. What type of energy does the plant use to convert CO_2 and H_2O into sugar? _____

The products (what is made) are sugar and oxygen. The glucose produced is used by the plant for energy and growth. We also use this glucose by eating plants. The oxygen produced is released into the air for us to breath. Photosynthesis is essential for all life on earth, because it provides food and oxygen.

13. What is produced in photosynthesis? _____
14. What is the glucose used for? _____
15. What is the oxygen used for? _____
16. Why is photosynthesis important? _____

17. On the back side of this paper, draw the process of photosynthesis. Make sure you use the words listed below in your drawing. Carbon dioxide, water, chloroplast, sugar, oxygen, sunlight