



Photosynthesis

Attention Getting Question:

Do you know how plants get their food? What do they eat? Let's find out.

Introduction:

Photosynthesis is the process plants use to make their own food. Plants need sunlight, water and carbon dioxide in order to complete this process. This process not only helps the plants but other living things as well, including us!

Subject:

When people exhale, carbon dioxide is released as a waste product. This means our bodies do not use it so the carbon dioxide is released into the atmosphere. Plants then absorb this gas and use it in photosynthesis. Along with carbon dioxide, plants also need sunlight for energy. Water is needed to produce glucose, or sugar, as food for plants. This process takes the light energy from the sun and converts it into chemical energy that produces sugar and oxygen.

Plants have tiny openings located on their leaves that absorb carbon dioxide. These openings are called stomata. The roots of the plants absorb water and nutrients from the soil. The water and nutrients travel up the stem of the plant to the leaves through a system of vessels. This system of vessels is called the xylem. Here the water aids the plant in photosynthesis. Chlorophyll helps the plants absorb sunlight. Chlorophyll is a green chemical substance in the plants that gives plants color and helps in the photosynthesis process. The chlorophyll is held in a part of the plant cell called the chloroplast. Chloroplasts are known as the "food producers" of the cell because the food that the plant needs in order to survive is made inside chloroplasts.

The light hits the chlorophyll and the energy from the light excites the chlorophyll. The plant cells take this energy from the sunlight and combine it with the carbon dioxide and water. A chemical process happens and converts the light energy into sugar for the plant. The plant also produces oxygen as a waste product. The oxygen is released through the stomata into the atmosphere. Humans and animals then use the oxygen that the plants release to breathe.

The next time you see a plant, think about the continuous cycle that the plant goes through in order to make its own food!

Summary:

Photosynthesis is the process that plants use to make their own food. Plants need carbon dioxide, sunlight, and water to complete the process. Using these things, plants perform a chemical process that produces sugar and oxygen. The plant uses the sugar as food and gives off the oxygen. We breathe in the oxygen that is expelled by the plants and in turn the plants use the carbon dioxide we expel. We depend on each other in order to live!