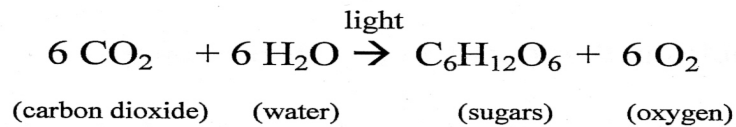


Photosynthesis: An Overview

Photosynthesis: A process by which plants use the energy of sunlight to convert water and carbon dioxide into high energy carbohydrates (sugars and starches), and oxygen (a waste product).

The Photosynthesis Equation



-In addition to water and carbon dioxide, photosynthesis requires light and chlorophyll (a pigment found in chloroplasts)

-The leaf is the main organ of photosynthesis for a plant

-Most leaves are made of a specialized tissue called mesophyll. This is where photosynthesis occurs, so they are packed with chloroplasts.

-Leaves also have stomata (singular – stoma), which are pore-like openings underneath the leaf that let carbon dioxide and oxygen in and out.

-Surrounding each stoma are two guard cells that respond to changes in water pressure to open and close the stoma.

-When water pressure in the cells is high, the guard cells curve and the stomata open.

-When water pressure in the cells is low, the guard cells flatten and the stomata close.