

## Nutrition in Plants

### Nutrition in plants

All the organism require food to obtain energy for their growth and development. So, the process of utilization of food to get the energy for growth and development is called nutrition.

#### Mode of nutrition in plants

Plants obtain their nutrition by two distinct types i.e Autotrophic and Heterotrophic nutrition.

##### 1. Autotrophic nutrition

Plants are also known as autotrophs which means that they can prepare their own food. This mode of nutrition is found in green plants.

##### 2. Heterotrophs nutrition

When the organisms are dependent on others for their food then the mode of nutrition is said to be heterotrophic( hetero - others, trophos - nourishment). Animals are unable to make their own food and to gain their nutrition they are dependent on plants directly or indirectly.

Under this category, we consider - parasites, saprophytes, and symbiotic plants

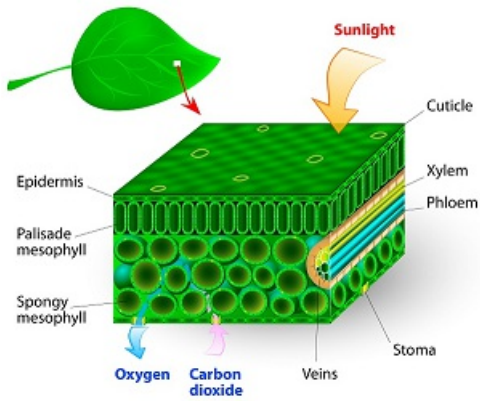
#### Photosynthesis

This is a process of making food by green plants with the help of water and carbon so oxide in the presence of sunlight and chlorophyll. The exchange of carbon dioxide taken in and oxygen out is done with the help of small pores present on the surface of the leaves. These tiny openings on the leaf surface called **stomata**. Water is absorbed from the soil with the help of roots of the plant to the leaves through hair like pipelines called xylem. Xylem is a type of tissues which helps in the conduction of wastewater and minerals.

Green leaves contain chlorophyll which absorbs the sunlight to provide the energy by which carbon dioxide and water get converted into carbohydrates and oxygen is evolved in gaseous form. This whole process of food making done by plants is called photosynthesis. The food formed as the end product of photosynthesis i.e carbohydrates is ultimately converted into starch and gets stored in the plant's body. Leaves are known as the kitchen or food factories of the plant as the process of photosynthesis occur here only.

The process of photosynthesis may occur in any green part of the plant. Even a green stem is able to do photosynthesis. You can understand this by looking up to the plants living in deserts where the leaves have been modified into spines and stem becomes green and fleshy allowing the photosynthesis to occur properly.

## LEAF ANATOMY



### Photosynthesis in Algae

You may have noticed the green patches formed in the ponds or any stagnant water. Even many of the times the green patches are present on the surface of rocks wall, plants etc. These patches are algae which were unable to grow into differentiated body forms. Algae like all the other photosynthetic organisms can make their own food. The green colour is due to the presence of chlorophyll in their body cells. Although, there are many algae which possess different colors like brown, red, golden etc.