Photosynthesis

The process of synthesizing food by green plants in the presence of sunlight, carbon dioxide and water is called photosynthesis. The plants convert light energy from sun and convert it to chemical energy to make carbohydrates and gives out oxygen in the process. It is prepared in the leaves which are designated as the food factories of the plants.

The carbon dioxide is taken in by the tiny pores on the surface of the leaves called **stomata** that are surrounded by the **guard cells**.

The absorption of water is taken care by the **roots** while the transportation is carried out the **stems**. The stem forms a continuous path or passage for the nutrients to reach the leaf.





- All living organisms are made up of cells. Some are single cellular while some are multicellular.
- Each cell is surrounded by the cell membrane and contains a centrally located spherical structure called nucleus.
- ◆ All the cellular components or the cell organelles are embedded in the cytoplasm.
- The desert plants have green stem to carry out photosynthesis and even the green algae prepare its food by photosynthesis.
- Plants prepare carbohydrates which is a compound made of Carbon, Oxygen and Hydrogen but the proteins which are nitrogenous compounds are obtained from



the atmosphere by **nitrogen fixation** with the help of nitrogen fixing bacteria or by addition of fertilizers.

Activity

- > Take two potted plants of the same kind.
- > Keep one in the dark for 3 days and the other in the sunlight.
- > Perform iodine test with the leaves of both the plants. Record your results.
- You will observe that plant kept in dark does not give test for starch but the other kept in sunlight turns blue black with iodine.
- Now leave the pot which was earlier kept in the dark, in the sunlight for 3 4 days and perform the iodine test again on its leaves.
- > You will find that the leaf of this plant turns blue black on addition of iodine confirming the presence of starch.



