Leaf

☞ The leaf is a green coloured thin, broad and flat part of a plant. It grows on the shoot at a node. Younger and smaller leaves are found at the upper part of the stem while older ones are on the lower part of the stem. A typical leaf has an expanded flat part called leaf blade or lamina. Leaf is attached to the stem by a short structure called petiole. It continues through the lamina as a mid-rib which branches out into a fine network called veins. Veins help in transportation of the food material and also provide support to the lamina.

☞ The arrangement of veins on the lamina of a leaf is called venation. There are two types of venation seen in all plants.

1. Parallel Venation: The arrangement of veins as seen in the leaves of maize and wheat plants is parallel venation. These leaves have smooth and linear lamina but do not possess petiole.

2. Reticulate Venation: The net-like arrangement of veins as seen in the leaves of rose and hibiscus plants is reticulate venation. These leaves have broad lamina with a petiole.

Leaf

☞ Functions of the leg

- It prepares food using carbon dioxide, water and chlorophyll In the presence of sunlight. This process is called photosynthesis.
- It helps in the exchange of gases through small pores called stomata.
- Plants breathe through stomata present on their leaves.
- Transpiration is another important function of leaves. Plants get rid of excess water through their stomata.

☞ Modifications of Leaves

The leaves which perform some special functions in addition to the manufacture of food are called modified leaves. The modifications of leaves are as follows:

1. Leaf Spine: In some plants like cactus, the leaves are modified into hard and pointed structure called spines. These spines can be used for defensive purpose or may also be a means to check the rate of transpiration.

2. Leaf Pitcher: Plants like pitcher plant and sun dew plant possess highly modified leaves that trap and digest insects. This process provides the plant with nutrients that otherwise the plant would not obtain. Such plants are also called Insectivorous plants.

3. Leaf Tendril: In some plants, leaves are modified into structures known as tendrils which are highly coiled. Tendrils are climbing organs and are sensitive to contact with a foreign body. Therefore, whenever they come in contact with a neighboring object, they coil around it and help plant to climb. They help the plant to climb, eg- Gloriosa etc.

Leaf modified as a reproductive organe in some plants, leaves have buds that produce new plants, e.g., Bryophyllum.