Parts of a Plant

The various parts of a plant as follows:

<u>Stem</u>

It is the part of the plant which conducts water. The minerals dissolved in water move up in the stem, along with the water. The minerals go to every part of the plant through narrow tubes inside the stem.



Leaves

It is the part of the plant which prepares food. The portion of a leaf by which it is attached to the stem is called **petiole** while the broad, green part of the leaf is called **lamina**. The lines present on the leaf are called **veins**. This middle vein of the leaf is called the **midrib**.



The pattern made by the veins is called as venation. These are of two types namely parallel and reticulate venation. When the veins are parallel arranged then it is called as parallel venation while if it is in net like fashion on both the sides of the midrib is called as reticulate venation.







Parallel venation

Reticulate venation

Activity to show transpiration

- Put water in 3 measuring cylinders.
- Take 3 similar cuttings from the plant of 8 cm each.
- Place the plant cutting in the measuring cylinder.
- Adjust the water level to an exact level (for example 8 cm³)
- Make a note of the volume of water.
- Add about 1 cm³ of oil on top of the water in the measuring cylinder.
- Place the measuring cylinder on the balance and record the mass.
- On the measuring cylinder, write the starting volume of water.
- Take 3 more cuttings at timed intervals for the next couple of days.
- Uptake of water gives an estimate of water loss by transpiration.

Activity to show leaves contain starch

• The leaf is first decolourised by treating it in 90% ethanol (alcohol) solution. It is then rinsed in hot water to remove all alcohol and to soften the tissue.





- The leaf is now colourless. Then iodine solution (brown in colour) is poured over the leaf.
- The leaf turns blue-black indicating that it contains starch.

This proves that leaves produce starch in the presence of sunlight.

Plants synthesize their own food in the presence of sunlight, green coloured substance (chlorophyll) from water and carbon dioxide. This process id called as **photosynthesis**.

Roots

Roots help in absorption of water from the soil. They anchor the plant firmly to the soil. There are two types of roots.

Fibrous roots and tap roots

A root where only one main primary root is present is called as tap root and the smaller roots from these roots are called lateral roots.

Plants that do not have primary roots and all roots appear similar are called as fibrous roots.



Fibrous Roots



Tap Roots

The food prepared by the leaves is transported through the stem and stored in various parts of the plants. In some it is stored in roots like carrot, tapioca etc.

Flower: Flower is most attractive parts of plants.

