Introduction

When we go outside in park and garden and look around us, we find different kind of plants, leaf of plants, shape of flowers, color of flowers, size of stem,Some plants are tall, while some are short.

Picture showing different kind of flowers showing different shape, size and color

Herbs

- Plants with green and tender stems are called**herbs**.
- Herbs are plants used in food, flavoring, for aroma (pleasant smell), and medicinal purpose.
- For example: mint (***Pudhina***), rosemary, coriander (***Dhaniya***), bay leaf (***Tejpatta***), basil (***Tulsi***).

Bay leaf *Basil* *Mint*

Shrubs

- Some plants have stem branching out near the base there stem is hard but not too thick these are called **shrubs**.
- These are shorter in height and have multiple stems. Mainly found in gardens for decorative purpose.

Hibiscus *Moonbeam* *Oleander*

Trees

- Some plants are very tall and have hard and thick brown stem. The stem has branches in the upper part, much above the ground. Such plants are called **trees**.

For Example: Apple tree, Mango tree, Neem tree, Coconut tree, Oak tree etc

Creepers

- Some plants with weak stem needs support, they cannot stand upright by their own and spreads on the ground are called **creepers**.
- For examples: Pumpkin, Watermelon, Sweet potato, Muskmelon etc.

Watermelon *Pumpkin* *Muskmelon*

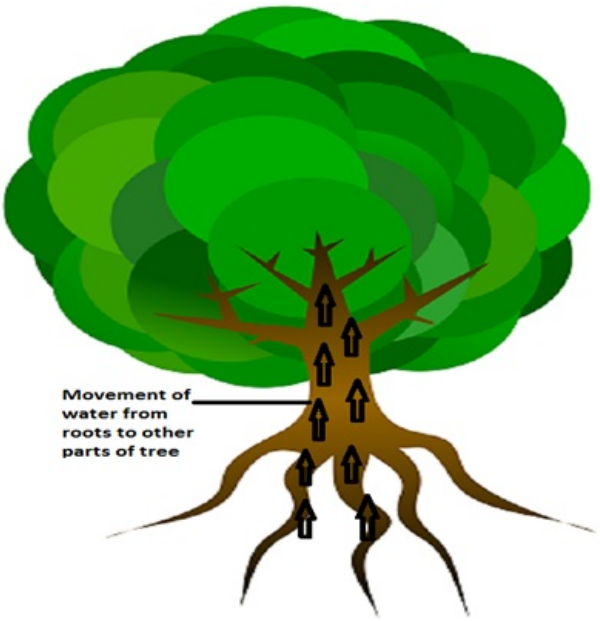
Climbers

- Some plants take support on the neighboring structures, like wall, tree, fence and climb up are called climbers.
- For example: Money plant, Pea plant, Grapevine, Bean plant etc.

Bean plant *Pea plant* *Grapevine*

Class 6 Biology Getting to Know Plants

Stem

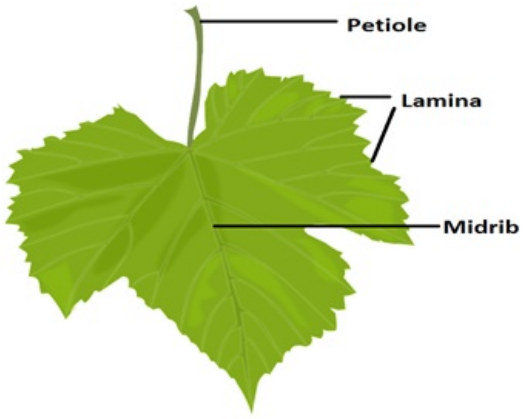


Stem

- Stem is the part of plant that support leaves, flowers and fruits.
- Stems helps in transport of fluid from roots to other parts of plant.
- This movement of water and minerals is done through the narrow tube inside the stem called **xylem**.

Leaf

- Leaves and stem together form the shoot.
- The part of leaf by which it is attached to the stem is called **petiole**. The broad green part of leaf is called **lamina**.
- Small lines present on a leaf are called its **vein**. These gives support and transport water and mineral through the leaf.
- A thick vein in the middle of the leaf is called **midrib**.

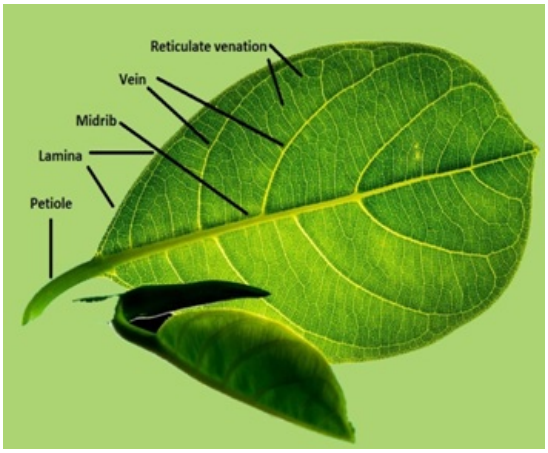


Class 6 Biology Getting to Know Plants — Leaf venation

Leaf venation

- The design made by veins in a leaf is called the**leaf venation**.
- If the design is net like on both sides of midrib is called**reticulate venation**. For example: coriander, rose, oak etc.

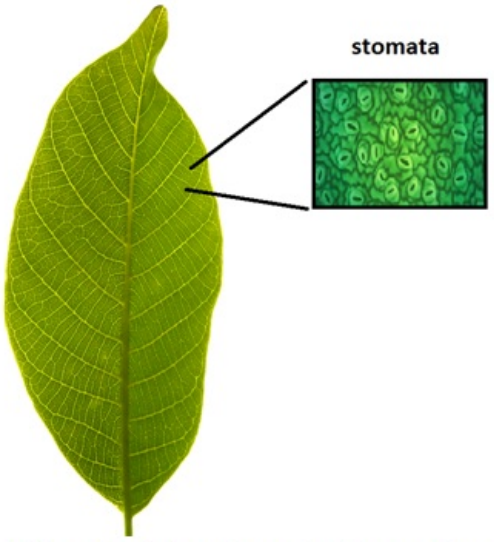
If the design made by veins is parallel to one another in a leaf is called**parallel venation**. For example: grass, wheat, maize etc



Class 6 Biology Getting to Know Plants — Photosynthesis and transpiration

Photosynthesis and transpiration

- On the upper part of leaf there present number of small opening or pores called **stomata**.
- Stomata help in exchange of gases, which is intake of carbon dioxide and release of oxygen in the presence of water and sunlight by the process of **photosynthesis**.
- Plants prepare their food by photosynthesis.
- Water vapors are released into the atmosphere through stomata present on leaf this process is called **transpiration**.
- Due to transpiration a suction force is generated inside the plant and water runs from roots to shoots and other part of plant.



Water droplet coming out of leaves shows

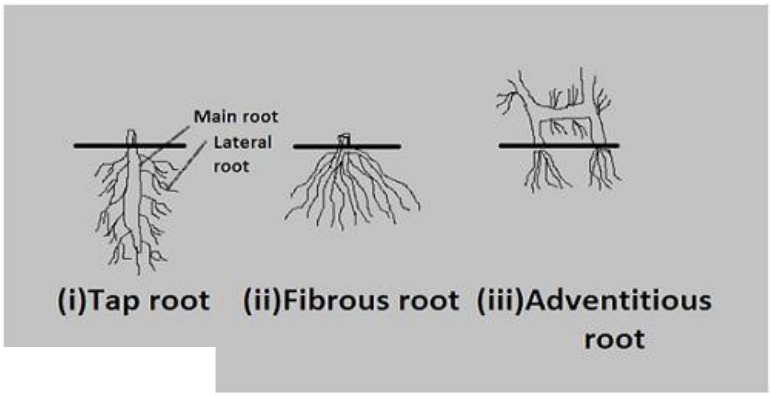
Transpiration

Class 6 Biology Getting to Know Plants

Root

Root

- Plant organ which lies below the soil surface is called **root**.
- Roots helps in holding the plant firmly in the soil. They are said to anchor the plant to the soil.
- Root absorbs minerals and nutrients from the soil necessary for plant.
- Plants have 3 types of root system: Tap root, Fibrous root, Adventitious root

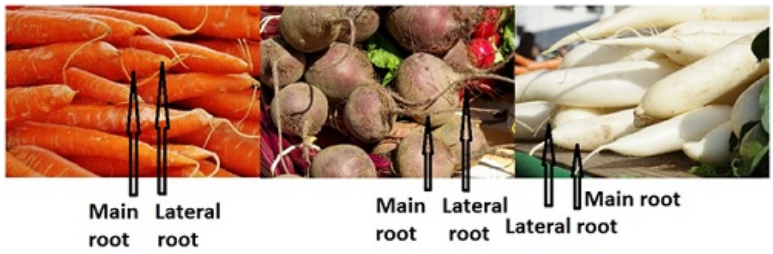


Class 6 Biology Getting to Know Plants — Types of root system

Types of root system

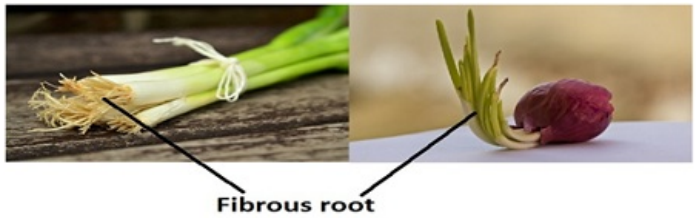
- **Tap root**: The main root which is larger and fast growing is called tap root and the branched smaller roots is called lateral root.

For example: Beet root, Carrot, Sugar beet, Radish, etc.



- **Fibrous root**: No main root, all the roots are of same size.

For example: Coconut palm, Onion, Grass, spring onion, etc.



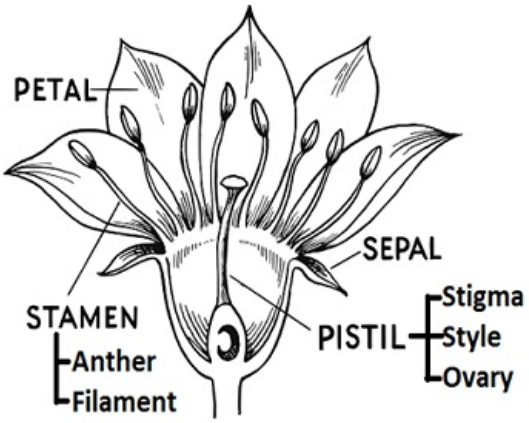
- **Adventitious root**: Root that form on any part of plant other than the actual root area.

- **Note**: If plant has leaves with reticulate venation will have tap root and plants with fibrous root have parallel venation in their leaves.

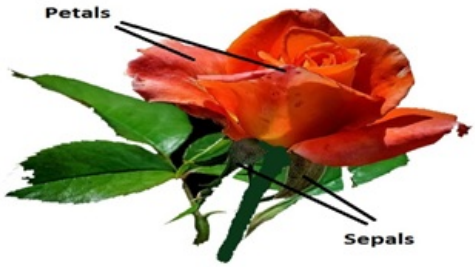
Class 6 Biology Getting to Know Plants Flower

Flower

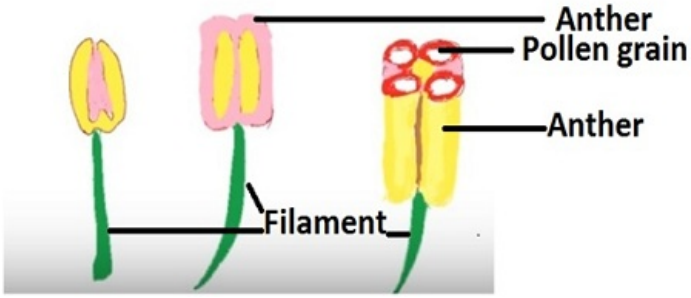
- Flower is mainly the reproductive part of plant. Due to different colors of flowers we are able to recognize the plant.
- Different parts of flower: Petals, Sepals, Pistil, Stamen.



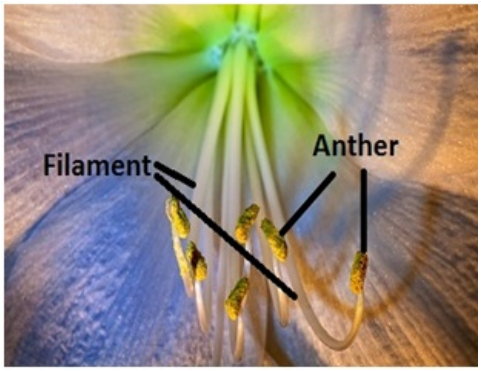
- **Petals**: The colored part of flower that covers the reproductive part of flower.
- **Sepals**: The outermost green color part that enclose the bud.



- **Stamen**: The pollen producing part of flower. It has two parts, first is **anther** which contains pollen grains and second is **filament**, the tube like structure supporting anther.

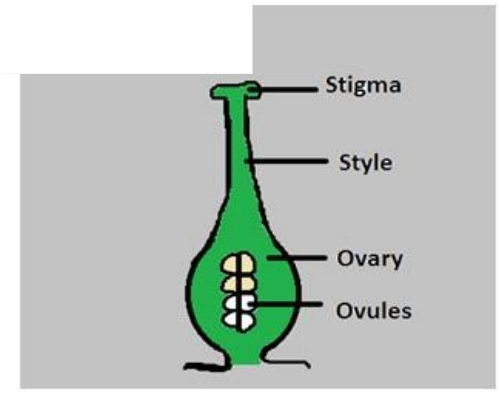


Structure of stamen



- **Pistil**: The innermost part which produces ovules.

- It has 3 parts, first is stigma, the upper part receives pollen grain for fertilization. Second is style a long hollow tube like structure join stigma and ovary. Third is ovary in which ovules are produced.
- The mature ovary develops into fruit and the mature ovules develop into seeds.



Structure of pistil