Morphology of Flowering Plants

toppr

Short growing season, up to few weeks Ex. Arabidopsis

Complete their life-cycle in a single favourable season Ex. Wheat, maize etc.

Complete their life-cycle in two favourable seasons Ex. Parsley etc.

Live for more than two years Ex. Mango, Bamboo etc.

Classification of Flowering Plants on the Basis of Appearance

Classification of Flowering Plants on the Basis of Longevity

Small, soft and non-woody plants Ex. Coriander



Medium height, woody, branched from the base Ex. Rose



Tall, woody with one main trunk Ex. Mango



Classification of Flowering Plants on the Basis of Habitat

Hydrophytes

Plants growing in aquatic habitat Ex. Hydrilla

Mesophytes

Plants grow under moderate moisture and temperature conditions. Ex. Sunflower

Xerophytes Plants grow in dry

or xeric habitats Ex. Cactus

Plants grow in saline habitats Ex. Spartina

Plants grow on the surface of other plants Ex. Vanda

Angiosperms

- The pollen grains and ovules are developed in specialised structures called flowers
- Size ranges from tiny, almost microscopic Wolffia to tall trees of Eucalyptus (over 100 metres)
- Provide us with food, fodder, fuel, medicines and several other commercially important products

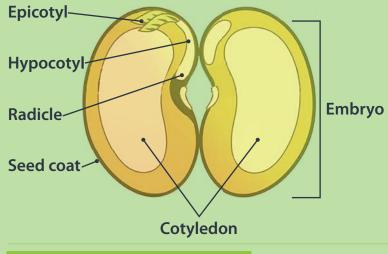
Classification of FLowering Plants on the Basis of Number of Cotyledons

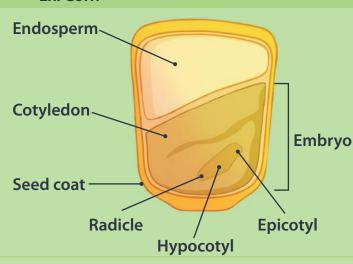
Dicotyledons Monocotyledons Seeds have two cotyledons Seeds have one cotyledon Tap roots Fibrous roots Reticulate venation in leaves Parallel venation in leaves

Tetramerous or pentamerous flowers Trimerous flowers

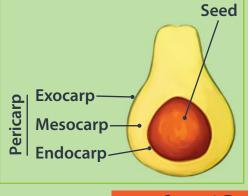
Vascular bundles scatterd Vascular bundles arranged in ring form

Ex: Bean Ex: Corn





Parts of a Fruit



True Fruit

Develops only from the ovary Ex. Mango, coconut etc.

A fruit protects seeds

Develops from some other parts of the flower Ex. Apple, strawberry etc.

False Fruit

Classification of Fruits on the Basis of:

- Whether the carpels present in gynoecium are free or in a fused state
- One or more flower takes part in the formation of fruit

- Fruits develop from the monocarpellary ovary or multicarpellary syncarpous ovary
- Only one fruit is formed **Fleshy Fruits Dry Fruits**

Ex. Mango

Ex. Cashew

Fruits develop from the

- multicarpellary apocarpous ovary • Fruits make a bunch of
- fruitlets which is known as etaerio

 Many ovaries and other floral parts combining to form the fruit (False fruit)

Sorosis Ex. Jackfruit

Sycosis Ex. Peepal

Ex. Calotropis

Etaerio of follicles

Etaerio of achenes

Ex. Strawberry

Ex. Custard apple

Etaerio of berries Ex. Raspberry

Etaerio of drupes

Fruits and Seeds Dispersal

Water

as to float on water

Light and spongy covering so

Seeds or fruits are light-weight

Wind

Animals

Presence of hooks, spines, bristles, stiff hair to attach to animal body