

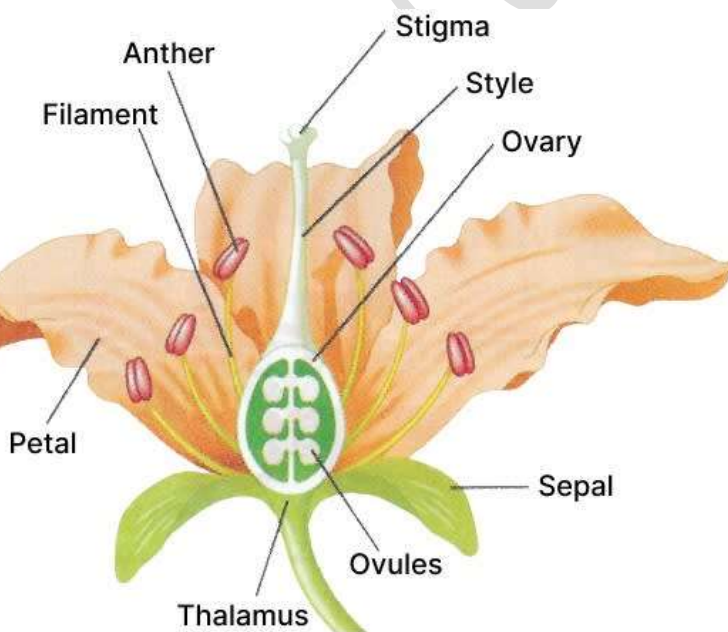
Brain Builders Coaching Center

The Flower

Class-IX ICSE

- A flower is the reproductive part of the plant.
- It is responsible for sexual reproduction.
- It develops into a fruit which contains seeds.

Flower Structure & Whorls



A flower consists of four whorls borne on the thalamus (receptacle)

Parts: Description & Functions

Calyx (Sepals)

- Green, leaf-like, non-essential
- Protects bud before opening

Corolla (Petals)

- Brightly coloured, non-essential accessory
- Attracts pollinators

Androecium (Stamens)

- **Filament** (stalk) + **Anther** (produces pollen grains)

Gynoecium (Pistil / Carpel)

- **Stigma** (receives pollen), **Style** (connects stigma–ovary), **Ovary** (contains ovules)
- Ovary → fruit; Ovules → seeds after fertilization

Accessory whorls (calyx, corolla) protect/support; essential whorls (stamen, pistil) involved in reproduction

- Sepals + petals may form perianth, and when they look alike, called tepals (perianth collectively)

Types of Flowers & Sexuality

Feature	Type	Examples
Complete (all 4 whorls)	E.g. Hibiscus, Rose	
Incomplete (one or more whorls missing)	E.g. American elm	
Bisexual (Hermaphrodite)	Contains stamens & carpels	E.g. Hibiscus, Lily
Unisexual	Only stamens or only carpels	
Monoecious plants	Both male and female flowers on same plant	E.g. Maize, Cucumber
Dioecious plants	Male and female flowers on separate plants	E.g. Papaya, Palm

Androecium Variations (Structure Types)

- **Polyandrous:** All stamens free (e.g. *Petunia*)
- **Monadelphous:** Filaments united in one bundle (anthers free), e.g. *China rose*
- **Diadelphous:** Filaments united in two bundles (e.g. *Pea*)
- **Polyadelphous:** Filaments united in more than two groups (e.g. *Bombax*)

Inflorescence & Placentation

- **Inflorescence:** Pattern of flower arrangement on a plant axis
- **Placentation:** Arrangement of ovules within ovary, e.g. marginal, axile, basal, etc.
(covered under chapter

Common Examples

Flower	Type
Hibiscus	Complete, bisexual
Maize	Incomplete, unisexual
Rose	Complete, bisexual
Papaya	Unisexual
Pea	Self-pollinated