



Unisexual and Bisexual Flower

Differences Between Unisexual and Bisexual Flowers:

Feature	Unisexual Flower	Bisexual Flower
Reproductive Parts	Contains either male or female parts.	Contains both male and female parts.
Whorls Present	Androecium (male) or Gynoecium (female) only.	Both Androecium and Gynoecium present.
Completeness	Considered an incomplete flower.	Considered a complete flower.
Pollination	Requires cross-pollination for reproduction.	Can self-pollinate or cross-pollinate.
Examples	Papaya, watermelon, corn.	Mustard, hibiscus, rose.

Parts of a Flower and Their Functions:

i. Style:

The slender stalk that connects the stigma to the ovary.
Allows the pollen tube to grow toward the ovary.

ii. Ovary:

The swollen base of the pistil.
Contains ovules that develop into seeds after fertilization.
The ovary matures into the fruit.

iii. Carpel (Pistil):

The female reproductive part of the flower.
Consists of the stigma, style, and ovary.

iv. Anther:

The male part of the flower.



Produces pollen grains that contain the male reproductive cells.

v. Stamen:

The male reproductive organ.

Consists of anther and filament.

vi. Filament:

A slender stalk that supports the anther.

vii. Petal:

Brightly colored leaf-like structures.

Attract pollinators like bees and butterflies.

viii. Sepal:

Green, leaf-like structure at the base of the flower.

Protects the flower in its bud stage.

Pollination in Unisexual and Bisexual Flowers:

i. Unisexual Flowers:

Cannot self-pollinate as they have only one reproductive part.

Require cross-pollination through agents like wind, water, or insects.

Examples:

- **Papaya:** Pollination occurs through insects.
- **Corn:** Pollination occurs through wind.

i. Bisexual Flowers:

Can self-pollinate (pollen transfers within the same flower) or undergo cross-pollination.

More efficient reproduction due to the presence of both reproductive organs.

Examples:

- **Hibiscus:** Undergoes both self- and cross-pollination.
- **Rose:** Primarily self-pollinates but can also cross-pollinate.



Examples of Unisexual and Bisexual Flowers:

i. Unisexual Flowers:

- **Papaya:** Male and female flowers are present on different plants.
- **Watermelon:** Requires insect pollination for reproduction.
- **Corn:** Wind-pollinated, with separate male and female flowers.

i. Bisexual Flowers:

- **Hibiscus:** Contains both male and female reproductive organs.
- **Rose:** Capable of self-pollination and cross-pollination.
- **Mustard:** Produces seeds through self-pollination.

Key Takeaways

Unisexual flowers have only one reproductive organ and need cross-pollination.

Bisexual flowers have both reproductive organs and can self-pollinate or cross-pollinate.

Flowers play a crucial role in plant reproduction, ensuring the formation of seeds and fruits.

Pollinators like bees, butterflies, and wind help transfer pollen between flowers, aiding fertilization.