



CLASS: V

Subject: Science

Date: 25.06.2020

Topic: Pollination (continued)

Time Limit: 30 Mins

Worksheet No. :18

(Please read the chapter from your text book and the attached notes. Then work out the exercises neatly in your notebooks henceforth. Make a contents page first with columns under the heads: date, worksheet number, chapter number, chapter name and teacher's signature. Ensure neat and tidy work. Follow the pattern given below)

Qt-Which type of pollination occurs in maize?

Ans- Flowers of grasses like maize are pollinated by wind.

Give reasons for the following statements

1--Flowers are the reproductive parts of the plant.

Ans--Flowers are reproductive part of a plant because they contain the male and female reproductive parts that is stamens and carpels which help in reproduction.

2-- A hibiscus may or may not need a pollinating agent for reproduction.

Ans--A hibiscus may not need a pollinating agent because it is a bisexual flower which is capable of self-pollination. On the other hand the petals of a hibiscus flower being brightly coloured, it attracts insects for pollination.

Fill in the blanks ---

- 1- Roots, stem and leaves constitute the ----- parts of the plant.
- 2- ----- is the female reproductive part of a flower.
- 3- ----- is the male reproductive part of a flower.
- 4- ----- plants produce monosexual flowers.

Qt-Write one word answers for the following sentences.

- 1-The male reproductive organ of the plant that is made up of anther and filament -----
- 2-The female reproductive organs also known as carpel, present at the centre of the flower of the plant that consists of three parts stigma, style and ovary-----
- 3- The collection of sepals-----
- 4- Collective term for the stamens of a flower -----
- 5- The flowers which contain both stamen and pistil-----

Remember to fill up the Contents page of your notebook every day.

Some flowers have only male reproductive parts, i.e., only the androecium while some have only female reproductive parts, i.e., gynoecium. Such flowers are called monosexual flowers. For example, pumpkin, cucumber and papaya plants bear distinct male flowers and female flowers.

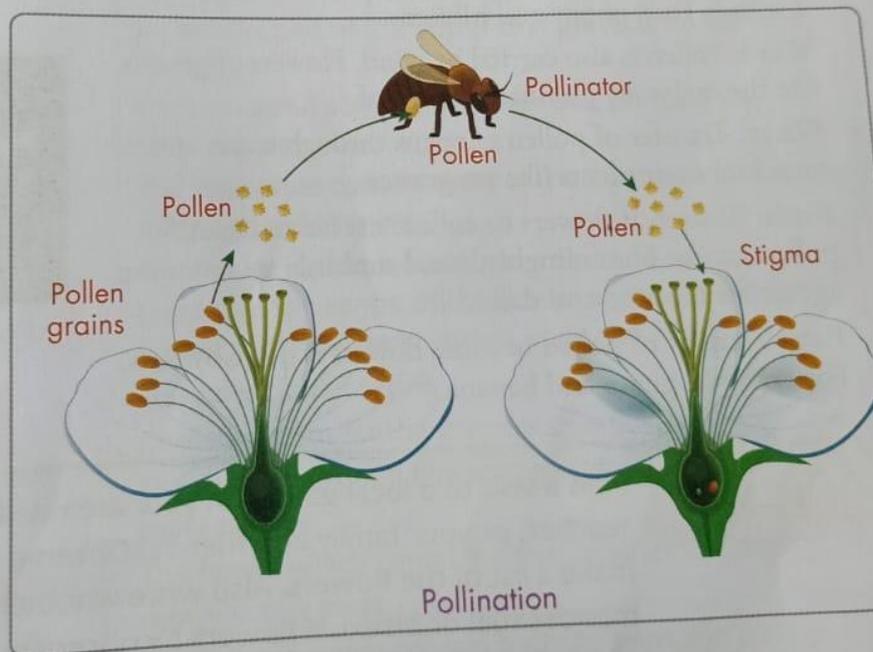
Bisexual Flowers

Some flowers have both male and female reproductive parts, i.e., both androecium and gynoecium. Such flowers are called bisexual flowers or complete flowers. For example, lily, hibiscus and rose.

POLLINATION

Plants reproduce with the help of pollen grains and ovules. The pollen grains from the anther and the ovules from the ovary fuse together and form the seed during the process of fertilisation. Pollen grains from the anther are transferred to the stigma for the fertilisation to take place. The pollen sticks on the stigma and travels all the way to the ovary via the style.

The phenomenon of transfer of pollen from the anther to the stigma of the same flower or a different flower is termed as **pollination**.



Types of Pollination

Pollination is two types, self-pollination and cross-pollination.

Self-pollination

The process by which the pollen moves from the anther to the stigma of the same flower or a flower in the same plant is called self-pollination.

Self-pollination is possible only if the pollen and the ovary mature at the same time.

Cross-pollination

When the pollen is transferred from the anther of a flower to the stigma of a flower borne by another plant, cross-pollination is said to have happened.

There are various agents that make pollination happen. For example,

- **Insects:** Insects like bees and butterflies sit on a flower to collect its nectar. During this process, some pollen grains get stick to the wings and legs of the insects. These grains are then carried by the insect and get deposited on the next flower the insect sits on. This method of pollination is seen in rose, poppy and hibiscus.
- **Wind:** Pollen is also carried by wind. Flowers of grasses like the maize are pollinated by wind.
- **Water:** Transfer of pollen happens through water and is found in water plants like sea grasses.
- **Birds:** Birds visit flowers to collect nectar and transfer pollen grains. Hummingbirds and sunbirds are common agents for hibiscus and daffodil.
- **Bats:** Transfer of pollen in some flowers is done by bats. For example, guava and banana.



Pollination by insects such as bees



Pollination by bats

My JOURNAL

Plan a visit to a local garden in your area with your class a teacher, or your family and friends. Observe the flowers and make a list of the flowers. Also write whether the flowers are monosexual or bisexual flowers by observing their parts.
