VIDYA BHAWAN, BALIKA VIDYAPITH

SHAKTI UTTHAN ASHRAM, LAKHISARAI - 811311

STUDY NOTES — Teacher's Name: Anjani Kaushik

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Science

CHAPTER: 8 Understanding Plants

Today's Topic: Flower

Flowers:

Most plants produce flowers mainly for reproduction. Flowers produce seeds from which new plants grow. Flowers of most plants are colourful and fragrant which helps to attract pollinators, such as insects, birds and bats to them. These pollinators play an important role in the process of pollination.

Flowers come in a wide variety of shapes and sizes, but, they all have almost similar parts. They are made up of the calyx, corolla, androecium and gynoecium. Before a flower blooms, it is in the form of a bud in which all the parts are enclosed in a green cover called the **calyx**. The calyx is made up of leaf- like structures called the sepals. When the bud develops into a flower, the **sepals** open up.

Enclosed within are the most prominent parts of a flower—the **petals**. Different flowers have petals of different shapes and colours. Some flowers have a fixed number of petals while in others the number of petals varies- In some flowers, such as petunia and datura, the petals are not separate but joined together in the shape of a trumpet. The petals of a

flower are typically in a concentric shape called corolla, which enclose the reproductive organs.

The gynoecium is the female part of the flower and consists of the **pistil.** The pistil usually has a sack at its base called the **ovary**, which contains the female germ cells of a plant or **ovules**. Ovules develop into seeds after fertilisation. Coming out of the ovary is a column called the **style**, which is crowned by a sticky structure called the **stigma**; the stickiness makes the stigma suitable for receiving and retaining **pollen grains**.

The pistil is nearly surrounded by the androecium, the male parts of the flower, Which called the **stamens**. Each stamen consists of a slender stalk, called the **filament**, topped by an enlarged structure called the anther. It is the anther that carries the pollen grains.

After pollination, when pollens reach the ovary at the centre of the flower, fertilisation takes place, which leads to the formation of fruits and seeds. Seeds germinate to form plants. The flowers that are pollinated by insects are usually colourful and attractive and have additional structures called **nectaries**, which secrete sugary nectar and thus attract insects to the flowers.

In their search for nectar, the insects often push against the anthers causing the pollen grains to get stuck on their bodies. These pollen grains may then brush off on the stigma of the next flower that the insect visits and in this way flowers are pollinated.

Wind pollination is also common in flowering plants. The flowers of plants pollinated by the wind are usually not colourful. They also do not produce nectar or any scent as they do not need to attract insects. Wind-pollinated plants usually produce large quantities of pollen.