Life Cycles

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Introduction

The life of a flowering plant has a cycle like pattern. Flowers come from seeds, and they create seeds too. Each different part of a plant has a unique purpose.

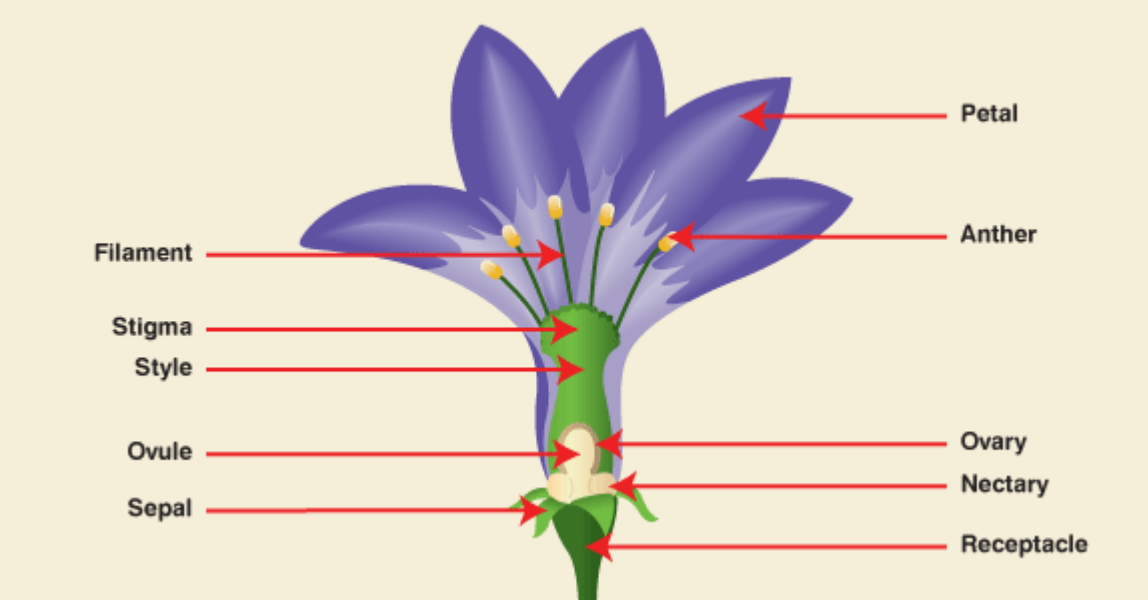
This section includes:

- **Non flowering plants**
- **Life cycle of a flowering plant**
- **Petals**
- **Sepals**
- **Nectaries**
- **Carpels**
- **Stamens**
- **Receptacle**

Not all plants produce flowers. These are called non-flowering plants. Ferns and mosses are examples of plants which do not produce flowers. They grow from spores instead of seeds. Non-flowering plants as well as flowering plants make their own food through photosynthesis.

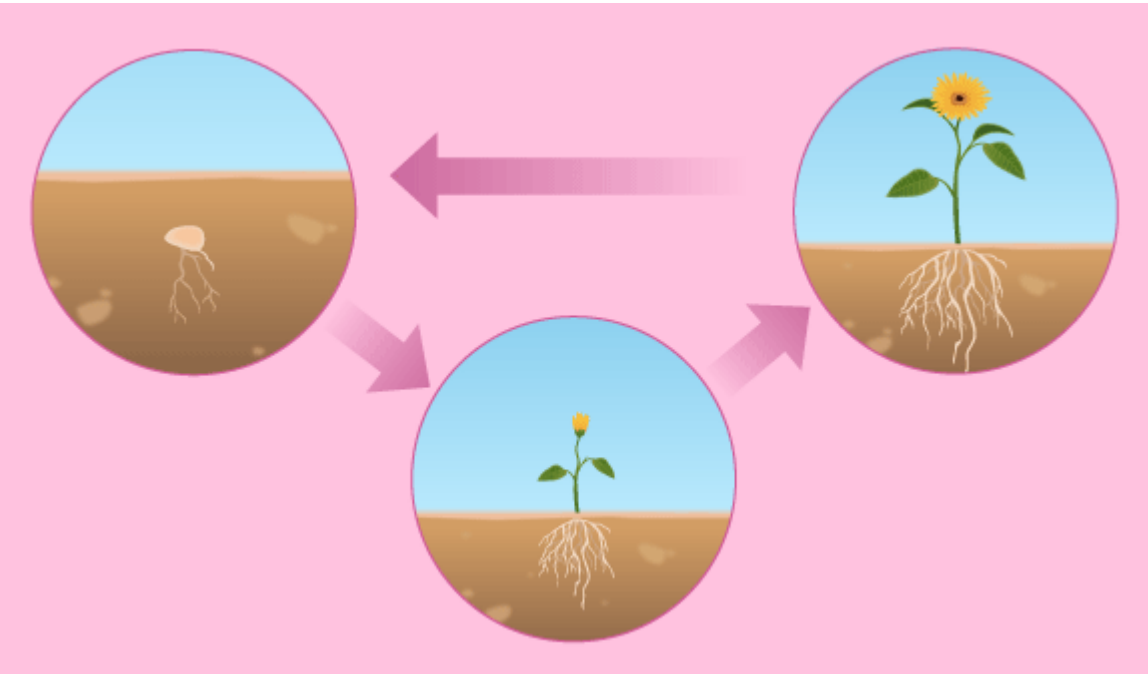
Life cycle of a flowering plant

These are the main parts of a flower.



Flowering plants go through the following life cycle.

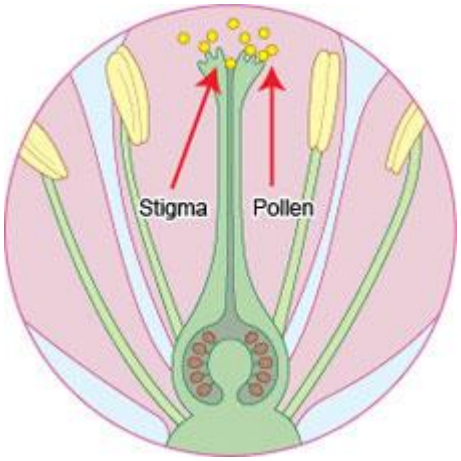
1. Roots begin to form under the soil.
2. The stem, leaves and flower bud emerge above the soil.
3. The plant grows tall, more leaves grow and the bud opens to show the flower.



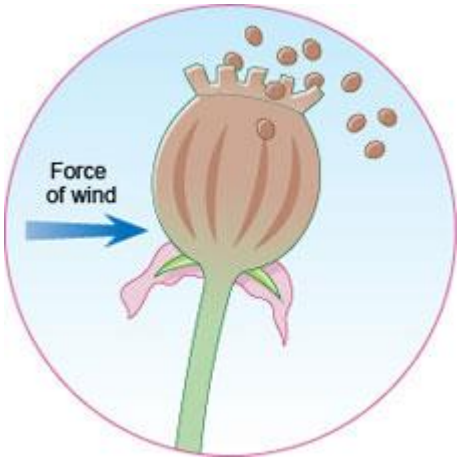
How seeds are made

1. Pollen is carried by insects or blown by the wind from one flower to another. This process is called **pollination**.

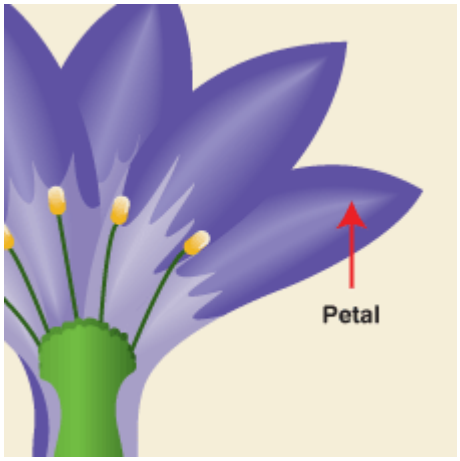
2. Pollen reaches the carpel of the new flower. Pollen then travels to the ovary where it fertilises egg cells (ovules) to make seeds. This process is called **fertilisation**.



3. The seeds are scattered by animals or the wind. This process is called **dispersal**. Some of the seeds will grow into new plants.

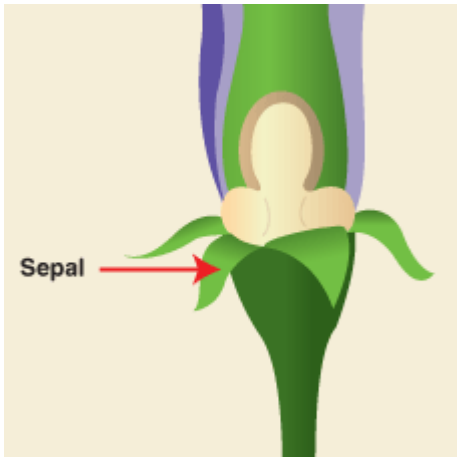


Petals



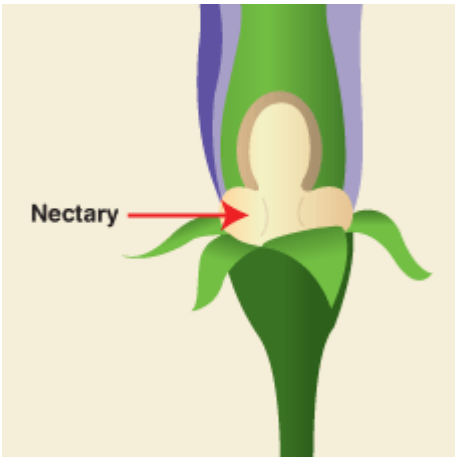
Petals are often very brightly coloured. This is because their main job is to attract insects, such as bees or butterflies, into the flower. The insects pick up **pollen** from the flower, and carry it to the next flower they visit. This is how most flowers are pollinated.

Not all flowers have brightly coloured petals. Some grasses, for example, have small, dull, off-white flowers. This is because they are not pollinated by insects or other animals, but use the **wind** to blow their pollen grains to other plants.



Sepals are special types of leaves that form a ring around the petals. Their job is to **protect**the flower while it is still a bud. After the flower has opened, the sepals can still be seen behind the petals.

Sepals are usually green or brown, although in some plants they are the same colour as the petals.

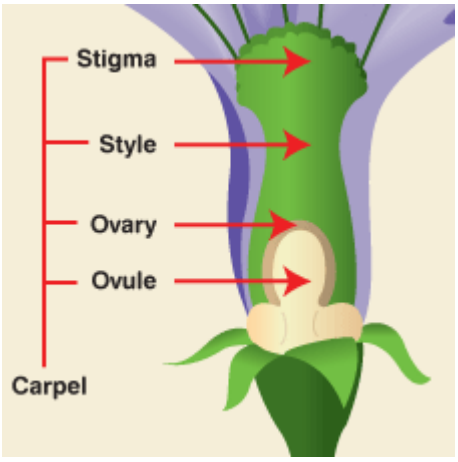


The nectaries are the parts of a flower that make **nectar**. Nectar is a sweet substance, which insects drink to give them energy. Bees also use nectar to make honey.

The nectaries are usually right in the centre of the flower. This means the insects have to reach deep into the flower to find the nectar. As they do so, their bodies pick up pollen from the anthers, and they carry it to the next flower they visit.

Carpels

The **carpel** is the female part of the flower, where the seeds are made. The carpel has three parts: the stigma, the style, and the ovary.

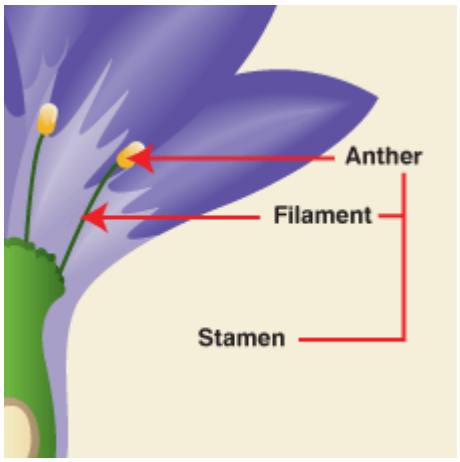


- The **stigma** is covered in a sticky substance. Its job is to "catch" the grains of pollen (which usually come from another flower).
- The **style** is the stalk that holds up the stigma.
- The **ovary** contains the ovules (or "eggs").

When the flower is pollinated, the pollen sticks to the stigma. It then travels down the style to the ovary. In the ovary, the pollen joins with the ovules, and

the ovules become seeds. This is called **fertilisation**. After fertilisation, the ovary turns into the fruit.

Stamens

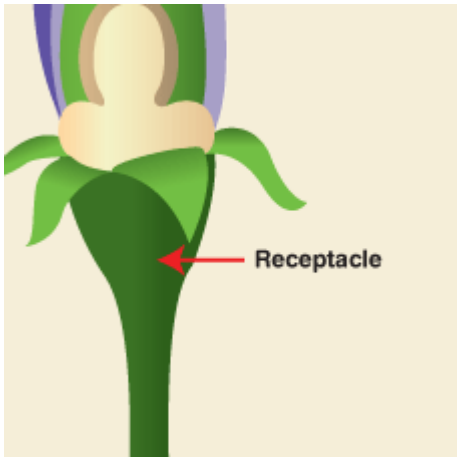


The stamens are the male parts of the flower. Their job is to make **pollen**. Pollen is a fine yellow powder that is needed to make a new plant.

Each stamen has two parts: an anther and a filament. The **anther** contains the pollen and the **filament** holds up the anther.

The pollen is carried to the stigma of another flower and fertilises it, and new seeds are made. Sometimes pollen from a flower gets onto the stigma in the same flower, and it fertilizes itself.

Receptacle



The receptacle is the top part of the flower stalk, where the parts of the flower are attached. It is often rounded in shape.

All the parts of the flower are attached to the receptacle.