Activity-37: Pollination

Aim:

To understand the process of pollination in plants. Is the process AUTOMATIC or MEDIATED?

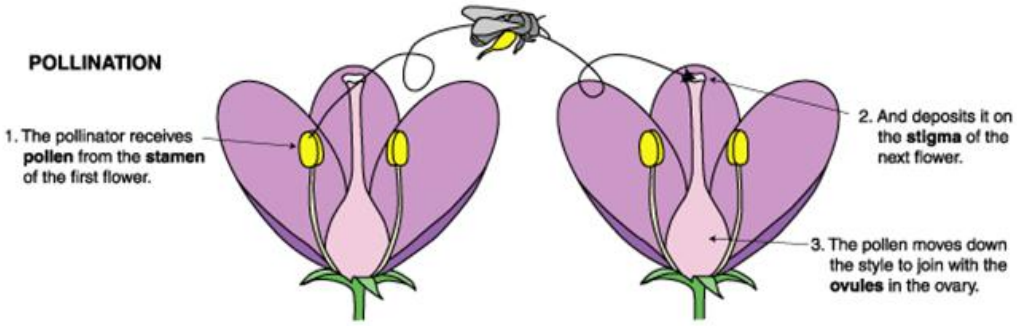
Requirements:

You will need the following:

A potted plant with lots of flower buds. You can choose any plant with flowers but you MUST NOT choose flowers that are fully mature (grown). You must choose plants in which you can easily identify a fruit.

Make sure that you are able to identify the stamens and pistils in the flowers. It would be convenient if you can choose a plant in which the stamens and pistils are separate and not attached to each other or other parts of the flower. You must choose plants with flowers having both the male and female parts (stamens & pistils).

You will need a small plastic cover or large cello tape, a string and a plain paper, pencil and a brush.



Procedure:

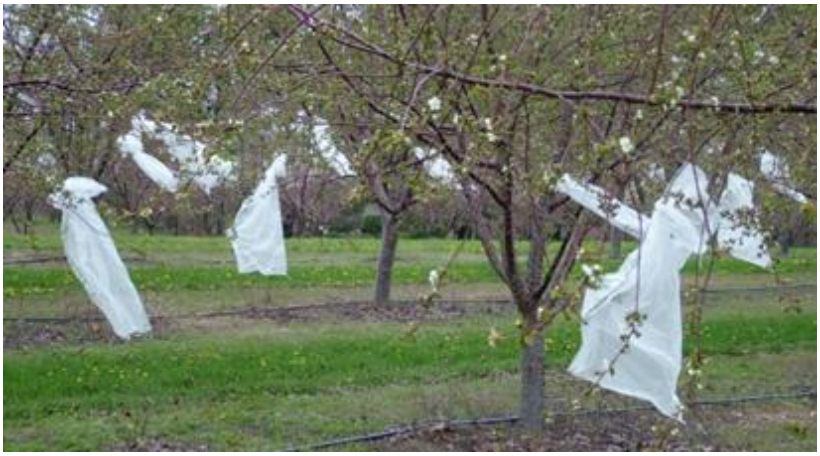
After choosing the plants with budding flowers, wait till they blossom.

Very soon after they blossom, choose individual flowers and label them as A, B, C…. Now make a note in your plain paper. You must try to mark all the flowers on the plant or if you only choose to study some of them cut away the rest and discard them.

If you only have one potted plant, divide the flowers into 2 groups:

Group-1: Seal the stigmas with tape or cover them with the plastic cover. It should be very secure. Do not cut the stigmas or any flower parts. This could lead to an infection and compromise your experiment.

GROUP-2: Seal away the stamens without bringing them in contact with the stigmas of that or any other flowers.



Observation:

Do you observe fruits and seeds growing from flowers in which you sealed away the pistils?

Do you observe fruits and seeds growing from flowers in which you sealed away the stamens?

Concepts covered:

In the flowering plants you observe seeds are the end products of fertilization of the ovules by the pollen. The pollen is produced by the stamens and ovules are produces by the ovary from which the pistils grow.