

# Sithney C.P. School Knowledge Organiser



## Science. Biology: Plants

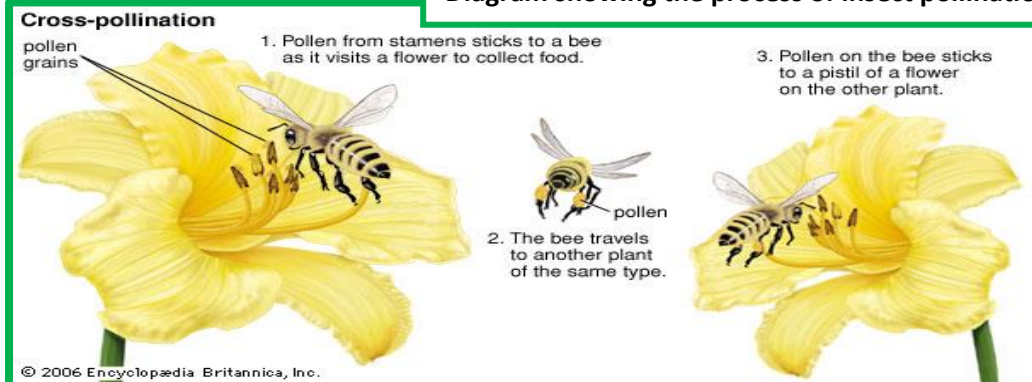
### What you should already know:

- Observe and describe how seeds and bulbs grow into mature plants. (Y2 - Plants)
- Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. (Y2 - Plants)

### Key learning:

Many plants, but not all, have roots, stems/trunks, leaves and flowers/blossom. The roots absorb water and nutrients from the soil and anchor the plant in place. The stem transports water and nutrients/minerals around the plant and holds the leaves and flowers up in the air to enhance photosynthesis, pollination and seed dispersal. The leaves use sunlight and water to produce the plant's food. Some plants produce flowers which enable the plant to reproduce. Pollen, which is produced by the male part of the flower, is transferred to the female part of other flowers (pollination). This forms seeds, sometimes contained in berries or fruits which are then dispersed in different ways. Different plants require different conditions for germination and growth.

### Diagram showing the process of insect pollination



### Key Vocabulary:

#### Photosynthesis

Photosynthesis is a chemical reaction that takes place inside a plant, producing food for the plant to survive.

Carbon dioxide, water and light are all needed for photosynthesis to take place.

Photosynthesis happens in the leaves of a plant.

#### Pollen

Pollen is the substance that causes [plants](#) to form [seeds](#). New plants then can grow from the seeds.

#### Insect pollination

Most plants depend on a carrier, such as a bee, to bring pollen to them from another plant.

#### Wind pollination

Wind carries pollen from one plant to another.

#### Seed formation

Seeds need the right conditions to germinate, or grow into a new plant. They need air, water, the right temperature, good soil conditions, and the right amount of light

#### Seed dispersal

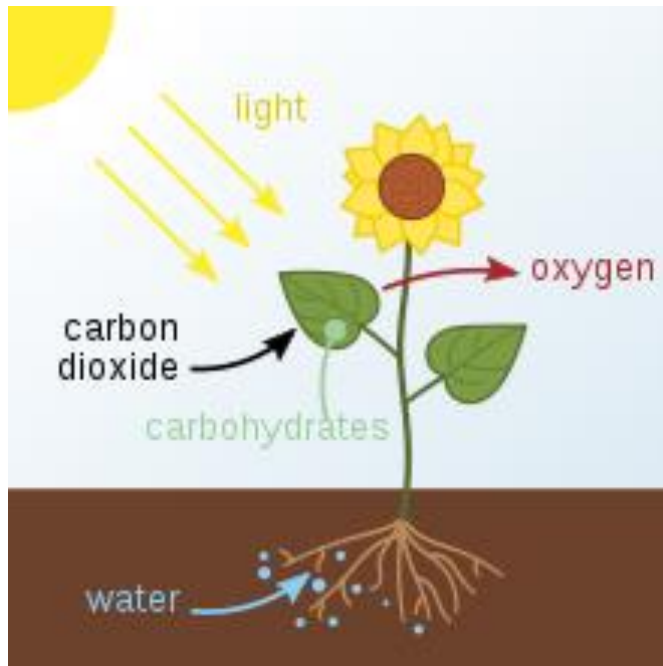
Seed dispersal is the movement, spread or transport of seeds away from the parent plant. Plants have limited mobility and rely upon a variety of dispersal types which include: wind, animals and water.

## The process of photosynthesis

Plants need food to respire, grow and reproduce. Unlike animals, plants are able to make their own food by the process of photosynthesis.

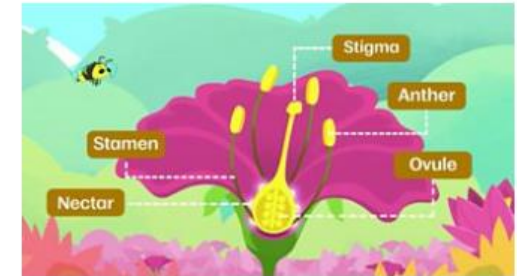
Photosynthesis takes place in the part of the plant cell containing **chloroplasts**, these are small structures that contain **chlorophyll**.

For photosynthesis to take place, plants need to take in **carbon dioxide** (from the air), **water** (from the ground) and **light** (usually from the sun).



## 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 new flower and travels to the ovary where it fertilises egg cells (ovules) to make seeds. This is 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.



## Seed dispersal

Plants disperse their seeds in lots of different ways. Some seeds are transported by the wind and are shaped to float, glide or spin through the air.

Plants growing near a river may use the flowing water to transport their seeds.

Some seed pods are designed to explode and throw the seeds a good distance from the parent plant.

Many plants also use animals to carry their seeds. This type of seed may have handy hooks which attach to an animal's fur. Alternatively, the plants might make tasty fruit to enclose the seeds, which attract animals to eat them.

## Parts of a Plant

