

**Seed Dispersal**

When a plant has developed a seed through fertilisation then it needs to be put into soil to develop and germinate. This cannot be too close to the existing plant as it will take resources from this plant. Therefore, seeds must be dispersed away from the parent plant.

There are 4 main ways of seed dispersal.

1. Animal dispersal – either animals eat seeds and they pass through their digestive system or they stick to the fur of animals and are passed to other locations this way.
2. Explosion – seed pods burst open and seeds are spread far from the plant
3. Water dispersal – seeds drop from the plant into running water and are spread through the current
4. Wind dispersal – seeds are spread through strong gusts of wind

**Germination**

A seed has three main parts:

1. Embryo: the young root and shoot that will become the adult plant
2. Food store: starch for the young plant to use until it is able to carry out photosynthesis (to make its own food)
3. Seed coat: a tough protective outer covering.

Contents of the ovule become the food source for when the plant starts to grow or germinate. The seeds will often lie dormant until the conditions around it are just right for germination. Factors such as temperature, concentration of oxygen in the air, and water will affect germination.

**Different types of pollination**

There are two different types of plants in terms of pollination.

**Insect pollinated plant** – insects land on the plant collecting pollen on their bodies and then transferring it to the next plant that it lands on.

These plants have bright petals and a sweet smell to attract insects. The stigma and anther are inside the flower ensuring the insect is able to get to the pollen. The stigma is sticky so that the pollen carried from the insects sticks to it. Pollen grains are larger, and can easily stick to insets, so fewer pollen grains need to be produced. The anthers are firm and rigid to allow the insects to brush against them. They often contain nectar, which is sweet and sugary to attract insects. Some bees use nectar to make honey.

**Wind pollinated plants** – strong gusts of wind blow pollen from one plant to another.

No petals as there is no need to attract insects. The anther hangs loosely out of the plant to make it easier for wind to blow it from the plant. The stigma hangs outside of the plant to make it easier to catch pollen on the wind. The stigma may be feathery or sticky to catch pollen blown by the wind. They produce large amounts of pollen to increase the changes of it reaching another plant. Their pollen has a low mass so can be blown far on the wind.

**Fertilisation**

The pollen moves down the style towards the ovule where it joins with the ovule to create a seed. This is known as fertilisation

**Pollination**

Pollen must pass from one plant to another. This is done in a variety of different ways however, the basic concept is that pollen from one plant makes its way to another plant. It then attaches to a sticky substances on the stigma.

**Key Vocabulary**

**Fertilisation**

The fusion of the pollen and egg

**Germination**

The growth of a seed

**Nectar**

Sugary liquid which attracts pollinating animals to a flower.

**Pollen**

The male sex cell in a plant

**Carpel**

The female part of a flower

**Stamen**

The male part of a flower

**Ovary**

Where the eggs are stored

**Anther**

Where pollen is stored

**Filament**

Long stalk that holds up the anther

**Stigma**

Sticky part of the plant where pollen from another plant will stick

**Style**

A tube which pollen travels down to reach the ovary

**Plant reproduction**

Flowers contain various structures which all work together to allow the plant to reproduce

**Ambitious Vocabulary**

Fertilisation Germination Pollination

**Y7 Plant Reproduction**

**Science**