



Plants and Pollinators

Learning Objectives:

- Understand the purpose of a flower
- Understand the structure of a flower

Key Topics: Science

Location: Indoors

Equipment: Paper and pens.

Key Words: Structure, Flower, Petals, Stigma, Stamen, Pollen, Nectar, Pollination.

Background:

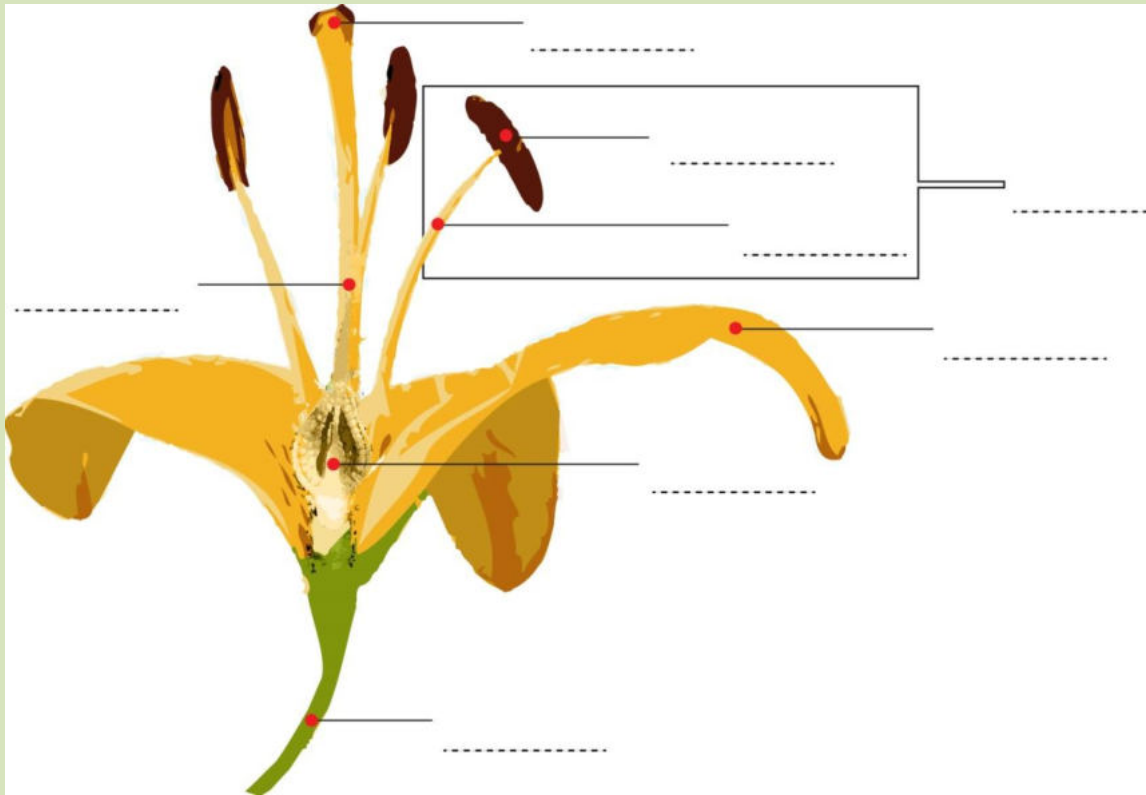
As human beings, we are born as a baby, grow through childhood to become an adult. We have our own families, before getting old and eventually dying. Through this process, our genes, the instructions on how we work, travel from one generation to the next.

In the plant kingdom, a seed grows into a plant, flowers and then releases its instruction in the form of pollen. Once the pollen arrives on the new flower, by the process of pollination, it combines with the ovule inside the flower to form a seed which will eventually grow into a new plant.

Some plants will produce things that we like to eat such as fruit and vegetables after they have been pollinated. This means that pollination is very important to us!

In this exercise, we are going to look more closely at flowers and how they are pollinated.

Activity 1: Flower Structure



Use the word bank below to label the flower parts above.

Petal

Anther

Flower stalk

Style

Ovary

Stigma

Stamen

Filament

As the bud ripens and the flower comes into bloom, the petals open out to reveal the **stamens** (made up of the **filament** and **anther**) and the **style** and **stigma**.

The **stamen** is the **male** part of the flower and the **style** and **stigma** are the **female** parts.

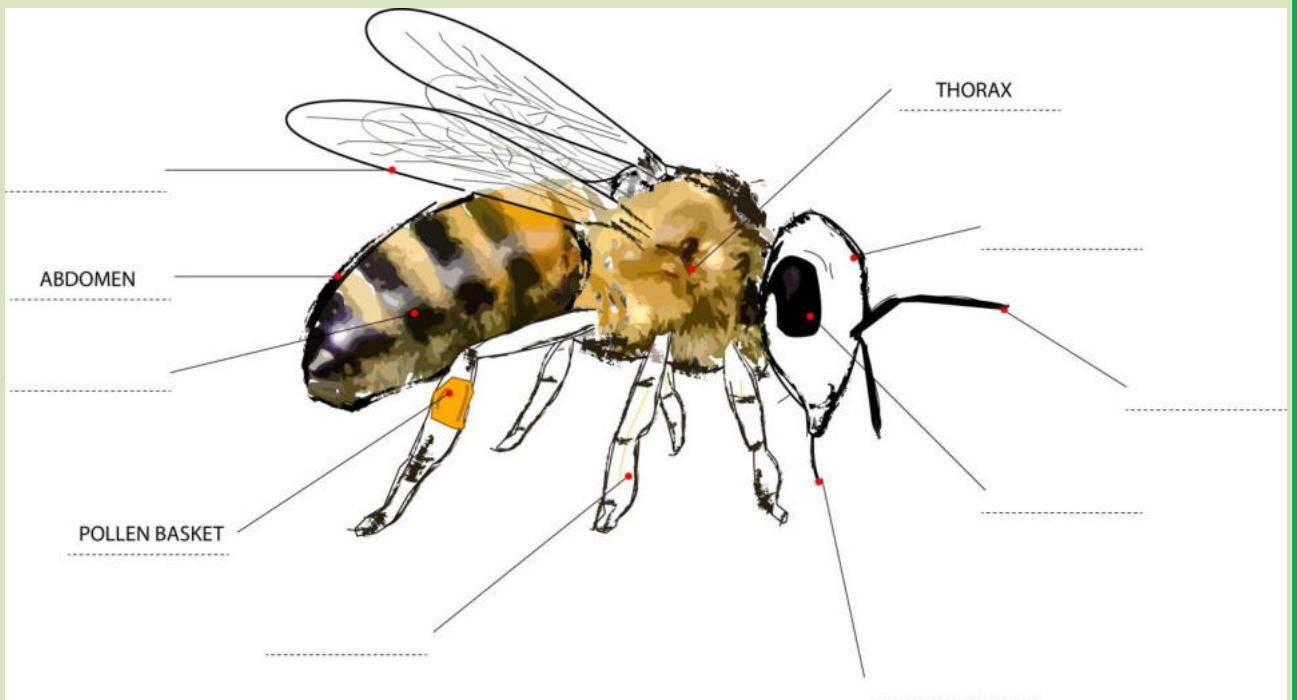
The **anther** ripens and releases **pollen**, which is carried to the **stigma** of another flower by **insects** (sometimes by the wind or other animals). Once on the stigma, the pollen grows down through the **style** into the **ovary** where it **fertilises** an ovule to form a **seed**.

Activity 2: Insect pollination

Bee anatomy

The transfer of **pollen** from one flower to another is called **pollination** and this process is often completed by insects known as **pollinators**.

When a bee visits a flower to collect pollen and nectar it rubs against the **anthers** and **pollen** sticks to its **fur**. They also collect pollen in their **pollen baskets** which are usually on their back legs. When they visit the next flower, the pollen from its fur brush off onto the stigma and this will then fertilise the ovule in the ovary.



Use the word bank below to fill in the missing body part labels of the bee

Head

Eye

Tongue

Fur

Leg

Antennae

Buzz Pollination is a technique used by some bees to release pollen from the anthers of a flower.

Bees will grab onto the flower and move their flight muscles very fast, this causes the flower and anthers to vibrate releasing the pollen.

Buzz pollination is essential for the pollination of certain plants such as **tomatoes**.



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Tree Bumblebee
(*Bombus hypnorum*)

Activity 3: Your Favourite Pollinator

Using your class computer, find out about pollinators.

What sort of insects are pollinators?

How do these insects carry pollen?

What is your favourite pollinator?

Your class may like to draw pictures of your favourites to make a **Pollinator Plaque**.

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