



# Pollination

In order to produce a new plant many flowering plants need to be pollinated.

This means that pollen, produced by the male part of the plant needs to reach the stigma.

Many plants cannot be pollinated by their own pollen.

The pollen must land on another plant of the same species (type).

This is called cross pollination.



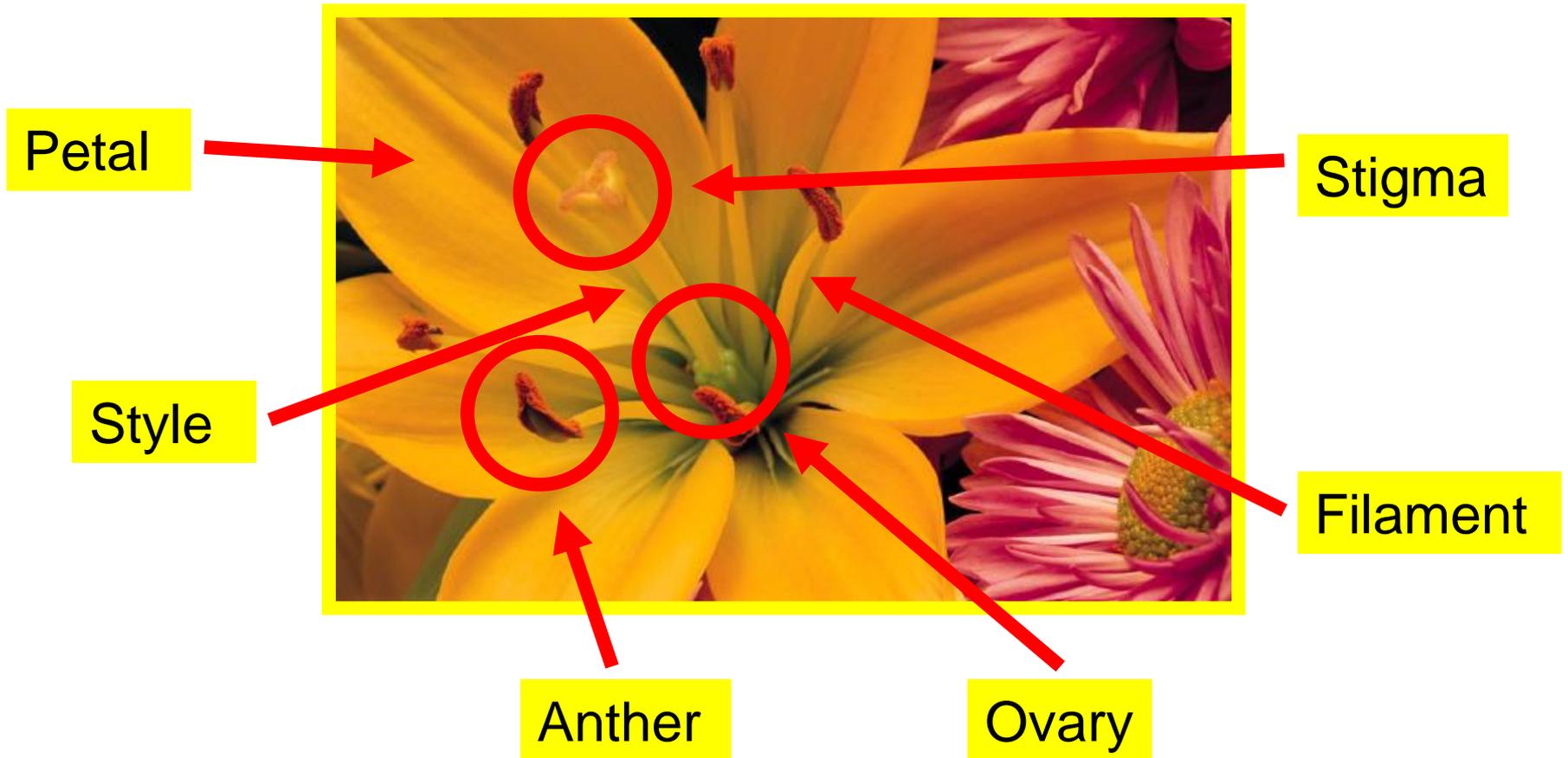
# Parts of a flower

Flowers are vital to the reproduction of flowering plants.

Flowers are made up of several different parts.



# Parts of a flower



# Petal

The petal attracts insects (pollinators) to visit the flower.

The colours that we see in flower petals are very different to those seen by insects with their specialised eyes.



# Stigma

Together with the **Style** and **Ovary** the **Stigma** makes the female parts of the plant.

The Stigma receives the pollen from visiting insects.



# Style

The Style leads down to the **Ovary**.

The **Style** along with the **Stigma** and the **Ovary** make up the female parts of the flower.

The female parts of a flower are called the **Carpel** or **Pistil**.



# Filament

The Filament is one of the two male parts of the flower.

The **Anther** and **Filament** together are known as the **Stamen**.



# Anther

Together with the filament the anther makes the pollen.

The shape and size of the Anther and Filament depend on the type of insect that the flower attracts to pollinate it.



# Ovary

The ovary is one part of the **Carpel** or **Pistil** which are the female parts of the flower.

The female parts make the seeds.





# Insect Pollination

Insects pollinate many flowering plants.

The flower attracts the insect by using bright colours and also scents.

The insect arrives at a flower to collect the nectar which is a sweet liquid.

While the insect is collecting the nectar the male parts of the flower brush it with pollen.

The insect then travels to another flower where the pollen brushes off onto the female parts of that flower.

If the pollen is from the same type of flower then it pollinates the visited flower.



The pollen from the first flower sticks to the sticky **Stigma**.

Part of the pollen called the Male Cell travels down the Style.

The Male Cell then enters the Ovary.

Within the Ovary the Male Cell joins with the Ovule.

The plant has then been Fertilised.

After Fertilisation the seeds start to grow.

The Ovary of the flower becomes the fruit containing the seeds.

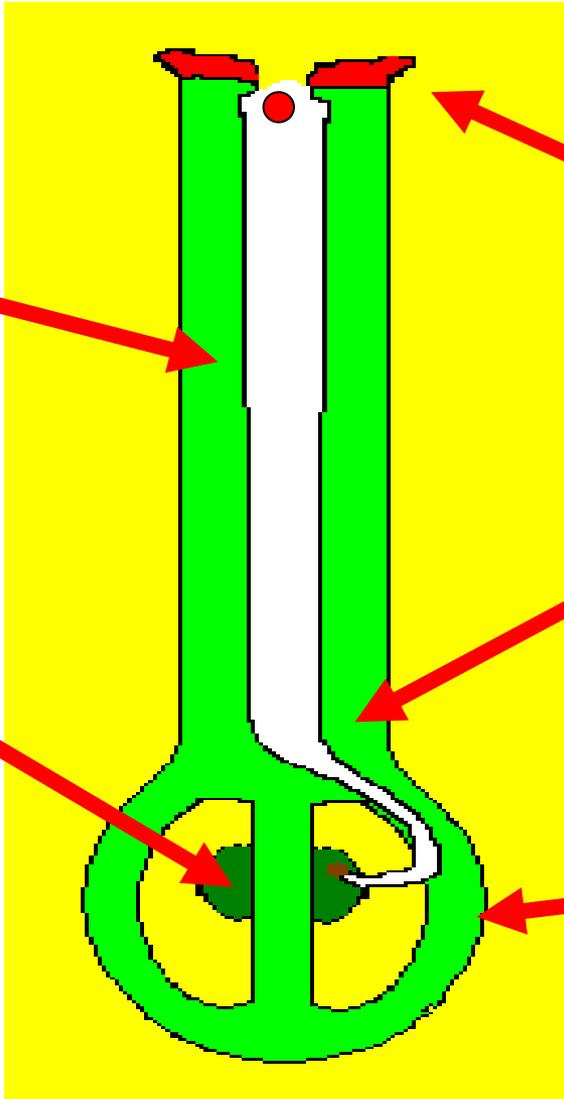
The **Male Cell** travels down the tube

The **Male Cell** fertilises the ovule

**Stigma**  
Pollen grains land here

**Style**

**Ovary**



Below are the stages of pollination. Your task is to put them into the correct order. If you can, print these off, cut them out and stick them into your Distance Learning book in the correct order. If you are unable to print these off, the write them out in the correct order in your Distance Learning book. If you are unsure of anything, then please contact your teacher – they will be more than happy to help.

The tiny piece of pollen joins onto an ovule in the ovary.  
The plant has now been fertilised.

When the insect gets hungry again, it gets attracted to another  
flower's bright colours and fragrant scent.

As the insect is gathering the nectar it rubs against the anthers  
which rub pollen onto the insect.

The ovary of the flower turns into seeds which will then be  
dispersed so that new plants will be able to grow somewhere else.

Part of this pollen travels down the style and then into the ovary.

The insect arrives on the flower to collect nectar.  
This is a sweet liquid which makes perfect insect food.

The flower petal's bright colours and fragrant scents attract an insect.

As the insect is gathering the nectar it rubs against the  
anthers which rub pollen onto the insect.

As the insect feeds on the nectar in this new flower, the pollen stuck to the insect from the  
first flower rubs off onto the female parts of the second flower (the stigma).

Complete the Pollination  
sorting activity. It can be  
found on the school  
website. The file is called  
'Pollination Sorting Activity'.

# Bug Hotels

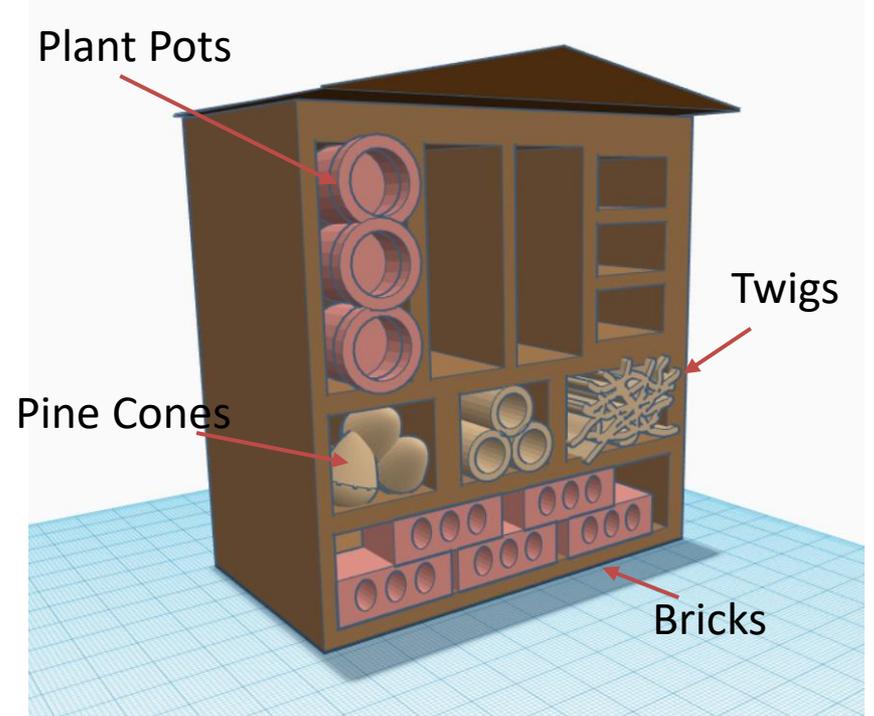
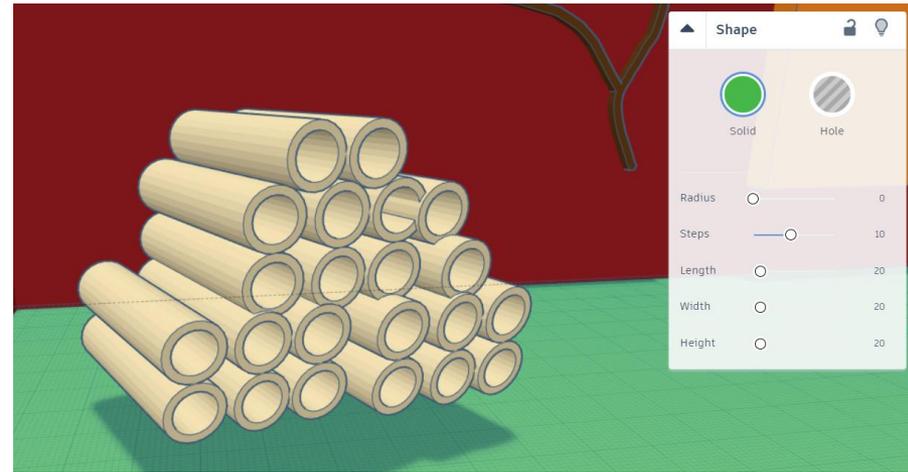


Bug hotels are typically made from naturally occurring materials such as wood and pine cones. Some also make use of recycled materials such as bricks and plant pots. They can vary in size and provide spaces of different sizes and shapes due to how the materials used are organised.

# Bug Hotels

Your design can be small and just use one type of material to provide the nooks and crannies for pollinators to live in or it could be large and include several sections with different types of materials.

Whatever shape and size you go for, your hotel will need a roof to keep the materials and insects within sheltered from the rain.



# Design a Bug Hotel for Pollinators

As we have seen in our Global Scholars Units, pollinators play an important part in supporting our biodiversity and help combat the issue of climate change.

With the numbers of pollinators decreasing, we need to set this right by providing environments that they can thrive in. Using your Tinkercad log ins, design a home/hotel for pollinators that will help boost the number of pollinators.

To log in you'll need you class code and nickname. The codes are below. Your nicknames have been changed to your first and last name without any spaces.

## Class Codes

5C – TGXXA1WS3PAX

5M – BZFLYYCGEYTE

5P – GGP2EEXTJ5GW