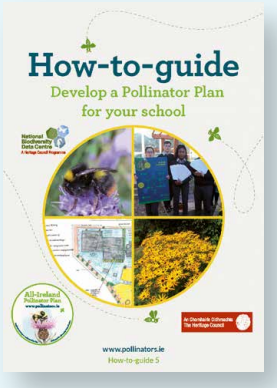
01

Lesson Plan

What is Pollination?

Suitable for Junior Infants to 6th Class

Use our School Resources at www.pollinators.ie/schools including the Junior Pollinator Plan (also available in Irish) and the 'How-to-guide: Develop a Pollinator Plan for your School'



Objectives

In this lesson, students will:

- ✓ Learn what 'pollination' means
- ✓ Learn that flowers are adapted for different types of pollination. Some are pollinated by wind, water, and many are pollinated by animals, especially insects.
- ✓ Learn that many plants depend on animals to reproduce (via pollination) and many pollinators depend on plants for food.

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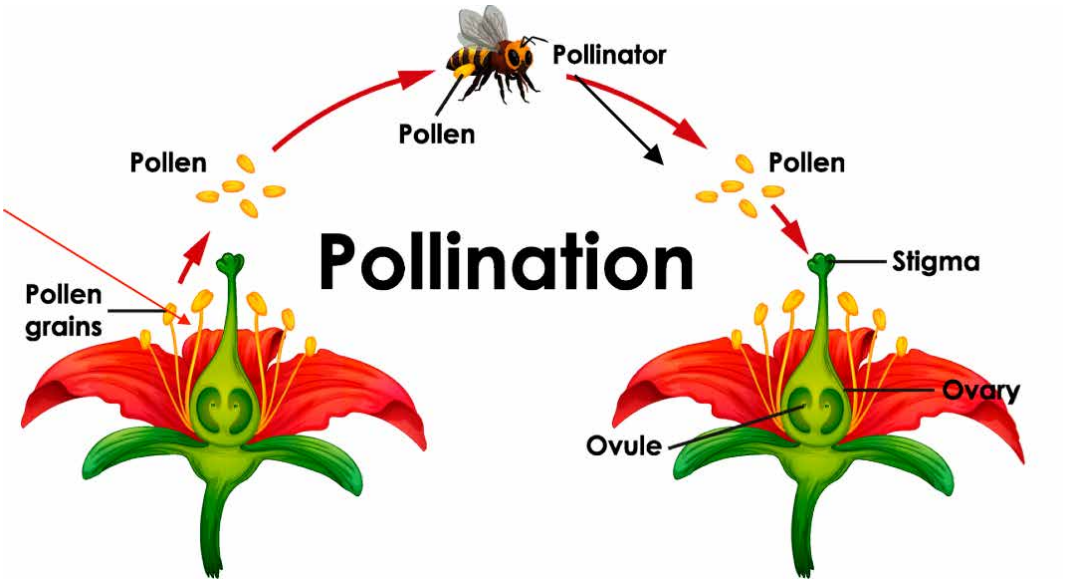
Cross-Pollination

1 Pollen is transferred onto the body of the bee from the stamen of the first flower. (The pollen brushes onto the bee's body while it collects pollen to bring back to its nest, and drinks nectar from deep inside the base of the flower)

2 When the bee visits the second flower (to collect more pollen and to drink nectar), pollen rubs off its body onto the stigma.

3 The pollen from the first flower moves down the style to join with the ovules in the ovary where it will become a seed for a new plant.



Background:

Pollen is a fine powder that is made inside flowers and helps them to reproduce.

Pollination happens when pollen is moved from one flower to another and allows the plant to create seed, which is often wrapped in yummy fruit.

When a bee lands on a flower, it uses its long tube-shaped tongue (called a proboscis) like a straw to drink the sweet nectar inside the flower.

Bees also collect pollen to bring back to the nest to feed to the baby bees.

While the bee is busy getting a drink, and collecting pollen, tiny grains of pollen also get stuck to the bee's body.

These grains of pollen come from the male part of the flower, the stamen. When a bee flies to a different flower to get more nectar, some of the pollen grains will fall off the bee and onto the new flower. If they land on the pistil of the flower (the female section of the flower), then the flower gets pollinated and will be able to create a fruit and seed.

The plant provides nectar for the bees, and the bees help the plant to reproduce!

Birds, butterflies, moths, bats, and flies can also pollinate flowers. Some flowers can also be pollinated by the wind (green flowers are usually wind-pollinated).

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Make some crafty Bees

You can use paper/cardboard or plasticine to make your bees.

Why not create some bees and butterflies and hide them around your school yard and have an Insect Treasure Hunt!

Make a Squidgy Balloon Bee

Make a Squidgy Balloon Bee

You will need:

- ✓ Yellow balloons
- ✓ Black markers
- ✓ Flour
- ✓ Funnel or you could use a plastic bottle to make your own funnel, by cutting it in half

Instructions:

1. Take a yellow ballon and blow it up to the size of the bee you want to make. This helps to stretch the balloon so that it will be easier to fill with flour.
2. Insert your funnel and slowly fill with flour. When you're happy with the size, tie a knot in the balloon opening.
3. Use a black marker to draw stripes and a face on your bee.
4. If you wish, you can glue on pipe cleaners or card, shaped as wings.

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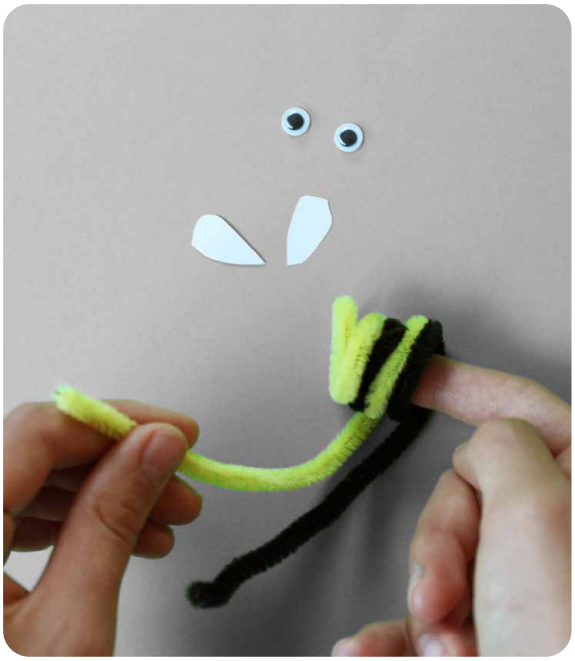
Make a Pipe Cleaner Bee

You will need:

- ✓ Black and yellow pipe cleaners
- ✓ Paper/card or more pipe cleaners for wings
- ✓ Craft Glue
- ✓ Eyes



Instructions:

1. Take one black and one yellow pipe cleaner and twist around your finger
2. Twist to make the bee's body shape and then tuck in the ends.
3. Cut wings and glue onto bee's back. Bees have four wings - two larger and two smaller, but it's fine to just add two.
4. You can also add eyes if you have them.

You might even like to create a pencil-top bumblebee!

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Dissect a Flower

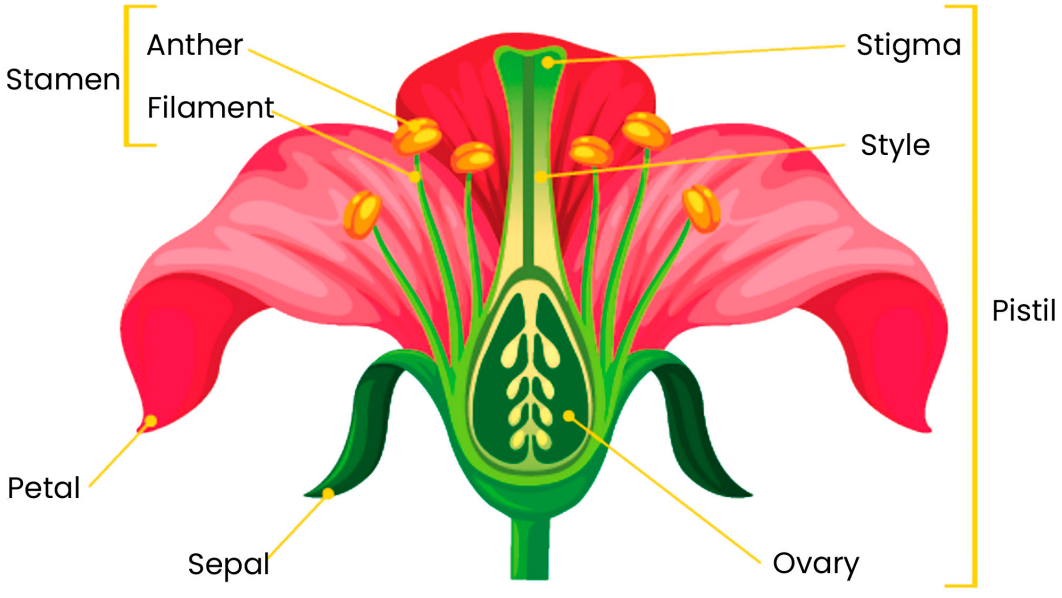
4th Class to 6th Class

Can you identify the different parts of a flower?

Try experimenting with different types of flowers from flower shops or your garden.

Using scissors or a knife (with help from an adult) and tweezers, carefully dissect the flower head.

See if you can identify different parts like on this diagram.



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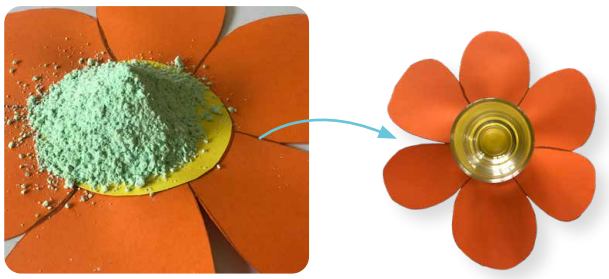
Insect Pollination Game

You will need:

- Coloured cardboard or paper and scissors to create 4 strawberry flowers.
- Two margarine tubs/bowls.
- Powder paint. This can be any colour, but for example let's say pink and green. You can make your own powder paint by using corn flour, food colouring and water - there are lots of videos online on how to do this. You can also use a grater to grate coloured chalk to create different coloured chalk dust.
- One cotton bud for each team.
- Two collecting dishes for the centres of the flowers that are to be 'pollinated'.

Instructions:

1. On your paper or cardboard draw the outline of 4 flowers and then cut these out. If you would like to make more detailed flowers, you can also cut out centres and leaves and glue these together.
2. Divide the class into teams and arrange them in lines at one end of the room/school garden. Each team is given one paper flower they will aim to pollinate and a collecting dish to collect the pollen.
3. At the other end of the room/garden place two flowers - one with a tub of pink powder on its centre, and one with green powder at its centre on the ground. The tubs represent the flower's stamens producing the pollen.
4. One team must collect pollen from the pink flower tub and the other team uses the green pollen tub. The first member of each team runs to the pink flower tub carrying their cotton bud and collects some pink 'pollen'. The team member returns to their team and puts the pollen in the collecting dish. The next child takes a turn with the cotton bud. The rest of the team each take turns until they have all completed the activity.



5. Both teams have pollinated their flowers. The winning team is the team who has collected the most pollen in their collecting dish.

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