

# Living things and their habitats

## *Pollination in flowering plants*

*Year 5*  
*Age 9-10*



### **For parents**

*Thank you for supporting your child's learning in science.*

### ***Before the session:***

- Please read slide 2 so you know what your child is learning and what you need to get ready.
- There are two suggested practical activities.

### ***During the session:***

- Share the learning intentions on slide 2.
- Support your child with the main activities on slides 3 to 7, as needed.
- Slide 8 has an extra optional activity.
- Slide 9 has a glossary of key terms.

### ***Reviewing with your child:***

- Slides 10 and 11 give an idea of what your child may produce.



# Living things and their habitats

## Pollination in flowering plants

### Key Learning

- **Sexual plant reproduction** occurs through **pollination**, usually involving wind or insects.
- There are male and female parts of a flower. The **pollen** is transferred from the male **stamen** to the female **stigma** during pollination.

### I can...

- Explain how flowering plants are pollinated in different ways.
- Identify the different parts of a flower which are involved in pollination.

### Activities (pages 3-7): 40 - 50 mins

- Use paper and a pencil.
- You may wish to print page 6.



There are two alternative practical activities.

- For a flower survey, you will need access to an outside area with some flowers.
- For a flower dissection you will need a flower with clearly visible male and female parts such as a tulip, lily or daffodil.

*If you unable to do a practical activity, there is an alternative suggestion on page 8.*



# Explore, review, think, talk....

*What do you already know about pollination?*  
(5 minutes)

- Talk or think about what you already know about **pollen**.

Watch these two clips.

<https://www.bbc.co.uk/programmes/p00lx94l>



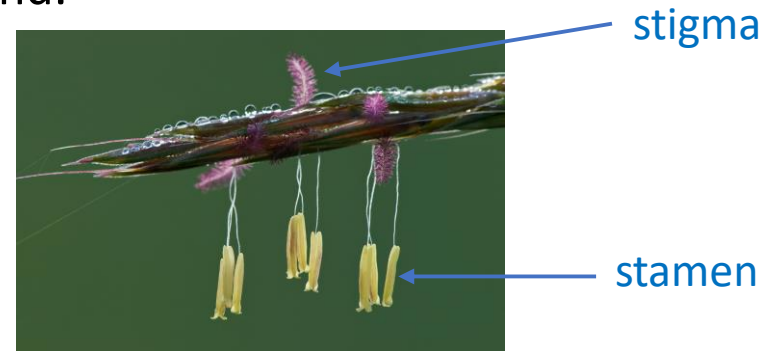
- Which type of tree has catkins?
- What happens to the pollen?

<https://www.bbc.co.uk/programmes/p006997b>



- Why do some people get hay fever?

Many flowering trees and grasses are pollinated by the wind.



- Tiny **pollen grains** on male *stamen* are blown away by the wind.
- Some of the pollen will land on the female part of another flower, called the *stigma*.
- This is called **wind pollination**.



# Comparing wind and insect pollination

Compare the differences between flowers pollinated by the wind and by insects  
(5-10 minutes)

Many flowers are pollinated by insects.

- Watch this clip. Talk or think about why a variety of insects act as pollinators.  
<https://www.bbc.co.uk/bitesize/clips/zmrb4wx>



- Now watch this clip. Jot down any differences you notice between insect pollination and the wind pollination you saw earlier.  
<https://www.bbc.co.uk/bitesize/clips/zfx76sg>

You may have noticed...

Many ***insect-pollinated*** flowers:



- have brightly coloured petals that attract insects.
- produce nectar that insects feed on.
- have a central **stigma** (sticky tip of the female part of the flower) surrounded by several **stamens** (the male part of the flower).



Many ***wind-pollinated*** flowers of grasses or trees:

- have dull colours and do not produce nectar.
- have feathery stigmas and hanging stamens.





# Investigate insect-pollinated flowers

*Conduct a survey of flowers in a local environment  
(page 5-6: 20-30 minutes)*

## Option 1: Conduct a survey of flowers

- You can find many flowering plants in gardens during the spring and summer months.
- If you are able to go outside, conduct a survey of plants with flowers.
- Look carefully at each flower you find. What colour and shape are the petals? Can you see both a stigma and stamen?
- You may like to compare two flowers.



- *Ask an adult to help you plan and conduct the survey.*
- *Follow government guidelines on social distancing and staying safe.*
- *Look carefully but avoid touching the flowers and insects you find.*
- *You may like to take photographs.*

*The key on page 6 shows some of the flowers you may find. The 'Seek' app and many websites can also help you identify flowers:*

<https://www.wwf.org.uk/discover-nature-seek-app>

<https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/plants/wild-flowers/>

<https://www.countrylife.co.uk/gardens/a-simple-guide-to-the-wildflowers-of-britain-71271>



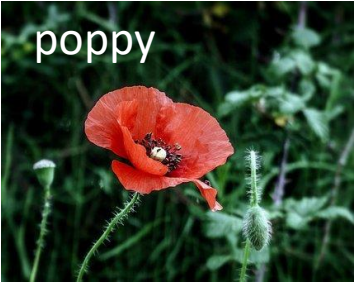
foxglove



primrose



buttercup



poppy



daisy



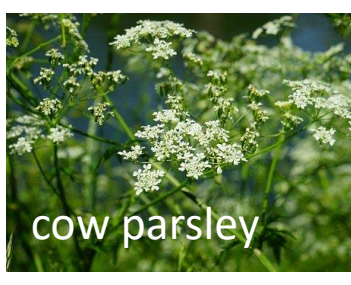
harebell



bluebell



cowslip



cow parsley



honeysuckle



forget me not



dandelion

I can conduct a survey of plants with flowers and compare different flowers.



# Investigate insect-pollinated flowers

*Dissect a single flower*  
(15 minutes)

## Option 2: Dissect a single flower

- If you are unable to visit a garden or area with flowers, you may be able to buy a flower.
- There are many flowers like lilies, tulips and daffodils which can be looked at carefully to observe the male and female parts of the flower.



- Start by looking at the whole flower closely to try and identify the petals, the stigma (sticky tip of female part) and the stamen (male part).
- Take the flower apart gently, starting from the outside and working inwards.
- Lay out the different parts and label them.
- You may like to take a photograph.







# Find out more...

*Find out how some flowers attract their pollinators in unusual ways*

Some plants have developed unusual ways of attracting insects.

Watch these two clips from 'Life of Plants'

1. Wild orchids and male wasps

<https://www.bbc.co.uk/programmes/p00lx7qx>

2. Dead horse arums and blow flies

<https://www.bbc.co.uk/programmes/p00lx782>



*Choose one of the clips to watch again.*

- *Take notes about the way pollination occurs.*
- *Write a short report or design a poster to describe how the **wild orchid** or the **dead horse arum** 'deceives' the insects to make sure their flowers are pollinated.*





## Glossary of terms

- **Sexual plant reproduction** is when a plant reproduces by forming seeds or spores.
- **Pollination** is when pollen is carried from the male part of a flower to the female part of another flower, usually by insects or the wind.
- The **stamen** is the male part of the flower. It carries the pollen.
- The **stigma** is the sticky tip of the female part of the flower. Pollen grains land on and stick to the stigma during pollination.

**Possible learning outcome:** I can conduct a survey of flowers and compare different flowers.

“I found seven different plants with flowers: primrose, forget-me-not, bluebell, daisy, cowslip, cow parsley and a plant with small white flowers called greater stitchwort (I found the name using Seek app).”

Comparing the primrose and the forget-me-not.



*“Some of the primroses had pink and dark yellow petals, others had light and dark yellow petals.”*

*“The primrose and forget-me-not had the same shape of flower with a tiny hole in the centre of the petals. It was hard to see the stigma and stamens inside the hole.”*



*“The forget-me-not had tiny blue petals with yellow at the centre.”*

Comparing the greater stitchwort and the bluebell.



*“The greater stitchwort had open white petals. I could see yellow stamen and a tiny stigma in the centre of the flower.”*

*“The greater stitchwort and the bluebell had different shaped flowers but they both had visible stigmas and stamens.”*



*“The bluebell had cone-shaped blue petals. I could see about seven long stamens and one stigma in the centre of the flower.”*

**Possible learning outcome:** I can identify the different parts of a flower which are involved in pollination.

