
BBC
Teach
KS1 Topic Resources
Plants

# Plants

## Introduction

**1: What is a plant?**
**2: How do plants grow?**
**3: How do plants make new plants?**

In the three videos in this collection Naomi Wilkinson and her young helpers find out about plants - what a plant is, what plants need in order to grow and how plants reproduce.

Each of the films in this unit combines live action and animation to explore this KS1 Science topic in a clear, age-appropriate manner. The live action filming includes children exploring their own environment to seek out and identify plants; the animations include labelled diagrams demonstrating the parts of plants and the process of pollination and seed dispersal.

Key vocabulary is introduced and explained throughout - including roots, stems, leaves, flower, pollen, stigma, stamen, pollination, cross-pollination and seed dispersal.

## Curriculum links

The topic *Plants* is referenced in the KS1 Science programmes of study at both Year 1 and Year 2.

At Year 1 pupils should be taught to:

- identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
- identify and describe the basic structure of a variety of common flowering plants, including trees

At Year 2 pupils should be taught to:

- observe and describe how seeds and bulbs grow into mature plants
- find out and describe how plants need water, light and a suitable temperature to grow and stay healthy

Each film ends with a short demonstration of how the topic can be used to explore other areas of the curriculum, including Music and Design and Technology.

The films in this series also target science objectives at 1st Level in Scotland as well as the Science and Technology Area of Learning and Experience within the Curriculum for Wales.

# 1: What is a plant?

*What is a plant?* gives an introduction to plants: what they are and where they grow. The video explores the variety of types of plant that exist, the complex make-up of plants and the conditions they need to grow. It goes on to examine the role of flowers in plant reproduction and how plants can be found in many different locations, such as rural areas, gardens and urban spaces.

In the *Nature Explorers* section a child finds out what plants are growing on the streets near her home.

**Points for discussion:**

- What are living things?
- What is a plant?
- How is a plant different to an animal?
- Where can plants be found growing?
- What colours are the plants you have seen near where you live?
- What are the three main parts of a plant?
- What conditions do plants need to grow well?

**Suggested activities:**

Pupils can explore the variety of plant life within their local area and what types of plants can they find. What different coloured flowers, leaf shapes, sizes, etc, can they find? Use a variety of methods – eg graphs – to record results.

Use the image of three plants to label the stem, the leaves and the roots. See ‘Resources’ below.

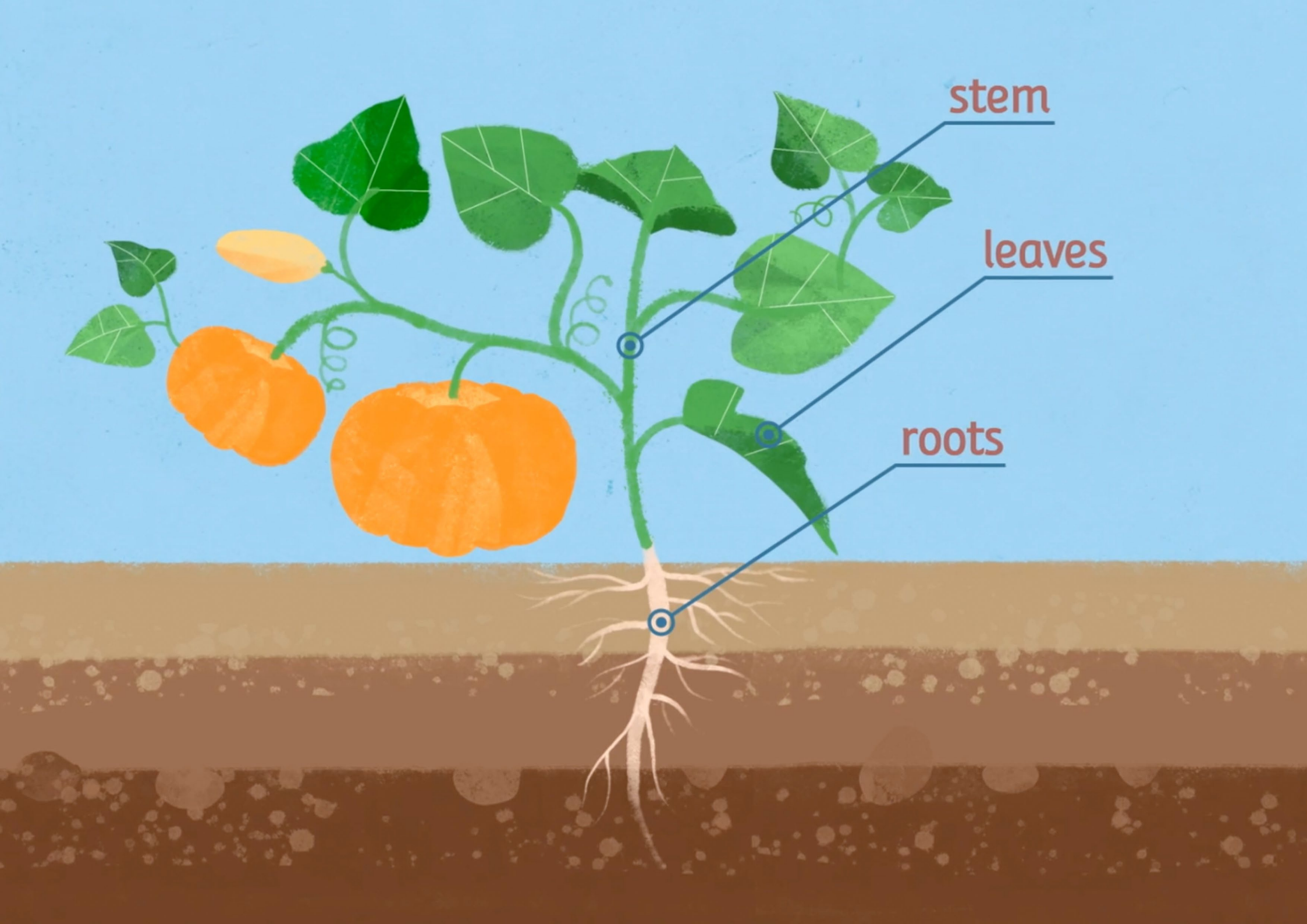
After sharing the video, teachers can explore types of plants, how they grow and the conditions they need to grow well. You could share the image below showing sunlight, water and carbon dioxide. See ‘Resources’.

Pupils could plant a variety of seeds in different locations to investigate how conditions such as water, light, soil and temperature impact seed germination.

To take this learning further, pupils could care for a growing plant - eg a geranium - and investigate how conditions such as water, light, soil and temperature impact plant growth. Are there tell-tale signs that one type of condition is not suitable for a plant to grow?

Pupils could investigate water absorption into plants. Using food colouring, can pupils predict where water will be visible in a carnation flower, celery stick, etc? Pupils can move onto explore in more detail why water travels through a plant.

Pupils could explore the texture, shape and size of autumnal leaves by carrying out leaf rubbings using leaves found within their local area.


stem
leaves
roots

Label the parts of each plant


$CO_2$

# 2: How do plants grow?

This video explores the life cycle of plants - from seed, to baby plant, to mature plant, and back to seed again. It examines what conditions are needed for a seed to successfully germinate and what germination looks like. It also covers those plants that develop bulbs to grow back year after year and the conditions that are needed for plants to grow successfully - such as the right temperature, light conditions and air.

At the end two children continue their exploration through music, creating sounds to represent how different seeds or plants grow.

**Points for discussion:**

- What is a plant?
- What does germination mean?
- What conditions are needed for a seed to germinate?
- How important are roots? What is the job of roots?
- What is the job of the leaves on a plant?
- Can you name places a plant would find growing difficult and explain why?

**Suggested activities:**

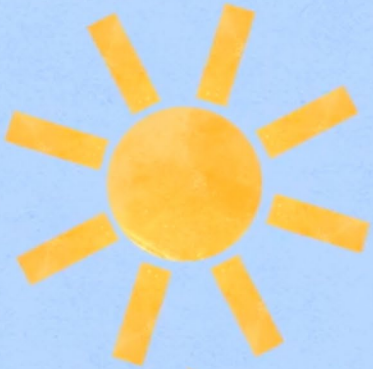
Pupils can explore music, dance and drama to match the varying phases of plant growth. Can they create a sound-scape as a class or group to represent a plant growing?

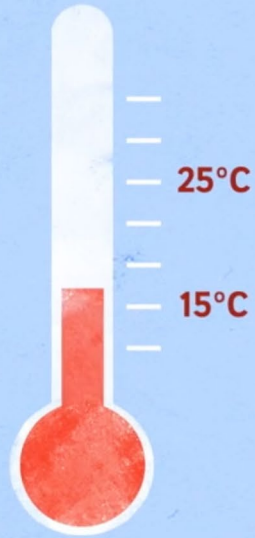
Following the video, pupils can explore how seeds germinate in different locations. What factors impact germination and what factors impact plant growth? What observations can the pupils make of seeds and plants as they grow in different conditions? Use a variety of methods - eg graphs - to record your results.

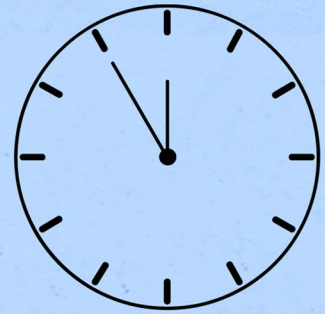
When undertaking a walk in their local area, can pupils find plants at different stages of their life cycle? Is there a place that younger plants appear to grow better than other places? Why do the pupils think this is?

Undertake a ‘scavenger hunt’ in the autumn. What seeds can pupils find? When back in school, how do these grow and develop? (Ensure appropriate clothing - including gloves - is worn throughout and be mindful of any allergies that may exist in the class).

# What is needed for the seed to grow?






Seeds come in many different
shapes and sizes

# 3: How do plants make new plants?

The video explores how plants reproduce and the role of flowers in particular in the reproduction process. The structure of a flower is examined and the role of the various parts of the flower in making new plants. Pupils are introduced to key vocabulary such as stamen, stigma, pollen and pollination.

Varying types of pollination are explored including the role of insects in pollination. The methods of seed dispersal are covered, such as by wind, rolling and animal dispersal.

At the end two children continue the exploration by making pumpkin lanterns. They keep seeds to dry out and replant to grow new plants the following year.

**Points for discussion:**

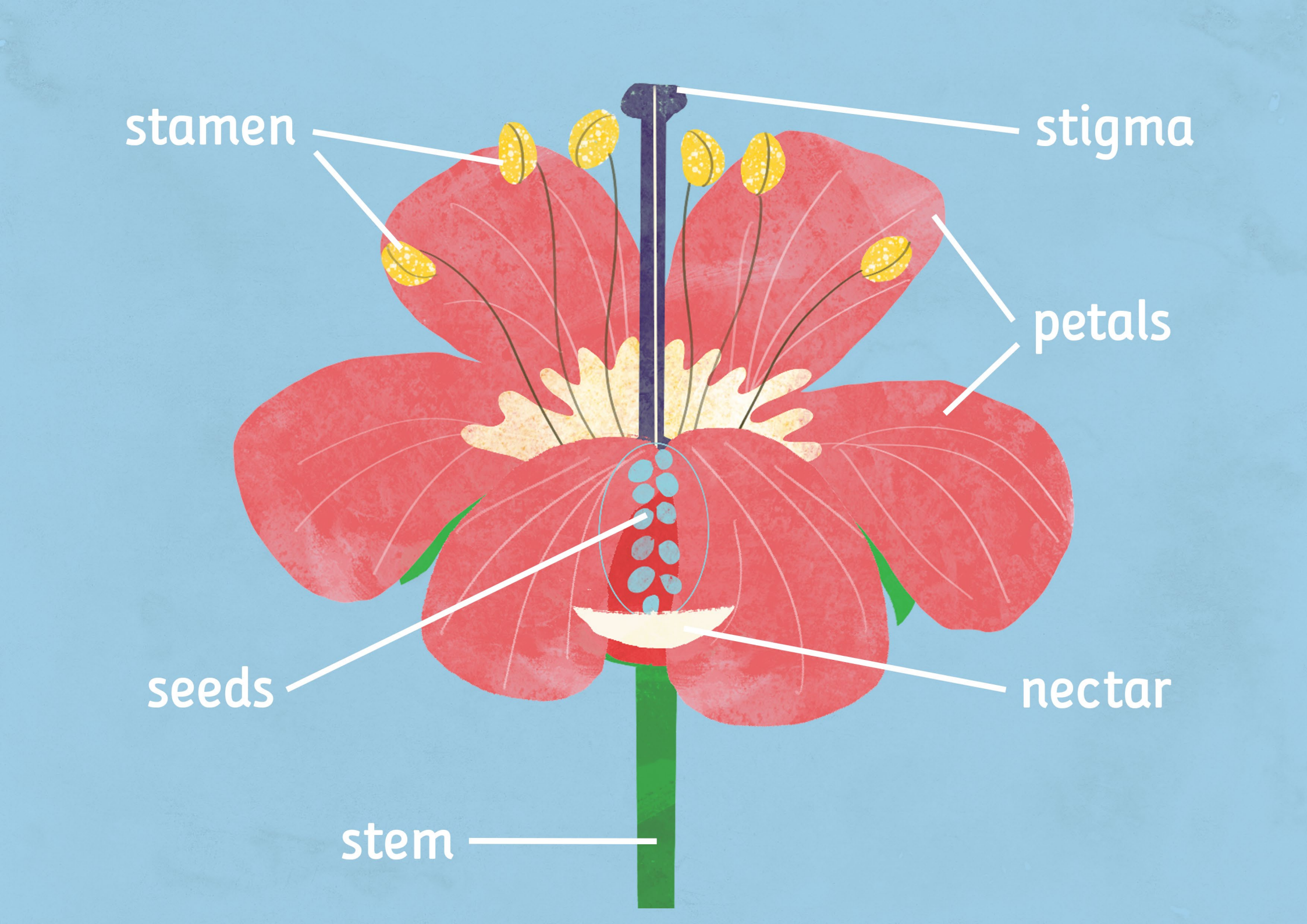
- What is pollination?
- Can you remember the names of the parts of the flower?
- What job do animals have in helping plants to grow?
- How do bees help some plants to create new seeds and then new plants?
- Can you remember the different ways that seeds can move from a parent plant?

**Suggested activities:**

Pupils can create their own pumpkin lantern or collect seeds from another fruit - such as an apple - to plant in school. They could explore how long these take to dry out and then grow into new plants. Pupils could record the growth on a regular basis to explore how quickly seeds grow into adult plants.

Use illustrations to label the various parts of a flower and discuss / recall what function they serve in helping new seeds to grow and develop. See ‘Resources’ below.

Examine a collection of seeds and discuss with pupils how they think the seeds would be dispersed. Ensure a variety - those that have adapted to stick to the fur of animals, those carried by the wind, those that might roll or be eaten by animals. You could begin with the image of seeds in ‘Resources’ below.


stamen
stigma
petals
seeds
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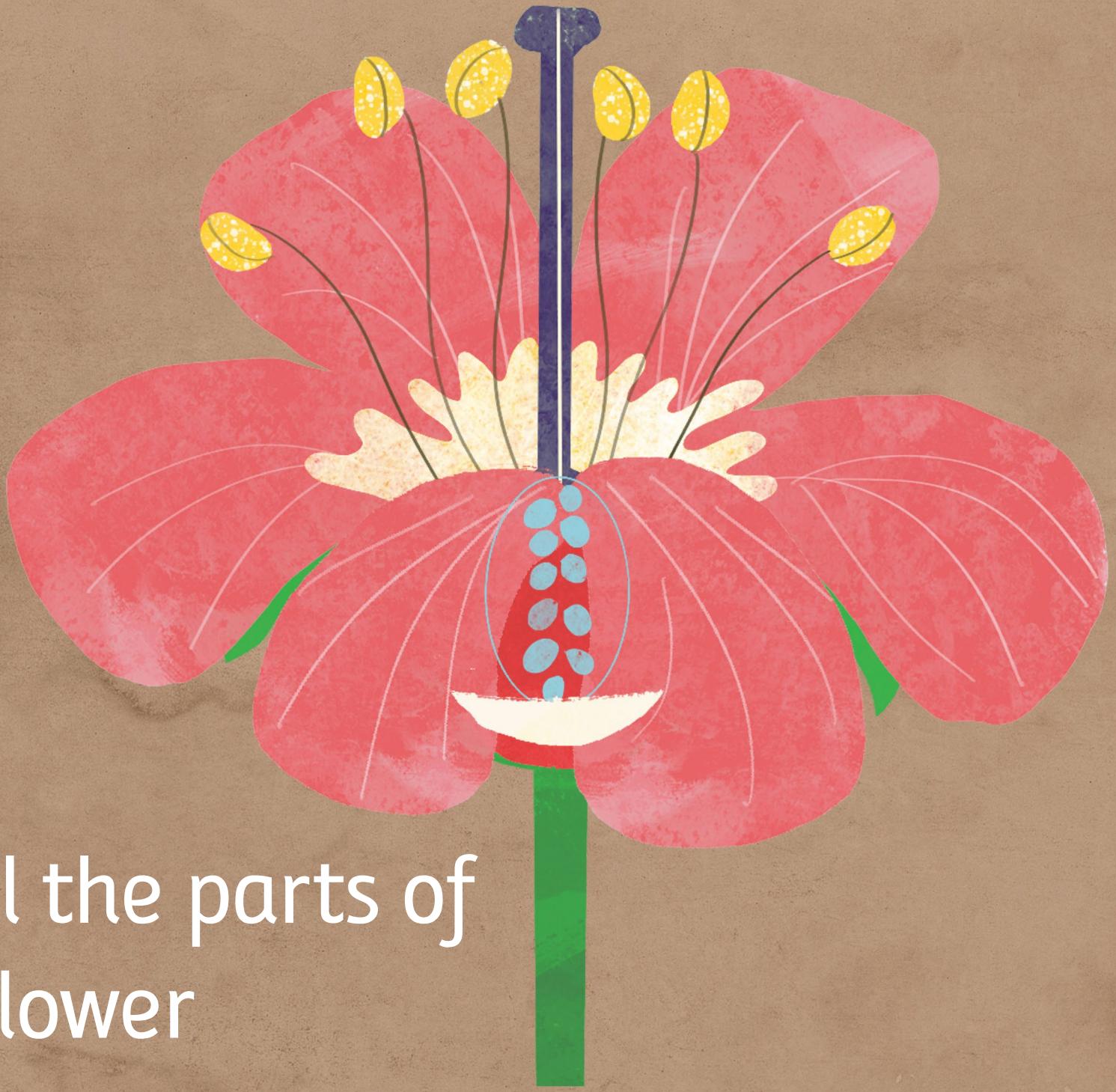
stem



Label the parts of the flower