



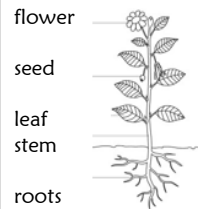
Year 3
Topic: Plants
Strand: Biology

What I should already know.

- Which things are living and which are not.
- The names of the parts of common flowering plants, including trees (including leaves, flowers, fruits, roots, bulbs, seeds, stem, trunks and branches).
- Seeds and bulbs grow into mature plants.
- Plants need water, light and a suitable temperature to grow and stay healthy.
- Plants and animals depend on each other to survive.
- Plants eventually die, they usually make seeds to reproduce and make more plants.
- Some plants die after producing seeds, others live for many generations.

What will I know by the end of the unit?

The functions of the different parts of flowering plants.



- The **petals** on a **flower** are usually bright – this is to attract bees and other insects so that they can collect **pollen** to make **seeds**.
- The seeds are then able to grow to make new plants, this is called germination.
- Leaves use carbon dioxide and sunlight to make food for the plant.
- The **stem** carries water and other **nutrients** from the roots to the rest of the **plant**. **Leaves** use this water to make food.
- The **stem** also helps the **plant** to stay upright so that the sunlight can reach it easier.
- The **roots** help to anchor the **plant** to the **soil**. They also **absorb** water and **nutrients** from the **soil** for the **stem** to carry to the rest of the **plant**.

What do different plants need to grow?

- air
 - water
 - sunlight
 - **nutrients** from the **soil**
 - room to grow
 - suitable **temperature**
- The amount of these may vary depending on the type of **plant**. For example cacti need less water than other **plants**.

How is the water transported within plants?

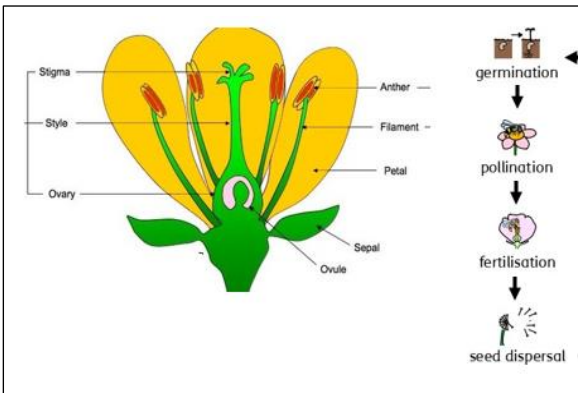
- Water is **transported** from the **soil** by the **roots**.
- It is then **transported** from the **roots** to the **stem** and then to the rest of the **plant**.

What will I know by the end of the unit?

How do **flowers** help the **life cycle** of **flowering plants**?

- The flower's job is to create new seeds so that new plants can grow.
- Pollination occurs when the anther is transferred to the stigma by bees and other insects.
- When this happens seeds are formed – this is called fertilisation.
- Seeds are then dispersed so that germination can happen again.

Diagram



Investigate!

- Compare the effect of different factors in **plant** growth (e.g. the amount of water, the amount of light and the amount of **fertiliser**). Discuss what would make this a fair test.
- Place white carnations in dyed water to observe how plants **transport** water.
- Discover how **seeds** are formed by observing **plant life cycles**.
- **Dissect fruits** to observe their structure and use this to explain how **seeds** are **dispersed**.
- **Dissect a flower** and identify each of the different parts that help with **fertilisation**.

Vocabulary

Absorb	Soak up or take in.
Anther	The part of a stamen that produces and releases the pollen .
Branches	Parts that grow out from the tree trunk and have leaves , flowers , or fruit growing on them.
Bulb	A root shaped like an onion that grows into a flower or plant .
Carbon dioxide	A gas produced by animals and people breathing out.
Climate Zone	Sections of the Earth that are divided according to the climate. There are three main climate zones; polar, temperate and tropical.
Deciduous	A tree that loses its leaves in the autumn every year.
Dispersed	Scattered, separated, or spread through a large area.
Dissect	To carefully cut something up in order to examine it Scientifically.
Evergreen	A tree or bush which has green leaves all the year round.
Fertilisation	In plants , where pollen meets the ovule to form a seed .
Fertiliser	A substance that is added to soil in order to make plants grow more successfully.
Flowering	Trees or plants which produce flowers .
Function	A useful thing that something does.
Germination	If a seed germinates or if it is germinated , it starts to grow.
Nutrients	Substances that help plants and animals to grow.
Ovule	A small egg.
Petal	Thin coloured or white parts which form part of the flower .
Plant	A living thing that grows in the earth and has a stem , leaves , and roots .
Pollen	A fine powder produced by flowers . It fertilises other flowers of the same species so that they produce seeds .
Pollination	To pollinate a plant or tree means to fertilise it with pollen . This is often done by insects.
Roots	The parts of a plant that grow under the ground.
Seed	The small, hard part from which a new plant grows.
Stem	The thin, upright part of a plant on which the flowers and leaves grow.
Stigma	The top of the centre part of a flower which takes in pollen .
Transported	Taking something from one place to another.
Trunk	The large main stem from which the branches grow.