Willerby Carr Lane Primary School - Science

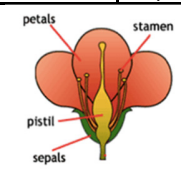
Topic: Plants	Year: Year 3	Strand: Biology

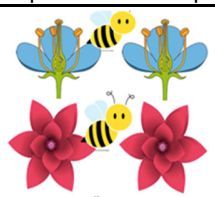
What should I already know?

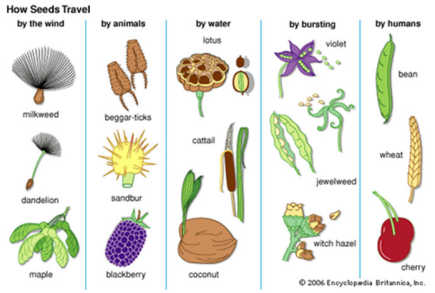
- What **Plants** need to grow.
- The names of some **common garden plants** (e.g. poppy, rose) and some **common wild plants** (e.g. daisy, dandelion, nettle).
- The difference between **Deciduous** and **Evergreen trees.**
- The parts of a **plant** may include: **petals, fruits, roots, bulbs, seeds, stem, trunk** and **branches**.
- The parts of plants we can eat (vegetables: leafy, root, stem, flowering; fruit; grains, cereals, nuts and seeds)

What will I know by the end of the unit?

How do varying conditions can affect the growth of a plant?	• **Plants** require: water, a sustainable temperature, nutrients from soil and light to grow and stay healthy • Plant growth will be affected by the conditions in which it is placed
How do plants reproduce?	• most plants need **pollen** or spores to make new plants • **pollination** is the process of moving pollen onto the pistil • pollinators, such as honey bees, move **pollen** from one flower to another • **fertilisation** is when pollen combines with the egg inside of the pistil to make a seed • seeds can be **dispersed** in various ways (by: wind, animals including humans, water, bursting)
What are the functions of the parts of flowering plants?	• **Roots** attach the plant and provide water and nourishment • The **stem/trunk** is the main body • Water is **transported** from the roots, through the tubes in the stem, to the tip of the plant • **Leaves** turn energy from the sun into food. • The **sepal** and **pistil** are the male and female parts of the plant used in reproduction







Vocabulary

bulb	a root shaped like an onion that grows into a **flower** or **plant**
fertilisation	when pollen combines with the egg inside of the pistil to make a seed
flower	the part of a **plant** which is often brightly coloured and grows at the end of a **stem**
germination	Germination is when a plant begins to sprout/grow from a seed or spore
leaf/ leaves	the parts of a **plant** that are flat, thin and usually green
nutrients	substances that help **plants** and animals grow
petal	thin coloured or white parts which form part of the **flower**
pistil	female part of a flowering plant – this is sometimes known as 'carpel.'
pollen	pollen is a powdery substance that is transported from the anther (part of the stamen) to the stigma (part of the pistil)
pollination	pollination is when pollinators (such as bees) pass (transfer) pollen from one flowering plants' stamen to another plants' pistil, however in order for fertilization to work both flowers must be the same type
reproduce	when an animal or **plant** produces one or more individuals similar to itself.
roots	part of a **plant** that attaches it to the ground, conveying water and nourishment to the rest of the plant.
seed	the small, hard part from which a new **plant** grows
seed dispersal	the movement or transportation of seeds
seedling	a young plant that has germinated however has not fully matured yet
sepal	The sepal encloses the petals before they bloom and supports the head of the flower after blooming
stamen	male part of a flowering plant
stem	the thin, upright part of a **plant** on which the flowers and leaves grow
sustainable temperature	keeping something at a consistent and constant level of warmth or cold
transportation	The movement of water and nutrients from the **roots** up to other parts of the **plant**
tree	a tall **plant** that has a hard **trunk**, **branches**, and **leaves**
trunk	the large main **stem** from which the **branches** grow

Investigate!

- Set up a comparative test to show how plants are affected by varying conditions (light, water, temperature, nutrients)
- Explore seed formation by planting crocus seeds and investigating the process
- Investigate how water is transported within plants with an example of water, food colouring and tissue/food colouring mixed with water/flowers
- Investigate seed dispersal and pollination through the use of role play

Common misconceptions
Some children may think: • plants eat food • food comes from the soil via the roots • flowers are merely decorative rather than a vital part of the life cycle in reproduction • plants only need sunlight to keep them warm • roots suck in water which is then sucked up the stem.