Plants
Knowledge Planner

What should I already know?

- Which things are living and which are not.
- A variety of **common wild** and **garden plants**, including **deciduous** and **evergreen trees** and how to identify them.
- The **structure** 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**.
- Different **vegetation** belts and **climate zones** around the world
- **Plants** and animals depend on each other to survive

Key Vocabulary	
Absorb	Soak up or take in
Anther	The part of a stamen that produces and releases the pollen
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.
Deciduous	A tree that loses its leaves in the autumn every year.
Dispersed	Scattered, separated, or spread through a large area.
Evergreen	A tree or bush which has green leaves all year round.
Fertilisation	In plants, where pollen meets the ovule to form a seed.
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 the flower
Pollen	A fine powder produced by flowers
Pollination	To pollinate a plant or tree means to fertilise it with pollen. This is often done by insects.
Stigma	The top of the centre part of a flower which takes in pollen
Vegetation	Plants, trees and flowers

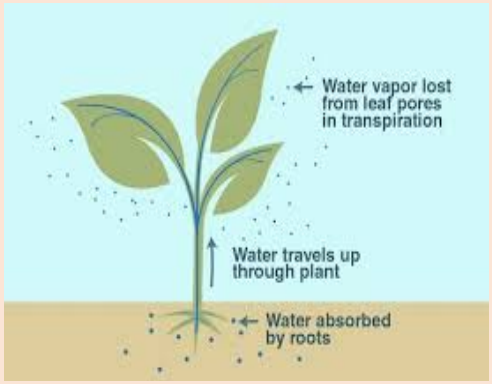
What do different plants need to grow?

- air
- water
- sunlight
- nutrients from the soil
- room to grow
- suitable temperature

The amount of each of these may vary depending on the type of plant. For example, cacti need less water than other plants

How is water transported within plants?

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



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

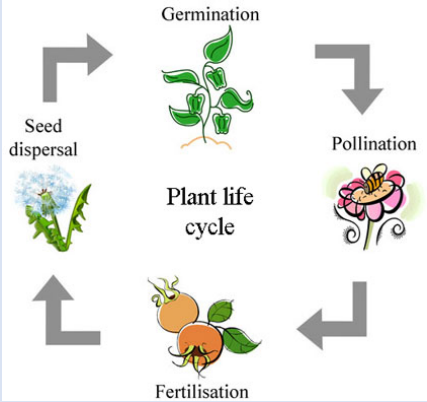
- The flower's job is to create seeds so that new plants can grow.
- Pollination occurs when pollen from the anther is transferred to the stigma by bees and other insects.
- The pollen then travels down and meets the ovule. When this happens, seeds are formed - this is called fertilisation.
- Seeds are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

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.

Diagrams

Life cycle of a plant



Parts of a flower