

Year 3/4 Knowledge Organiser – Plants

What should I already know?

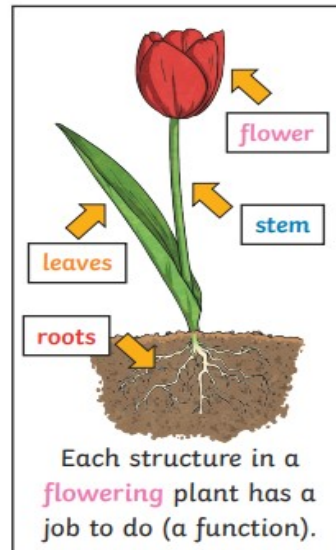
Describe how seeds and bulbs grow into mature plants

Describe how plants need water, light and a suitable temperature to grow and stay healthy.

Key vocabulary

roots	These anchor the plant into the ground and absorb water and nutrients from the soil.
stem	This holds the plant up and carries water and nutrients from the soil to the leaves. A trunk is the stem of a tree.
leaves	These make food for the plant using sunlight and carbon dioxide from the air.
flowers	These make seeds to grow into new plants. Their petals attract pollinators to the plant.
nutrients	When a liquid turns into a gas.
pollination	To pollinate a plant or tree means to fertilise it with pollen . This is often done by insects
fertilisation	in plants , where pollen meets the ovule to form a seed
pollen	a fine powder produced by flowers . It fertilises other flowers of the same species so that they produce seeds
Seed dispersal	When a seed is scattered, separated, or spread through a large area
life cycle	the series of changes that an animal or plant passes through from the beginning of its life until its death

Diagrams



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 to keep the **plant** upright so that the sunlight can reach it easier.

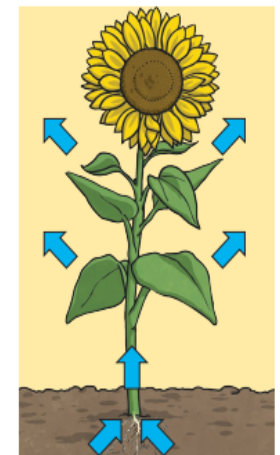
The **roots** help to 'anchor' the **plant** in the **soil**. They also **absorb** water and **nutrients** from the **soil** for the **stem** to carry to the rest of the **plant**.

What will I know by the end of the unit?

- identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant
- investigate the way in which water is transported within plants
- explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

How Water Moves through a Plant

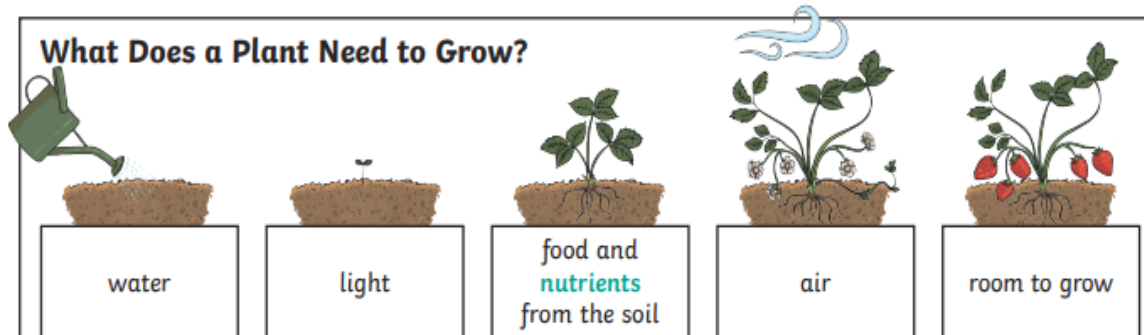
1. The **roots** absorb water from the soil.
2. The **stem** transports water to the **leaves**.
3. Water **evaporates** from the **leaves**.
4. This **evaporation** causes more water to be sucked up the **stem**.



The water is sucked up the **stem** like water being sucked up through a straw.






Diagrams

What Does a Plant Need to Grow?

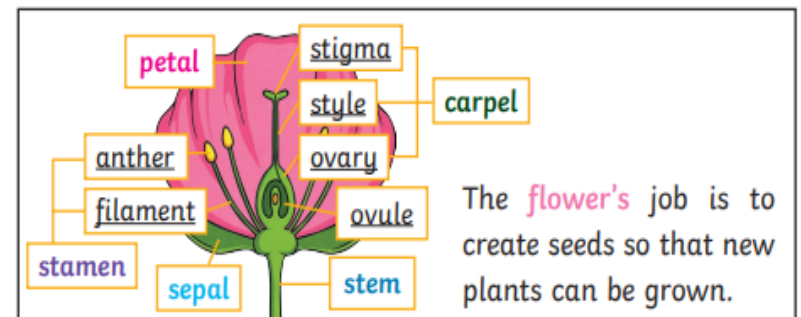
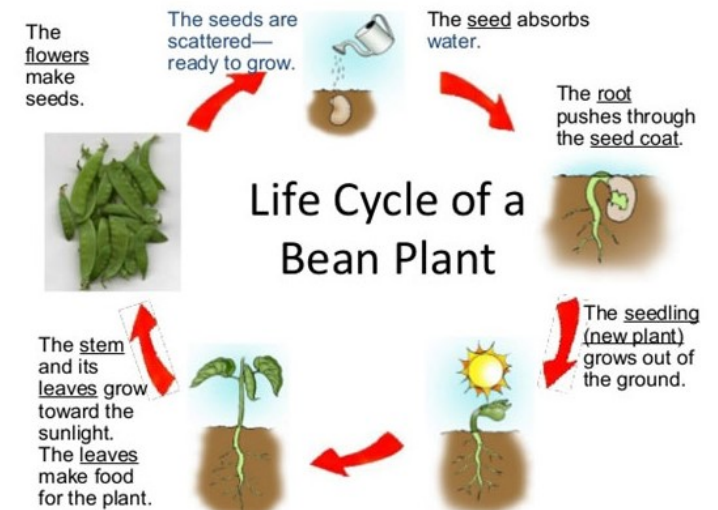


Different plants vary in how much of these things they need. For example, cacti can survive in areas with little water, whereas water lilies need to live in water.

Seed Dispersal

Carried by the wind	Animals eat them	Carried on animals	Bursts from the pods	Carried by water
				

Life Cycle of a Bean Plant



Topic - Plants

How does your garden grow?

Question 1 - Tick ONE thing all the seeds must have to start to grow.	Start of unit	End of unit
A. Light		
B. Water		
C. Soil		
D. Salt		

Question 4 - A stick of celery is placed in red water. What will happen next?	Start of unit	End of unit
A. Nothing		
B. It grows roots		
C. the leaves will turn red		
D. It grows more leaves		

Question 2 - Which of these best describe the function of roots (tick two)?	Start of unit	End of unit
A. To make seed		
B. To absorb nutrients and water		
C. To anchor the plant to the ground		
D. To attract bees and insects		

Question 5 - : Some wild flowers have petals with bright colours because...	Start of unit	End of unit
A. They are pretty		
B. They attract birds and bees		
C. The sun makes them bright		
D. The soil has nutrients that changes the colour		

Question 3 - Write down the numbers 1-4 to show the order in which parts of a plant grow.	Start of unit	End of unit
A. The leaves grow		
B. The stems grow		
C. The roots grow		
D. The flowers grow		

Question 6 - Birds and insects are important for plant growth because they help with....(tick two):	Start of unit	End of unit
A. Fertilisation		
B. Pollination		
C. Germination		
D. Seed Dispersal		