



Knowledge Organiser

Science

Year 3

Topic: Plants – roots and shoot

Prior Knowledge

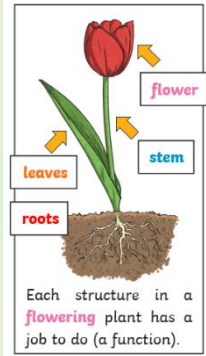
Which things are living and which are not.
A variety of common wild and garden plants, and how to identify them.

The structure of common flowering plants, including trees

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.

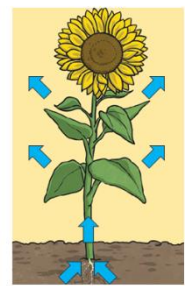
Knowledge and Application



Each structure in a flowering plant has a job to do (a function).

How Water Moves through a Plant

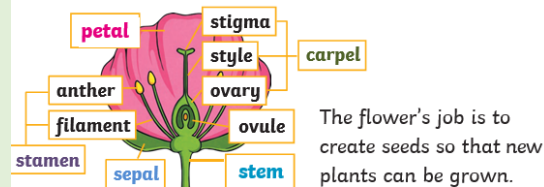
1. The **roots** absorb water from the soil.
2. The **stem** transports water to the **leaves**.
3. Water evaporates from the **leaves**.
4. This evaporation causes more water to be sucked up the **stem**.



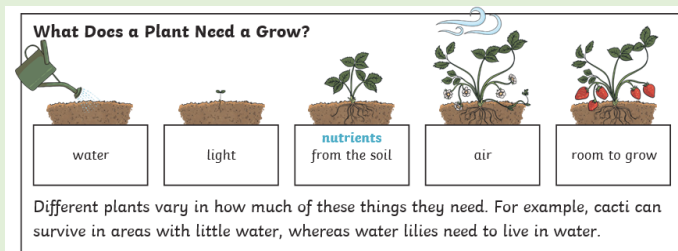
The water is sucked up the stem like water being sucked up through a straw.

What will I know by the end of this topic?

Know the function of the different parts of the flowering plant.



The flower's job is to create seeds so that new plants can be grown.



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.

Identify and know the names of: stem; roots; leaves and flowers.

Know what a plant needs to grow. Know that light, air, water, nutrients from soil and suitable temperature are all important for plant growth.

The amount of light, air, water, nutrients from soil and temperature may vary depending on the type of plant. For example, cacti need less water than other plants.

Find out how water is transported within a plant: Water is absorbed from the soil by the roots and then transported from the roots to the stem and then to the rest of the plant.

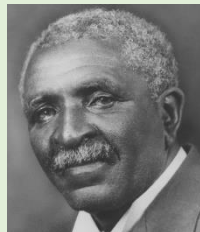
Key Vocabulary

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	These substances are needed by a living things to grow and survive.
Evaporation	When a liquid turns into a gas.
Petal	The brightly coloured part of the flower that attracts insects to pollinate the plant.
Soil	The upper layer of earth that contains minerals and nutrients to help plants grow
Investigation	Carrying out an experiment to search for an answer to a question
Hypothesis	An educated guess or prediction about what might happen during an investigation or experiment
Control variable	A part of an experiment that you keep the same
Dependent variable	A part of an experiment that you measure
Independent variable	A part of an experiment that you change

Famous Scientist

Books/ Websites

George Washington Carver
<https://www.britannica.com/biography/George-Washington-Carver>



<https://www.bbc.co.uk/bitesize/topics/zy66fg8/articles/z2d4g7h>

The Night Flower – Lara Hawthorne

