

# Knowledge Organiser - Year 1 - Science: plants



Plants are a group of living things that grow in the earth with roots, stems and leaves.

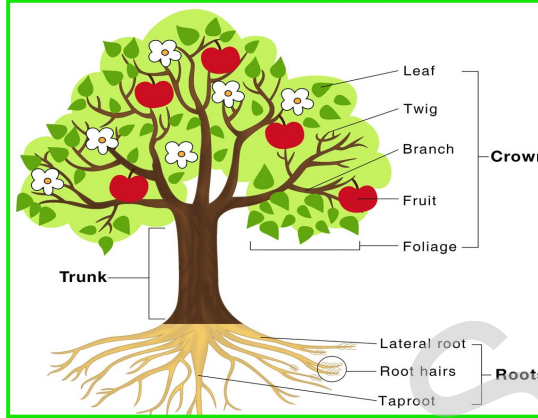
## Key Vocabulary

<b>Cultivated</b>	This is the act of caring for or growing plants.
<b>Deciduous</b>	A deciduous tree or bush is one that loses its leaves in the autumn every year.
<b>Evergreen</b>	A plant that has green leaves throughout the year and does not lose them in autumn.
<b>Environment</b>	The natural world in which plants and animals live.
<b>Flowers</b>	The colourful and scented petals on the plant that attract insects to pollinate the plant and then produce the seeds.
<b>Fruit</b>	The sweet and fleshy product of a tree or other plant that contains seeds and can be eaten as food.
<b>Habitat</b>	The natural home or environment of an animal and plant.
<b>Leaves</b>	The parts of the plant that make food using the sun, water and carbon dioxide. They are green and are attached to the branches or stems.
<b>Petal</b>	The brightly coloured sections around a flower, these are specialised leaves.
<b>Pollination</b>	The act of transferring pollen from the stamen of one flower to the stigma of another flower, to create a seed.
<b>Roots</b>	Usually below the ground, these fibres hold the plant firmly in place and transport the nutrients and water to the plant.
<b>Seed formation</b>	Seeds form at the base of the flower, usually inside a fruit.
<b>Stem</b>	The main stalk of a plant, typically rising above ground but occasionally can grow underground.
<b>Trunk</b>	The large, wide, wooden stem of a tree.
<b>Vegetables</b>	A plant or part of a plant used as food, such as a cabbage, potato, turnip, or bean.
<b>Wild flowers</b>	Flowers that grow freely without being cultivated by humans.

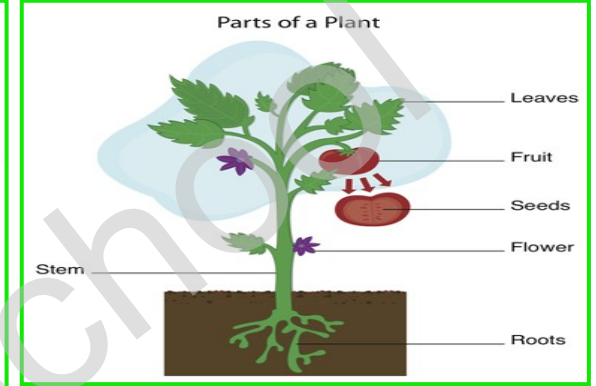
## Working Scientifically

Pupils should use the local environment throughout the year to explore and answer questions about plants growing in their habitat. Where possible, they should observe the growth of flowers and vegetables that they have planted. They should become familiar with common names of flowers, examples of deciduous and evergreen trees, and plant structures (including leaves, flowers (blossom), petals, fruit, roots, bulb, seeds, trunk, branches, stem). Pupils might work scientifically by: observing closely, using magnifying glasses, and comparing and contrasting familiar plants; describing how they were able to identify and group them, and drawing diagrams showing the parts of different plants including trees. Pupils might keep records of how plants have changed over time, for example the leaves falling off trees and buds opening; and compare and contrast what they have found out about different plants.

## Key Question: What type of plant is this?



A tree is a tall plant with a trunk and branches made of wood. Trees can live for many years. A single tree has many roots. The roots carry nutrients and water from the ground through the trunk and branches to the leaves of the tree. All plants have some key parts in common: roots, stem, leaves, flowers and fruits.



The roots of a plant take up water and nutrients from the soil. The roots also keep the plant steady and upright in the soil. The stem carries water and nutrients to different parts of the plant. The leaves use light from the sun, along with carbon dioxide from the air and water to make food for the plant. Some plants have flowers. These are involved in producing seeds from which new plants grow inside fruits.



There are two main types of trees: deciduous and evergreen. Deciduous trees lose all of their leaves for part of the year. In cold climates, this happens during the autumn so that the trees are bare throughout the winter. In hot and dry climates, deciduous trees usually lose their leaves during the dry season. Evergreen trees don't lose all of their leaves at the same time - they always have some foliage. They do lose their leaves a little at a time with new ones growing in to replace the old but a healthy evergreen tree is never completely without leaves.



There are many types of wild flower as well as those cultivated in people's gardens. They have different looking flowers and leaves depending on whether they are made from seeds or bulbs. Flowers are brightly coloured and scented to attract insects to them and this helps to make new plants. Insects can see blue and yellow flowers more clearly and so wild flowers often have petals with these colours.