

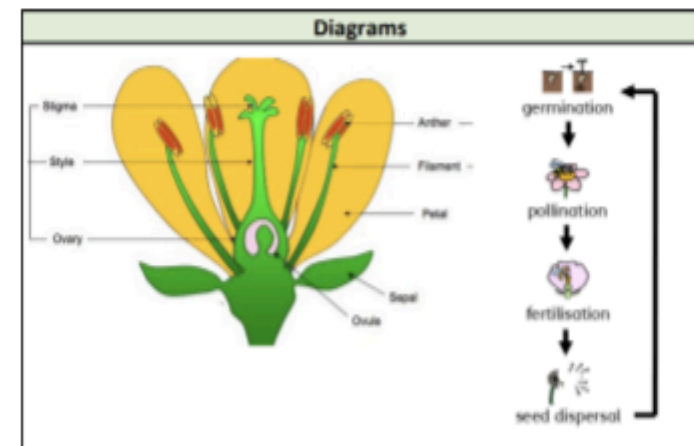


Caroline Haslett Primary School - Science Topic: Plants Year 3

What should I already know?
<ul style="list-style-type: none"> 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.

What will I know by the end of the unit?
<p>The functions of the different parts of flowering plants.</p> <p>flower</p> <p>seed</p> <p>leaf</p> <p>stem</p> <p>roots</p>  <ul style="list-style-type: none"> 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.
<p>What do different plants need to grow?</p> <ul style="list-style-type: none"> air water sunlight nutrients from the soil room to grow suitable temperature  <p>The amount of each of these may vary depending on the type of plant. For example, cacti need less water than other plants.</p>
<p>How is water transported within plants?</p> <ul style="list-style-type: none"> 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.
<p>How do flowers help in the life cycle of flowering plants?</p> <ul style="list-style-type: none"> 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.



Vocabulary	
absorb	soak up or take in
anther	the part of a stamen that produces and releases the pollen
branches	parts that grow out from the tree trunk and have leaves , flowers , or fruit growing on them
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
climate zone	sections of the Earth that are divided according to the climate. There are three main climate zones; polar, temperate and tropical.
common	something that is found in large numbers or it happens often
deciduous	a tree that loses its leaves in the autumn every year
dispersed	scattered, separated, or spread through a large area
dissect	to carefully cut something up in order to examine it scientifically
evergreen	a tree or bush which has green leaves all the year round
fertilisation	in plants , where pollen meets the ovule to form a seed
fertiliser	a substance that is added to soil in order to make plants grow more successfully
flower	the part of a plant which is often brightly coloured and grows at the end of a stem
flowering	trees or plants which produce flowers
fruit	something which grows on a tree or bush and which contains seeds or a stone covered by a substance that you can eat
function	a useful thing that something does
garden	a piece of land next to a house, with flowers , vegetables, other plants , and often grass
germination	if a seed germinates or if it is germinated , it starts to grow
healthy	well and not suffering from any illness
leaf / leaves	the parts of a tree or plant that are flat, thin, and usually green
life cycle	the series of changes that an animal or plant passes through from the beginning of its life until its death
mature	When something matures , it is fully developed
nutrients	substances that help plants and animals to grow
ovule	a small egg
petal	thin coloured or white parts which form part of the flower
plant	a living thing that grows in the earth and has a stem , leaves , and roots
pollen	a fine powder produced by flowers . It fertilises other flowers of the same species so that they produce seeds
pollination	To pollinate a plant or tree means to fertilise it with pollen . This is often done by insects
roots	the parts of a plant that grow under the ground
seed	the small, hard part from which a new plant grows
stem	the thin, upright part of a plant on which the flowers and leaves grow
stigma	the top of the centre part of a flower which takes in pollen
structure	the way in which something is built or made
temperature	a measure of how hot or cold something is
transported	taking something from one place to another
tree	a tall plant that has a hard trunk , branches , and leaves
trunk	the large main stem from which the branches grow
vegetation	plants , trees and flowers
wild	animals or plants that live or grow in natural surroundings and are not looked after by people

Investigate!
<ul style="list-style-type: none"> 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.

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Working Scientifically	<p>Ask questions about the world around them and explain that they can be answered in different ways.</p> <p>Set up and carry out some simple, comparative and fair tests, making predictions for what might happen. Tests can be set up and carried out by following or planning a set of instructions. A prediction is a best guess for what might happen in an investigation based on some prior knowledge.</p> <p>Take measurements in standard units, using a range of simple equipment eg. data loggers plus sensors, timers (seconds, minutes and hours), thermometers (°C) and metre sticks (millimetres, centimetres and metres). Make increasingly careful observations, identifying similarities, differences and changes, and make simple connections Taking repeat readings can increase the accuracy of the measurement.</p> <p>An observation involves looking closely at objects, materials and living things, which can be compared and grouped according to their features. Gather and record findings in a variety of ways (labelled diagrams, tables, charts and graphs) with increasing accuracy.</p> <p>Data can be used to provide evidence to answer questions. Results are information that has been discovered as part of an investigation. A conclusion is the answer to a question that uses the evidence collected.</p> <p>Use suitable vocabulary to talk or write about what they have done, what the purpose was and, with help, draw a simple conclusion based on evidence collected, beginning to identify next steps or improvements.</p>
Plants	<p>Name and describe the functions of the different parts of flowering plants (roots, stem/trunk, leaves and flowers). The plant's roots anchor the plant in the ground and transport water and minerals from the ground to the plant. The stem (or trunk) supports the plant above the ground. The leaves collect energy from the Sun and make food for the plant. Flowers make seeds to produce new plants.</p> <p>Explore and describe 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 how water is transported within plants [from the roots, through the stem and to the leaves, through tiny tubes called xylem].</p> <p>Draw and label the life cycle of a flowering plant - germination, flower production, pollination, fertilisation, seed formation and seed dispersal. Explore the important part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. Insects and the wind can transfer pollen from one plant to another (pollination). Animals, wind, water and explosions can disperse seeds away from the parent plant [seed dispersal].</p> <p>Different plants have different needs depending on their habitat. Examples include cacti, which need less water than is typical, and ferns, which can grow in lower light levels.</p>