



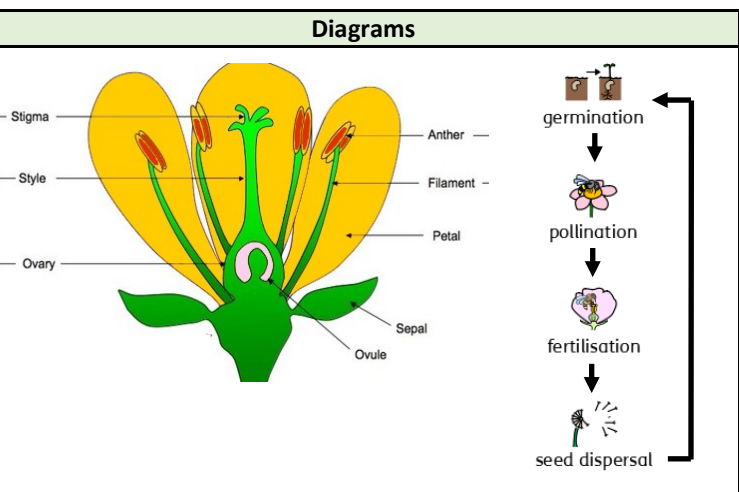


<b>Topic: Plants</b>	<b>Year: 3</b>	<b>Strand: Biology</b>
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What should I already know?
<ul style="list-style-type: none"> <li>• Which things are living and which are not.</li> <li>• A variety of <b>common wild</b> and <b>garden plants</b>, including <b>deciduous</b> and <b>evergreen trees</b> and how to identify them.</li> <li>• The <b>structure</b> of <b>common flowering plants</b>, including <b>trees</b> (including <b>leaves, flowers, fruits, roots, bulbs, seeds, stem, trunks</b> and <b>branches</b>)</li> <li>• <b>Seeds</b> and <b>bulbs</b> grow into <b>mature</b> plants</li> <li>• <b>Plants</b> need water, light and a suitable <b>temperature</b> to grow and stay <b>healthy</b>.</li> <li>• Different <b>vegetation</b> belts and <b>climate zones</b> around the world</li> <li>• <b>Plants</b> and animals depend on each other to survive.</li> </ul>

Vocabulary	
absorb	soak up or take in
anther	the part of a <b>stamen</b> that produces and releases the <b>pollen</b>
branches	parts that grow out from the tree trunk and have <b>leaves, flowers, or fruit</b> growing on them
bulb	a root shaped like an onion that grows into a <b>flower</b> or <b>plant</b>
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 <b>tree</b> 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 <b>tree</b> or bush which has green <b>leaves</b> all the year round
fertilisation	in <b>plants</b> , where <b>pollen</b> meets the <b>ovule</b> to form a <b>seed</b>
fertiliser	a substance that is added to soil in order to make <b>plants</b> grow more successfully
flower	the part of a <b>plant</b> which is often brightly coloured and grows at the end of a <b>stem</b>
flowering	<b>trees</b> or <b>plants</b> which produce <b>flowers</b>
fruit	something which grows on a <b>tree</b> or bush and which contains <b>seeds</b> 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 <b>flowers, vegetables, other plants</b> , and often grass
germination	if a <b>seed germinates</b> or if it is <b>germinated</b> , 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 <b>plant</b> passes through from the beginning of its life until its death
mature	When something <b>matures</b> , it is fully developed
nutrients	substances that help <b>plants</b> and animals to grow
ovule	a small egg
petal	thin coloured or white parts which form part of the <b>flower</b>
plant	a living thing that grows in the earth and has a <b>stem, leaves, and roots</b>
pollen	a fine powder produced by <b>flowers</b> . It <b>fertilises</b> other <b>flowers</b> of the same species so that they produce <b>seeds</b>
pollination	To <b>pollinate</b> a plant or tree means to <b>fertilise</b> it with <b>pollen</b> . This is often done by insects
roots	the parts of a <b>plant</b> that grow under the ground
seed	the small, hard part from which a new <b>plant</b> grows
stem	the thin, upright part of a <b>plant</b> on which the <b>flowers</b> and <b>leaves</b> grow
stigma	the top of the centre part of a <b>flower</b> which takes in <b>pollen</b>
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 <b>plant</b> that has a hard <b>trunk, branches, and leaves</b>
trunk	the large main <b>stem</b> from which the <b>branches</b> grow
vegetation	<b>plants, trees</b> and <b>flowers</b>
wild	animals or <b>plants</b> that live or grow in natural surroundings and are not looked after by people

What will I know by the end of the unit?	
<p>The <b>functions</b> of the different parts of <b>flowering plants</b>.</p> <p><b>flower</b></p> <p><b>seed</b></p> <p><b>leaf</b></p> <p><b>stem</b></p> <p><b>roots</b></p>	 <ul style="list-style-type: none"> <li>• The <b>petals</b> on a <b>flower</b> are usually bright - this is to attract bees and other insects so that they can collect <b>pollen</b> to make <b>seeds</b>.</li> <li>• The <b>seeds</b> are then able to grow to make new <b>plants</b>. This is called <b>germination</b>.</li> <li>• <b>Leaves</b> use <b>carbon dioxide</b> and sunlight to make food for the <b>plant</b>.</li> <li>• The <b>stem</b> carries water and other <b>nutrients</b> from the <b>roots</b> to the rest of the <b>plant</b>. <b>Leaves</b> use this water to make food.</li> <li>• The <b>stem</b> also helps to keep the <b>plant</b> upright so that the sunlight can reach it easier.</li> <li>• The <b>roots</b> help to 'anchor' the <b>plant</b> in the <b>soil</b>. They also <b>absorb</b> water and <b>nutrients</b> from the <b>soil</b> for the <b>stem</b> to carry to the rest of the <b>plant</b>.</li> </ul>
<p>What do different <b>plants</b> need to grow?</p>	<ul style="list-style-type: none"> <li>• air</li> <li>• water</li> <li>• sunlight</li> <li>• <b>nutrients</b> from the <b>soil</b></li> <li>• room to grow</li> <li>• suitable <b>temperature</b></li> </ul>  <p>The amount of each of these may vary depending on the type of <b>plant</b>. For example, cacti need less water than other <b>plants</b>.</p>
<p>How is water <b>transported</b> within <b>plants</b>?</p>	<ul style="list-style-type: none"> <li>• Water is <b>absorbed</b> from the <b>soil</b> by the <b>roots</b>.</li> <li>• It is then <b>transported</b> from the <b>roots</b> to the <b>stem</b> and then to the rest of the <b>plant</b>.</li> </ul>
<p>How do <b>flowers</b> help in the <b>life cycle</b> of <b>flowering plants</b>?</p>	<ul style="list-style-type: none"> <li>• The <b>flower's</b> job is to create <b>seeds</b> so that new <b>plants</b> can grow.</li> <li>• <b>Pollination</b> occurs when <b>pollen</b> from the <b>anther</b> is transferred to the <b>stigma</b> by bees and other insects.</li> <li>• The <b>pollen</b> then travels down and meets the <b>ovule</b>. When this happens, <b>seeds</b> are formed - this is called <b>fertilisation</b>.</li> <li>• <b>Seeds</b> are then <b>dispersed</b> so that <b>germination</b> can begin again.</li> </ul>



Investigate!
<ul style="list-style-type: none"> <li>• Compare the effect of different factors in <b>plant</b> growth (e.g. the amount of water, the amount of light and the amount of <b>fertiliser</b>). Discuss what would make this a fair test.</li> <li>• Place white carnations in dyed water to observe how plants <b>transport</b> water.</li> <li>• Discover how <b>seeds</b> are formed by observing <b>plant life cycles</b>.</li> <li>• <b>Dissect</b> <b>fruits</b> to observe their structure and use this to explain how <b>seeds</b> are <b>dispersed</b>.</li> <li>• <b>Dissect</b> a <b>flower</b> and identify each of the different parts that help with <b>fertilisation</b>.</li> </ul>



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Question 1: Tick <b>ONE</b> thing all the seeds <b>must</b> have to <b>start</b> to grow.	Start of unit:	End of unit:
light		
water		
salt		
soil		

Question 2: Which of these best describe the function of roots (tick two)?	Start of unit:	End of unit:
to make seeds		
to absorb water and nutrients		
to anchor the plant in the ground		
to attract bees and insects		

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:
leaves grow		
the stem grows		
roots grow		
the flower grows		

Question 4: Which part of the plant makes new food?	Start of unit:	End of unit:
leaf		
flower		
roots		
stem		

Question 5: A flower has just grown on a plant. What is the next stage of the life cycle?	Start of unit:	End of unit:
fertilisation		
pollination		
germination		
seed dispersal		

Question 6: A stick of celery is placed in red water. What will happen next?	Start of unit:	End of unit:
nothing		
it will grow roots		
the leaves will turn red		

Question 7: This diagram shows the life cycle of a plant. Which box shows where germination happens?	Start of unit:	End of unit:

Question 8: Some wild flowers have petals with bright colours because...	Start of unit:	End of unit:
they are pretty		
to attract birds and bees		
they have ALL been placed in dye		
the sun makes them bright		

Question 9: Birds and insects are important for plant growth because they help with....(tick two):	Start of unit:	End of unit:
fertilisation		
pollination		
germination		
seed dispersal		

Question 10: Draw lines to match each part of the plant to its function:	Start of unit:	End of unit:
<div style="display: flex; flex-direction: column; gap: 10px;"> <div style="border: 1px solid black; padding: 5px; width: 80px;">roots</div> <div style="border: 1px solid black; padding: 5px; width: 80px;">leaves</div> <div style="border: 1px solid black; padding: 5px; width: 80px;">stems</div> <div style="border: 1px solid black; padding: 5px; width: 80px;">flowers</div> </div>	<div style="display: flex; flex-direction: column; gap: 10px;"> <div style="border: 1px solid black; padding: 5px; width: 100px;">create seeds</div> <div style="border: 1px solid black; padding: 5px; width: 100px;">absorb water and minerals and keep plants 'anchored'</div> <div style="border: 1px solid black; padding: 5px; width: 100px;">make new food for the plant</div> <div style="border: 1px solid black; padding: 5px; width: 100px;">carry water and minerals to the plant and keep it upright</div> </div>	