

# Jeavons Wood Primary School – Science Knowledge Organiser

**Topic: Plants**

**Year: 3**

**Strand: Biology**

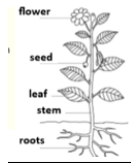
## Big Question: What does a plant need to live? Why are there different parts of a flowering plant?

### What should I already know?

\*Children should know how to identify and name a variety of common wild and garden plants, including deciduous and evergreen trees  
 \*They should be able to identify and describe the basic structure of a variety of common flowering plants, including trees.  
 \*Children should be taught to observe and describe how seeds and bulbs grow into mature plants  
 \* Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

### What will I know by the end of the Unit?

The functions of the different parts of flowering plants



\*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 do different plants need to grow?



\*air  
 \*water  
 \*sunlight  
 \*nutrients from the soil  
 \*room to grow  
 \*suitable temperature

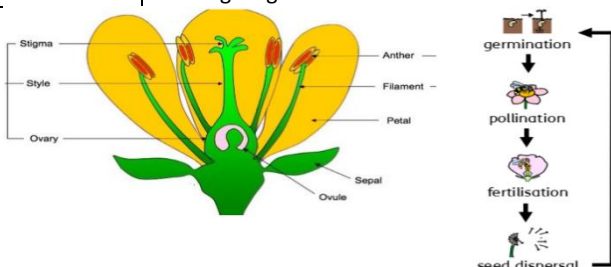
The amount of each of these may vary depending on the type of plant. For example, cacti need less water than other plants.

How is water transported within plants?

\*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.

How do flowers help in the life cycle of flowering plants

\*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
bulb	a root shaped like an onion that grows into a flower or plant
Climate zone	sections of the Earth that are divided according to the climate. There are three main climate zones; polar, temperate and tropical.
deciduous	a tree that loses its leaves in the autumn every year
dispersed	scattered, separated, or spread through a large area
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
fruit	something which grows on a tree or bush and which contains seeds or a stone covered by a substance that you can eat
germination	if a seed germinates or if it is germinated, it starts to grow
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
pollen	a fine powder produced by flowers which fertilises other same species flowers so 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
temperature	a measure of how hot or cold something is
transported	taking something from one place to another
vegetation	plants, trees and flowers
wild	animals or plants that live or grow in natural surroundings and are not looked after by people

### Where will my learning go next?

**In Yr 5:** To describe the life process of reproduction in some plants. Year 5 will be dissecting and labelling parts of the flower in order to describe the processes of pollination, fertilisation, and seed dispersal in the life cycle of flowering plants. The life cycle of non-flowering plants.

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## Big Question: What does a plant need to live? Why are there different parts of a flowering plant?

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>	