

# Uplands Manor Primary School - Science Unit Organiser

<b>Science Topic:</b>	Plants		Year 4	
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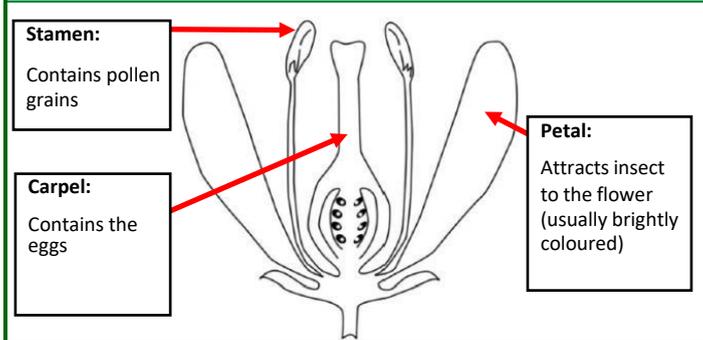
What? (Key Vocabulary)	
Spelling	Definition/Sentence
<b>Petal</b>	One of the coloured segments of a flower
<b>Stamen</b>	The male part of a flower containing pollen
<b>Carpel</b>	The female part of a flower containing an egg
<b>Fertilisation</b>	When pollen and an egg join together to make a seed
<b>Dispersal</b>	Spreading things over a wide area
<b>Pollen</b>	A powdery yellow substance from the male part of a flower
<b>Nectar</b>	A sweet fluid in flowers that attracts insects

## Diagrams and Symbols

### How a plant takes up water



### The structure of a flower



## Recommended Experiments

**A minimum of two experiments should take place during this unit of work with one final written outcome linked to the scientific enquiry skills and approaches used.**

	Investigating the different ways to speed up pollination with flowers planted at the beginning of the unit.
	Comparing the factors that effect plant growth, e.g. the amount of light, amount of water etc.
	Using microscopes to explore parts of flowers and classifying them into groups
	Experimenting with a range of fruit and trying to grow them from seeds

## What? (Key Knowledge)

Functions of the parts of a plant	
The main parts of a plant	Flowers, leaves, stem and roots
Flowers	They have colour and smell to attract insects
Leaves	They change carbon dioxide and water into food for the plant and oxygen
Stem	They hold the plant up and carry water from the roots to the rest of the plant
Roots	They hold the plant in the ground and soak up water and minerals from the soil
Sometimes plants bear fruit	Fruit is the part of the plant we often eat but its main job is to keep the seeds safe

## How plants grow and survive

To grow and survive, plants need:	<ul style="list-style-type: none"> <li>• Light</li> <li>• Water</li> <li>• Carbon Dioxide</li> </ul> <p>This is so that they can make their own food.</p>
	<ul style="list-style-type: none"> <li>• Warmth</li> </ul> <p>This is because if plants get too hot or too cold then they will die.</p>
How does a plant get water?	<ul style="list-style-type: none"> <li>• The roots take up water from the soil. The water travels through the stem of the plant to the leaves.</li> </ul>

## The importance of flowers

The job of the flower	<ul style="list-style-type: none"> <li>• The flower exists to make new plants</li> <li>• The flower contains the pollen and eggs which make seeds</li> <li>• The seeds grow into new plants</li> </ul>
Parts of the flower	<ul style="list-style-type: none"> <li>• Petal</li> <li>• Stamen (the <b>male</b> part of a flower)</li> <li>• Carpel (the <b>female</b> part of a flower) (see second diagram)</li> </ul>
Pollination and Fertilisation	For a plant to grow a new seed, pollen needs to get to its carpel from another plant.
How does Pollen get from one plant to another?	<p>Insects:</p> <ul style="list-style-type: none"> <li>• The insect goes to the first flower looking for nectar</li> <li>• Pollen gets stuck to it</li> <li>• When it goes to another flower, the pollen gets stuck to that flower</li> </ul> <p>Wind:</p> <ul style="list-style-type: none"> <li>• Pollen is blown from one flower to another</li> </ul>
Fertilisation	<ul style="list-style-type: none"> <li>• When the pollen joins the egg of the new flower a seed or many seeds are formed</li> </ul>
How do the new seeds get to the soil to grow?	<p>The seeds are dispersed. This can be done in 3 main ways:</p> <ol style="list-style-type: none"> <li>1) By wind, for example like dandelion seeds</li> <li>2) By animals - (they get eaten and pooped out)</li> <li>3) By explosion - (dry seed pods split open and shoot out the seeds)</li> </ol>

<b>Builds on:</b> learning in Year 2 - Autumn 2 - Unit: Plants	<b>Learning links</b>	<b>Leads to:</b> learning in Year 4 - Autumn 2 - Unit: Living Things and Their Habitats
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