Subject Knowledge Organiser – Plants – Year 3

What I will have learnt by the end of this unit
- identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- explore the requirements of plants for life and growth and how they vary from plant to plant
- investigate the way in which water is transported within plants
- explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal

What I have already learnt (KS1)

Year 1

- identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
- identify and describe the basic structure of a variety of common flowering plants, including trees

Year 2

- 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 I will have learnt by the end of my Key Stage

- identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- explore the requirements of plants for life and growth and how they vary from plant to plant
- investigate the way in which water is transported within plants
- explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal

Key Questions

- Will seeds grow without light?
- Where can I put them to ensure there is no light?
- Will seeds grow using different liquids other than water?
- Will seed grow if I plant them far apart or very close together?
- What would happen to a flowering plant if it didn't have: flowers; a stem; leaves; roots?
- How do plants get water?
- Why are bees important?

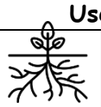
Key Concepts/Strands

- Biology
- Chemistry
- Physics
- Scientific Enquiry
- Science for the future

My Skills and Knowledge that I may use from other subjects

- Literacy- I can use my literacy knowledge to write about my findings.
- Geography- I will learn about plants grown in different parts of the world. I can use my atlas skills to find these countries.
- Mathematics- I can use my measuring skills to compare different plants
- Forest school – I can identify different plants and trees during my forest school sessions.

Key vocabulary	
photosynthesis 	The way in which plants make food in their leaves, from the sun.
pollen 	This is a very fine powder that is produced by the male part of the flower.
pollination 	When pollen is transferred to female parts of a flower. This can be done by **wind** or **insects.**
seed formation 	Seeds can develop after pollination. They can be found in berries or fruits.
seed dispersal 	Seeds can be dispersed in different ways, for example, **wind, animals or water.**

Useful vocabulary	
roots 	Anchor a plant in place. The roots also absorb water and nutrients from the soil.
stem/trunk 	Transports water and nutrients around the plant. It also holds the leaves/flowers up in the air.
leaves 	They use sunlight and water to produce the plant's food.

Key Skills I will learn/use

Ask questions and recognise that there are different types of enquiries.	Set up a simple practical enquiry and begin to understand how to make a test fair Make suggestions about what observations and measurements to make and what equipment is need.	Begin to make systematic and careful observations. sometimes using standard units. With help use information sources provided to find things out.	Gather data and use a pre-prepared table Record data. Record finding using a drawing and/or words.	With help, present data	Use results when talking about what happened.	Talk about what went wrong Suggest ideas about what else could be found out.

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Recall and remember

Question 1 - Tick **ONE** thing all the seeds **must** have to **start** to grow.
A. Light
B. Water
C. Soil
D. Salt

Question 4 - A stick of celery is placed in red water. What will happen next?
A. Nothing
B. It grows roots
C. the leaves will turn red
D. It grows more leaves

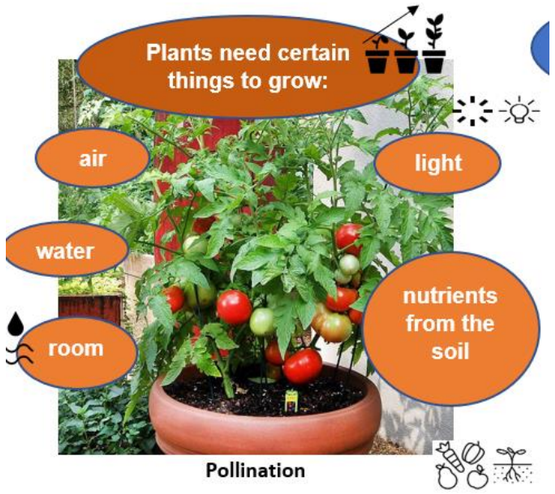
Question 2 - Which of these best describe the function of roots (tick two)?
A. To make seed
B. To absorb nutrients and water
C. To anchor the plant to the ground
D. To attract bees and insects

Question 5 - : Some wild flowers have petals with bright colours because…
A. They are pretty
B. They attract birds and bees
C. The sun makes them bright
D. The soil has nutrients that changes the colour

Question 3 - Write down the numbers 1-4 to show the order in which parts of a plant grow.
A. The leaves grow
B. The stems grow
C. The roots grow
D. The flowers grow

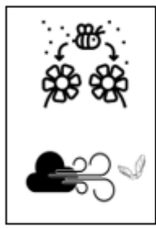
Question 6 - Birds and insects are important for plant growth because they help with….(tick two):
A. Fertilisation
B. Pollination
C. Germination
D. Seed Dispersal

Key Knowledge



Pollination

Pollination



Insects like bees and wasps transfer the pollen from the male part of a flower to the female part of other flowers. **Wind** is responsible for the pollination of some plants too.

How a plant takes in water

Opportunities for teaching Diversity, Equality (including protected characteristics) and expanding Cultural Capital

Visit a garden centre or RHS Garden Harlow Carr to explore a wide range of plants and meet some gardeners.