Subject Knowledge Organiser – Plants – Year 6

What I will have learnt by the end of this unit

- Name and know the function of other parts of a plant, e.g pips, seeds, stones.
- Know that xylem transports water and nutrients from the roots to the leaves.
- Know that phloem transports food from leaves to the rest of the plant.
- Explain why a plant withers.
- Explain why a plant's leaves start to go brown or the leaves/roots rot.
- Recognise the different needs of plants according to the habitat where they grow, e.g. plants in the desert, plants in the rainforest.
- Name and know the functions of other parts of a plant, e.g. stamens, stigma.

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

What I have already learnt

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

Year 3

- 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 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.**
xylem	The vascular tissue in plants which conducts water and dissolved nutrients upwards from the root and also helps to form the woody element in the stem.
phloem	The vascular tissue in plants which conducts sugars and other metabolic products downwards from the leaves.
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 Questions

- Which part of the plant transports water and nutrients from the roots to the leaves?
- Why does a plant wither?
- Which part of the plant transports food from leaves to the rest of the plant?
- What does a plant in the desert need?
- What does a plant in the rainforest need?
- What is the function of the stamen?
- What is the function of the stigma?

Key Skills I will learn/use

Ask relevant questions and use different types of scientific enquiries to answer them.	Set up simple practical enquiries, comparative or fair tests Decide what observations and measurements to make and what equipment to use.	Use a range of equipment (including thermometers and dataloggers). Make systematic and careful observations and take accurate measurements using standard units. Use information sources provided to find things out	Gather, record and classify data in a variety of ways to help answer questions. Record findings using simple scientific language, tables, drawings and labelled diagrams.	Present data in a variety of ways *using e.g., Venn diagrams,* bar charts, *simple scatter graphs and* keys.	Use results to draw simple conclusions and make predictions for new values. Communicate what has been found out using straightforward scientific ideas and report findings using oral and written explanations and displays.	Suggest improvements to the way an enquiry is carried out. Suggest further questions to investigate.

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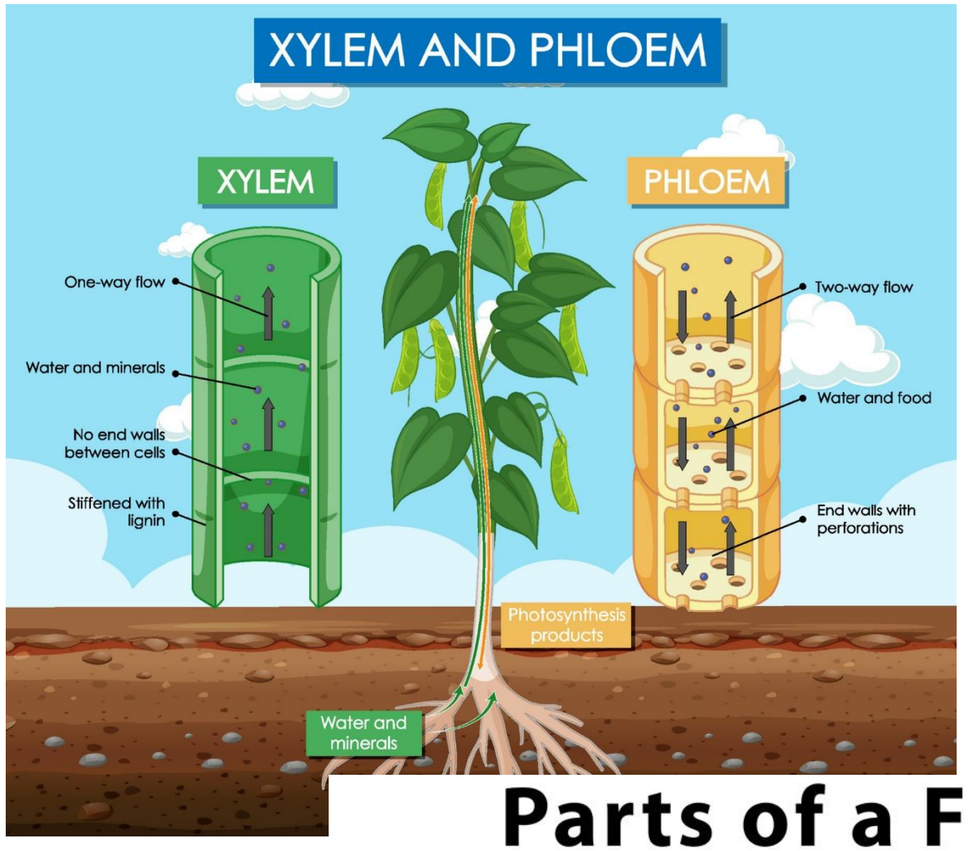
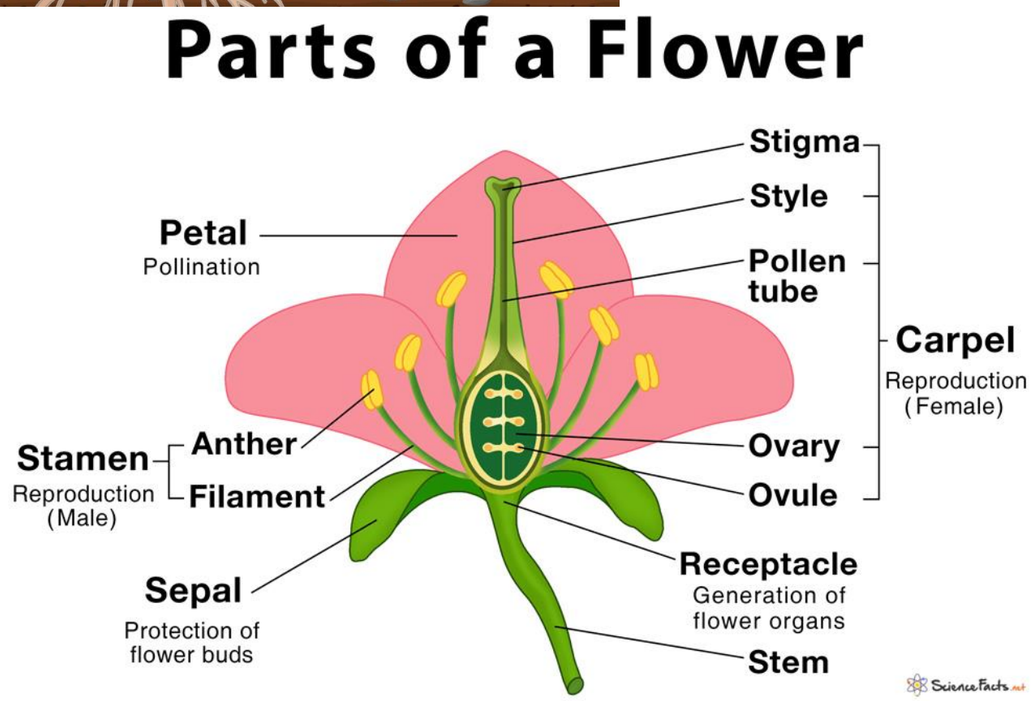
Key Knowledge





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.

Key Concepts/Strands

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

Recall and remember

When a seed germinates, what is the first plant part to grow out of the seed?

Which part of a flower produces pollen grains?

Which parts of a plant contain chlorophyll and are essential for photosynthesis?

Which part of a plant transports water from its roots to the rest of the plant?

Flowers play a role in which of a plant's life processes?

Which parts of a plant anchor it to the ground and also absorb water from the soil?

What do buds become?

What will the fertilised ovary of a flower become?

Which one of the following is not one of the female parts of a flower?

- Stamen
- Ovary
- Stigma
- Style

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.