

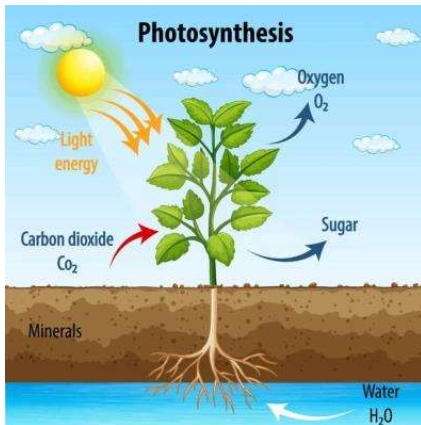
Knowledge Organiser for Year 5/6: Plant Structures and Processes

What I should already know:

- EYFS** – Plants change with the seasons.
- Year 1/2**- Plants need water, light, an appropriate temperature and air to survive. The main part of a plant and their functions: roots; stem; leaf and flower. Photosynthesis is how plants make their own food- they take in carbon dioxide and make oxygen and glucose. Plants give off oxygen and use carbon-dioxide to convert to water, glucose and oxygen.
- Year 3** - Flowers help a plant to reproduce; the flower enables pollination and fertilisation to occur in a plant and therefore reproduce.

Tier 3 Vocabulary

| | |
|---------------------------|--|
| Pollination | The process by which pollen is transferred from the male part of the flower to the female part often by insects. |
| Pollen | Pollen is a fine yellow powder that is needed to make a new plant. It is found on the anther. |
| Chlorophyll | A green pigment, present in all green plants, which is responsible for the absorption of light to provide energy for photosynthesis. |
| Vascular plant | Vascular plants have tube-like structures that allow water and nutrients to move through the plant. |
| Non-vascular plant | Non-vascular plants do not have tube-like structures and cannot transport nutrients as well as vascular plants do. Moss is an example of a non-vascular plant. |



Links to future learning:

- KS3** - Variation in living things; plant and animal cells; life processes.

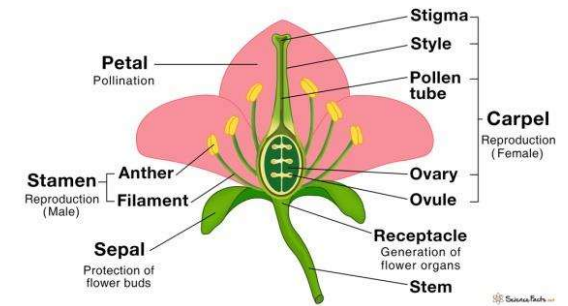
Photosynthesis: A chemical reaction that takes place inside a plant, producing food for the plant to survive. Carbon dioxide, water and light are all needed for photosynthesis to take place. Photosynthesis takes place in the leaves of the plant and produces a type of sugar called glucose (energy for the plant) and oxygen (a waste product that is released into the atmosphere).



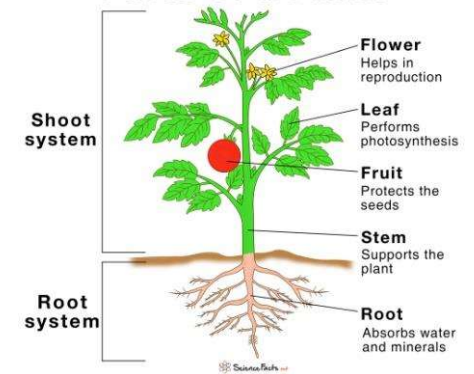
Dr Angie Burnett
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Plant biologists are interested in understanding how plants work. They grow plants and see how they react to different conditions that make it more difficult for them to grow. By understanding what makes it easy or difficult for plants to grow, we can grow better plants to help us produce more food. This is especially important because the population of the world is growing and the climate is changing.

Parts of a Flower



Parts of a Plant



Sexual reproduction

Sexual reproduction requires special male and female cells to combine. These special cells are called gametes and join together to form a fertilized egg. Plants can reproduce using flowers or cones to make seeds, or using spores.

Asexual reproduction

Asexual reproduction takes place without male and female cells. The plant makes genetically identical clones (copies) of itself.