

Science

Topic: How do plants grow?

Year 3

Strand: Plants

Function of the plants

FLOWERS: The flowers are often brightly coloured and smell to attract insects. Insects help with the plants reproduction through pollination.



STEM / TRUNK: The stem carries water and nutrients to different parts of the plant. They keep the plant upright.

LEAVES: The leaves use light from the sun, along with carbon dioxide from the air and water to make food for the plant. This process is called photosynthesis.

ROOTS: The roots of a plant take up water and nutrients from the soil. The roots also keep the plant steady and upright in the soil; they "anchor" the plant.

What you should know

A plant is a living thing that usually grows from the ground.

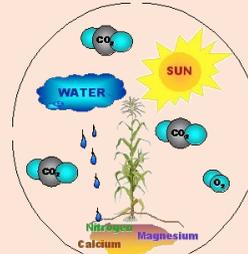
The main parts of a plants are:

Flowers Leaves Stem Roots

Key facts

What does a plant need to grow?

Plants need air, water, sunlight, nutrients from the soil, room to grow, sustainable 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 do plants reproduce?

Pollination - Pollen is carried by insects or blown by the wind from one flower to another. This process is called pollination.

Fertilisation - Pollen sticks to the flower and then travels to the ovary where it fertilises egg cells (ovules) to make seeds. This process is called fertilisation.

Seed Dispersal - The seeds are scattered by animals or the wind. This process is called dispersal. Some of the seeds will grow into new plants.

Key Vocabulary

| | |
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| Flower | the part of a plant which is often brightly coloured and grows at the end of a stem. |
| Leaves | the parts of a tree or plant that are flat, thin, and usually green. |
| Stem/trunk | the thin, upright part of a plant on which the flowers and leaves grow. |
| Roots | the parts of a plant that grow under the ground. |
| Petal | thin coloured or white parts which form part of the flower. |
| Soil | the loose upper layer of the Earth's surface where plants grow. |
| Function | a useful thing that something does |
| Reproduction | the process by which a living organism creates copies of itself. |
| Seed | the small, hard part from which a new plant grows. |
| Dispersal | the scattering, separating, or spreading of something over a large area. |
| Pollination | to pollinate a plant or tree means to fertilise it with pollen. This is often done by insects. |
| Fertilization | in plants, where pollen meets the ovule to form a seed. |
| Nutrients | substances that help plants and animals to grow. |
| Dissect | to carefully cut something up in order to examine it scientifically |
| Transportation | taking something from one place to another. |
| Life-cycle | the different stages of life for a living thing. |

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Focus Scientist

A Russian-born American botanist

(1898-1997) who did groundbreaking

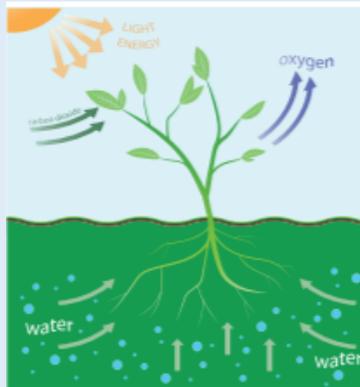
work on the structure and workings of

plants. Her book *Plant Anatomy* is a classic in the field.



What is photosynthesis?

Photosynthesis is how we explain how a plant can make its own food. The leaves of the plant are the key part in this process. The plant uses water, sunlight and carbon dioxide to produce sugar (which is food for the plant.) In this process, the plant also produces oxygen which is really good for us!



What is the life cycle of a flowering plant.

What is the lifecycle of a flowering plant?

Flowering plants have lifecycles like all other living things, including us! A flowering plant will begin life as a seed, the roots and shoot will then begin to grow. We call this germination. The plant will then grow and produce flowers. Pollination happens next so that seeds can be produced and fertilised. The plant will then disperse the seeds so that new plants can grow.



Skills I will develop.

- 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 (air, light, water, nutrients from soil, and room to grow) 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 polli-

