



Plants:

Plants are living things that grow in soil and make their own food using sunlight.



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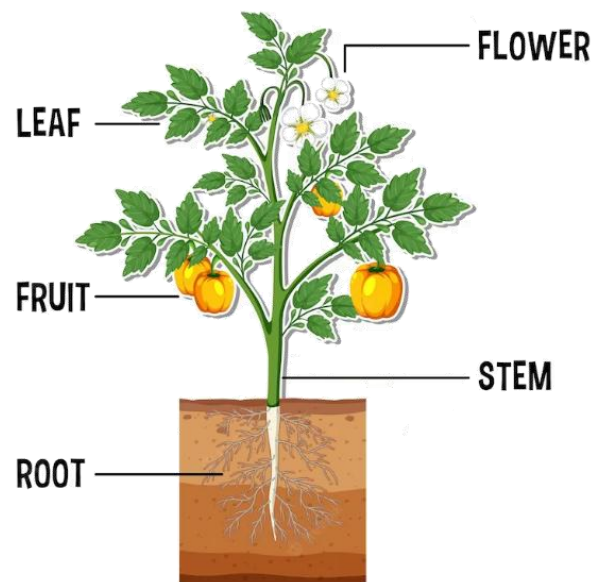
Students' Learning Outcomes

Identify the major parts of a plant.
(Root, stem, leaf and flower)

Parts of a plant:

A plant typically consists of four major parts.

- Root
- Stem
- Leaf
- Flower





Functions of the Parts of a Plant:

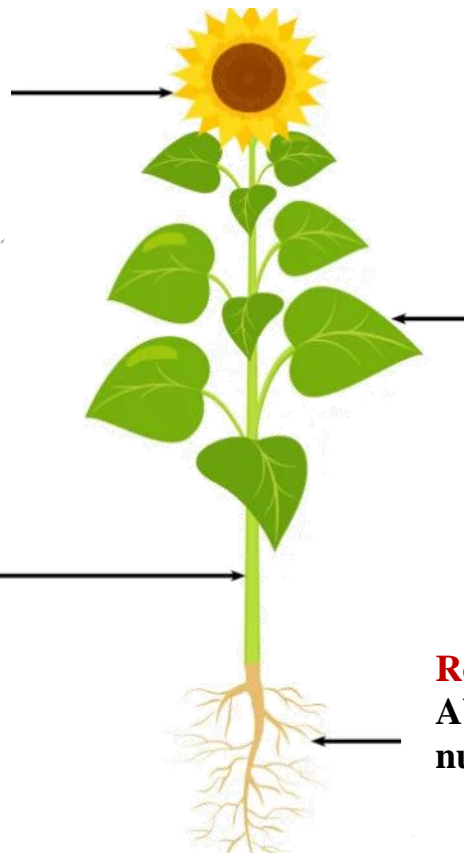
A plant consists of different parts, and each part is responsible for performing its specific function.

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Students' Learning Outcomes

List the functions of roots, stem, leaf and flower.

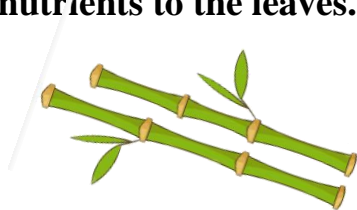
Flower:
Attracts pollinators
and produces seeds.



Leaves:
Attracts pollinators
and produces seeds.



Stem:
Supports the plant
and carries water and
nutrients to the leaves.



Roots:
Absorb water and
nutrients from the soil.





Leaves:

Leaves are important parts of a plant that help it live and grow. They are usually green and come in many different shapes and sizes. Leaves use sunlight to make food for the plant through a process called photosynthesis.

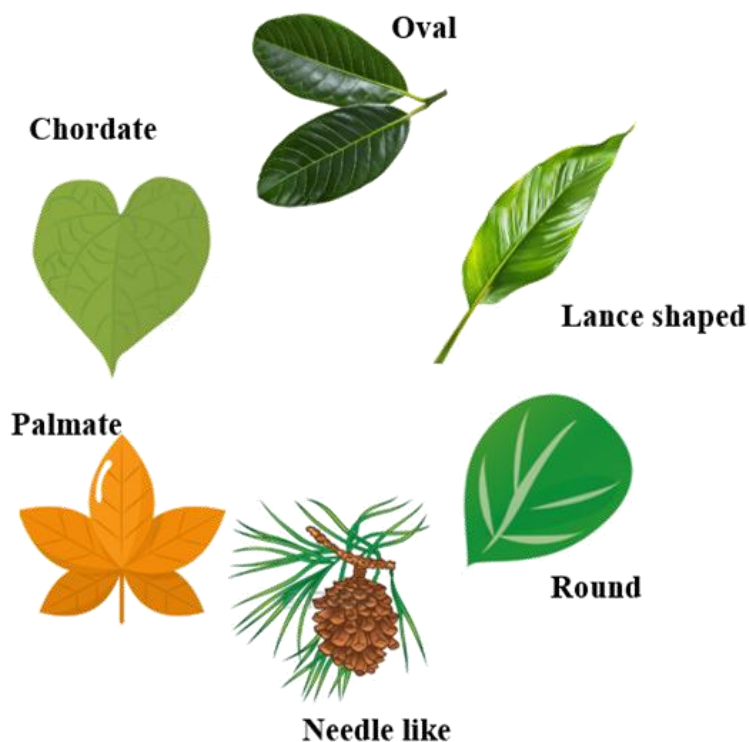
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Identify different shapes of leaves found around them.

Shapes of leaves:

- **Oval:** Leaves that are shaped like an egg or oval.
- **Heart-shaped:** Leaves that resemble the shape of a heart.
- **Lance-shaped:** Long and narrow leaves that taper to a point at the end.
- **Round:** Leaves that are circular or nearly circular in shape.
- **Palmate:** Leaves that spread out like fingers on a hand.
- **Needle-like:** Long and thin leaves, like those of pine trees.





Roots:

Roots are essential parts of plants that grow underground. They anchor the plant in the soil, absorb water and nutrients, and store food for the plant's growth and survival.

Edible Roots:

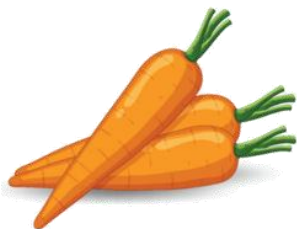
Edible roots are roots that humans can eat as food. These roots are often nutritious, providing essential vitamins, minerals, and carbohydrates.

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Identify the roots that are eaten by people.

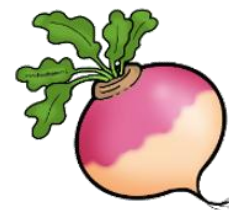
Examples:



Carrot



Sweet Potato



Turnip



Beetroot



Radish

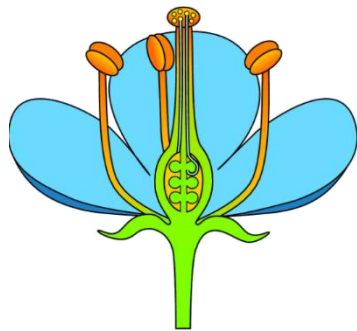


Potato



Flower:

A flower is the reproductive part of a flowering plant that produces seeds through pollination. Its primary functions are to attract pollinators and facilitate the development of seeds for plant reproduction.



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Identify the fruits which have seeds in them.

Seed:

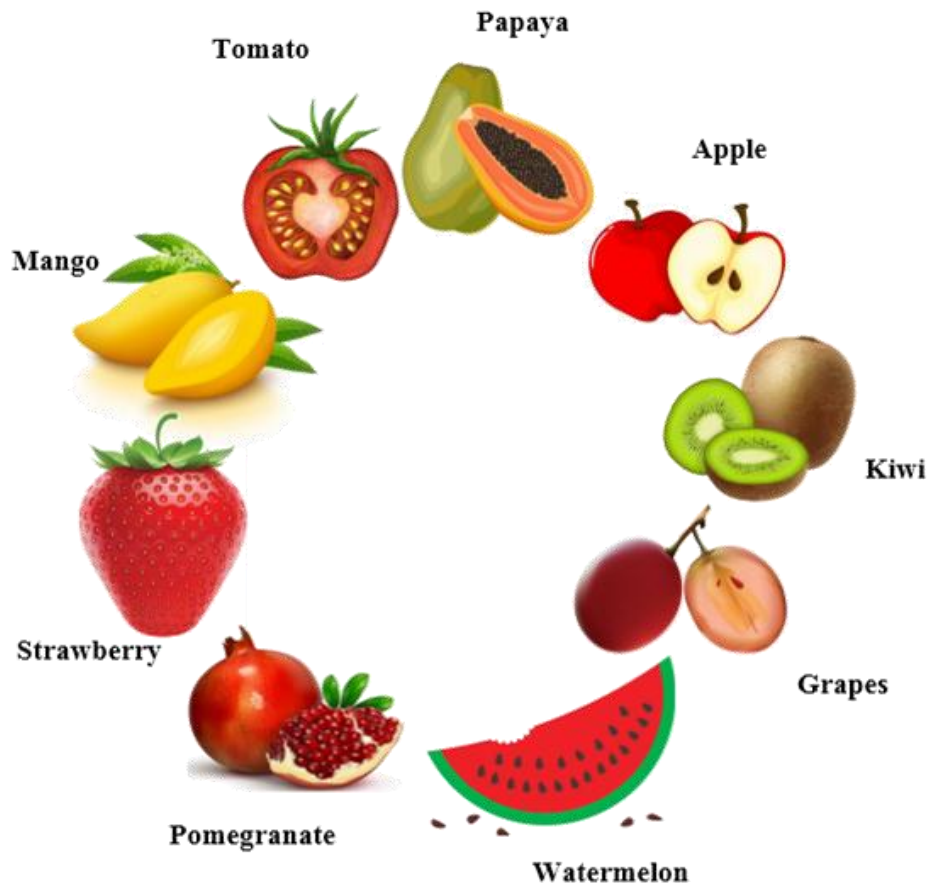
Seeds are the plant structures that contain the embryo and are capable of developing into a new plant.





Fruits with Seeds:

Most fruits have seeds inside them. Some fruits have only one seed, some have few and some have many seeds present inside them.



Flowers with one seed:

- **Mango:** Contains a large seed (stone) within its flesh.
- **Apricot:** Contains one seed in its center.

Flowers with few seeds:

- **Apple:** Contains seeds within the core.
- **Grapes:** Contain seeds inside the flesh.



- **Orange:** Contains seeds within its segments.

Flowers with many seeds:

- **Watermelon:** Has seeds embedded in its flesh.
- **Tomato:** Contains seeds within its pulp.
- **Pomegranate:** Has seeds (arils) inside juicy sacs.
- **Kiwi:** Contains numerous small seeds.
- **Papaya:** Contains seeds in its central cavity.

Types of Plants:

On the basis of flowers plants are of two types.

- Flowering Plants
- Non-flowering plants.

Flowering plants:





Plants that produce flowers are called flowering plants.

Examples:

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Name a few plants around them, which have flowers and which do not have flowers.

			
Rose	Sunflower	Tulip	Daffodil



Non-flowering plants:

Plants that do not produce flowers are called non-flowering plants.

			
Ferns	Mosses	Conifers	Liverwort

Growth of Plants:

Plants can grow in different ways! Some plants grow from seeds, while others can grow from stems or roots.

Growth from Seeds:

A plant begins its life cycle as a seed. Inside the seed is an embryo, a tiny plant that contains stored food reserves to fuel its initial growth and development.

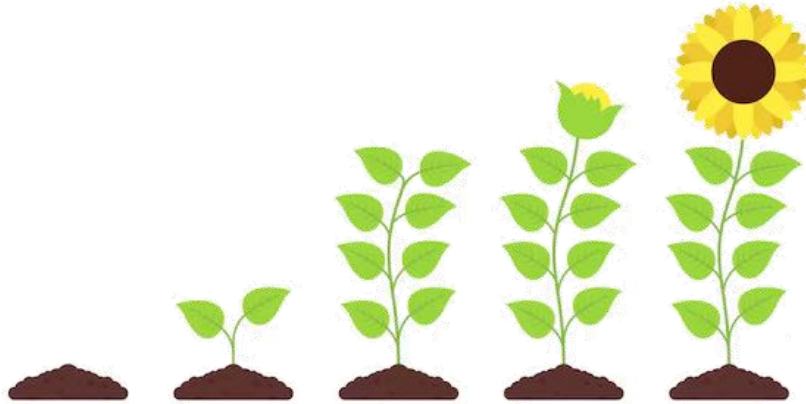
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Recognize that some plants grow from seeds while other grows from stems or roots.



Example: Sunflowers start their life from tiny seeds. The seed is planted in the soil, watered, and it grows into a tall sunflower.



Growth from Stems:

Plants can grow from stems through a process called vegetative propagation. When a stem or part of it is planted in soil or water, it can develop roots and grow into a new plant.

Example: Strawberries can grow from stems. If a piece of a strawberry plant's stem is planted in the soil, it can grow into a new strawberry plant.

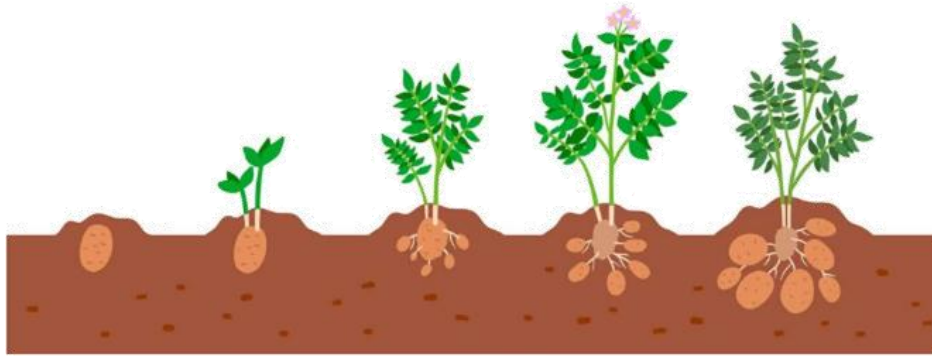




Growth from Roots:

Plants can also grow from roots.

Example: Potatoes grow from pieces of the potato itself, which is a root. If a piece of potato with a small sprout is planted, it will grow into a new potato plant.



Conditions necessary for the growth of plants:

Plants need different conditions for their growth including:

Soil: Provides nutrients and support for plants to grow by absorbing minerals and organic matter through roots.

Light: Essential for plants to make food through photosynthesis using sunlight, carbon dioxide, and water.

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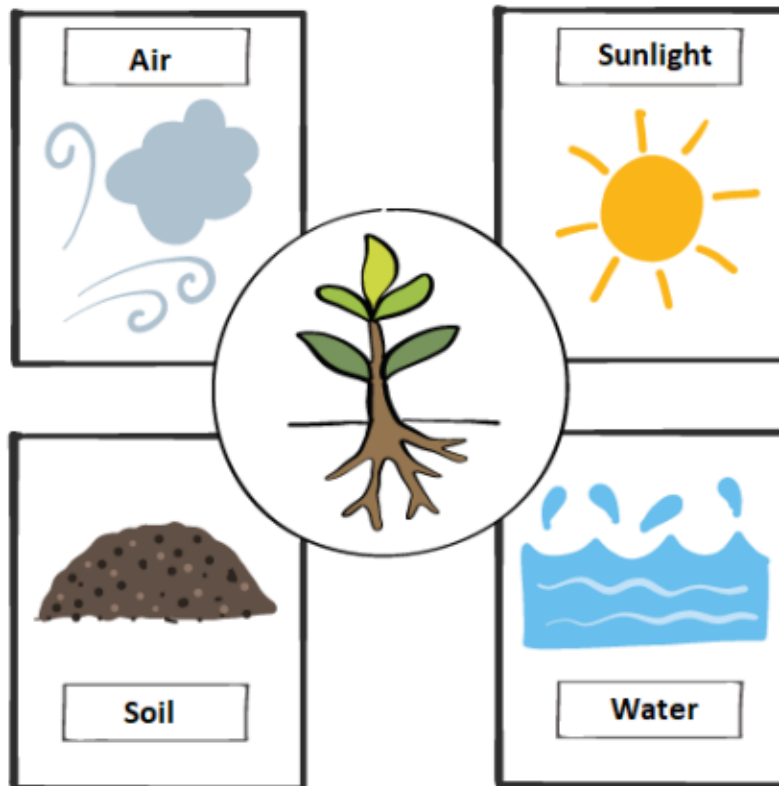
Students' Learning Outcomes

Identify that soil, light air and water are needed to grow a plant.



Air: Provides carbon dioxide for photosynthesis (food making process) and oxygen for respiration.

Water: Essential for transporting nutrients, maintaining cell structure, and supporting photosynthesis.



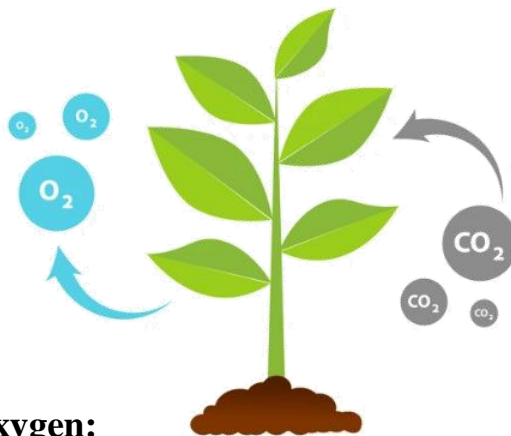


Importance of plants for climate change:

Plants are importance for climate change in many ways including:

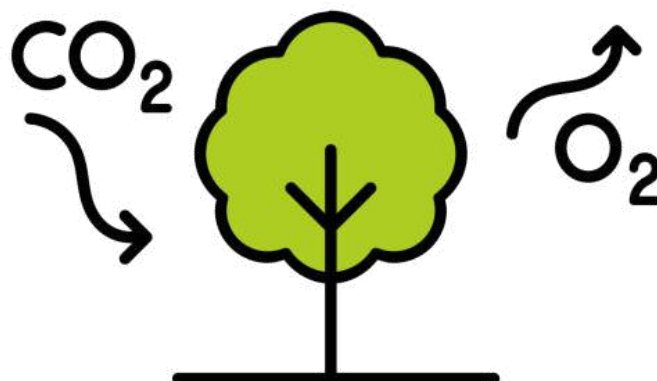
1. Absorbing Carbon Dioxide:

Plants take in carbon dioxide, a gas that makes the air warmer, and use it to make food.



2. Providing Oxygen:

Plants release oxygen, which humans and other animals need to breathe and stay alive



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Students' Learning Outcomes

Highlight the importance of plants for climate change.



3. Cooling the Earth:

Plants help cool the Earth by providing shade and releasing water vapor into the air, which cools down temperatures.

