2 Parts of a Plant

Before We Start, Let's Check

What you already know

Write which part of the plant the vegetables in the pictures are.

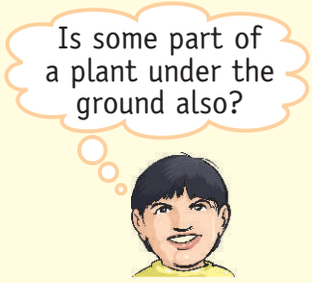
	O O		

S			M

	E				S

F			W		

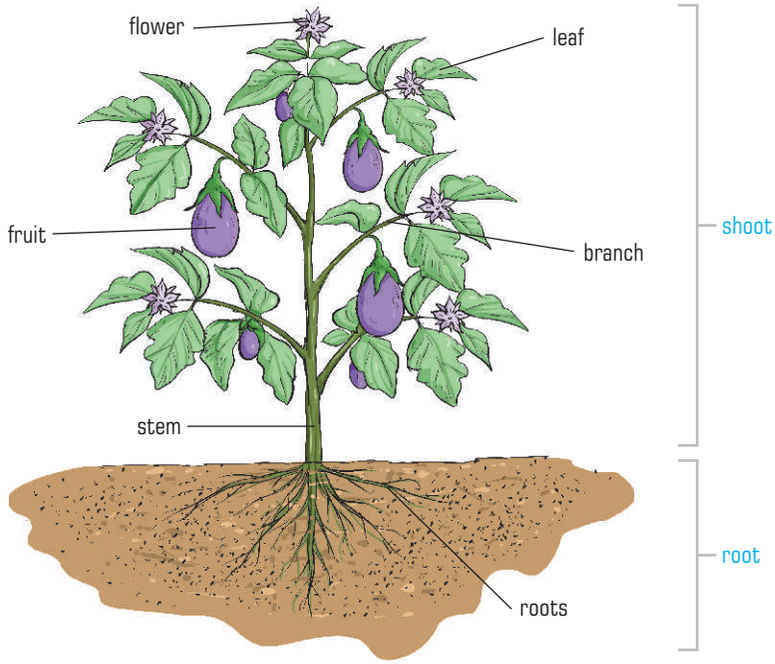
What you will know



You have studied that like man and animals, plants are also living things. So like their bodies, a plant's body also has many parts. Each part has a specific task to perform.

A plant which you see in a garden, home, etc. is not a complete plant. Some part of a plant is under the ground and we cannot see it.

The part that grows under the ground is called the **root**. The part that grows above the ground is called the **shoot**. The shoot has a stem, branches, leaves, flowers and fruits.



Let us study each part of a plant.

ROOTS

Roots are under the ground. Pull out a small plant from the ground. Wash the soil off its lower part. You will see roots.

KNOW A FACT

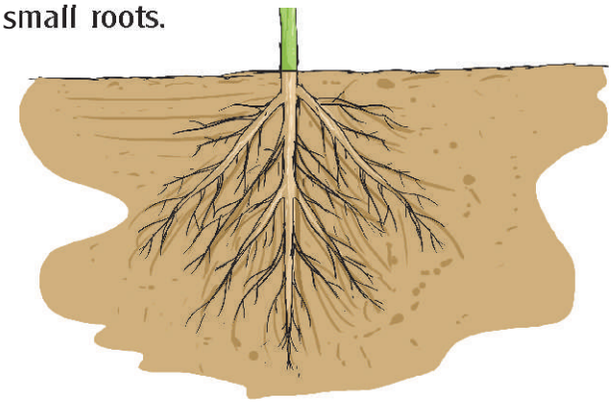
Some plants like banyan trees and mangrove trees also have roots which are above the ground.

Types of roots

Roots are of two types.

Taproot

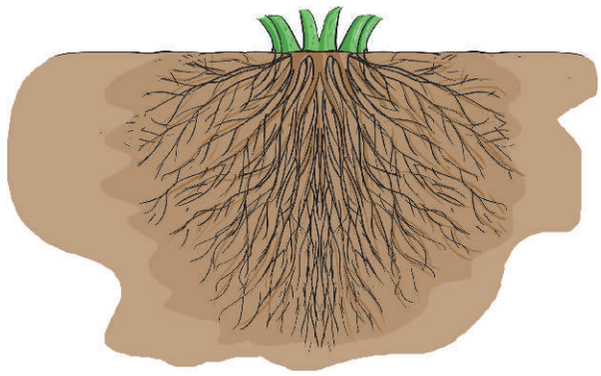
Some plants have a single main root that grows from the end of the stem. It is called the taproot. The taproot bear many small roots.



Examples: mustard, bean, balsam

Fibrous roots

In some plants, many thread-like tiny roots grow from the lower end of the stem. They are called fibrous roots. These roots do not go very deep into the soil.



Examples: grass, rice, wheat, onion

Uses of roots

- Roots keep the plant firmly fixed in the soil.
- Roots take in water and minerals from the soil, which are necessary for the plant to live.
- Some plants such as the carrot, turnip, beetroot, etc. store their extra food in their roots. We eat some of these roots as food.

STEM

The stem grows above the ground. It is the main part of the shoot.

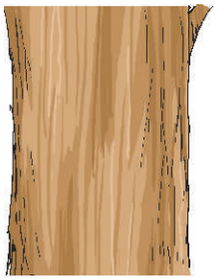
The stem has branches. Leaves, flowers and fruits grow on branches.

KNOW A FACT

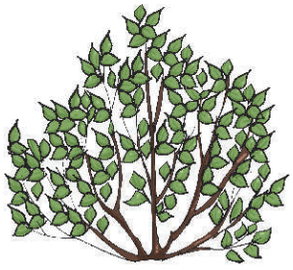
In some plants such as the potato, ginger and onion the stem grows below the ground.

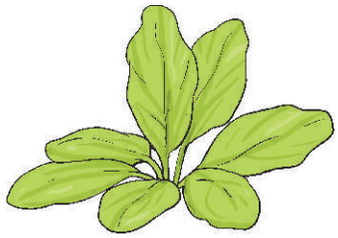
Kinds of stems

Different plants have different kinds of stems.



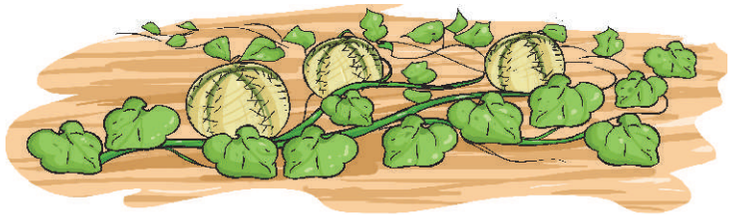
The stem of a **tree** is thick, hard and woody. It is called the **trunk**.





Shrubs have hard and thin stems. **Herbs** have soft and green stems.

A **climber's** stem is very thin and weak. It cannot stand on its own. It needs support.

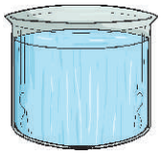


Creepers too have very thin and weak stems. They grow along the ground.

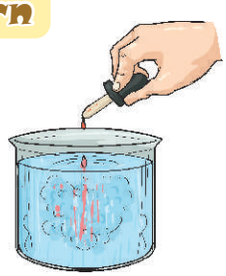
Uses of the stem

- The stem keeps the plant upright.
- It carries water and minerals from roots to the other parts of the plant.
- Similarly, it carries the food made by leaves to the other parts of the plant.
- Some plants such as the sugar cane and potato store their extra food in their stems. We eat some of these stems as food.

Fun and Learn

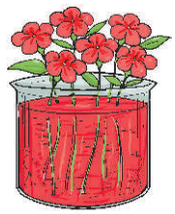


Take a jar full of water.



Drop some red ink in it.

Put some white flowers with stems in it.



After some time, the flowers turn red.

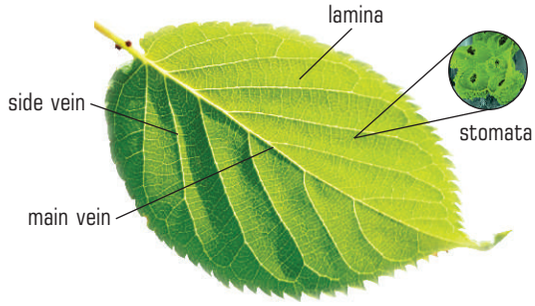
Why does it happen?

It happens because the stem carries the coloured water to the flowers.

LEAVES

Leaves are a very important part of a plant. They are mostly green in colour. But the leaves of some plants are also red, yellow, brown, etc. Leaves differ greatly in shapes and sizes.

Parts of a leaf



Look at the picture of the leaf. The flat and broad part of it is called the **lamina**.

Many thin lines called veins run across it. In the middle of the leaf is the **main vein**. Veins carry water to the leaf.

There are many tiny pores on the underside of a leaf. They cannot be seen by the naked eye. They are called **stomata**. Plants breathe through stomata. Extra water also evaporates through stomata.

Uses of leaves

- The most important function of leaves is to make food for plants. Green leaves prepare food for plants in the presence of air, water and sunlight.

KNOW A FACT

Because of their ability to prepare food, leaves are also called the 'food factory' of plants.

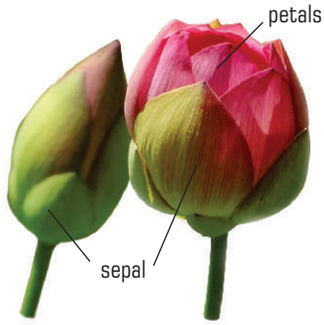
- During the process of making food, leaves give out a gas called **oxygen**. This gas is used by human beings and animals for breathing.
- Leaves release extra water into the air. It helps in causing rain.
- Some plants such as the cabbage and spinach store their extra food in their leaves. We eat the leaves of some such plants as food.

FLOWERS

Some plants bear flowers. The flower is the most beautiful and colourful part of a plant. Flowers are of different shapes, sizes and colours.

Some flowers have fragrance too.

Parts of a flower



Plants first bear buds. Buds later grow into flowers. A bud has an outer green covering called the **sepal**. The sepal protects the bud.

Gradually, the bud opens up and a flower with colourful **petals** comes out.

Uses of flowers

- In most of the plants, flowers turn into fruits.
- Flowers are used for decoration, painting and in religious ceremonies.
- Flowers are used to make perfumes.
- Some plants such as the cauliflower and broccoli store their extra food in their flowers. We eat the flowers of some such plants as food.

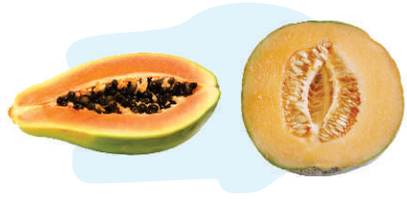
FRUITS

Flowers usually turn into fruits. The fruits of most plants are edible. They are juicy and tasty.

Fruits have seeds in them.

Some fruits have only one seed.

Some fruits have few seeds.



Some fruits have many seeds.

Uses of fruits

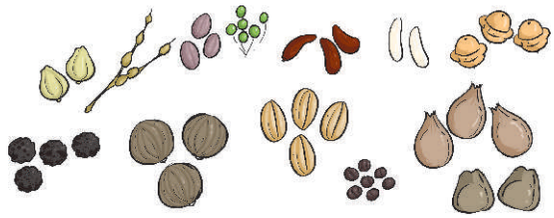
- Fruits protect the seeds inside them.
- Some plants such as the apples, bananas and grapes store their extra food in their fruits. We eat the fruits of some such plants as food.

KNOW A FACT

Many vegetables which we eat are in fact fruits. *Examples:* tomato, ladies' finger, brinjal, cucumber, pumpkin, etc.

SEEDS

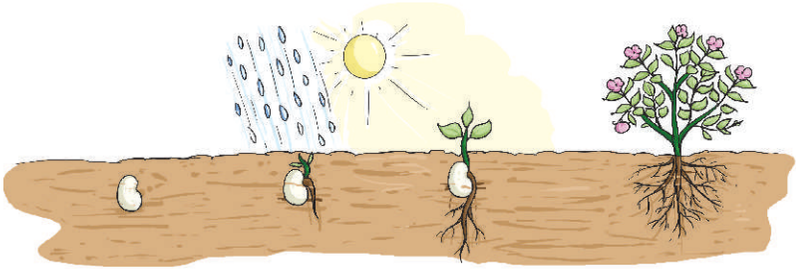
Seeds are found inside fruits. Seeds are of different shapes and sizes.



Uses of seeds

- A seed has a baby plant inside it. A seed needs soil, air, water and warmth to grow into a baby plant.

  The growth of a seed into a baby plant is called **germination**.



germination of a seed

KNOW A FACT

The strawberry has seeds outside the fruit.

- We eat seeds of some plants such as wheat, rice, gram, corn and beans. Such seeds are called edible seeds.

Words to Remember

root	–	the part of a plant under the ground
shoot	–	the part of a plant above the ground
taproot	–	the thick main root in some plants
fibrous roots	–	many thread- like tiny roots in some plants
trunk	–	the thick, hard and woody stem of a tree
lamina	–	the flat broad part of a leaf
stomata	–	tiny pores on the underside of a leaf
sepal	–	the green outer covering of a bud
petal	–	a colourful leaf-like part of a flower
germination	–	the process of a seed growing into a plant

Points to Recall

- A plant has two main parts–the root and the shoot.
- Roots are of two types–tap root and fibrous roots.
- Roots take water and minerals from the soil.
- The stem carries water and food to various parts of a plant.
- Green leaves make food for the plants.
- Plants breathe through tiny pores, called stomata, in their leaves.
- Leaves give out oxygen used by animals and humans for breathing.
- In most of the plants, flowers turn into fruit.
- Fruits have seeds inside them.
- Some fruits have one seed, some have few and some have many seeds.
- A seed grows into a baby plant in the presence of water, soil and warmth.

Exercises

A. Tick (✓) the correct option.

1. The part of a plant that grows under the ground is the
   (a) branch ☐ (b) fruit ☐ (c) root ☐ (d) leaf ☐
2. Which of these plants has a taproot?
   (a) grass ☐ (b) mustard ☐ (c) onion ☐ (d) wheat ☐
3. The part of the plant that takes in water from the soil is
   (a) leaf ☐ (b) fruit ☐ (c) root ☐ (d) bud ☐
4. The stem of a _____ is thick, hard and woody.
   (a) climber ☐ (b) tree ☐ (c) shrub ☐ (d) herb ☐
5. A plant breathes through the _____ on its leaves.
   (a) lamina ☐ (b) sepal ☐ (c) veins ☐ (d) stomata ☐
6. A bud grows into a
   (a) fruit ☐ (b) leaf ☐ (c) shoot ☐ (d) flower ☐

B. Write 'T' for true statements and 'F' for false ones.

1. Mangrove trees also have roots which hang above the ground. ☐
2. Herbs have soft and green stems. ☐
3. Flowers release extra water into the air. ☐
4. Sepals are the colourful part of a flower. ☐
5. Vegetables like carrots and potatoes are in fact fruits. ☐

C. Answer in one or two words.

1. Name an underground stem. _____
2. What is the flat and broad part of a leaf called? _____
3. Name the gas given out by leaves. _____
4. What is the growth of a seed into a baby plant called? _____
5. What fruit has seeds outside it? _____

D. Answer in one sentence only.

1. What do you understand by the shoot?
2. Why does a climber need support to grow?
3. What are stomata?
4. How do leaves help in causing rain?
5. Name a few edible seeds.

E. Answer in two or three sentences.

1. Differentiate between taproot and fibrous roots.
2. What are the uses of stomata?
3. Why are leaves called the 'food factory' of plants?
4. Write a few uses of flowers.
5. What is germination? Explain.

Creative Skills

BRAINSTORM

1. The gardener frequently loosens the soil in plant pots. Why does he do so?
2. Why is a potato called a stem, though it grows under the ground?
3. If you swallow a seed of an apple by mistake, would an apple plant grow inside your body? Why or why not?

TELL YOUR TEACHER

Given below are some people. Tell your teacher which part of a plant each of them can be compared to.




1. How do people in South India use banana leaves?
2. Find the name of one fruit which has no seeds.

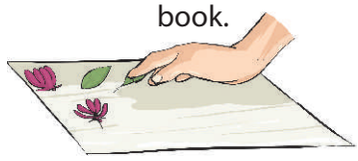
Project

Go to a garden or a field. Pick up some fallen leaves and flowers.

Place them in a thick book.

Put some more heavy books on top of that book.

After a few days, the leaves and flowers will dry.



Take them out and paste them on a sheet of chart paper.

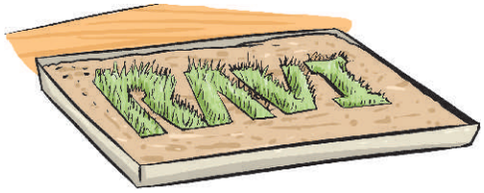
Submit the chart to your teacher.

Write below each leaf and flower the name of the plant.

Activity Time

- Take a broad and deep tray and fill it with soil.
- Now write your name on a sheet of chart paper as shown.
- Cut out your name.

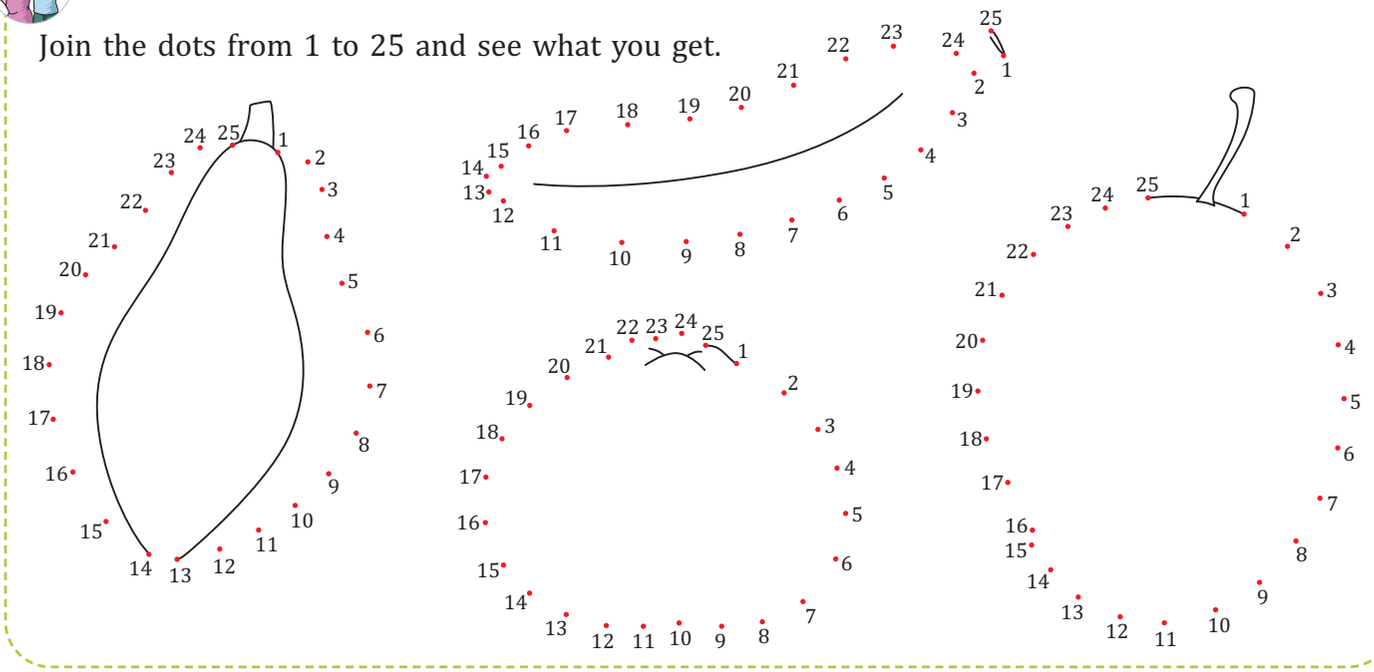
- Place the paper on the tray.
- Sow some mustard seeds in the soil that lies below your name.
- Remove the paper.



- Put the tray in an open place.
- Keep watering it regularly.
- After some days, you will see your name written with small plants.

Let's Have Fun

Join the dots from 1 to 25 and see what you get.



Virtual Tour

For more information visit:

- *http://www.brainpop.com/educators/community/bp-jr-topic/parts-of-a-plant/*
- *http://kidsgrowingstrong.org/Germination*