

Living and Non-living Things



We see many things around us. For example, there are trees and toys, animals and aeroplanes, rocks and rockets, flowers and fountains, birds and books. Some of these are living and some are non-living things. **Living things** have life in them. Humans, animals and plants all have life. So, they are called living things.



ACTIVITY

Look around your room. Observe the things. Now classify and write them as living things or non living things.

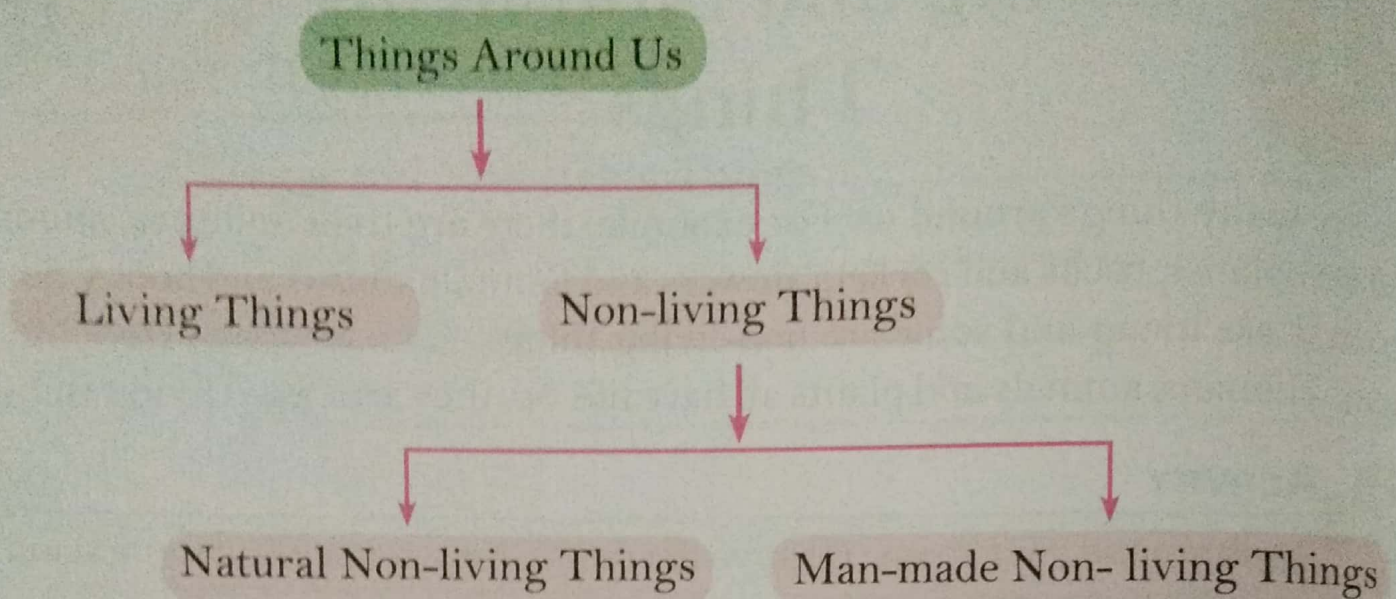


There are many things around us

Living things :

Non-living things :

Non-living things do not have life in them. They can be further grouped as **natural non-living things** and **man-made non-living things** us.



Things like car, chair, table, book, pen, bus, bridge and school are built by man. So, they are called man-made non-living things. Moon, Sun, rock, soil, air and water are not made by man. So, they are called natural non-living things.

Features of Living Things >>>

Living things show some special features that keep them alive. Let us know about them. These features distinguish living things from non-living things.

Living Things Move

Living things can move on their own. They move because they are alive. All animals move from one place to another. For example, cat, dog, cow, deer all walk, birds fly and fish swim in water. Animals move in search of food, water and suitable habitat.



Dog



Boy

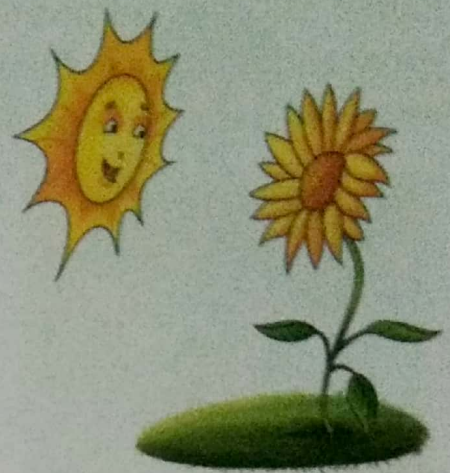


Fish

Living things move

Animals also move to find suitable place to live. It helps them to protect themselves from enemies. If they would not be able to move, large animals may kill the smaller animals.

Some parts of the plants also move such as roots. Roots grow and move down the soil. Sunflower moves towards the sunlight during the day time and folds its petals at night. **Non-living things do not move on their own.**



Plants also show movement

Living Things Grow

All the living things grow. They grow and change their shape and size as they get older. A small baby grows slowly into an adult. A baby elephant grows into an adult elephant. A small plant grows into a tree.

KNOW MORE

Bamboo is the fastest growing woody plant in the world. It can grow 35 inches in a single day.



A baby grows into an adult



A seed grows into tree

Have you seen a small chair growing into a big chair? Can a small basket grow into a big basket? No, they cannot. Because **non-living things do not grow.**

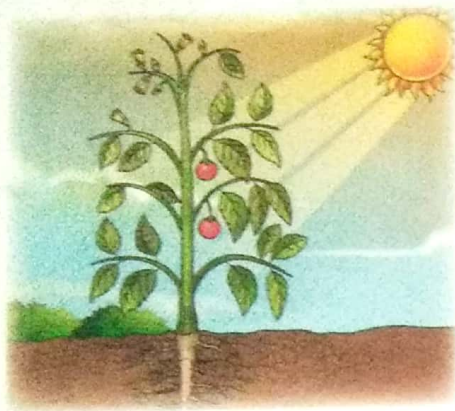
Living Things Need Food

All living things need food to grow and survive. Food gives us energy to work and play. What do you do when you forget your tiffin at your

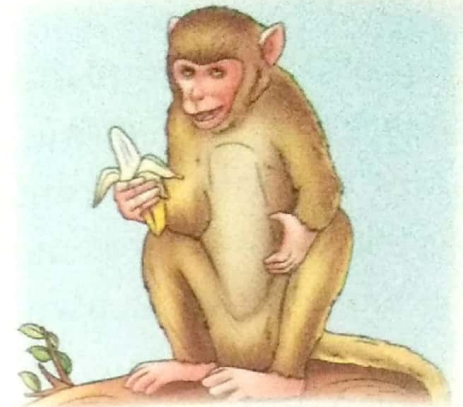


What will happen if you do not water plants for four days during summer season?

home? You feel sad because you are hungry. Like us, all animals need food to grow and stay alive. Plants also need food to grow. Green plants make their own food with the help of air, water and sunlight.



Green plants make their own food



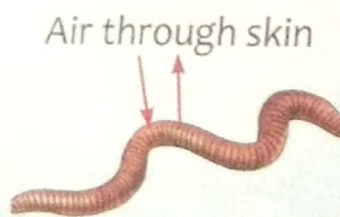
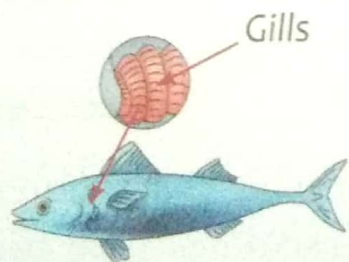
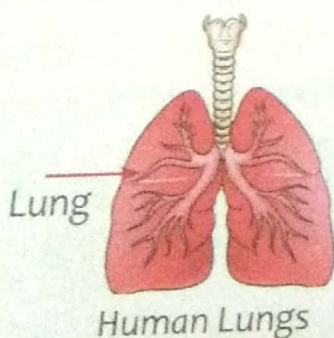
We all need food to grow

Non-living things do not need food. Have you seen a chair eating food or a ball drinking a chocolate shake?

Living Things Breathe

Living things breathe air. They cannot stay alive without breathing for a minute. Plants, animals and humans all need air for breathing. Human beings breathe through lungs. Air is taken in through nose. Animals breathe by different ways. They have lungs, gills, air holes and skin for breathing.

Plants also breathe. They have minute pores present on their leaves that help them to breathe. These are called **stomata**. **Non-living things do not breathe.**



All living things breathe air

Living Things Can Feel

All living things feel changes around themselves. A dog runs away when someone throws stone on it. A cat purrs when you strike it.

How do you feel when you touch a hot vessel? We move our hand very quickly when we touch a hot vessel. We cry when we feel pain.

Plants also feel. Touch me not (mimosa) plant shows movement when we touch it. Plants need sunlight to grow. Some flowers get colourless in the absence of sunlight. They need sunlight to be colourful. This shows that all living things feel.

Non-living things do not feel.



Living things feel pain
when hurt

Practice Time

1. Which animals breathe through lungs and gills?
2. Car, boat, telephone and bridge are man made or living things?
3. How does a dog feel when someone throws a stone on it?
4. How do plants breathe?

Living Things Produce Babies

Living things produce their own babies. You must have seen a bird laying eggs and babies coming out of them. Some animals lay eggs. Small babies hatch out of the eggs. Many others do not lay eggs, such as elephant, horse, tiger, monkey and humans although they produce babies.

A baby plant comes out of the seed. Some plants also produce new plants from the stem, leaves and roots. You may have seen sometimes a gardener planting a stem of rose in the soil. **Non-Living things do not produce babies.**



All living things produce babies

Life Skills

- ❖ Do not tease your pets.
- ❖ Keep some grains and water in your balcony or terrace. Little birds will eat their meal.

Keywords

- ♦ **Living things** : Things that have life.
- ♦ **Petals** : Colourful parts of flower.
- ♦ **Breathe** : Inhale and exhale air.
- ♦ **Stomata** : Tiny pores on leaves.

Let's Revise

- There are many living and non-living things around us.
- Living things include humans, animals and plants.
- Non-living things are chair, plastic, stones, bricks, etc.
- Things made by man are called man-made things.
- Living things can move, breathe, grow, eat and feel.

Quora Watch

A. Tick (✓) the correct answer.

1. Which of the following is a non-living thing?

- | | |
|--------|-----------|
| a. Bus | b. Plants |
| c. Dog | d. Fish |

2. Things that move and breathe are _____.

- | | |
|------------------|---------|
| a. Living things | b. Car |
| c. Soil | d. Rock |

- B. Write 'T' for true and 'F' for false statement.**

- C. Fill in the blanks with the correct words from the box.**

D. Who am I?

- 13

4. I am a natural thing and I make fresh breeze.
5. My young ones hatch from the eggs and they have feathers on their bodies.

E. Encircle the non-living things from the names given below.

- | | | | |
|--------|-----------|-------------|-------------|
| 1. Air | 2. Chair | 3. Water | 4. Elephant |
| 5. Car | 6. Flower | 7. Mountain | 8. Duster |

F. Answer the following questions.

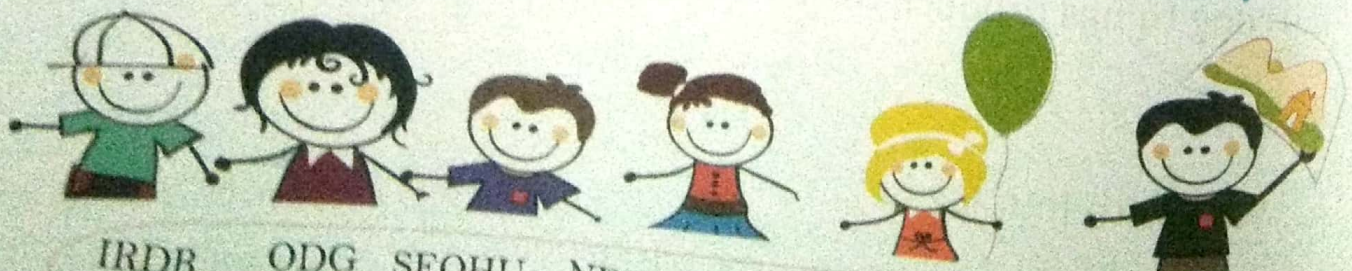
1. Name any two man-made things.
2. Write any two features of non-living things.
3. What are natural non-living things? Give three examples.
4. Why do living things need food?
5. Why do animals move?
6. How do you react when you touch a hot vessel of water?
7. How do fish breathe?

G. Think and Answer.

Write down the names of the things that are man made and are present in the natural form.



1. Correct the jumbled words given below and write in the correct place.

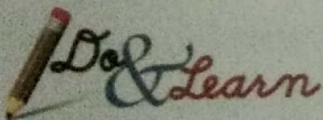
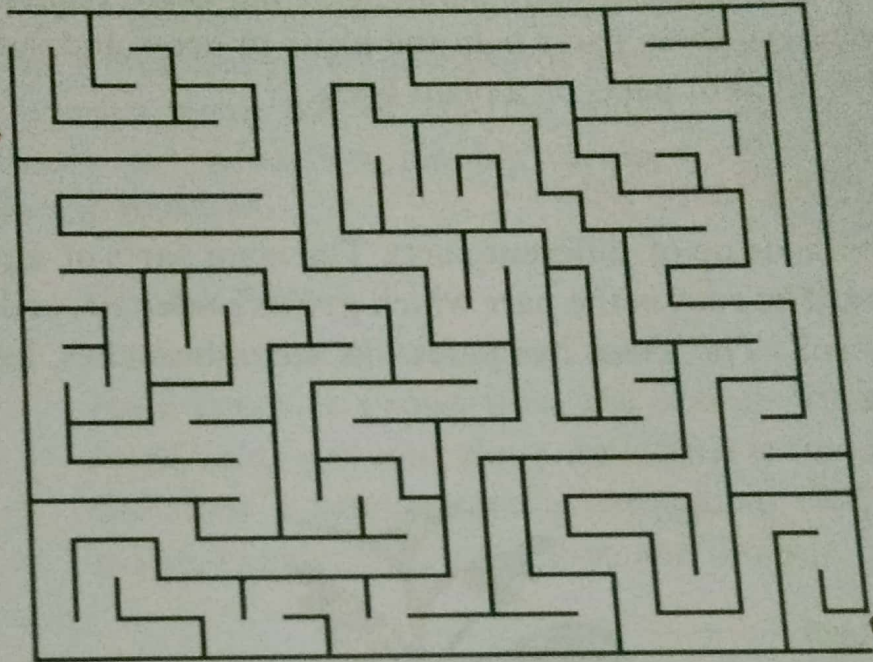


IRDB	ODG	SEOHU	NEPLIC	ULEG	HARIC	NOEYKM
AGOT	IMTN	OKOB	EPALEP	NAT		

We are natural things. _____

We are man-made things. _____

2. Meeku monkey is fond of bananas. Can you help him to reach his favourite food.



Take some pictures of non-living and living things and make a collage. Display it on the bulletin board of your school.



Take a small stem of money plant and keep it in a bottle half of full water. Observe for 3 to 4 days. You will see roots growing from the base of the money plant.



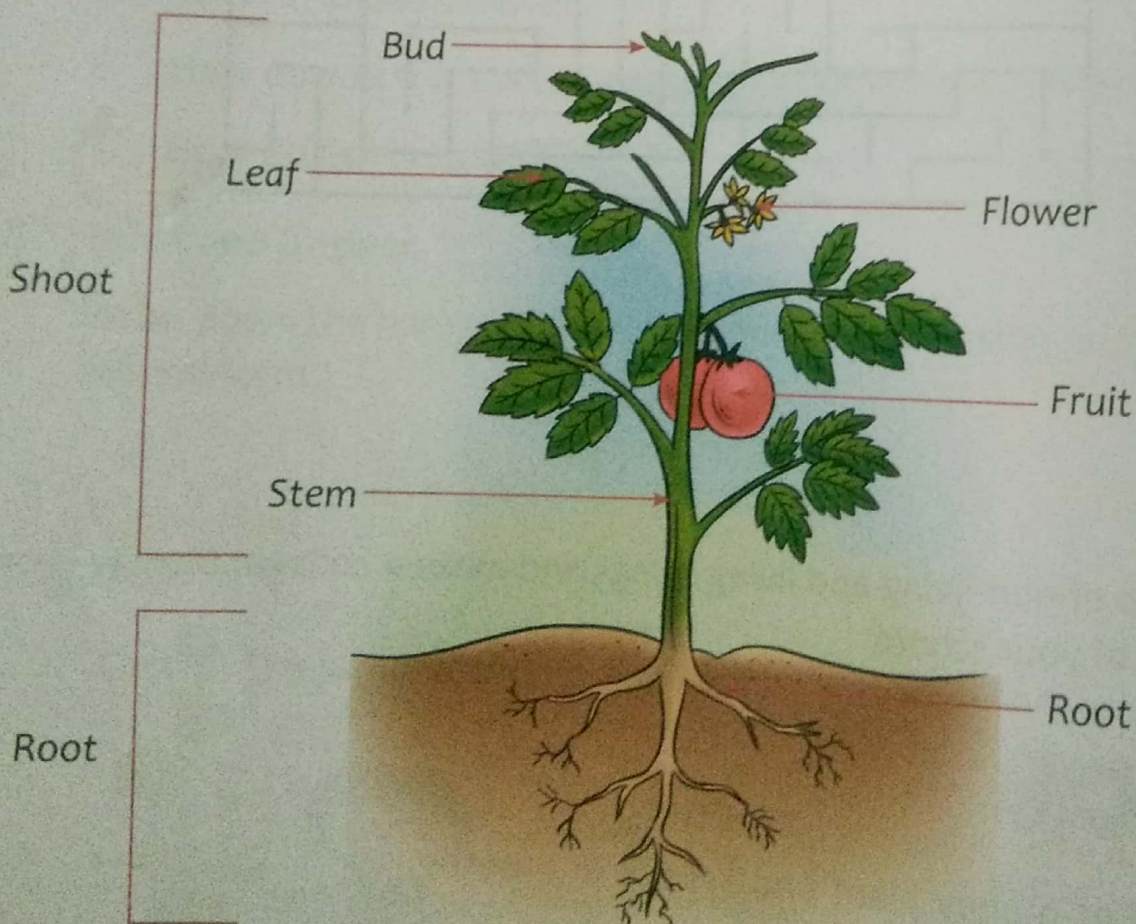
Money plant

Parts of a Plant

Our body has different body parts. Alike our body, plants also have different body parts. All these parts help the plant to grow and survive. Let us learn about the different parts of a plant body.

Parts of a Plant >>>

Plants are made up of different parts. The main parts of a plant body are **root** and **shoot**. The root is the part which grows under the soil. The shoot grows above the soil. The shoot has parts like stem, branches, leaves, flowers, buds and fruits.



Parts of a plant

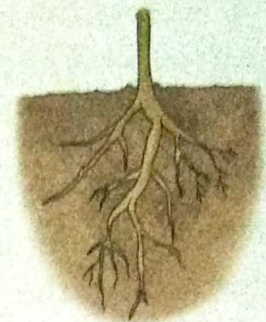


Root

Root is the part of a plant that grows under the soil. It helps the plant to fix tightly in the soil. The roots have many thin branches. These help them to absorb water from the soil. There are two main types of roots – **tap root** and **fibrous root**.

Tap Root

Tap root is a long, thick root that grows downwards into the soil. Small thin roots grow out of the tap root. Examples of tap roots are dandelion, parsley, turnip, carrot, bean, balsam and mustard.



Tap root



Fibrous root

Fibrous Root

A fibrous root is made up of many small roots. It grows from the end of the stem. The small roots grow in many directions from the base of the stem. Examples are grass, wheat, rice, marigold, maize, banana, millet, bamboo and onion.

Functions of Root

- Root helps the plant to fix firmly in the soil.
- They absorb water and minerals from the soil for the plant.
- Some roots like roots of a carrot, radish, beetroot, turnip, sweet potatoes and sugarbeet store food in them. We eat these roots.
- Roots prevent soil to blow away.

Differences between tap root and fibrous root

Tap Root	Fibrous Root
1. Tap roots have one main root.	1. Fibrous roots have no main root.
2. Small and thin roots grow out from the main root.	2. Thin and bushy roots grow out from the base of the stem.
3. Main root is thick and side roots are thin.	3. All the roots have the same thickness.

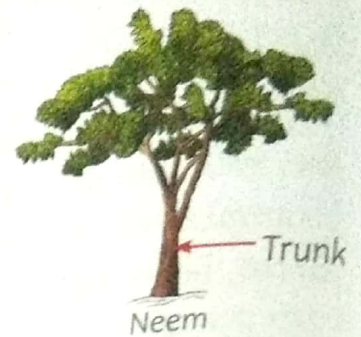
Shoot

Shoot is the part of a plant that grows above the soil. It has parts like stem, branches, leaves, buds, flowers and fruits.

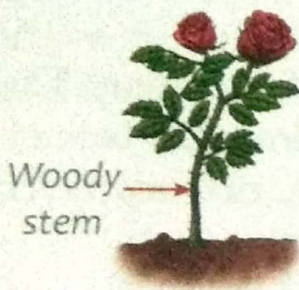
Stem

The stem is the upper part of the plant. It grows above the ground. The main function of the stem is to hold the plant in an upright position.

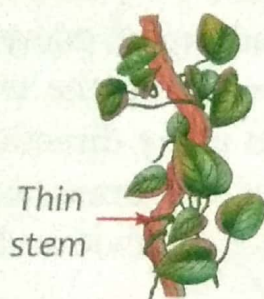
The stem of big trees like Neem, Coconut and Ashoka are hard, strong and woody called as **trunk**. The trunk helps to keep the plant upright in the soil. It is the main part of the tree that holds it upright.



Trees have hard stem



Rose plant

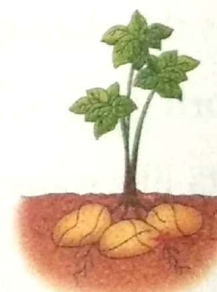


Money plant

Some plants have woody stems but are not so thick. Examples are rose, lavender, tulsi. The plants like coriander, mint, garlic have soft and weak stems. Some plants have very thin and weak stems. They need support of the other plants to climb

up. For example, money plant, bougainvillea, pea plant and grapevine.

The stems of potato, ginger and turmeric grow below the soil. They are called **underground stems**. The underground stems store food in them.



Potato plant

Functions of Stem

- Stem helps the plant to hold upright in the soil.
- It carries water and food to the various parts of the plant.
- Stem of some plants such as sugarcane, potato, carrot, sweet potato and ginger store food.
- Stem supports leaves, branches, fruits and flowers.

Amazing Fact

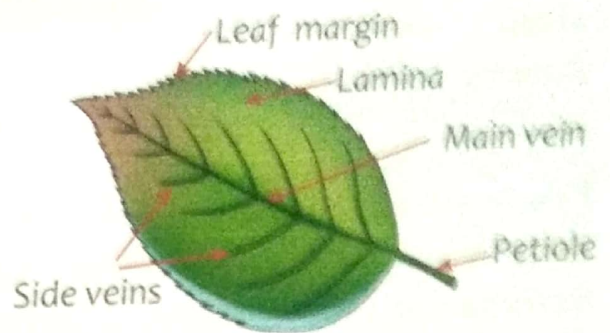
The age of the tree can be taken by counting annual growth rings. These can be seen when a tree is cut.

Fill in the blanks.

1. Rose plant has _____ stem.
2. Fibrous root is made up of _____ roots.
3. _____ grows above the soil.
4. The hard part of stem is called _____.

Leaf >>>

Leaves are the green parts of a plant. The green colour of leaves is due to a pigment called **chlorophyll**. A leaf has flat and broad surface called as **leaf blade** or **lamina**. A stalk called petiole holds leaf to the stem. In the middle of the leaf, there is a line called **midrib** or **main vein**. There are a number of side veins that branch out from the main vein.



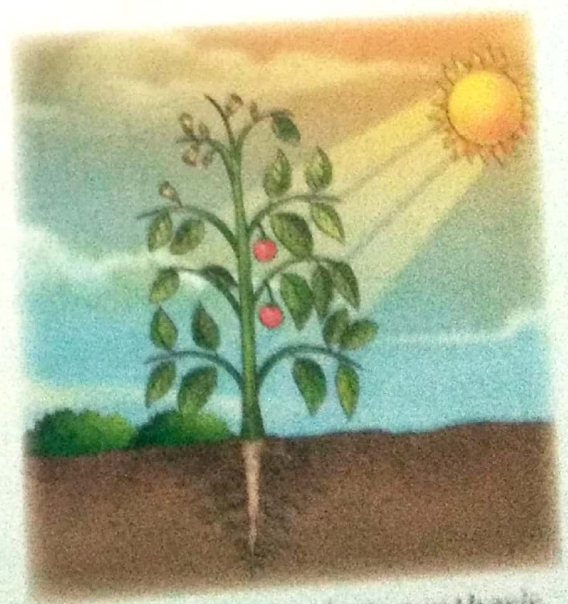
Parts of a leaf

These fine veins carry water to the leaf. The lower side of the leaf has many tiny pores called **stomata**. Air enters through these pores.

Functions of Leaf

A leaf is an important part of a plant. It performs many functions.

- Leaf is also called as a **kitchen** or **food factory** of the plant. Green leaf prepares food for the plant with the help of air, water and sunlight. This food making process of plants is called as **photosynthesis**.
- Plants breathe through their leaves. Leaves have stomata for breathing.



Leaves carry out photosynthesis

- Leaves of plants such as cabbage, spinach and mint store food in them. We eat the leaves of these plants.
- Leaves help in releasing extra water from plants.

Flower

Flowers are colourful parts of the plant. They grow from buds. They have different colours, shapes and sizes. Most flowers smell sweet. The flowers grow into seeds.



Bud



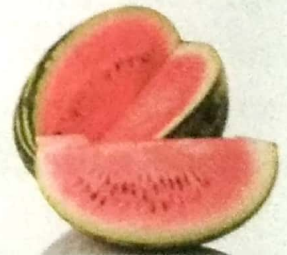
Flower

Bud changes into a flower

Fruits such as mango, peach, cherry and avocado have one seed. There are some fruits having more than one seed; these are apple, papaya, oranges, watermelon, pomegranate, strawberry and guava.



One seed fruits



Fruits with many seeds

Plants Grow From Seeds >>>

Plants grow from seeds. Seeds are protected inside the fruit. A baby plant lies inside the seed of the mother plant. "Have you seen a small baby plant coming out of the mango seed thrown in the garbage?"



A seed grows into a plant

When the seeds get enough water, air and warmth, the baby plant come out and starts growing into a new plant. "Do you know that a seed will die, if it will not have sufficient air, water and sunlight?"

Life Skills

- ❖ Grow too many plants and trees.
- ❖ Never pluck flowers from the garden.
- ❖ Do not throw the seeds of mangoes and other fruits on the road.

Keywords

- ♦ **Tap root** : A main root to which many smaller, thin roots are attached.
- ♦ **Fibrous root** : A type of root with no main root with several thin roots bunched together.
- ♦ **Trunk** : Main, hard stem of a tree.
- ♦ **Leaf blade** : Flat and broad part of a leaf.
- ♦ **Veins** : Tubes running through a leaf.

Let's Revise

- A plant is divided into two main parts - the root and the shoot.
- Root is divided into two main types - the tap root and the fibrous root.
- Roots help to fix the plant into the soil. They take water from the soil.
- Stem grows above the ground.
- Leaf is the green part of a plant. It makes food for the plant.
- A flower grows into a fruit. The fruit has seeds inside it.
- A plant grows from the seed.
- Seeds are protected inside the fruit.
- When seeds get enough water, air and sunlight, the baby plant come out and grows into a new plant.

A. Tick (✓) the correct answer.

- Which of the following has a tap root?
 - Mustard
 - Grass
 - Wheat
 - Bamboo
- The part which makes food for the plant is _____.
 - Flower
 - Stem
 - Leaf
 - Root
- Which of the following is a tree?
 - Coconut
 - Coriander
 - Pumpkin
 - Mint
- We eat cabbage which is a _____.
 - Stem
 - Leaf
 - Flower
 - Root
- A seed will die if it will not have sufficient _____.
 - Sunlight
 - Water
 - Air
 - All of the above

B. Write 'T' for true and 'F' for false statement.

1. The stem of a mango tree is soft.
2. Most fruits have seeds inside them.
3. The leaf makes food for the plant.
4. Plants breathe through stem.
5. Shoot is the lower part of the plant.
6. Root supports the plant.
7. Green leaves contain chlorophyll.

C. Fill in the blanks with the correct words from the box.

leaf blade, seed, shoot, potato, tap root

1. The part that has a baby plant inside it is called a _____.
2. _____ is the long thick root.
3. _____ is present above the ground.
4. _____ is a stem.
5. Flat, broad surface of the leaf is called as _____.

D. Who am I?

1. I have tiny pores called stomata. _____
2. I am called the kitchen of a plant. _____
3. I am hard and brown in colour. _____
4. I have a fibrous root. _____
5. I am a line present in mid of leaf. _____
6. I grow from buds. _____

E. Answer the following questions.

1. Name the two main parts in which a plant body is divided.
2. Write the main function of the root.
3. Write the names of different parts of a plant.
4. Name the things needed by a plant for photosynthesis.
5. Write down any one function of a leaf.
6. Write any stem that we eat as food.
7. How does a seed grow into a new plant?

F. Think and Answer.

Write down the name of the plants that store food in their stem.



1. Observe the roots of these plants. Write their type in the given space.

Coriander _____

Grass _____

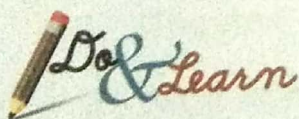
Spinach _____

Onion _____

Radish _____

Mustard _____

2. We eat these seeds as our food. Identify and write their names.



Collect pictures of different flowers and paste them in your scrapbook. Write their name below the pictures.



Keep a potted plant in a dark room for a few days. You will see that the leaves of the plant start yellowing. The plant will die after a few more days which shows that plants are unable to make food without sunlight.