

**BOYS' HIGH SCHOOL AND
COLLEGE, PRAYAGRAJ
SESSION - 2020 TO 2021
SCIENCE
WORKSHEET NO. 2
CLASS – 3 (A-F)**



Unit 4 Plant Life



Reegha, few days back there were no plants in this field and now it is full of plants.

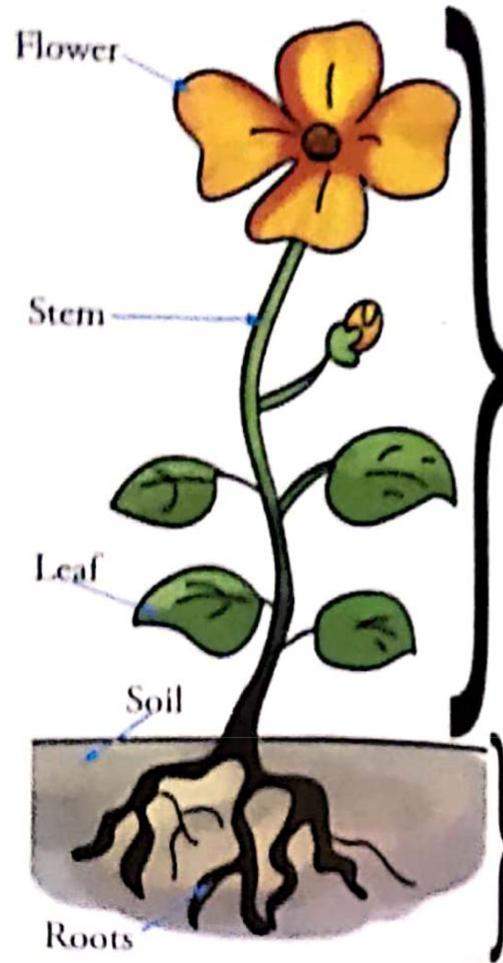
Sanjam, that time farmers had sown seeds in soil and now they have emerged into plants.



Plants

Plants are the living organisms. They are fixed to the soil. Plants also have many body parts. There are different kinds of plants. These plants differ in height, structure and looks. Most of the plants grow in soil. Hence, we can divide the body of a plant into two main parts: **root and shoot**.

Different Parts of a Plant



The part of a plant in the air or above the ground is called the shoot.

The part of a plant in the soil or below the ground is called the root.

The different parts of a plant perform different functions. Each plant part has an important task to do in the life of the plant.



Q. Do you know what are minerals ?

Ans. Substances present in the soil that the plant takes in to stay healthy are known as minerals.



Roots fix the plant in the soil and the shoot contains stem which bears fruits, flowers and buds.

Why all plants look so different? Even their roots differ a lot!

Yes! They look very different but the functions are almost the same. I will explain you in detail.



ROOT

The part of the plant which remains under the ground is called the root.



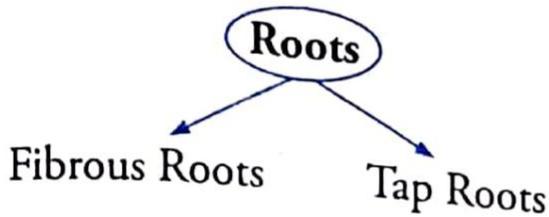
Functions of Roots

- It holds the plant firmly in the soil.
- It helps to take up water and minerals from the soil.
- Some roots store food and are used for eating.

Types of Roots

Roots are mainly of two types:

- Fibrous roots
- Tap roots



Fibrous Root System –

When several tiny roots grow from the end of the stem, it is called fibrous root system.

Examples : Wheat and rice,



Tap Root System –

When a single main root grows from the end of stem and many small roots grow from it, it is called a tap root system.



Examples : Cotton and mustard.



Q. Which two roots can I eat ?

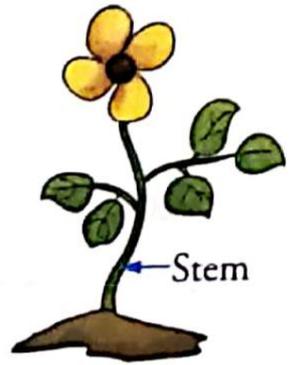
Ans. Radish and Carrot.



STEM

Stem is the main part of shoot. It bears leaves, buds, flowers and fruits.

The main stem which is large and thick in trees is called the trunk and the other thinner stems are called branches.

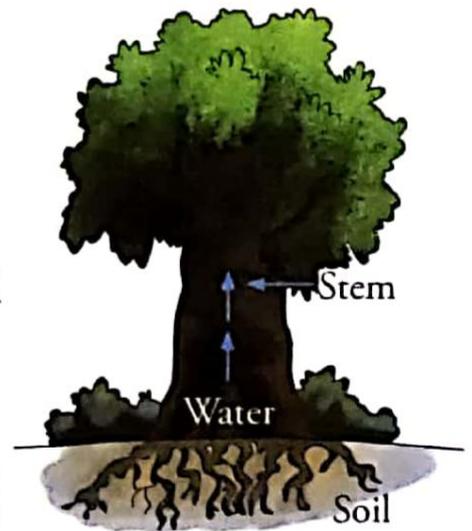


Functions of Stem

- The stem holds up leaves, flowers and fruits.

- It carries water to all parts of the plant.

- Hard stems support the plant.
- Weak and green stems prepare food for the plant.
- Some stems store food and are used for eating purpose.



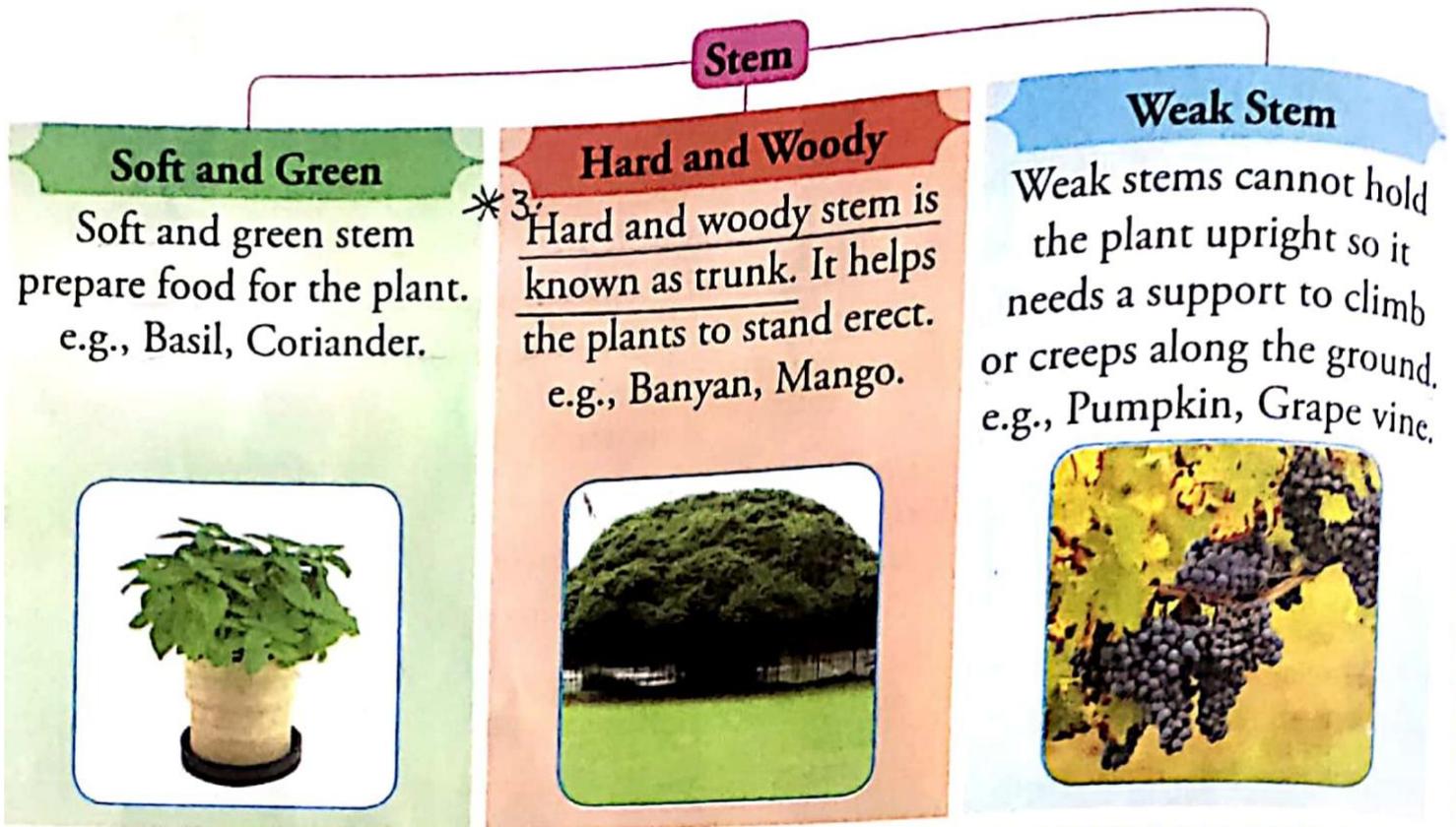


Two stems which all children like to eat are potato and sugarcane.



Types of Stem

Stem is broadly classified into three categories:



Skill Fill

Classify the following stems by choosing from the clue box.



Cluebox

1. hard and woody

2. soft and green

3. weak stem

Worksheet — 1

Q.1. Unscramble the letters to reveal three main parts of plant.

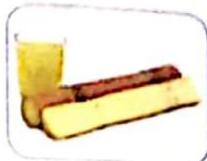
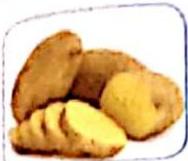
RWELFO _____

EAFLE _____

ESTM _____

Q.3. Complete the following sentences by filling the blanks.

Roots which store food can be used for eating. _____ and _____ are two such roots. Some stems like _____ and _____ also store food and can be used as food item.



Q.5. Name the types of root shown:



Q. Which stem contains maximum sugar?

Ans. Sugarcane.

Q.2. Write whether each statement is true or false :

- (a) The part of the plant which remains underground is known as shoot. _____
- (b) Roots hold the plant firmly in the soil. _____
- (c) Green stems do not prepare food for the plant. _____
- (d) Weak stems hold the plant upright. _____

Q.4. Tick (✓) the correct answer.

Potato, used as a vegetable, is which part of the plant

- (a) root
- (b) stem
- (c) leaf
- (d) fruit

Q.6. Answer the following questions :

1. Which stem cannot hold the plant ?

2. What is hard and woody stem known as ?

3. Which stem can prepare food ?

LEAF

Leaves are usually green coloured structures attached to the stem. The leaf absorbs maximum sunlight due to its flat surface.



* 1.
Leaf Blade : The flat surface of leaf is called leaf blade.

Veins : The vessels which carry water to leaf are called veins.

Functions of Leaf

- Green leaves help the plant to prepare its food.
- Leaves contain stomata. It helps the leaves to breathe.
- Some leaves become thick and fleshy and store food. Such leaves can be used for eating. Example - Spinach.

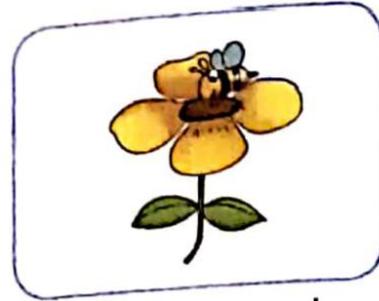
FLOWERS

Flowers are the colourful structures attached to stem. They make the plant look attractive.

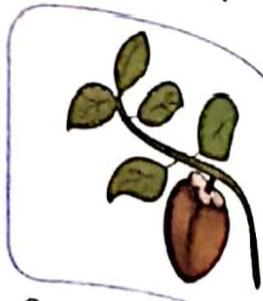


Functions of Flowers

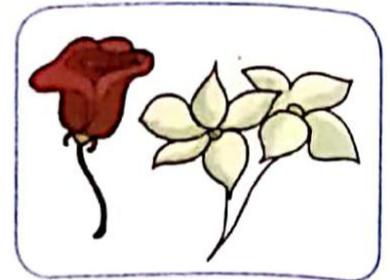
- Flowers help in the reproduction of plant.
- Many flowers like Rose and Jasmine yield perfumes.
- Many flowers produce a sweet liquid called nectar.
- Some flowers change into fruit.



Some flowers produce nectar.



Some flowers change into fruit.



Some flowers yield perfumes.

FRUITS

* 5 Fruits are the sweet, fleshy edible part of a plant.

Fruits also contain a sweet fragrance. Not only human beings but many birds and animals also eat fruits. Fruits are formed from flowers. They contain seeds.



The number of seeds are different in different fruits.



Functions of Fruits

- Fruits store the food material.
- Fruit contain the seeds which when sown give rise to a new plant.

SEEDS

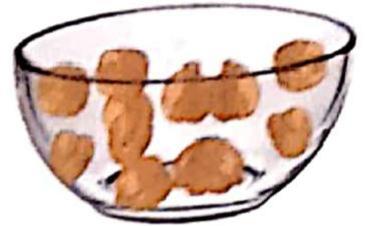
* 2,
Seeds are the hard structures present in a fruit. Seeds contain a tiny baby plant. This baby plant in the seed is protected by a seed coat.

Types of Seeds

Edible seeds: Seeds of some plants can be eaten. Such seeds are called edible seeds. e.g., Wheat and Gram.



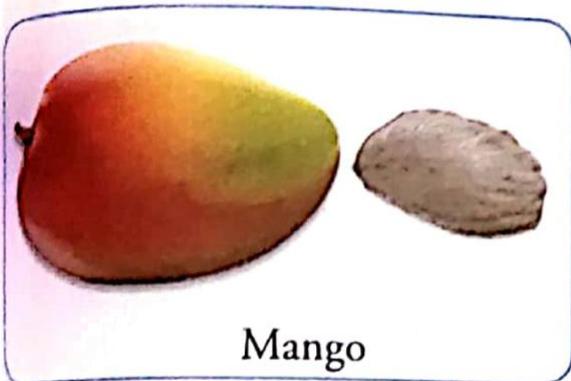
Wheat Seed



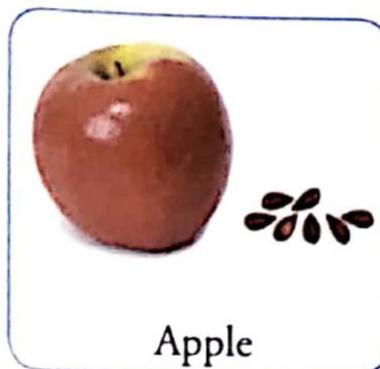
Gram Seed

Non-edible seeds: Seeds of some plants cannot be eaten. Such seeds are called non-edible seeds, e.g., Orange and Apple seeds.

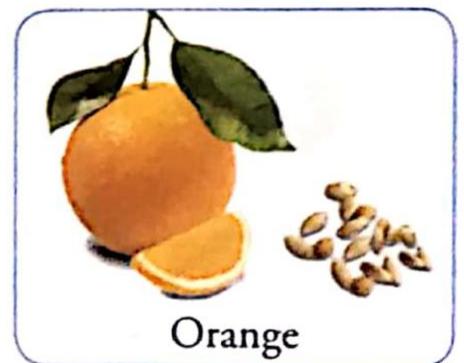
Seed is protected by a hard layer known as **seed coat**. When it is sown, the seed coat bursts open and a baby plant emerges out. This baby plant grows into a healthy plant on receiving proper amount of sunlight, air, water and minerals from the soil.



Mango



Apple



Orange

Worksheet - 2

Q Which fruit doesn't contain any seed?

Ans. Banana.

Q.1. Unscramble the letters to reveal the different products of plants.

FURPEEM _____

RCNAET _____

TUIRF _____

Q.3. Complete the following sentences by filling in the blanks :

Wheat and Gram are seeds which can be eaten. Hence, they are known as _____ seeds. Orange and Apple seeds cannot be eaten. Hence, they are known as _____ seeds. Seeds if sown can give rise to a _____ plant.

edible baby non-edible

Q.5. 1. Label the parts



2. What is the colour of most leaves ? _____

3. Which feature of leaf helps to absorb maximum sunlight ? _____

Q.2. Write whether each statement is true or false.

(a) Pulp is the hard structure present in a fruit. _____

(b) The sweet liquid present in a fruit is nectar. _____

(c) The flat surface of leaf is called vein. _____

(d) Leaf makes the plant look attractive. _____

Q.4. Tick (✓) the correct answer.

Which living organism sucks nectar ?

(a) crab

(b) honeybee

(c) housefly

(d) mosquito

Q.6. Answer the following questions :

1. Name any flower that yields perfume. _____

2. Where are stomata present ? _____

3. What are the vessels which carry water to leaf known as ? _____

GROWING PLANTS FROM SEEDS

When you eat papaya or a watermelon, you will find seeds inside. New plants can be grown from these seeds. Let us perform the activity given below to understand the parts of a seed.

Activity :

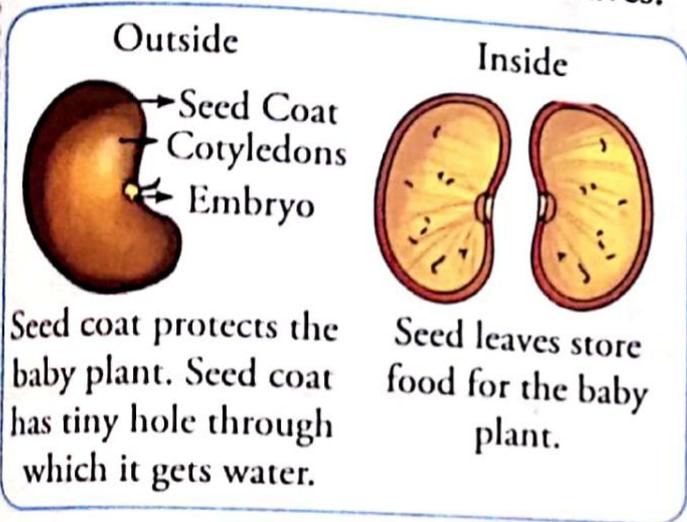
1. Take a handful of gram seeds.
2. Dip them in water overnight.
3. Take one of the seeds in the morning.
4. Observe it carefully.

You will observe the following parts :

Seed coat: It is the outer hard covering which can be removed.

Cotyledons : These are the seed leaves you will see on removing the seed coat.

Embryo : The baby plant which we see on separating the two seed leaves.



STRUCTURE OF SEED

Types of Seed

Monocot Seed	Dicot Seed
Seeds which contain only one cotyledon are known as monocot seeds. e.g., : maize, rice	Seeds which contain two cotyledons are known as dicot seeds. e.g., : beans, gram, pea
	

GERMINATION OF SEEDS

The process by which seed changes into a baby plant (called seedling) is called **germination**.

During the early stages of germination, the seedling gets food for its growth from the seed leaves. After the seed leaves are used up, the baby plant obtains its nourishment from the nutrients present in the soil.

Stages of germination : The entire span from the seed to a plant is referred as stages of germination.

1. Seeds absorb water from the soil.



2. Seed gets air and light, seed coat breaks and the seedling comes out.



3. The seedling develops root (or radicle) which grows downwards and shoot (or plumule) which grows upwards.



4. Cotyledons shrink and disappear. The seedling develops into an young plant.

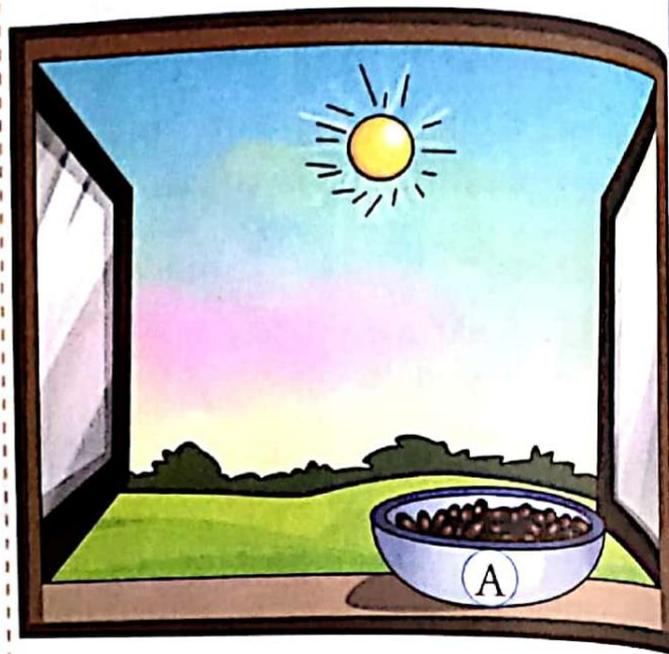


5. Young plants take time and grow to maximum.

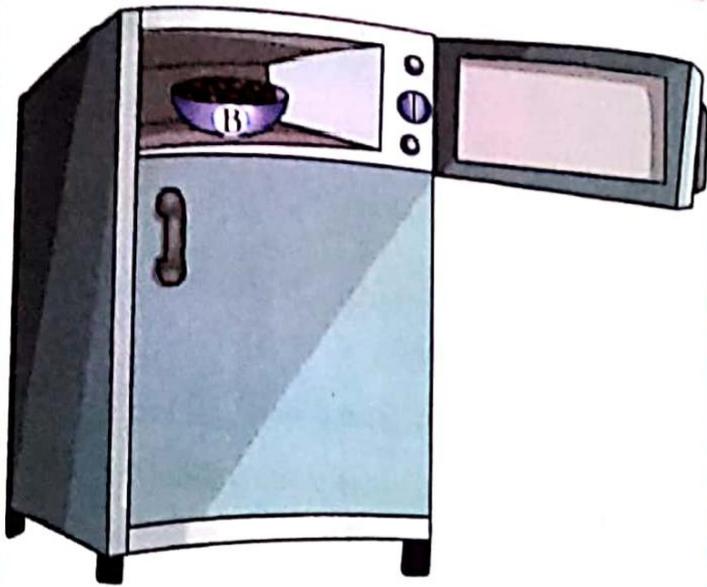
Conditions required for Germination
Conditions for germination include air, water and warmth. Thus, in order to understand the conditions of germination, let us carry out the following activity:

Activity :

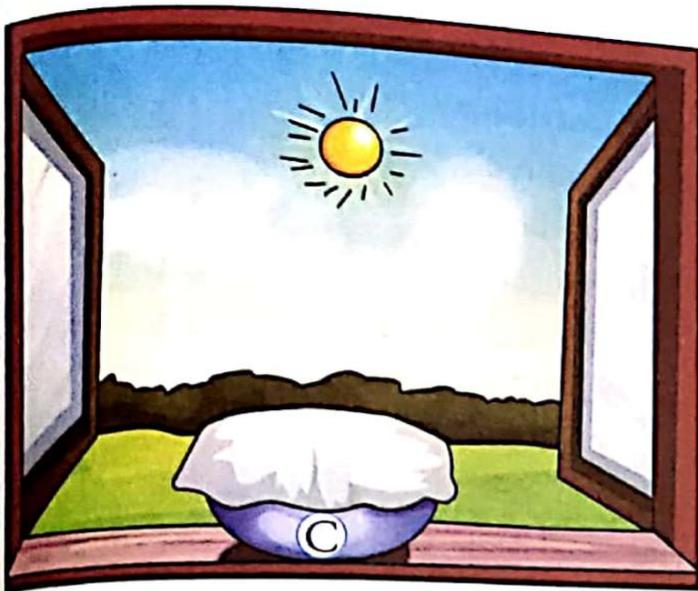
- Take three small bowls and label them A, B and C.
- Take some red kidney shaped bean seeds in each bowl.
- Keep bowl A by the side of a window where it gets sufficient air and sunlight.



- Soak the seeds in bowl B in moist cotton and place it in a refrigerator.



- Soak the seeds in bowl C in moist cotton and keep it by the side of a window where it gets sufficient air and sunlight.



Now what do you observe?
 Let us fill the given table.
 Tick (✓) the conditions which the seed got.

	Air	Water	Warmth	Result (Seeds showing germination)
Bowl A				
Bowl B				
Bowl C				

Observation : You will observe that the seeds in bowl C germinate as they get air, water and warmth which is required for germination.

Conclusion : Seeds require :

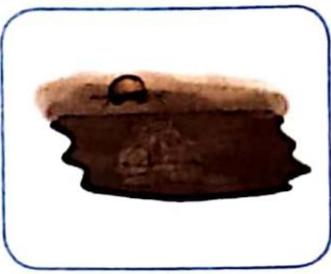
1. Air
2. Water
3. Warmth
for germination.

Q.1. Unscramble the letters to make meaningful words :
 NEMATGRINIO _____
 EDIGSELN _____

Q.3. Fill in the blanks with the options given below :
 Plants require _____ which they get from sunlight, _____ which is provided by moisture and _____ for their germination.

air water warmth

Q.5. Sanjam was given an assignment on germination. He was asked to re-arrange the stages of germination and put them in a correct order. Help out Sanjam in completing his assignment.



(A)



(B)



(C)



(D)

The correct order is 1. 3
 2. 4.

Q.2. Write whether each statement is true or false :

1. Pea is a monocot plant.
2. Plants require only warmth for their germination.
3. Seed leaves are also known as cotyledons.

Q.4. Tick (✓) the correct answer.

1. The outer hard covering of the seed is called
 - (a) cotyledon
 - (b) embryo
 - (c) seed coat
 - (d) radical
2. The structure which stores food for the baby plant is :
 - (a) embryo
 - (b) plumule
 - (c) seed coat
 - (d) seed leaves

Let's Recall

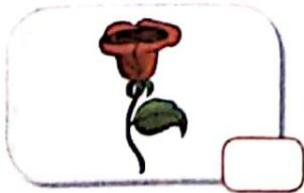
- The body of a plant can be divided into two main parts: 1. Root 2. Shoot
- ⁴ The part of the plant which grows above the soil is called shoot.
- The part of the plant which grows below the soil is called root.
- Roots hold the plant firmly in the soil and take up water and minerals from the soil.
- Roots are mainly of two types : Fibrous root and Tap root.
- Stem bears fruit, leaves, buds and flowers.
- Hard and woody stem is known as trunk.
- The flat surface of the leaf is called leaf blade.
- Flowers are colourful structures attached to the stem.
- Seeds are hard structures present in a fruit.
- The process by which a seed changes into a baby plant (called seedling) is called germination.



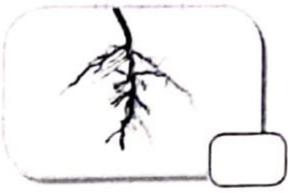
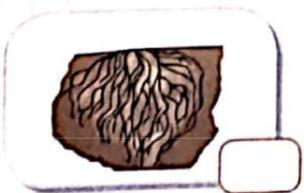
Exercise

A. Tick (✓) the right option.

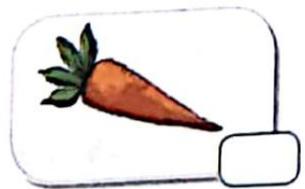
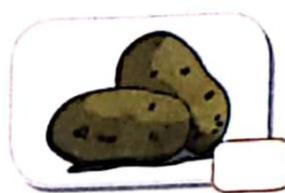
1. Which flower gives perfume ?



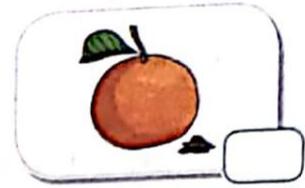
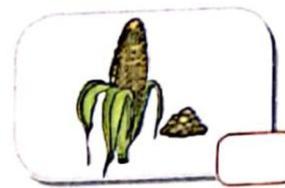
2. Tick the fibrous root system.



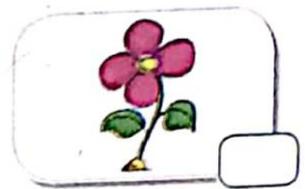
3. Which is a root ?



4. Which seed shown is edible ?



5. Leaves contain _____ .



B. Fill in the blanks with given options.

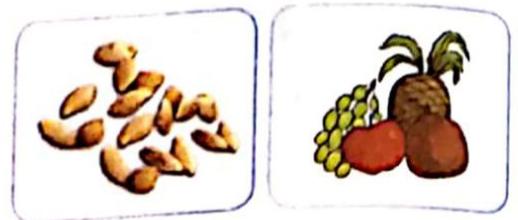
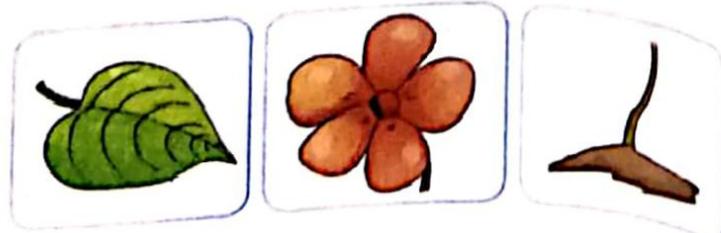
veins, flowers, stem, important, roots

1. Each plant part has an important task to do.
2. _____ hold the plant firmly in the soil.
3. _____ bears the leaves and flowers.
4. The vessels which carry water to leaf are called _____.
5. _____ make the plant look attractive.

C. Give one word for the following.

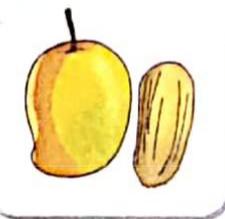
1. Substances absorbed from soil
Minerals
2. Hard and woody stem is known as
Trunk
3. Leaves breathe through
Stomata
4. Sweet liquid produced by flower
Nectar
5. Hard substances present in fruit
seed

D. Name the following parts.



E. Match the following terms with pictures.

1. Tap root
2. Fibrous root
3. Edible seed
4. Nectar
5. Non-edible seed



F. Write True or False.

1. All plants have same structure.

2. Roots help plant to take up water and minerals from soil.

3. Roots are of two types.

4. Roots can never be used for eating.

5. Stomata are present in seeds.

G. Answer the following questions.

1. Why are flowers colourful ?

2. What feature makes leaf absorb maximum sunlight ?

3. Give three functions of stem.

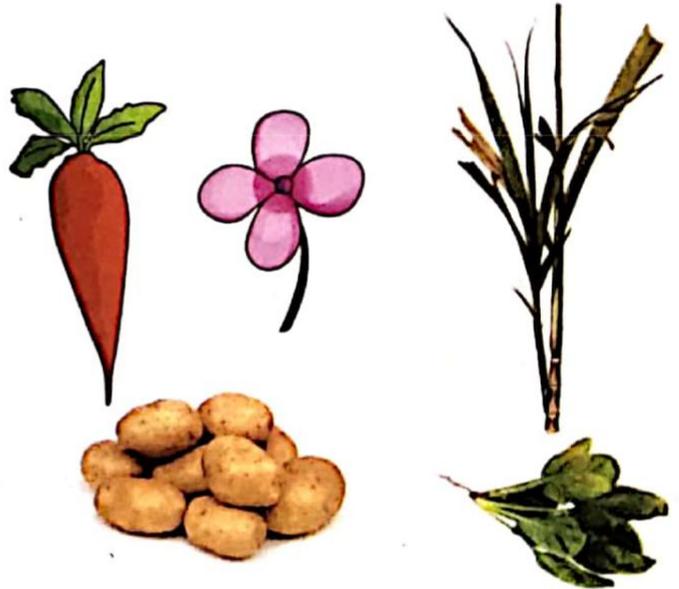
4. What is a seed ? What does it contain ?

5. What does the baby plant need to grow ?

Activity File...



Choose from the pictures and write the answers.



1. Which vegetable helps to make our blood ?

2. The sweetest stem _____ .

3. Used for making chips _____ .

4. Nectar is found in _____ .

5. A root that rabbit likes _____ .

Answer: 1. Spinach, 2. sugarcane, 3. potato, 4. flowers, 5. carrot

Fun file

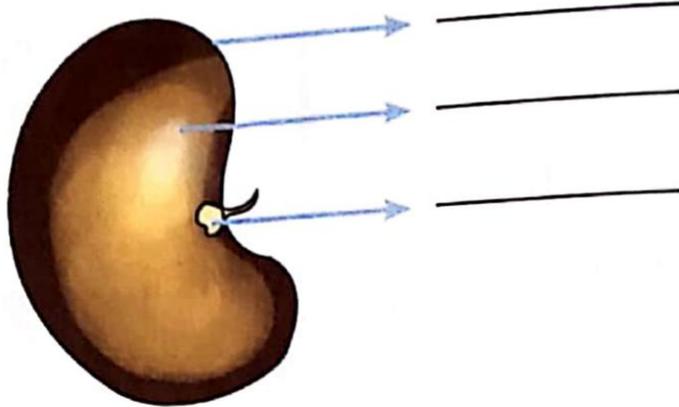
1. Leaves that make your palm red.
2. Leaf used to make paan.
3. Leaves that are used to make chutney.



Answer: 1. Methandi, 2. Betel, 3. Mint

Skill Fill

Label the following diagram :



Chapter 2

Plants

1-Fill in the blanks-

- 1- Each plant part has an important task to do.
- 2- Roots hold the plants firmly in the soil.
- 3- Stem bears the leaves and the flowers.
- 4- The vessels which carry water to leaf are called veins.
- 5- Flowers make the plant look attractive.
- 6- The flat surface of leaf is called leaf blade.
- 7- Seeds are the hard structure present in a fruit.
- 8- Hard and Woody stem is known as trunk.

2-Give one word for the following-

- | | |
|--|-----------------|
| 1- Substances absorbed from soil. | Minerals |
| 2- Hard and Woody stem is known as. | Trunk |
| 3- Leaves breathe through. | Stomata |
| 4- Sweet liquid produced by flower. | Nectar |
| 5- Hard substances present in fruits. | Seed |
| 6- The part of the plant which grows above the soil. | Shoot |
| 7- The sweet, fleshy edible part of a plant. | Fruit |

3-Write true or false-

- | | |
|--|-------|
| 1- All plants have same structure. | False |
| 2- Roots help plant to take up water and Minerals from soil. | True |
| 3- Roots are of two types. | True |
| 4- Roots can never be used for eating. | False |
| 5- Stomata are present in seeds. | False |

4-Short answers-

- 1- What are minerals?

Ans- Substances present in the soil that the plant takes in to stay healthy are known as minerals.

- 2- Name two types of roots?

Ans- The two types of roots are-

- a) Fibrous root
- b) Tap root

- 3- Write two functions of flowers.

Ans- The two functions of flowers are

- a) Flowers help in the Reproduction of plant.
- b) Many flowers like rose and Jasmine yield perfumes.

4- What is germination?

Ans- The process by which seed changes into a baby plant (called seedling) is called germination.

5- Answer the following questions:-

1- Why are flowers colourful?

Ans- Flowers are colourful to make the plant look attractive. These colourful flowers attract Birds, bees and other insects to help the plants reproduce.

2- What feature makes leaf absorb maximum sunlight?

Ans- The feature that makes leaf absorb maximum sunlight is its flat surface.

3- Give three functions of stem.

Ans- the 3 functions of stem are-

a) It holds up leaves, flowers and fruits.

b) It carries water to all parts of the plant.

c) Some stems store food and are used for eating purpose.

4- What is a seed? What does it contains?

Ans- Seeds are the hard structures present in a fruit. The seed contains a baby plant in it.

5- What does the baby plant need to grow?

Ans- the baby plant needs soil containing minerals, water, sunlight and air to grow into a plant.

6- Differentiate between monocot and dicot seed.

Ans- The difference between monocot and dicot seed is-

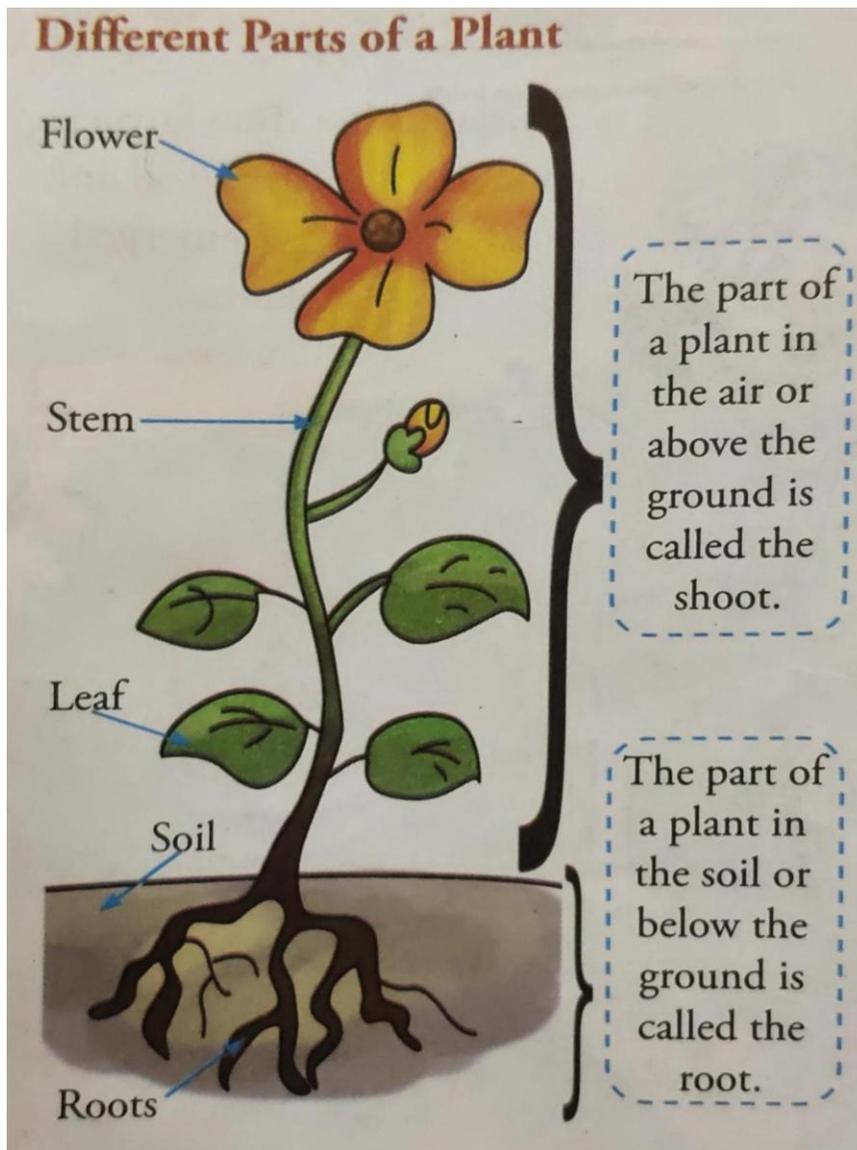
Monocot seed:- Seeds which contain only one cotyledon are known as monocot seeds.

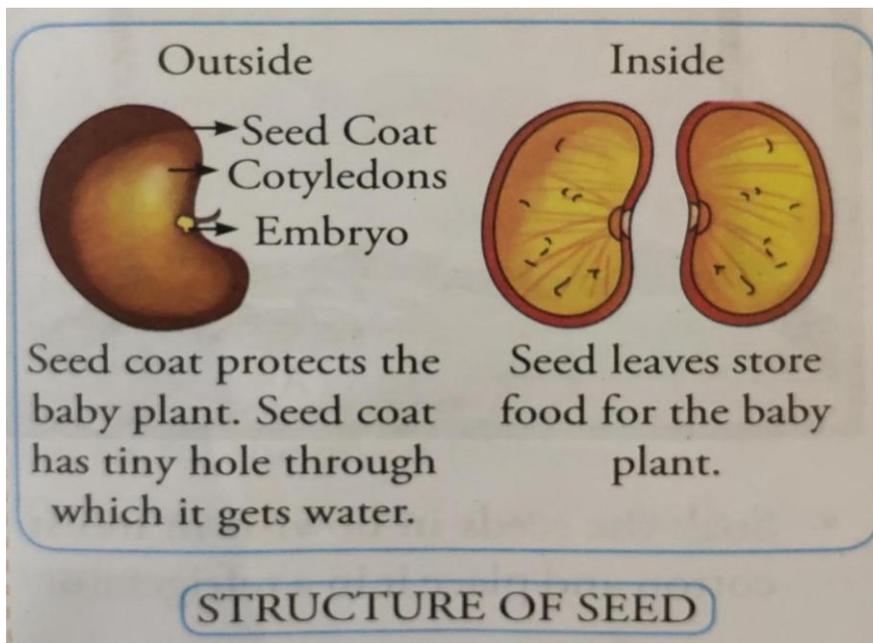
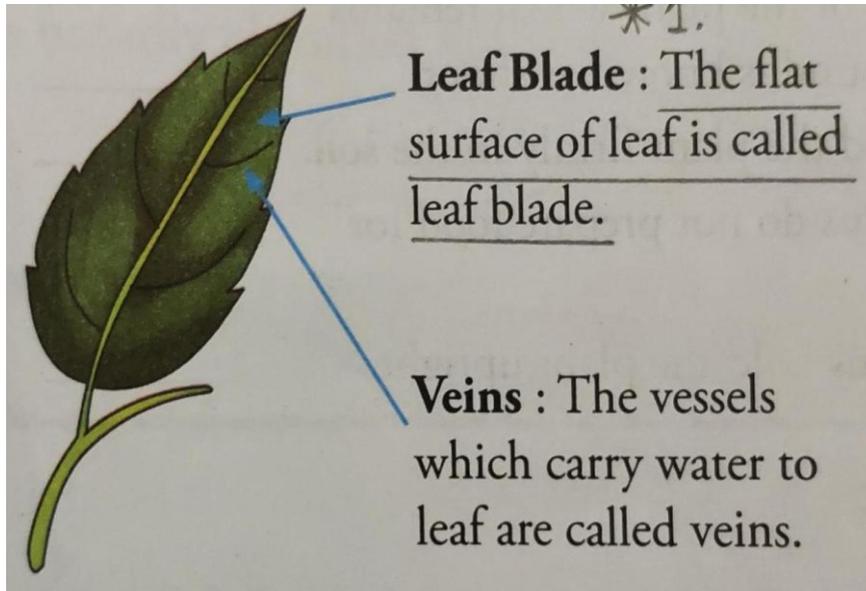
Example- maize and rice

Dicot seed- seeds which contain two cotyledons are known as dicot seeds.

Example- beans, gram and pea

Diagrams –





Recap Test 2

M.M 10

1- Answer the following questions- (2x2)

- A- Why are flowers colourful?
- B- Write two functions of flowers.

2- Write true or false- (2)

- A- Weak stem hold the plant upright.
- B- The flat surface of leaf is called vein.

3- Fill in the blanks- (2)

- A- _____ make the plant looks attractive.
- B- _____ bears fruit leaves birds and flowers.

4- Unscramble the letters- (2)

- A- EDIGSELN
- B- RCNAET