

# Chapter- 1

## Plants



There are different kinds of plants around us. Some of these plants are very short, some are bushy and some are tall with lots of leaves and branches. Based on their structure and form, plants are divided into four types, namely—herbs, shrubs, climbers and trees. You have already studied them in your previous class. We obtain our essential everyday items from these plants.

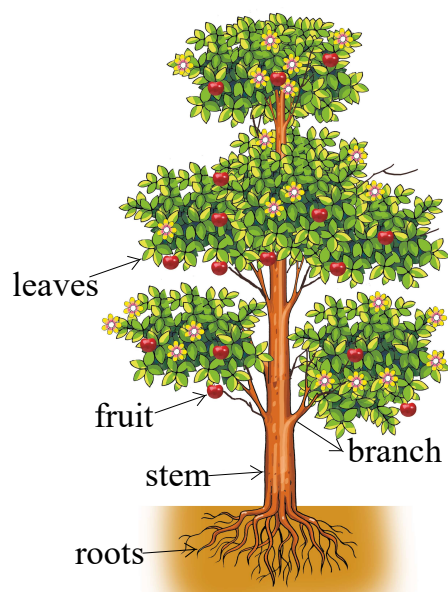


Look at the above picture. Say the names of the plants in the picture and categorise them into herbs, shrubs, climbers and trees.

➤ Observe the plants around you and complete the table below-

Name of the plant	Type of the plant/Herb/Shrub/ Climber/Tree	Items we obtain from plants

## Let us know-

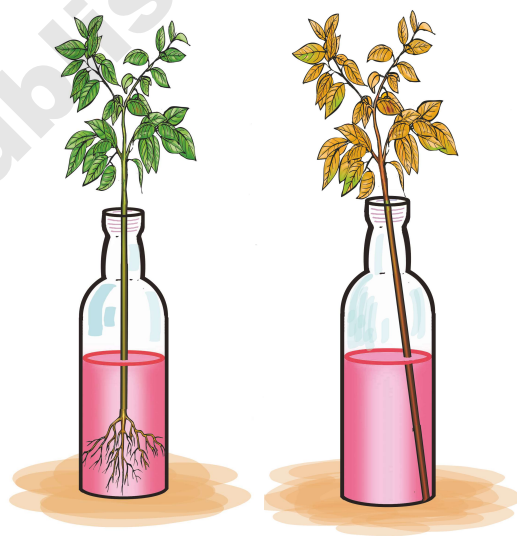


In every plant, one part is above the soil and the other part is under the soil. The part under the soil is the root. The root helps in holding the plant upright by grasping the soil. Apart from that, roots help in the absorption of water and minerals dissolved in water. The parts of the plants above the soil are stem, branch, leaf, flower, and fruit. We can identify a plant through these parts above the soil. The branches come out from the stem. The branches have uncountable leaves and flowers, fruits, etc.

The roots are clutched up deeply into the soil so that the plant is not pulled out. As a result of this, the soil does not wear away. That is how the roots of plants prevent erosion and help in the conservation of the soil.

## Let's try it–

- Pull out two plants with soft stem.
- Clean the roots by washing them with water.
- Cut the roots of one plant.
- Fill up two elongated bottles with some water and mix a few drops of red ink in them.
- Now put the two plants inside the two bottles.
- Keep the bottles in sunlight for two hours.
- Observe the plants after some time.
- Have you seen any changes in the plant with roots?



**Roots absorb water and minerals from the soil and send them to the leaves through the stem.**

- Draw a plant and label its different parts by identifying them.

Plants are very useful to us. We get many essential items from plants. We get crops, vegetables, fruits, etc. from plants. Do you know that **we eat the roots of some plants as vegetables?** Carrot, radish, beetroot, etc. are the roots of a plant. Generally, the roots under the soil are white. However,

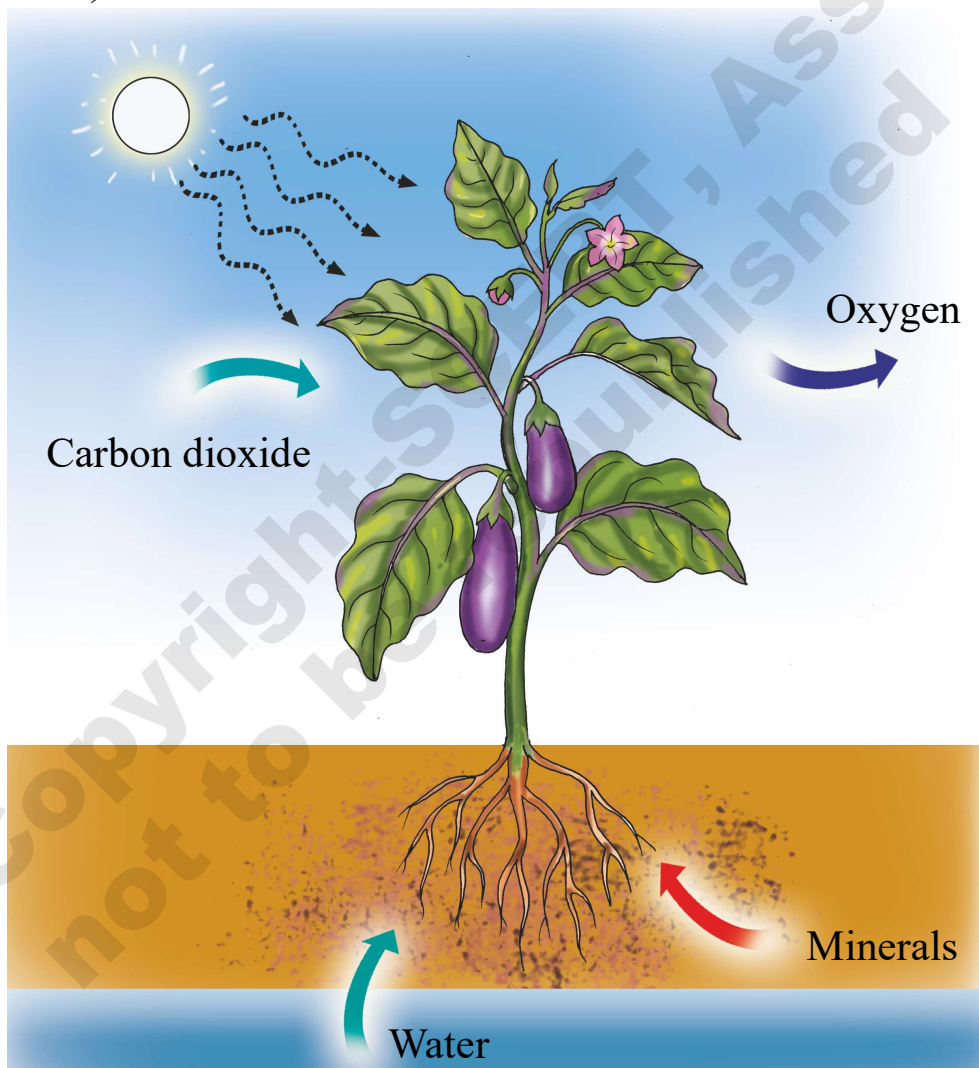


changes can be seen in the case of carrots, beetroots, etc.

The most necessary part of a plant is the leaves. Do you know what is the advantage of having green as the colour of the leaves? Because of having green as the colour of the leaves, plants can prepare their food themselves. **The colour of the leaves are green because a coloured pigment called chlorophyll is present in the leaves.**

**Let us understand how do plants produce their food—**

The roots absorb water from the soil. In the presence of sunlight, with the help of water and carbon dioxide gas obtained from the air, plants prepare their food and in this process plants release oxygen gas into the atmosphere. This process of preparing food by the plants is called **photosynthesis**. (Look at the picture.)



The process of photosynthesis

**Let us observe and write—**

- Looking at the picture above, write down the items used by the leaves to prepare food.

Do you know what is the use of the oxygen gas, released by the leaves? Animals live by inhaling the oxygen gas released by the leaves. The carbon dioxide gas released by the animals during exhaling is used by the plants to prepare their food. This results in maintaining the balance of oxygen gas and carbon dioxide gas in the atmosphere.

**Plants maintain the balance between oxygen gas and carbon dioxide gas in the atmosphere.**

**Let us know—**

- To live and to grow all living beings need food. Since ‘plants’ are also living beings, therefore, they also need food. Plants can produce their own food.
- The oxygen gas released by the plants during the preparation of their food is inhaled by the organism and the carbon dioxide gas exhaled by the organisms is used by the plants to prepare their food. In this case, both ‘plants’ and ‘organisms’ depend on each other.
- Plants maintain the balance between oxygen gas and carbon dioxide gas in the atmosphere. Therefore, we should grow as many plants and take care of the plants.

**Activity—**

- To bring about awareness about the plantation of trees, prepare posters by writing slogans. (Do the activity by making a group of 4—5 students.)

A flower is a part of a plant. You have seen flowers of different colours and shapes. The petals of some flowers are colourful and some are white. Similarly, some flowers have fragrance and some do not. You have already studied about this in class three. Different flowers bloom in different seasons. Some flowers bloom in the spring season, such as—*Kopou* (Orchid), *Naahor* (Ceylon Ironwood), *Togor* (Crepe jasmine) etc. Some flowers bloom during the winter season, such as—Dahlia, Marigold etc. Rose, *Nayantora* (Periwinkle), *Joba* (Hibiscus), etc. are seen to bloom throughout the year. *Sewali* (Night jasmine), *Rajanigandha* (Tuberose), etc. bloom at night. The colour and fragrance of flowers attract insects, butterflies, honeybees etc. Fruits come from flowers. The seeds inside those fruits again grow into new trees.

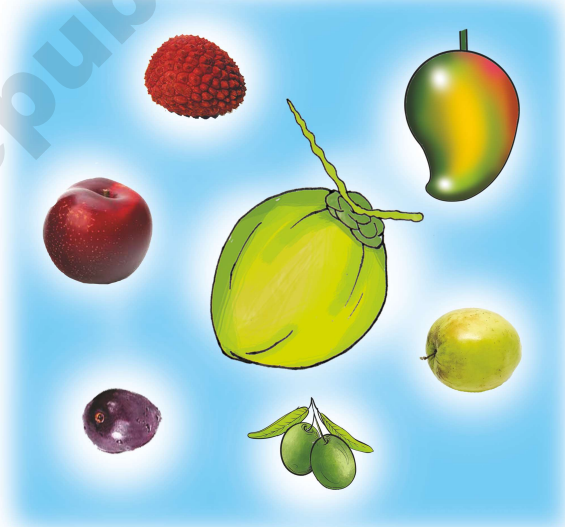
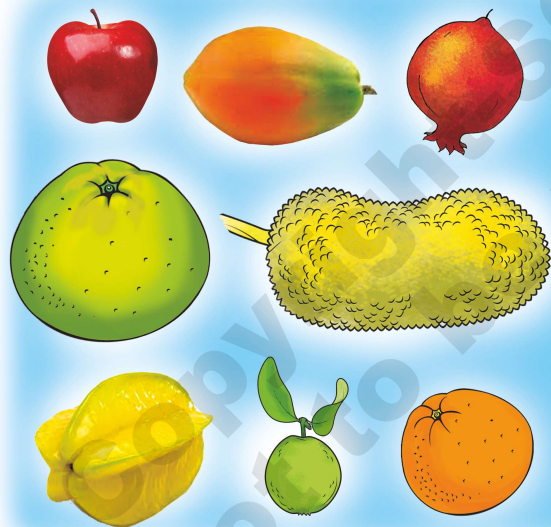
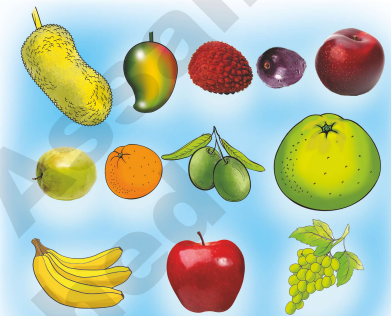


Let us observe and write-

- Write the names of some flowers that you know along with some information on the flowers according to the table given below.

Name of flower	With/ Without fragrance	Colourful/ White	Time of blooming (Season)
Rose	With fragrance	Colourful	Blooms in every season

We eat different fruits in different seasons. What are the fruits that you eat during the summer season? Mango, Jackfruit, *Jamu* (Black plum), Lychee, *Leteku* (Sapida), *Paniyal* etc., isn't it? These fruits grow in the summer. On the other hand, Orange, *Bogori* (Jujube), *Robab tenga* (Pomelo), *Jolfai* (Olive) etc. grow in the winter season. Banana, Apple etc. are available in all seasons.



Look at the picture above. Do the fruits in the picture taste the same? Different fruits have different sizes, shapes, colours, tastes, smells etc. Fruits have seeds inside them. Some fruits have one seed, some have two and some of them have many seeds. Fruits with one seed are called single seeded fruit eg mango, lychee, bogori, (jujube), jolfai (olive) etc. and fruits with more than one seed are called multiple seeded fruits eg jackfruit, leteku. Pomegranate, orange etc.

Some fruits are big in size, such as—Jackfruit, Pineapple, Watermelon etc. Some of them are small, such as—*Bogori*, Lychee, *Leteku*, *Paniyal* etc. In general, fruits are green coloured when they are unripe and becomes yellow when they ripen.

**The germination of a new plant takes place from seed.**

**Let us observe and do-**

➤ Write the names of the fruits that you eat and complete the table below—

Name of the fruit	At which time of the year it is available	Shape	Colour	Single fruit/ Multiple seeded fruit	With/ Without smell
Orange	Winter	Round	Orange	Multiple seeded	With smell

**Let's make an album of leaves—**



- Collect leaves of different shapes. Keep them inside a book and press it without folding the leaves.
- When the leaves dry, prepare an album of leaves by pasting them on paper.
- Make the shape of animals or other designs with leaves of different shapes.

**Let us do a survey of plants—**

- Divide into groups of 4-5 students. Take a look around the yards of five houses near your school. Write the names of the flowers and fruit plants available there.



## Exercise

### 1. Answer the following—

- (a) Write the names of the different parts of a plant.
- (b) Write the names of three plants whose roots are eaten as vegetables.
- (c) What is the reason for the green colour of leaves?
- (d) Write the names of two flowers that bloom all the time of the year.
- (e) Write the names of three fruits that grow during the summer season.
- (f) Write the names of four multiple fruits.

### 2. Fill in the blanks—

- (a) Plants use \_\_\_\_\_ gas to prepare their food.
- (b) Lychee, Olive etc has \_\_\_\_\_ seed.
- (c) Plants maintain the balance between \_\_\_\_\_ gas and carbon dioxide gas in the atmosphere.
- (d) \_\_\_\_\_ grow from flowers.
- (e) The colour and \_\_\_\_\_ of flowers attract insects.

### 3. Put a tick mark '✓' in the correct answer—

- (a) Plants obtain carbon dioxide gas/oxygen gas from the atmosphere to prepare their food.
- (b) Sewali, rajanigandha etc blooms in the day/at night.
- (c) Orange, *bogori* etc. are the fruits that grow in the summer season/winter season.
- (d) Pineapple, watermelon etc have big/small size.

### 4. Draw and colour your favourite fruit.

