2

Parts of a Plant

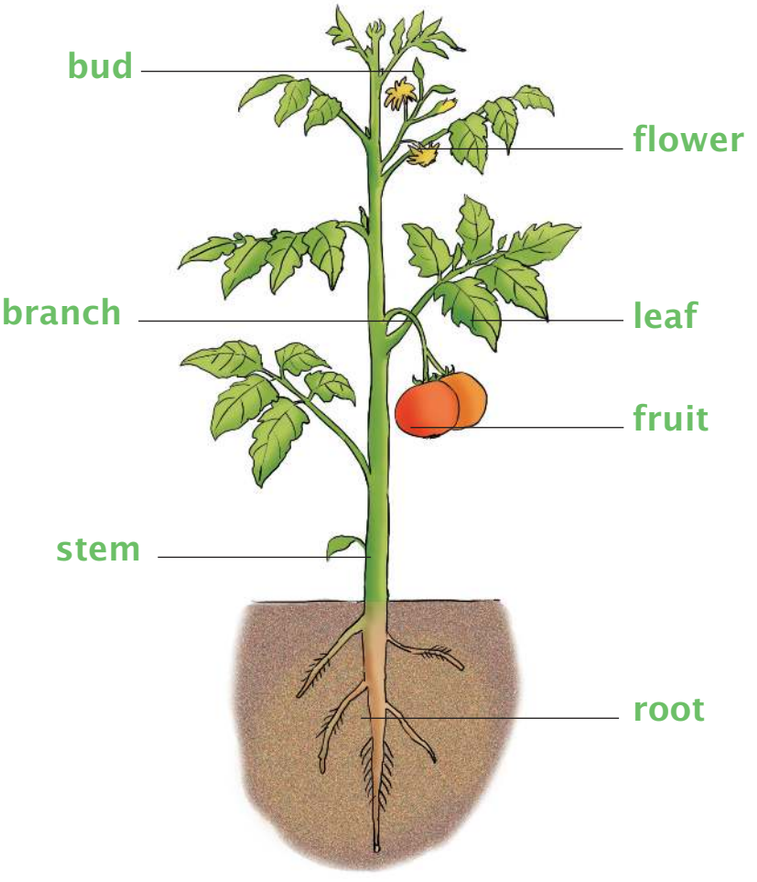
Let's Begin

Carefully pull out a small unwanted plant from your garden. Spread it on a sheet of white paper and observe its different parts.

Like our body, a plant has different parts. The part of the plant that is above the ground is the **shoot** and the part that is below the ground is the **root**.

The shoot contains many parts. They are the stem, leaves, flowers, fruits and seeds.

Each part of the plant has its own functions.



parts of a plant

THE STEM

The stem connects the roots to the different parts of the plant. The stem has branches, leaves, flowers and fruits.

Trees have hard and woody stems. The stem of a tree is called a **trunk**. Most small plants have firm green stems that keep them upright. Plants such as creepers and climbers have soft, weak stems.

Functions of the Stem

One of the main functions of the stem is to help the plant stand up. It carries water from the roots to the leaves. It carries food prepared by the leaves to other parts of the plant.

In some plants, the stem also stores extra food. An example is the sugarcane plant. Some plants like the ginger and potato have underground stems in which food is stored. We eat the stems of these plants as food.

THE LEAF

The leaf is an important part of the plant.

The leaf is found in many shapes and sizes.

The leaves of most plants are green. The flat, broad part of the leaf is the leaf blade or **lamina**.

There is a main **vein** or tube running through the centre of the leaf. There are also many small veins running from the main vein. Veins carry water from the stem to the leaf and food from the leaf to other parts. The leaf is fixed to the stem with the help of a **stalk**. The leaf has many small pores through which the plant breathes.

Functions of the Leaf

The main function of the leaf is to produce food for the plant. Green leaves get their colour from a substance called **chlorophyll**. Chlorophyll helps the plant to produce food using air, water and sunlight.

This process is called **photosynthesis**. Plants cannot produce food when there is no sunlight.

The food made in the leaves goes to other parts of the plant through the stem.

ROOTS

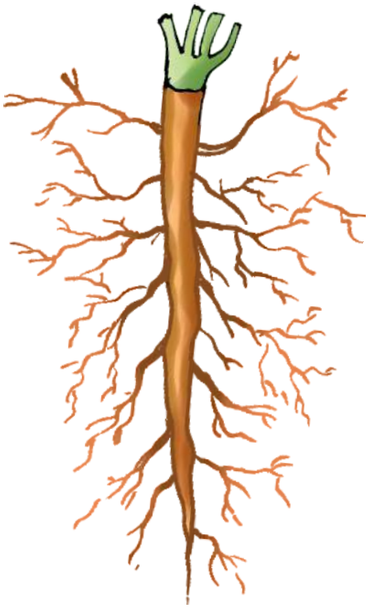
The **roots** of a plant grow under the ground. There are two types of roots—**taproots** and **fibrous roots**.

Taproots

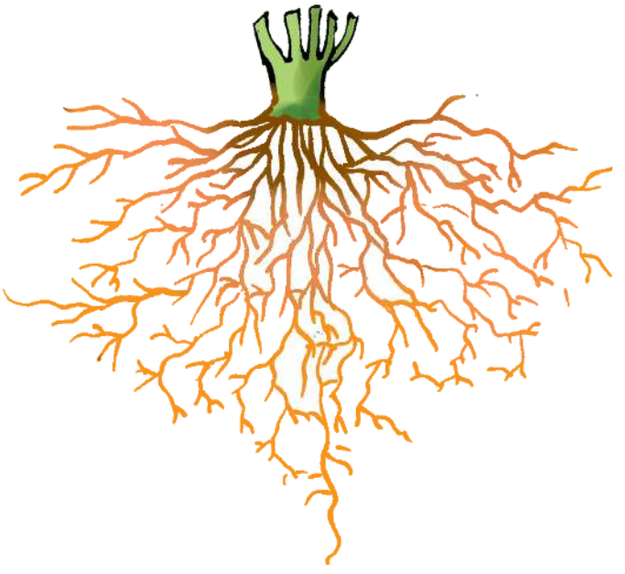
In a plant with a taproot, there is one main root which grows deep into the soil. Several thin roots come out of this main root. Carrot, bean and mustard plants all have taproots.

Fibrous Roots

Some plants have a number of small roots growing from the bottom of the stem. Such roots are called fibrous roots. Grass, rice, wheat and onion have fibrous roots.



taproot system



fibrous root system

Functions of the Root

The roots help to fix the plant firmly in the soil. They also protect the plant from falling over during heavy winds and rain.

Roots absorb water and minerals from the soil and carry them to the stem. From the stem, water travels to all parts of the plant. The roots of plants like the carrot and beetroot store food made by the leaves.

Activity

Place an onion in a glass of water and observe how its roots develop.

FLOWERS

The most colourful and beautiful parts of a plant are its flowers, which grow in different colours and have a number of petals. Some flowers have a strong smell. Others have a mild smell. Some may not have a smell at all or may have an unpleasant smell. Some flowers have nectar, a sweet liquid, in them.

The main function of the flower is in reproduction. A part of the flower develops into the fruit.

FRUITS AND SEEDS

Fruits contain seeds. Some fruits have just one seed and others have many seeds. The mango has a single seed. The orange has a few, while the papaya and the watermelon have many seeds.

The fruits protect the seeds. New plants grow from these seeds. When seeds are planted in the soil, the baby plants present in the seeds grow into new plants with the help of water, air and sunlight. Seeds also contain food for the baby plant.

Let's Sum Up

- The parts of a plant are the stem, root, leaves, flowers, fruits and seeds.
- The shoot is the portion of the plant above the ground.
- The stem bears branches, leaves, flowers and fruits and carries food from the leaves to different parts of the plant.
- Leaves prepare food for the plant by a process called photosynthesis.
- The root is the part of the plant which grows under the ground.
- Roots are of two types: taproots and fibrous roots.
- Flowers are the most beautiful parts of the plant, and their function is to help the plant reproduce.
- Fruits help the plant to protect the seeds.

Let's Understand

A. Choose the correct answers.

1. The _____ stands upright and bears branches.
   a. stem b. root c. leaf
2. The part of a potato plant that we eat is the _____ .
   a. root b. leaf c. stem
3. Water, mineral salts and food are transported in plants by the _____ .
   a. stem b. root c. leaf
4. The flat part of a leaf is called the _____ .
   a. vein b. lamina c. stalk
5. Flowers help a plant to _____ .
   a. breathe b. excrete c. reproduce

B. Match the words in the two columns.

Column A	Column B
1. stem	a. makes new plants
2. root	b. carries food, water and minerals
3. flower	c. makes food
4. leaf	d. absorbs water and minerals

C. Answer the questions.

1. Draw and label the different parts of a plant.
2. What are the functions of the stem?
3. Why are leaves called “food factories” of a plant? What are the things needed by a plant to prepare food?
4. Write the function of veins in a leaf.
5. What are the different types of root systems? Give two examples of plants that have each of them.
6. What are the functions of roots?
7. Why is a seed very important?

Let's Think  FA

A banana plant is useful to human beings in many ways. Write two ways in which it is useful to us.

Let's Learn  FA

Project

Collect the seeds from various fruits and observe their size, their shape and the number of seeds inside them. Paste these seeds in your scrapbook or on a sheet of white paper.

Know Your Values 

Plants are very important to our environment. We have to take care of them. How do you take care of the plants near your house?

Assessment Corner 1 FA

Let's Learn

Activity

Take some water in two glasses. Add some red ink to one of the glasses. Now, pluck two white coloured flowers such as carnations from a garden. Place a flower in each glass. Wait for an hour. What do you observe?

You will see that the flower in the glass to which ink has been added looks red or pink!

This is because the red-coloured water travels up the stem and changes the colour of the white flower.

Project

Collect leaves of different shapes. You can also collect leaves of different colours. Place the leaves between two sheets of newspaper and place a heavy book on them for a week. Take the leaves out and stick them on a sheet of chart paper.

Let's Have Fun

Circle the parts of a plant (eight words) in the word search grid.

S	E	E	D	S	P	T	J	A	O
A	P	X	E	T	I	R	O	O	T
G	P	T	O	E	D	U	E	M	P
E	U	L	A	M	I	N	A	G	F
P	F	E	O	X	M	K	O	T	A
T	I	A	T	U	E	U	F	I	J
O	G	F	L	O	W	E	R	G	M
A	P	J	A	L	I	Y	U	T	P
P	T	M	L	T	O	H	I	Y	A
D	E	L	Z	L	A	L	T	D	P