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**LESSON**  
PART 1



## UNIT

# 1

# LIVING THINGS

## LESSON-1

## GREEN PLANTS

### BEFORE WE PROCEED

- ❖ Each plant is found in a particular area but not in other. Why ?
- ❖ Do plants live in water also ?      ❖ What are aquatic plants ?
- ❖ How do plants accustom to different conditions ?



### SAY ALOUD

features, successfully, environment, xerophytes, mesophytes, mangroves

### Let us find out more about various types of plants

Plants grow all over the world. But all plants are not of the same kind. There are many types of plants found in different places. Some plants live on the land, some grow in water, some in desert and some on mountains and some are found in ice cold regions. Plants develop certain features which enable them to survive successfully in a particular environment. Such features are called adaptations. According to their habitats, plants are of three types :

A. Terrestrial Plants    B. Aquatic Plants    C. Insectivorous Plants

#### A. TERRESTRIAL PLANTS

Plants that grow on land are called terrestrial plants. These include grasses, shrubs, herbs and trees that grow on land. Plants show special features that help them to adapt with the environment.

There are different types of terrestrial plants :

#### *Do you know?*

Potato leaves and young stems are poisonous.



#### 1. Desert plants

These plants are called xerophytes. They grow in a relatively dry habitat. In such plants, the stem is less branched, usually stunted, dry and hard. Leaves are reduced to spines. This helps in reducing the loss of water from the leaves.







Photosynthesis takes place in its green stem. The roots are long, wide spread and go deep into the ground. This helps them to draw water from deep parts inside the ground.

## 2. Plants of plain

These are of many kinds. These are called mesophytes. Trees have a lot of leaves and branches. They shed their leaves in winter to prevent the loss of water from the plant. Trees like sheesham, mango, peepal, banyan etc are terrestrial plants.



Sheesham tree



Mango tree



Banyan tree

## 3. Plants of hilly areas

Hilly regions have frequent rains. The common trees that grow in these regions are pine, spruce, fir, oak, cedar, deodar etc. Many of them have needle-like leaves. When snow falls on them, it slides off easily because of the shape of these leaves.



Pine tree



Spruce tree



Fir tree



Deodar tree

## 4. Plants of marshy areas

Areas with lot of water and sticky soil are called marshy areas. The clay does not allow their roots to breathe. So, the roots come out of the soil to breathe. Such roots are called breathing roots. The plants that grow here are called mangroves. These roots that breathe are called rhizophores.

*Do you know?*

Biggest fruit is double coconut.





Rhizophore plant



Mangrove plant



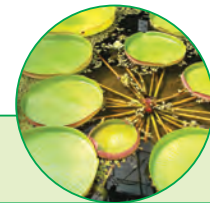
Sundari tree

## B. AQUATIC PLANTS

Plants that grow near or inside the water are called aquatic plants. They are also called hydrophytes. Aquatic plants are of the following types :

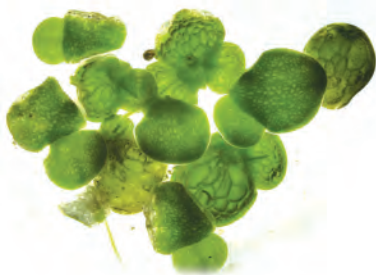
### *Do you know?*

An aquatic plant having the biggest leaf is *Victoria amazonica*.



### 1. Floating plants

These plants float freely on the surface of water. Their stem is reduced and roots are poorly developed. Their leaves have a thin waxy coating so that water does not wet the surface and block the stomata. Some common floating plants are lemna, pistia, jussiaea, water hyacinth.



Lemna



Jussiaea



Water hyacinth

### 2. Fixed plants

Roots of some aquatic plants are fixed in the mud. The leaves are broad and have long, hollow petioles which keep the leaves and flowers afloat.

Common examples of fixed aquatic plants are trapa, lotus and water lily.



Trapa



Lotus

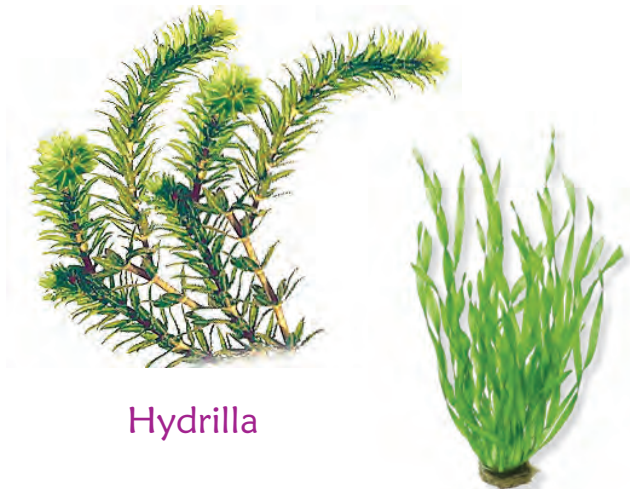


Water lily



### 3. Submerged plants

The plants which grow completely under in water, are called submerged plants. They are fixed to the soil with the help of their roots. The whole plant-body and the leaves also remain in the water. They breathe through their body surface. They clean the water by removing carbon dioxide. Common submerged plants are hydrilla and vallisneria.



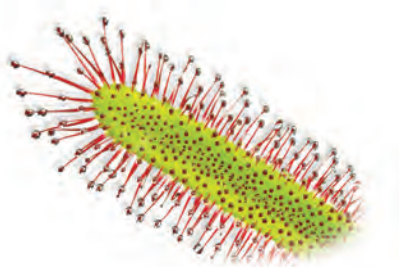
Hydrilla

Vallisneria



Pitcher plant

Venus flytrap



Sundew

### C. INSECTIVOROUS PLANTS

Some plants are insect-eaters. They are known as insectivorous plants.

The common insectivorous plants are pitcher plant, venus flytrap and sundew.

Pitcher plant traps insects and absorbs nutrients from their bodies and venus flytrap may snap shut round a fly at any moment.

Sundew plant catches insects with deadly hair that covers its leaves. The sticky drops at the end of the hair trap the insects.



### Key Ideas

- ★ Plants are found all over the earth.
- ★ According to the habitat they live in, plants are classified as terrestrial, aquatic and insectivorous.
- ★ Terrestrial plants grow on land.
- ★ Aquatic plants grow in water.
- ★ Insectivorous plants trap and eat insects.

## LET'S WRITE TOGETHER

### A. Answer these questions :

1. What are terrestrial plants ? Name any three terrestrial plants.
2. How does a desert plant adapt itself to desert conditions ?
3. What are called breathing roots ? Give reason.
4. What are floating plants ? Give two examples.
5. What are insectivorous plants ? Give two examples.

### B. Complete the sentences :

1. The leaves of desert plants are reduced to \_\_\_\_\_.
2. Water hyacinth is a \_\_\_\_\_ plant.
3. Plants that grow on land are called \_\_\_\_\_ plants.
4. The mangroves grow in the \_\_\_\_\_ area.
5. \_\_\_\_\_ trees have needle - like leaves.

### C. Name these :

1. A fixed aquatic plant \_\_\_\_\_
2. A floating aquatic plant \_\_\_\_\_
3. A submerged aquatic plant \_\_\_\_\_
4. A desert plant \_\_\_\_\_
5. An insectivorous plant \_\_\_\_\_
6. A plant growing in hilly area \_\_\_\_\_

## LET US DO

### Draw the following :

1. A terrestrial plant
2. An aquatic plant
3. A graphic orientation (G.O) on aquatic plants.




**Fun**  
Activity



Show a chart of the classification of the plants on the basis of their growing places and display it in your classroom :



## GLOSSARY

- 
- Environment - the natural world in which people, animals and plants live
  - Adaptation - the process of changing to suit a new situation
  - Habitat - the place where a particular type of plant or animal is normally found
  - Photosynthesis - the process by which green plants turn carbon-dioxide and water into food using energy obtained from sunlight
  - Floating - not fixed permanently in one particular position or place