# **CHAPTER 2**

# LIVING AND GROWING DIFFERENTLY

# **Learning Objectives**

- Terrestrial plants
- Aquatic plants
- Insectivorous plants

Students as we know plants are found all over the earth and all the human being are dependent on plants.

Earth is divided into two parts-

a. Land

b.Water

Plants growing in different areas and they have different features to survive. Depending on the place plants can be divided into two groups:- a. Terrestrial plants b. Aquatic plants

# A. TERRESTRIAL PLANTS – plants grows on land

- 1. Trees growing on the hills and mountains-
  - They are tall and straight and are cone shaped.
  - ➤ Cone shape protects from strong winds and rainfall
  - They have needle like leave with wax coating which helps water and snow to slip off easily.
  - In place of flowers they bear a cone that is why they are called conifers or coniferous trees. Eg- pine, fir, cedar (deodar), spruce.
- 2. Trees growing in the plains-
  - ➤ They have more space to spread.
  - > Their leaves are flat.
  - They shed their leaves in winter that is why they are called deciduous trees.
  - Shedding of leaves in happens mostly to avoid harsh winter. Eg- peepal, mulberry, popular and sheesham.
- 3. Plants growing in hot and damp areas-
  - They have many leaves.
  - They do not shed their leaves in winter.

- They remain green throughout the year that is why they are called evergreen trees. Eg- rubber, cotton, coconut, sugarcane etc.
- Many other plants also grow in the plains.
- The wheat crop grown in winter and is ready for harvesting in the beginning of summer.
- The rice crop grown abundantly in the plains.
- Carrot, reddish, turnip, cabbage and cauliflower are grown in winter
- Lady finger, gourd and cucumber grow well in summer.

# 4. Plants growing in marshy areas-

- These areas have clayey and sticky soil.
- Clay holds a lot of water and very little air. Due to lack of air, the roots start growing outwards. These roots are called breathing roots or Pneumatophores. Eg- mangrove

# 5. Plants growing in deserts-

- ➤ In desserts, there is shortage of water.
- Some plants like cactus, prickly pear and palm can grow.
- The leaves are changed into spines to reduce the loss of water.
- This also protects plants from grazing animals. Eg- cactus, prickly pear.

# B. AQUATIC PLANTS - plants grows in water

# 1. Floating plants –

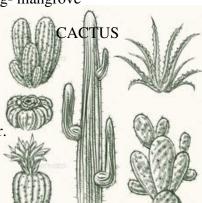
- Roots are not fixed that is why they float.
- They help to protect small water animals from the heat of the sun. Eg- duckweed and water hyacinth.

## 2. Fixed plants –

- > Roots are fixed in the waterbed.
- > Stems are long, hollow and light.
- Stomata are present on the upper side of the leaf help in exchange of gases easily. Egwater lily and lotus.

# 3. Underwater plants –

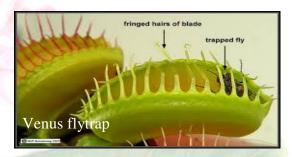
- They have long, thin, narrow, ribbon like leaves can bend easily in water.
- Leaves do not have stomata.
- ➤ They help to clean the water because they use carbon dioxide. Eg hydrilla and tape grass.



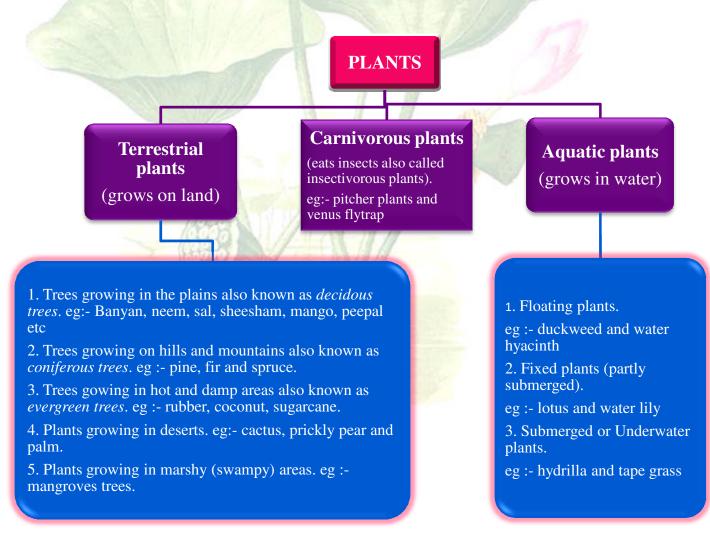
## C. CARNIVOROUS PLANTS – plants eat insects

- These plants grow in soil which is poor in minerals so they eat insects to get enough nutrition.
- Leaves of Venus flytrap are like a trap.
- ➤ Hollow leaves of the pitcher plant are filled with nectar. When insect sits on it. The lid closes and insects get trapped inside.





Let's study with the help of classification (to be done in practical science note book)



## **MULTIPLE CHOICE QUESTIONS** (to be done in text book)

- 1. An evergreen tree sugarcane
- 2. It is not a grass plant coconut
- 3. Carnivorous plant Venus flytrap
- 4. A floating plant water hyacinth
- 5. Trees that grows in marshy land mangrove
- 6. Plants with broad leaves grow in/on plains
- 7. A plant with hollow stems lotus
- 8. A plant with green stem prickly pear
- 9. A plant that bears cones fir
- 10. A plant with air filled leaves water hyacinth

## **EXERCISES** (to be done in text book)

## A. WRITE THE WORD

- 1. Plants which grow on dry land desert plants
- 2. Plants which grow in or underwater submerged
- 3. Changes which plants make to suit their surroundings adaptation
- 4. Trees which do not shed all their leaves at one time evergreen
- 5. Trees which grow their seeds in cones conifers
- 6. These trees can grow in marshes mangrove
- 7. Pitcher plants are carnivorous plants

#### B. NAME TWO

- 1. Conifers pine and fir
- 2. Broad leafed plants poplar and sheesham
- 3. Evergreens teak and coconut
- 4. Food crops which grow in the plains rice and wheat
- 5. Desert plants cactus and prickly pear
- 6. Aquatic plants duckweed and tape grass
- 7. Insect eating plants pitcher plant and Venus flytrap
- 8. Tall grasses rice and maize

## C. ANSWER THE FOLLOWING QUESTION (to be done in science practical notebook)

- 1. Why do underwater plants have narrow or thin leaves?

  Ans. Underwater plants have narrow or thin leaves so that they can bend easily in the flowing water.
- 2. Why does a lotus plant have a long, hollow and thin stem?

Ans. Lotus plant have long, hollow and thin stem because this helps the leaves and flowers to float on the surface of the water.



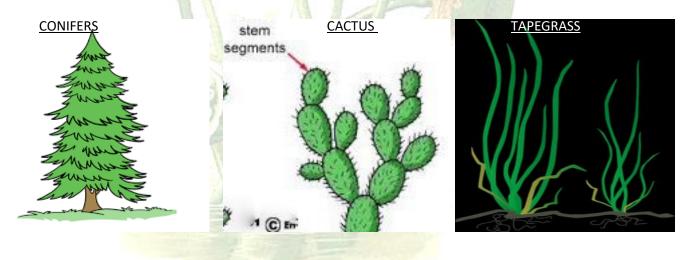
- 3. Trees growing in the plains have flat leaves. Why?

  Ans. Trees growing in the plains have flat leaves because they help water vapour to evaporate and keep the tree cool when it is hot. It also helps to trap a lot of sunlight.
- 4. Grasses can grow in many places. Why?

  Ans. Grasses can grow in many places because they do not need much water to grow and can grow in soil which has less minerals.
- 5. Write adaptation for each: conifers, cactus, and tape grass.

Ans. a. Conifers

- i. Instead of flowers, they have cones that contain seeds.
- ii. Sloping shape of the branches makes the snow to fall off easily.
- b. Cactus
- i. The leaves of the cactus are modified into thorns to prevent loss of water from it.
- ii. It makes food in its green stem.
- c. Tape grass
- i. It has narrow and thin leaves with no stomata
- ii. Exchange of gases takes place in a special way.



## D. Draw a lotus and a bamboo tree.





## Home work

- 1. Learn all questions answers.
- 2. Draw and practise mentioned diagram

# Activity

Search 5 different plants, draw and write adaptive features.

### Note – Dear students kindly draw and write answers in your science notebook, old notebook or pages, whatever is available with you.

