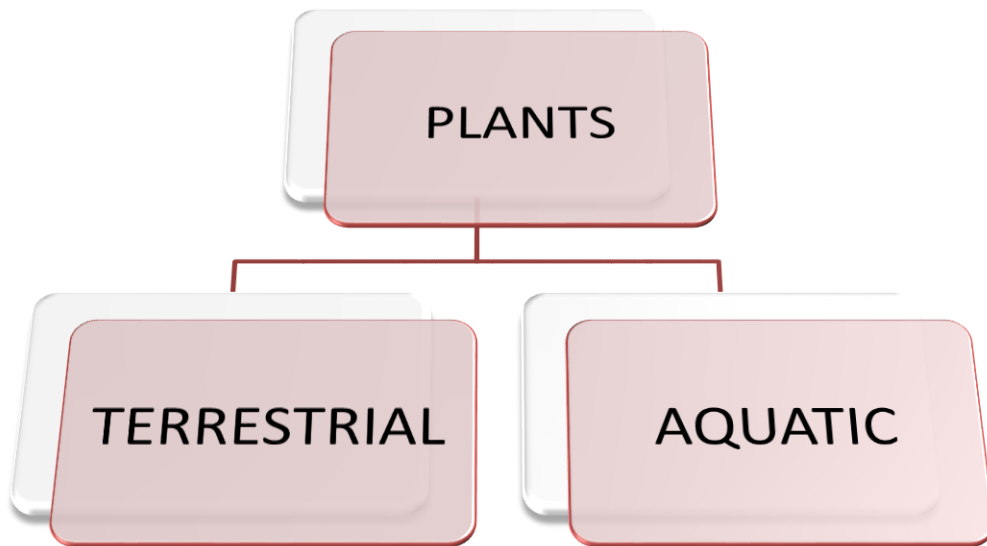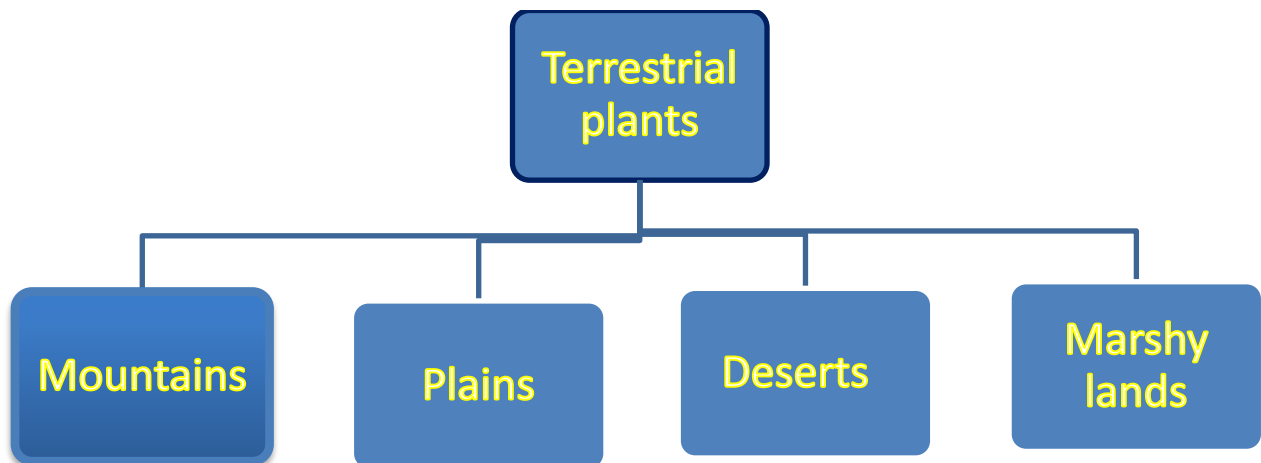# L-2 LIVING AND GROWING DIFFERENTLY

Plants are found all over the earth. Earth is divided into two main forms. Land and water. So there are two main kinds of plants.

```
                    PLANTS
                   /      \
          TERRESTRIAL    AQUATIC
```

Plants which grow on land are called **terrestrial plants**.

```
                Terrestrial
                  plants
         /        |        |        \
   Mountains    Plains   Deserts   Marshy
                                    lands
```

Let us learn about them.

Plants growing on hills and mountains.

- ❖ They grow tall and thin to catch sunlight.
- ❖ These trees are cone shaped.
- ❖ They have sloping branches.
- ❖ Their leaves are like thick needles with very few stomata.
- ❖ They are waterproof to able to stand the cold and snow.
- ❖ Trees in such places are very tall and straight to catch sunlight
- ❖ They have sloping branches which helps the snow to slide off easily.

- ⊙ They do not have flowers.
- ⊙ Their seeds grow inside the cones.
- ⊙ Cones shed from their leaves.
- ⊙ **Pine, fir, spruce** are coniferous trees.

The trees do not shed all their leaves at the same time and so look green throughout the year. These are called evergreen trees.

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New leaves keep growing to replace them, keeping them lush green throughout the year.

Plants growing in deserts.

- The cactus plants have thorns.
- Cactus makes food in it's green stem which has chlorophyll.
- They have spreading roots.
- Their stem is waxy.
- Desert Plants have special ways of coping with the climate.
- Leaves of desert plants are like sharp spines, like those of a porcupine.   This prevents loss of water from the leaves.
- Cactus stores water in its thick stem. When there is no rain, the cactus uses the water in its stem.

❖ Plants like cactus have roots

that   spread out under the

surface of the soil.

❖ Prickly pear, Barrel cactus and

organ pipe are some examples .

Mesquite / Keekar bush has   roots than can grow down to more than 20 metres in search of water.

Trees growing in the plains

▸   Plains means, region is flat. Place you live, Jabalpur, is plains.

▸   Trees growing in the plains have lot of spreading branches.

▸   Flat leaves help water vapour and keep the tree cool.

▸   Flat leaves also help to trap a lot of sunlight

▸   Peepal, Mango, Sheesham grow in the warmer climate of the plains.

▸   They loose all their leaves due to harsh winter. When it get warmer , new leaves start growing.

✓   Lot of spreading branches

✓   Flat leaves

✓   Loose all the leaves at once.

✓ When it is warmer , the new leaves start   growing.

o Some trees grow in the area where climate is hot and wet.

o   There is heavy rainfall.

- Some of them are deciduous and some of them are evergreen.
- **Teak wood, Sugarcane, Rubber** are some of the examples.

Rain forest trees

- In some areas it rains all throughout the year.

- So, plants grow throughout the year.

- Such places have turned into forests filled with dense green tall trees

- Such places are called Rain Forests.

Seasonal plants

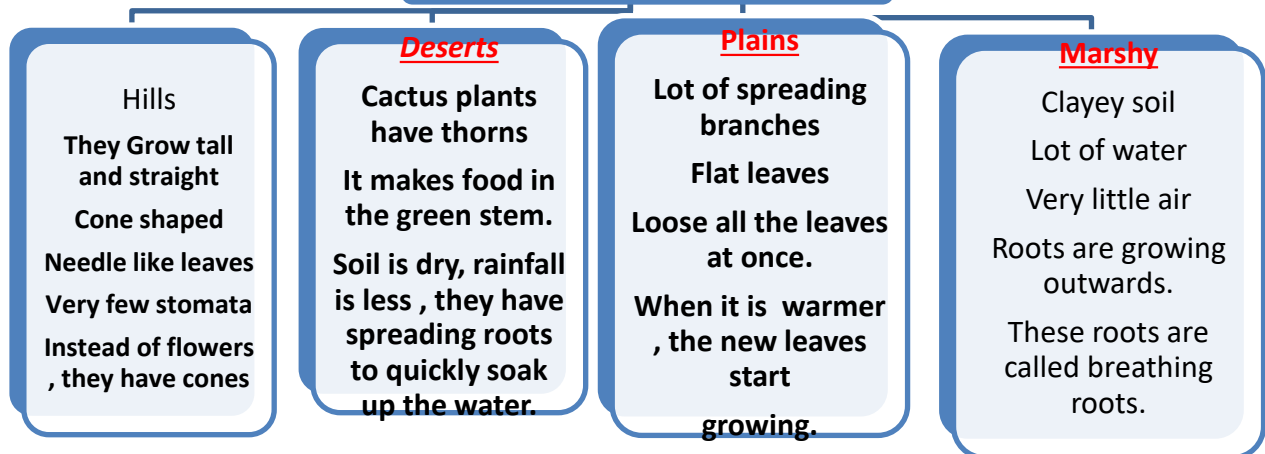| SUMMER CROPS	WINTER CROPS
Plants grow largely in plains Rice crops is grown. **Rice field**	Wheat crops grown in winter. Crop is ready for harvesting by the beginning of summer. **Wheat field**

Plants in marshes.

- In place that have clayey soil and plenty of water
- Clay soil holds lot of water and very little air.

- Mangrove trees grows in marshy places

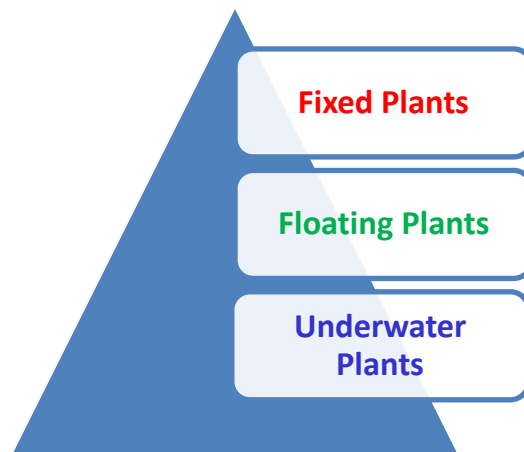- Roots are called breathing roots.
- Roots start growing outwards.

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Terrestrial plants

Hills They Grow tall and straight Cone shaped Needle like leaves Very few stomata Instead of flowers, they have cones	***Deserts*** **Cactus plants have thorns** **It makes food in the green stem.** **Soil is dry, rainfall is less, they have spreading roots to quickly soak up the water.**	**Plains** **Lot of spreading branches** **Flat leaves** **Loose all the leaves at once.** **When it is warmer, the new leaves start growing.**	**Marshy** Clayey soil Lot of water Very little air Roots are growing outwards. These roots are called breathing roots.

AQUATIC PLANTS

Plants that grow in water are called **aquatic plants.**

- **Fixed Plants**
- **Floating Plants**
- **Underwater Plants**

FIXED PLANTS

- ◉ Roots of such plants grow in the water bed.
- ◉ Stem are long, hollow and light.
- ◉ Leaves are broad.
- ◉ Stomata is on the top of the leaves.

Lotus and water lily are examples

FLOATING PLANTS

▸ Float freely on top of water.

▸ Plants are very light

▸ Roots are not fixed in the water bed.

▸ Leaves of these plants have air inside them.

▸ Water hyacinth, Duckweed and Water lettuce are some of the examples
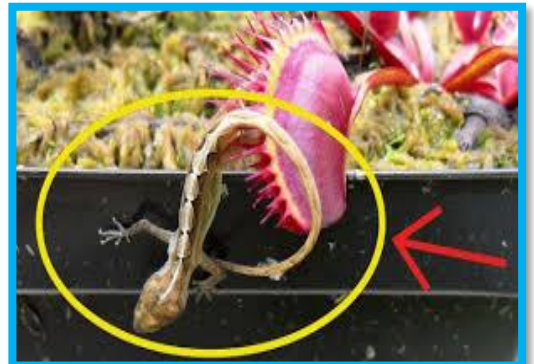

UNDERWATER PLANTS

• Plants like hydrilla and tape grass live completely under water.

- They are also called submerged plants.
- They have narrow, thin leaves with no stomata.

Water hydrilla

AQUATIC plants

Fixed plants	**Floating plants**	**Underwater plants**
Roots of such plants grow in the water bed.	Float freely on top of water.	Plants like hydrilla and tape grass live completely under water.
Stem are long , hollow and light.	Plants are very light	They are called submerged plants.
Leaves are broad .	Roots are not fixed in the water bed.	They have narrow, thin leaves with no stomata.
Stomata is on the top of the leaves.	Leaves of these plants have air inside them.	
Lotus and water lily are examples		

CARNIVOROUS PLANTS

- ◉ Some plants grow in soil which is poor in minerals.
- ◉ They trap and eat insects to get enough nutrition.
- ◉ Such plants are also called insectivorous plants

Venus flytrap and Pitcher plants are some of the examples.

- ◉ Venus flytrap has leaves that are folded in half.
- ◉ When an insect sits on the leaf , the two halves of the leaves close shut

PITCHER PLANT

- ◉ The pitcher plant has leaves that look like containers with lids.
- ◉ There is a liquid inside the container.
- ◉ Insects that fall in to the container (pitcher) are trapped and digested.

GRASSES

- ◉ Grass grow in hills and plains
- ◉ Grasses are tall or short
- ◉ Grasses do not need much water
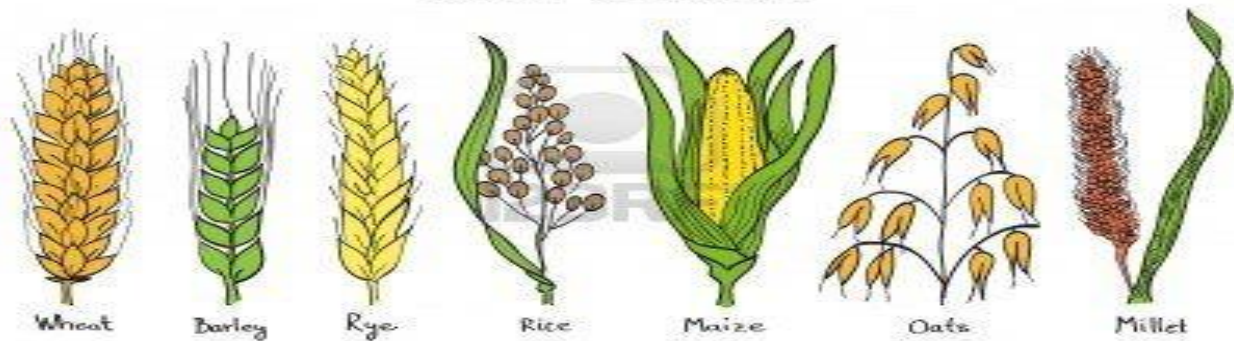- ◉ Grass can grow in soil which has less minerals.

Short grass is the ordinary grass in the gardens.

During the rainy season grass grows very fast and spreads along the ground.

Ordinary grass is the food of many grazing animals.

Some grasses grow tall and are very useful to us as food. Grasses like rice, maize , wheat and jowar give us cereals.

Cereals

Wheat   Barley   Rye   Rice   Maize   Oats   Millet

Bamboo and sugarcane are tall grasses

Sugar is extracted from sugarcane.

We all love sugarcane juice which is prepared from sugarcane

Bamboo is used to make comfortable furniture and beautiful huts.

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Summary

⦿ Plants have adapted to grow in different places and in different climates.

⦿ Terrestrial plants survive in hills, plains, deserts and marshes.

⦿ Aquatic plants live and grow in water.

⦿ Fixed, floating and underwater plants are types of aquatic plants.

⦿ Carnivorous plants eat insects to get enough nutrition.

⦿ Grasses grow at many places. They can be small or very tall.

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