

Chapter-7: How Plants Survive (Notebook work)

New Words

1. Terrestrial plants	5. Chlorophyll
2. Swamp	6. Carnivorous
3. Breathing roots	7. Stomata
4. Aquatic plants	8. Insectivorous plants

Define the Following-

1. **Swamps:** Sticky soil which contains a lot of water is known as swamp.
2. **Chlorophyll:** The green coloured substance present in the leaves used to make food is called chlorophyll.
3. **Saprophytic plants:** Plants that can not make their own food and absorb nutrients from dead plants and animals are called saprophytic plants. *Example:* Indian pipe and coral root etc.

Answer the Following Questions:-

Q1. What are terrestrial plants? Why do different kinds of plants grow in different regions?

Ans: Plants that grow on land are called terrestrial plants.

- Different kinds of plants grow in different regions because plants need to adapt to the natural conditions of different areas to be able to survive there.

Q2. List any three features that help desert plants save water?

Ans: To save water, desert plants have the following features:

1. They do not have any leaves or have very few of them. Photosynthesis is carried out by the green stem.
2. They store water in the stems, which become fleshy.
3. Most plants have spines or thorns which further reduce loss of water.

Q3. Why do plants in swampy areas have breathing roots?

Ans: Plants in swampy areas have breathing roots because they take in air and help a plant to breathe. They also absorb water and minerals required for photosynthesis.

Q4. What are the different kinds of aquatic plants?

Ans: There are three types of aquatic plants – floating, fixed, and underwater plants.

1. **Floating plants:** Stems of floating plants are light and spongy so that they can float on water.
2. **Fixed plants:** These plants have their roots fixed to the bottom of the pond. They have thin, long, and hollow stems to reach the surface of the water.
3. **Underwater plants:** These plants grow under the water surface and have thin and narrow leaves, without any stomata.

Q5. What are insectivorous plants? How does a Venus flytrap catch insects?

Ans: Plants that are carnivorous in nature and trap insects are called insectivorous plants.

- Venus flytrap has leaves that are like boxes with hinges. It has stiff hair-like structures inside the leaves. When an insect touches the hair, the leaf snaps shut, trapping the creature inside.

Q6. Write a short note on useful plants.

Ans: Plants are useful in many ways:

1. We depend on plants for food. Fruits and vegetables, oil, sugar, cereals, tea, coffee, etc. obtained from plants.
2. Plant fibre such as cotton and jute are used to make clothes, carpets, sacks, and ropes.

- Which of these can grow in areas of less rainfall?**
 - Peepal and gulmohar
 - Sheesham and sal
 - Ashok
 - All of these ✓**
- Which of these is true about trees that grow on mountains?**
 - They are tall and straight.
 - They have a conical shape.
 - They grow cones with seeds inside them.
 - All of these ✓**
- Which of these help plants growing in swampy regions to breathe?**
 - Breathing leaves
 - Breathing stems
 - Breathing roots ✓**
 - Cones and thorns
- Where do saprophytic plants get their nutrition from?**
 - Insects that they trap
 - Photosynthesis with the help of their leaves
 - Dead plants and animals ✓**
 - All of these
- Stems of which of these plants would you use to make baskets and walking sticks?**
 - Bamboo ✓**
 - Rubber
 - Flax
 - Kikar
- Which of these refers to dry lands that receive very little rainfall?**
 - Mountains
 - Plains.
 - Deserts ✓**
 - Swamps
- Why do we find coconut trees in coastal areas?**
 - Because they are tall and rain can slide off easily
 - Because the soil is sticky
 - Because coconut trees can survive in salty water ✓**
 - Because coconut trees have thorns that help them to conserve water
- How do some plants survive underwater?**
 - They have no stomata
 - They have thin and narrow leaves
 - Their leaves absorb gases directly from their surface
 - All of these ✓**

II. Very Short Answer Type Questions

A. Give two examples for each of the following.

- | | |
|---|-------------------------------------|
| 1. Plants that grow in areas of heavy rainfall: | <u>Rubber tree, Teak tree</u> |
| 2. Plants that grow in deserts: | <u>Cactus, Babool</u> |
| 3. Underwater plants: | <u>Tape grass, Pondweed</u> |
| 4. Insectivorous plants: | <u>Venus flytrap, Pitcher plant</u> |
| 5. Plant fibres: | <u>Cotton, Jute</u> |
| 6. Plants that give us medicines: | <u>Tulsi, Neem</u> |

B. Give one word for the following.

- | | |
|---|-----------------------------|
| 1. Plants that grow on land: . | <u>Terrestrial plants</u> |
| 2. Plants that remain green all year round: | <u>Evergreen plants</u> |
| 3. Plants that grow in water: | <u>Aquatic plants</u> |
| 4. Plants whose leaves are modified to trap insects: | <u>Insectivorous plants</u> |
| 5. Plants that cannot make their own food and absorb: | |

nutrients from dead plants and animals:.

Saprophytic plants

The image shows a student's handwritten work on a worksheet. At the top left, it says 'LET'S APPLY' with a small green leaf icon and the word 'APPLYING' above it. To the right, there are two circular logos: '21ST CENTURY SKILLS' and 'SCIENTIFIC SKILLS'. The student has written 'Text Book' in red and '(Note Book)' in blue. Below this, there are two questions and answers written in red ink. Question 1 asks why a cactus plant does not have leaves, with a hint that it is a desert plant. The student's answer is that because it is a desert plant, its leaves are reduced to spines to prevent water loss. Question 2 asks if plants can be used to dye fabrics, with a hint about decorating hands. The student's answer is yes, because plants contain natural pigments that can color clothes permanently. At the bottom left, there is a green bar with the number '8' and the text 'How Plants Survive'.

LET'S APPLY  **APPLYING** Text Book (Note Book)

1. Why does a cactus plant not have leaves? Because it is a desert plant and ~~have~~ ~~spines~~ leaves are reduced to spines to prevent water loss.
(Hint: Cactus is a desert plant.)

2. Komal says that plants can be used to dye (colour) fabrics. Do you think it is possible? How?
(Hint: How do we decorate our hands?)
Ans- Yes, Komal is correct, because plants contain natural pigment that can colour clothes permanently.

8 How Plants Survive

LET'S RECALL



Recall and complete the concept map given below.



Types of plants

Terrestrial plants

On mountains
Example: pine tree

In deserts:
Example - Cactus

In swampy areas
Example: mangroves

In plains

On Sea Coast
Example - Coconut trees

Heavy Rainfall
Example - Rubber tree

Less Rainfall
Example - Neem

Types of plants

Aquatic plants

Floating plants

Examples

• Duckweed

• Water hyacinth

Fixed plants

Examples

• Water lily

• Lotus

Underwater plants

Examples

• Pond weed

• Tape grass

Insectivorous plants

Examples:

• Venus flytrap

• Pitcher plant

Non-green plants (saprophytic)

Examples:

• Coral root

• Indian pipe

LET'S OBSERVE



LO 10



1. Name the plant shown here.
2. Why does it have leaves in the shape of a container?
3. What do we call such plants?
4. Give one more example of a carnivorous plant.

Pitcher Plant

To trap the insect inside it
Insectivorous plant

- Venus flytrap
- Sundew



LET'S ANALYSE AND EVALUATE

LO 7



(a)



(b)



(c)

1. Analyse which of the above plants is best suited to survive on the mountains.



Ans - (c)

2. Evaluate the various special features it has to survive there.



Ans - tall, straight, cone-shaped, needle-like leaves, flowerless

LET'S CREATE



- In groups of five, collect pictures of any three plants found in each of these regions:
a. Plains b. Deserts c. Areas of heavy rainfall d. Mountains e. Sea coast

Make a large map of India on a chart, and mark each of the above regions and then paste pictures of plants appropriately.

LO 7

LO 13

LO 17

- List at least five things found in your house besides foodstuffs that are made from plants. Identify which part of the plant they are made from. Discuss the list in class.

LO 2