Grade 4

Chapter 2: Adaptations in plants, Class 6

CLASS NOTES-ANSWERS

- I. Choose the correct words to fill in the blanks.
 - 1) The natural environment in which a plant or an animal lives is called its <u>habitat</u>.
 - 2) The characteristics which help a plant survive in its habitat are known as <u>adaptations.</u>
 - 3) Plants that grow on land are called <u>terrestrial</u> plants.
 - 4) Plants that grow in water are called <u>aquatic</u> plants.
 - 5) Mountains are cold places that receive a lot of sunshine and rainfall.
- II. Where am I found?
 - 1) I have sloping branches and thin, needle-like leaves. <u>Mountains</u>
 - 2) I need a lot of rainfall, but will die if too much water stands near my roots.
 <u>Hilly regions</u>
 - 3) I shed all my leaves during autumn or the dry season <u>Plains</u>
 - My leaves are modified into spines and I have thick, <u>Desert</u> fleshy and green stems.
 - 5) I have a tall, sturdy and flexible stem and my leaves <u>Coastal areas</u> are called fronds.
- III. Complete the table.

	Habitat	Example
1)	mountains	pines
2)	plains	<u>teak</u>
3)	<u>desert</u>	cactus



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4)	coastal regions	<u>coconut</u>
5)	marshy areas	mangroves
6)	aquatic (free-floating)	water hyacinth
7)	aquatic (fixed)	lotus
8)	aquatic (underwater)	<u>hydrilla</u>

IV. Circle the odd feature. Write the habitat in which a plant with the other

features is found.

1) sloping branches thin, needle -like leaves no flowers deciduous Habitat: mountains broad leaves many branches (flexible trunk 2) thick bark Habitat: plains 3) thick bark thick, fleshy stem shallow roots spiny leaves Habitat: desert thin stemo Kanjirappa flexible trunk single root 4) tiny leaves Habitat: aquatic (free-floating)

V. Answer the following questions.

1) Define terrestrial and aquatic habitats along with two examples of plants found in each.

Answer: A terrestrial habitat is a habitat found on land. Pine and neem are examples of plants found in terrestrial habitat. Aquatic habitat is a habitat found in waterbodies such as ponds, lakes, rivers, seas and oceans. Lotus and water lily are plants found in aquatic habitats.



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2) List the adaptations seen in cactus plants.

Answer: Plants growing in deserts have adaptations to save water.

- The leaves of the plant are modified into spines to prevent the loss of water.
- The thick and fleshy stem of the plant absorbs water like a sponge.
- The waxy coating on cactus stems prevents water loss.
- The roots are shallow and lie just below the surface of the soil
- During very dry periods, the roots wither away and break off so that the soil does not suck up the moisture of the roots.
- 3) Why do mangroves have special roots?

Answer: In marshy areas of the coastal region, the soil is sticky and wet. This clay-like soil does not have enough air for the roots to breathe easily. Thus, the mangroves have special roots known as respiratory roots which grow above the soil to breathe.

- Describe the leaves present in plants that grow underwater.
 Answer: The leaves of underwater plants are fully underwater. They have small, thin ribbon-like leaves. The leaves do not have stomata.
- VI. Higher Order Thinking Skills

Think and answer.

1) What would happen if the leaf stalks of water hyacinth were solid like those of terrestrial plants?

Answer: If the leaf stalks of water hyacinth were solid, it would make

the plant heavy and the plant would not float freely on the surface



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of the water.

- 2) Underwater plants have small, thin, ribbon-like leaves. Why? Answer: The small, thin, ribbon-like leaves of underwater plants help them to easily bend with flowing water and prevents damage of leaves and plants.
- 3) Why are stomata absent in underwater plants? Answer: The leaves of underwater plants absorb carbon dioxide and oxygen directly through their surface. Hence, stomata are absent.

