

Board- CBSE	Std- 6	Topic- The living organisms	Revision Notes
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Introduction: Different regions in the world have various types of living creatures called organisms. Even the openings of volcanoes have tiny living organisms. Even our homes are not devoid of these tiny organisms. List some of the tiny organisms which you have encountered at home!

Environment: Everything that we see surrounding us; living, non-living, physical, chemical etc. is called as environment

Biotic Components: These are the living components of the ecosystem. e.g. flora and fauna

Abiotic Components: The non-living components of the ecosystem like soil, water, air etc. are called abiotic components.

Organisms and the surroundings where they live

ORGANISM	WHERE THEY LIVE
CAMELS	DESERTS
YAK	MOUNTAINS
CRABS	SEA
ANTS	VARIOUS LOCATIONS

The table shows some common organisms and their place to live

Habitat and Adaptation

The region or place where an organism lives is termed as its habitat. Habitat provides an organism everything it needs to survive like food, shelter, proper weather conditions such as rainfall, heat etc to breed and flourish.

Camel:

It has long legs which provide protection from the heat of sand

Excrete small quantity of urine

They do not sweat and their dung is dry

Can live without water for many days as their bodies lose little water.



Figure 1 Camel

Fish:

Their streamline shape helps to move easily in water

Presence of slippery scales

Gills help in utilizing dissolved oxygen

Flat fins and tail help in changing direction in the water



Figure 2 Aquatic Organisms

Both the organisms discussed above have specific features or characteristics that enable them to survive in their habitat. These features are termed as adaptations.

TERRESTRIAL HABITAT:

Plants and Animals that thrive on land are said to live in terrestrial habitats.

E.g.: forests, deserts, mountain regions

AQUATIC HABITAT:

Plants and Animals that thrive in water are said to live in aquatic habitat.

E.g.: rivers, lakes

Journey through different habitats

Terrestrial Habitat:

a) Deserts:

The following adaptations of various organisms are enlisted below:

- Snakes and rats dig burrows to escape intense heat as they don't have long legs such as a camel. These animals come out only during the night, when it is cooler
- In desert plants leaves are reduced to spines and lose little water through transpiration
- The stems of desert plants have a waxy coating on them and in most of them photosynthesis is carried out by the stem
- Their roots go deep into the soil so as to absorb water.

- The leaves in desert plants are absent to prevent loss of water due to transpiration.
- Some of the animals are camels, kangaroo rats etc

b) Mountain Regions:

- The trees are cone shaped and slope-like shape.
- branches, also needle-like leaves are present so that rain and snow slide off them easily.
- Animals have thick fur which provides protection from cold. e.g. Snow Leopard
- Presence of strong hooves helps the mountain goat to run on the rocky slopes.
- Eg are Pines, mountain goats, yaks, sheep etc. Yaks have long hair to keep them warm.



Figure 3 A tree found in mountain region

c) Grasslands:

- The light brown colour of the lion helps it to hide in dry grasslands and the presence of long claws helps to capture the prey.
- Deer has strong teeth to eat plant stems also its long ears help to listen to predator movement. They have eyes on the sides of the head which help them to look in all directions to look out for danger.
- Some of the animals living in these habitats are elephants, giraffes, and lions .

d) Rainforest:

- This habitat receives a lot of rain and hence it is rich in animal life.
- Mammals, Amphibians, Reptiles, all sorts of animals are found here.
- The climate is hot and humid and animals have to learn to adapt to survive.

e) Polar Habitat:

- These habitats are very cold and windy.
- The animals are mostly carnivores and have thick fur to survive in the cold.
- Some blend in ice and some may hibernate in the coldest months.
- Examples of animals are polar bears, reindeers, penguins etc.

Aquatic Habitats



Figure 4 An aquatic plant

Marine Habitat

1. Marine Habitat comprises oceans and seas, and both have saltwater.
2. They are home to a wide variety of creatures like most of the part fish population is found here.
3. Marine creatures are found in Estuaries – where rivers and oceans meet and the water is salty.

4. Marine Mammals like whales migrate to long distances in order to cope up with the temperature changes.

Oceans

- Most organisms have streamlined bodies and gills
- Octopuses do not have streamlined bodies so they stay deep in the ocean, but when moving they make a streamline motion.
- Whales have blowholes instead of gills This enables them to breathe easily when they swim near the surface of water.



Figure 5 An Octopus

Freshwater Habitat:

1. Rivers, lakes, ponds etc comprise the freshwater habitats.
2. Three percent of the world's water is considered as freshwater but still a wide variety of species are found here.
3. Snails, worms, mollusks etc are found in this habitat

Ponds and Lakes:

- Plants: Water plants can be completely submerged in water (like Hydrilla) or floating on the surface of water (like Water Lily, Lotus, Water Hyacinth). Roots are much reduced in size, since their main function is to hold the plant in place. Stems of aquatic plants are long, hollow and light so that these can bend along with water movement. e.g Water Lily. The stems grow up to the surface of the water, while the leaves and flowers float on the surface of the water.

- Totally submerged plants have narrow and ribbon like leaves (e.g tape grass). These can bend in flowing water.
- Stems have air spaces to enable the plant to float. Floating plants are large and flat. They have waxy upper surfaces that make them waterproof. They have stomata on the upper surfaces which are exposed to air.
- Frogs are adapted to live both on land and water, they have strong back and legs and webbed feet which allows them to swim in water.

Coastal Habitat:

1. Habitats where the land meets the sea.
2. Beaches, special type of trees called mangroves are found in this habitat
3. Coastal plants like seaweed attach to the rocks firmly so that they are not swayed by the waves,

Acclimatisation: Due to certain changes in the surroundings, organisms adapt through them by making small changes in the body over short periods of time.

For e.g: The changes which take place in the body when we travel from plains to mountains. The adjustment which the body makes is called Acclimatisation

Characteristics of Living Organisms

Living

They require food to grow and carry out life processes

They grow in size

All living organisms breathe and respire(process of generating energy)

They Respond to stimuli(changes in environment)

They carry out reproduction(producing next generation) and excretion(elimination of waste from body)

Movement is shown by living organisms