OPTIMUM
INTERNATIONAL SCHOOL

CLASS – V

Science Date:-14/04/2020

- *Learn word meaning.*
- *Read the given page of ch-1 three-times and find the toughest words.*
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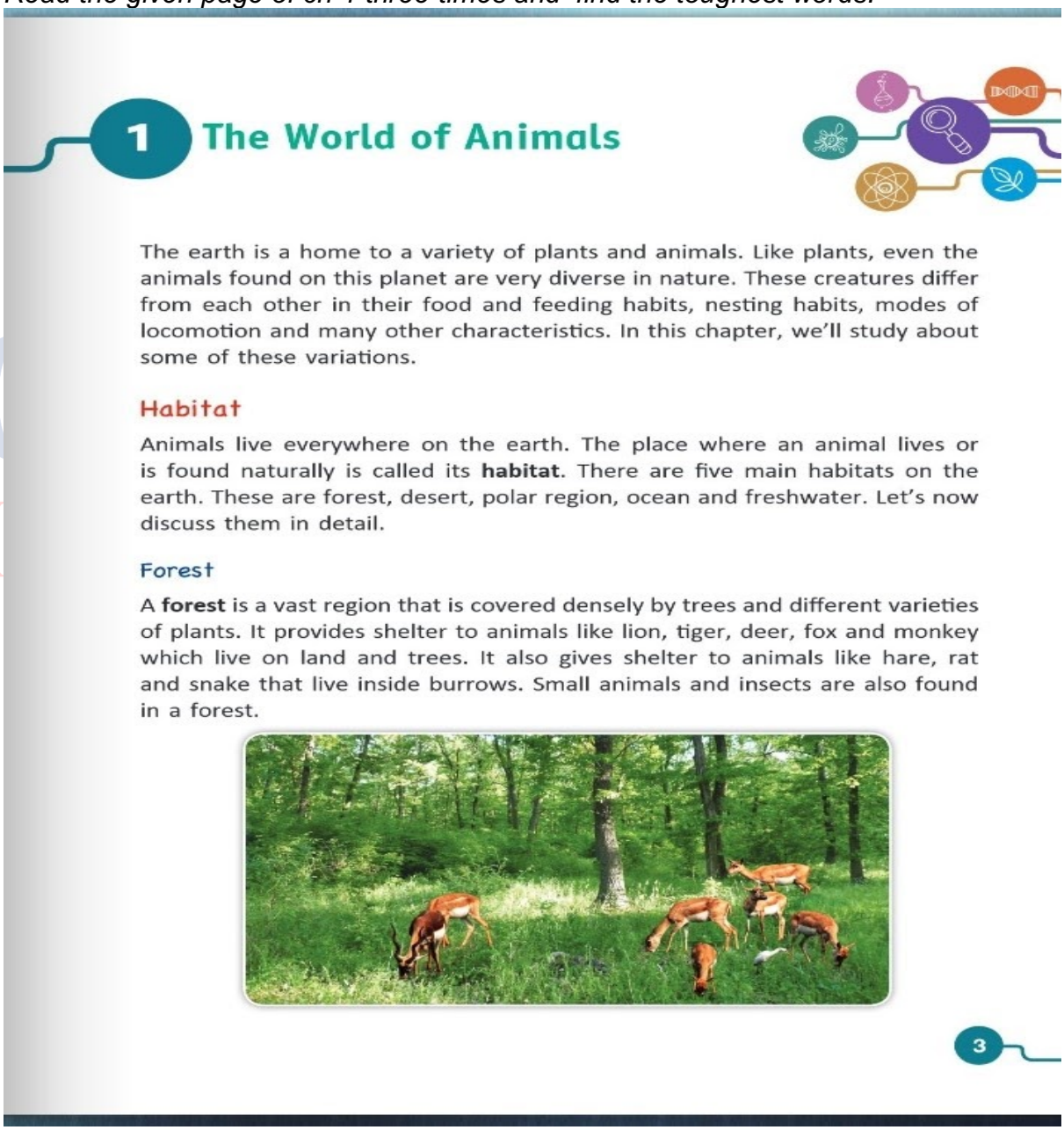

1 The World of Animals

The earth is a home to a variety of plants and animals. Like plants, even the animals found on this planet are very diverse in nature. These creatures differ from each other in their food and feeding habits, nesting habits, modes of locomotion and many other characteristics. In this chapter, we'll study about some of these variations.

Habitat

Animals live everywhere on the earth. The place where an animal lives or is found naturally is called its **habitat**. There are five main habitats on the earth. These are forest, desert, polar region, ocean and freshwater. Let's now discuss them in detail.

Forest

A **forest** is a vast region that is covered densely by trees and different varieties of plants. It provides shelter to animals like lion, tiger, deer, fox and monkey which live on land and trees. It also gives shelter to animals like hare, rat and snake that live inside burrows. Small animals and insects are also found in a forest.

Desert

A **desert** is a sandy and dry region as it receives very little rainfall. It is usually hot during the day and cold at night. Due to these reasons, the animals found here have special features that help them to live in such harsh conditions. Many desert animals have a thick skin that helps them to avoid water loss through sweating. Many others hide in their burrows to escape the heat. Some animals can even store water and food in their body. Some examples of desert animals are camel, scorpion, bandicoot, hedgehog and desert tortoise.

Bingo's Knowledge Bank

Arctic desert, Sahara desert and Gobi desert are some of the famous deserts of the world.

Bingo's Challenge!

What features enable a camel to survive in a hot desert?

Polar region

The regions near the north and south poles on the earth are called **polar regions**. The north pole is named Arctic and the south pole is called Antarctica. They are always covered with ice and snow. Similarly the high altitude mountains are also covered with snow all round the year. The animals found here have developed special features to cope with such cold weather. Their bodies are covered with fur. Most of the animals have a thick layer of fat beneath the fur which keeps them warm. Many animals live in groups to protect themselves from the cold. Penguin, polar bear, seal, snowy owl, walrus, arctic hare and arctic fox are some examples of animals found in polar regions.

Bingo's Teaser

What do we call the thick layer of fat beneath the fur of animals which keeps them warm?

Bingo's Challenge!

Discuss in class why can't lions survive in polar regions.

Ocean

An **ocean** is a vast and continuous body of saline (salty) water. It is the largest habitat on the earth. A large variety of animals are found here. Some of them are whale, dolphin, seal, seahorse and octopus. These animals are well-adapted to live in salty water.

Freshwater

Freshwater is naturally occurring water on the earth's surface. It contains minimal quantities of dissolved salts. Some examples of freshwater habitat are ponds, lakes, rivers, streams, etc. This kind of habitat gives shelter to numerous animals like fish, frog, salamander, toad, duck, swan, crane and a number of insects.

Name the habitat to which these animals belong.

1. Penguin, seal, polar bear
2. Swan, frog, salamander
3. Seahorse, octopus, whale
4. Camel, scorpion, bandicoot

Bingo's Knowledge Bank

The weight of a bird's feathers is more than that of its skeleton.

Body Covering

In order to adjust to the different kinds of environmental conditions of the habitat, animals have different types of body coverings. Some of them are given below.

- The body of birds is primarily covered with **feathers**. Feathers keep them warm and protect them from moisture. Thus, they help in maintaining the body temperature. They also help birds in flying.

- Another type of body covering is **fur**. Animals like yak, bear and sheep have fur on their body. It helps to keep the animal warm by protecting it against rain and cold.

- Animals like snake, lizard and some fish have a layer of dry and overlapping **scales**. These scales protect the underneath skin and also prevent loss of water in some animals.

- Another commonly found body covering is **shell**. It is very hard and strong. Shells can be seen in land and ocean animals like turtle, tortoise and snail. These animals draw their head and feet into the shell and hide to protect themselves from their enemies.

Name two animals having the following types of body covering:

1. Feathers
2. Shell
3. Fur
4. Scales

Feeding Habits

All organisms need food for their growth and development. Feeding habits differ from animal to animal. They also depend on the availability of food in the habitat. There are three main classes in which animals can be classified on the basis of their eating habits. These are—herbivores, carnivores and omnivores.

- **Herbivores** are the animals that eat only plants. They have sharp front teeth called incisors for biting, and broad teeth called molars and premolars for chewing food. Cow, goat, deer and giraffe are some herbivores.

- **Carnivores** like lion, tiger, cat and fox are those animals which feed on the flesh of other animals. Such animals have sharp and pointed front teeth called canines that help them to tear flesh. They have strong molars for chewing the flesh and bones.

  Scavengers like vulture, hyena and wolf are special types of carnivores that feed on dead or decaying animals. They play an important role in maintaining a balance in nature by preventing accumulation of dead bodies of animals.

- **Omnivores** are those organisms that eat both animals and plants. Examples of omnivores include man, bear, crow and squirrel.

Bingo's Knowledge Bank

There is another category of animals based on eating habits which is known as **decomposers**. These are very small organisms which feed on dead and decaying plants and animals.

Quick Recall

Fill in the blanks.

1. There are _____ main classes in which animals can be classified on the basis of their _____ habits.
2. Omnivores are those organisms that eat both _____ and _____.
3. Carnivores have strong _____ for chewing the flesh and bones.

Breathing Organs in Animals

Breathing is an important process for all living things. During breathing, an exchange of gases takes place, i.e., oxygen is inhaled and carbon dioxide is exhaled. The intake of oxygen is necessary as it helps to break down the food and release energy which is required to perform various activities. Different animals have different breathing organs. Some of them are discussed here.

- Insects exchange the gases through small openings on their body surface known as **spiracles**.
- **Gill** is a breathing organ found in almost all aquatic animals like fish, crab, tadpole, prawn, etc. Gills help these animals to absorb oxygen dissolved in water.

Bingo's Knowledge Bank

Microscopic organisms use their **body surface** to breathe.

- Other animals like reptiles, birds and mammals breathe through their **lungs**. The function of the lungs is to transport oxygen which is inhaled through the nose to the blood and to release carbon dioxide from the blood.
- Animals like frog and toad that spend part of their life under water and part of it on land are called amphibians. When young, these animals live in water and breathe through gills. As adults, they breathe through lungs on land and moist skin in water.

Quick Recall

State whether the following statements are true or false.

1. Insects exchange the gases through small openings on their body surface known as spiracles.
2. All animals have the same breathing organs.
3. Lungs help these animals to absorb oxygen dissolved in water.
4. Animals like reptiles, birds and mammals breathe through their lungs.

Movement in Animals

Unlike plants, animals can move from place to place. This movement is known as **locomotion**. It not only helps them to obtain food and get shelter, but also helps to protect them from danger of predators or natural calamities. Different animals use different body parts to move. Let's study some of them in detail.

- **Insects** can move in various ways. They can walk, jump, fly, hop or crawl. Butterflies and mosquitoes have one or two pairs of wings that help them to fly. Termites, lice, etc. move by crawling. Similarly, ants and cockroaches walk. A grasshopper hops using its long hind legs. Aquatic insects like backswimmer and water boatman use their hind legs to swim.

- **Reptiles** like lizard, snake and crocodile use various forms of locomotion to move from place to place. Some of them have legs and some use their scaly

skin to move by crawling. Tortoise and crocodile have legs and move about using them. A snake, on the other hand, does not have legs. It uses scales present on the underside of its body to move. Besides these, a strong muscular system and flexible backbone aid it in moving. A turtle can swim easily using its limbs.

- **Birds** can hop or walk on land, swim in water and fly in air. The forelimbs of a bird are modified in the form of wings that help them to fly. Crow, sparrow, eagle, parrot, etc. are common birds that fly in the sky. Some birds like ostrich, emu and kiwi are called **flightless birds** because they have very heavy bodies and weak wings and cannot fly.

Birds use their hindlimbs (or legs) to walk, run, catch prey and even attack their enemies.

Birds like duck, swan, etc. can also swim in water due to their webbed feet.

- **Terrestrial animals** like lion, tiger, elephant and many others have two pairs of limbs. Most animals use all the four limbs to walk, run and for other movements.

- **Aquatic animals** like turtles use their limbs to swim. Others like frogs use their webbed feet to swim in water, while they use their long hind legs to hop on land. Fish have fins to move in water. The fins help fish to swim and maintain balance in water. The tail fin helps them to change direction.

Quick Recall

Give one word for the following.

1. The dry and sandy region which receives very little rainfall
2. The strong and hard body covering found in turtles and tortoises
3. The breathing organ found in a tadpole
4. The modified forelimbs of a bird

Migration

Migration is defined as the movement of an animal from one region to another, in response to changes in season, habitat or availability of food. This happens at regular periods of time and during a particular season. Animals migrate because the conditions in their habitat become adverse to support life. Either the weather becomes too cold or too hot, or the available food becomes scarce. Many times animals also migrate because of natural calamities like earthquakes, droughts or floods.

Bingo's Knowledge Bank

The word migration comes from the Latin word 'migratus' which means 'to change'.

Usually the word 'migration' is more closely associated with the movement of birds. Birds migrate twice in a year during spring and autumn. But only some birds migrate, not all. The birds that migrate are called **migratory birds**, while the ones that do not migrate are called **resident birds**. The main reason behind their migration is to escape cold weather conditions and to find food. They come back to the original habitat each year. For example, the Arctic tern nests near the north pole in summer and flies all the way to Antarctica in autumn to escape harsh cold conditions.

Bingo's Knowledge Bank

Migrating ducks and geese often fly in V-shape formations which help them in saving energy.

Besides birds, some other animals like caribou, elk, some bats, whales, etc. too migrate in search of food.

Among insects, butterflies and moths also migrate. A very common example is Monarch butterfly that migrates from Canada to Mexico in winter.

Quick Recall

Unscramble the given words.

(a) LGISL _____ (b) TIARMGNIO _____

(c) EVRSANCEG _____ (d) LESRCIPAS _____

Recall with Bingo

1. The earth is a home to a variety of plants and animals.
2. The place where an animal grows or is found naturally is called its habitat.
3. There are five main habitats on the earth – forest, desert, polar region, ocean and freshwater.
4. In order to adjust to the different kinds of environmental conditions of the habitat, animals have different types of body coverings. Feathers, fur, scales and shell are some of them.
5. Based on their eating habits, animals are classified as herbivores, carnivores, scavengers and omnivores.
6. Breathing is an important process for all living beings. During this, an exchange of gases takes place, i.e., oxygen is inhaled and carbon dioxide is exhaled.
7. Different animals have different breathing organs. Insects breathe through spiracles, fish breathe through gills, birds, reptiles and mammals breathe through lungs, and amphibians breathe through gills, lungs and moist skin.
8. The movement of animals from one place to another is called locomotion. Animals use different body parts to move.
9. Migration is the movement of an animal from one place to another in response to changes in weather, habitat or availability of food.