

CLASS IV
SCIENCE
CHAPTER-3 ADAPTATION IN ANIMALS

- The place where an organism usually lives and grows in nature is called its **habitat**.
- **Adaptations** are the special features that help a animal to survive in its habitat.
- Animals adapt themselves in the following ways :
 1. For habitat
 2. For food habit
 3. For protecting themselves
 4. For surviving extreme heat and cold
 5. Special adaptations such as camouflage, migration and hibernation.

- **ADAPTATION FOR HABITAT**

Animals can be divided into different groups as per their habitat.

- (A) Terrestrial Animals
- (B) Aquatic Animals
- (C) Amphibians
- (D) Aerial Animals

- Animals that live on land either on the surface of the ground or in burrows below the surface of the ground are known as **terrestrial animals**. Snakes , rabbits, mice and foxes live in burrows.

Dog, cats, tiger, lion, elephant, camel, horses etc live on open land.

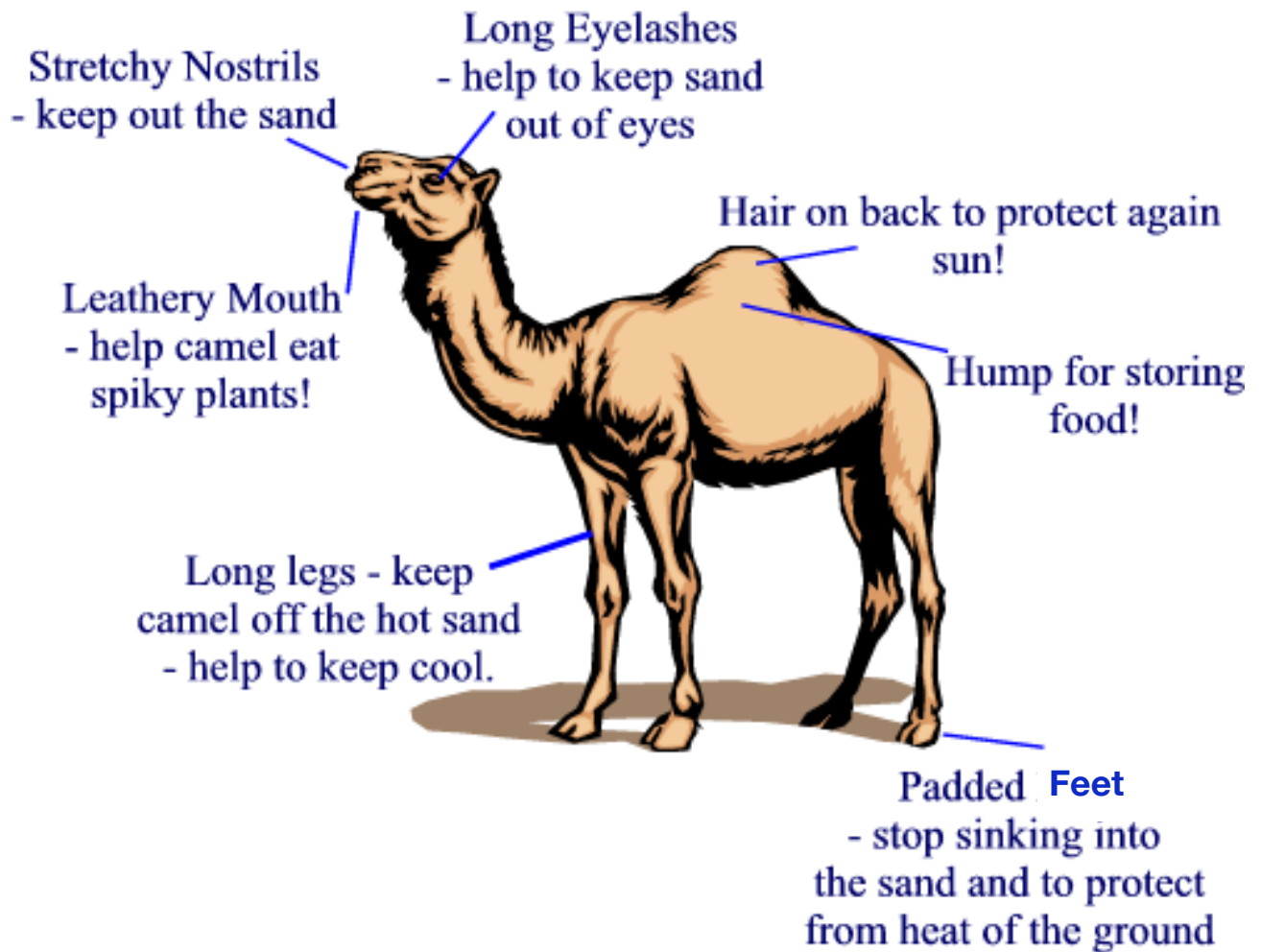
- Strong legs help them to cover long distance in search of food and water.
- Snakes have scales that help body to crawl.
- These animals have well developed digestive system as per their heating habits.
- Their keen sense of smell, sharp eyesight, sharp teeth, strong legs help them to prey on other animals.

- **Adaptation for surviving extreme cold/polar regions**

- Animals living here have fur on their bodies to protect them from cold.
- Penguin and polar bear have a thick layer of fat called **blubber** under their skin to keep them warm.
- Emperor penguin and their chicks huddle together. The birds take turn to occupy the outermost position.

- **Adaptation for surviving extreme heat.**

Animals living in the desert have thick skin which protects them from the sun. It also prevents water loss from their bodies. Eg; Scorpion, rattle snake and desert tortoise. Some adaptation of **camel**, (Ship of the desert), to live in desert are given below.



- **Aquatic Animals** are the animals that live in water. Crabs, turtles, ducks, fishes etc. are some examples.
 - Most of them breathe through gills.
 - They have fins or limb to swim.
 - Ducks have webbed feet which help them to push water back while swimming.

- Fish have streamlined body to cut water easily.
- Fish have scaly skin and they are waterproof.
- **Amphibians are the animals that can live both on land and water.** Frog, toads are some example.
 - They have limbs to facilitate swimming.
 - They breathe through moist skin.
 - They have webbed feet and tails to help in swimming.
- **Aerial animals** can fly. Birds, some insects and bats are examples.
 - Their forelimb are modified as wings to fly.
 - They also have feather that keep them warm and help during flight.
 - Their bones are hollow that keep them light in weight.
- **Arboreal animals** spend most of their lives on trees. They eat sleep and play in the tree canopy. Long limbs allow them to swing efficiently from one branch to another. Long tail to grasp branch. Animals squirrel needs strong grip so they don't fall. Their feet and claws are adapted for seizing, grasping or holding objects by wrapping around them. Their fingers and thumbs are shaped in a such way that they can hold branches firmly.

Adaptation for food habits.

- The teeth of **herbivores** are strong, broad and flat. They help them to eat and chew the grass and leaves.
- The teeth of **carnivores** are sharp. They help them to tear the flesh easily.
- **Omnivores** have the combination of tearing, biting and grinding teeth.
- **Parasites** are small animal that depend on other living animals for their food.Eg: Mosquitoes and leach. They suck blood from the body of other animals.

Adaptation for Protecting Themselves.

- Horns to push and threaten.Eg; Rhinoceros
- Scales protect them from drying.Eg; Lizard

- Spines is on the surface of the bodies. They injure other animals that come near or attack them.Eg; Puff fish.

Social adaptations

- **Camouflage** is the ability to blend into the surrounding environment . It is a useful self defence method for an animal when trying to avoid a predator.
- **Hibernation**, animals adapt by sleeping for up to few months at a time.Eg; Bears
- The mass movement of animals and birds from one place to another for breeding, feeding or to protect themselves from harsh weather condition is called **migration**.Eg; Artic tern

EXERCISES

OBJECTIVE TYPE QUESTIONS

A Give two examples of the following:

1. Animals in aquatic habitat
2. Animals in polar region.
3. Animals live in trees
4. Features for protection
5. Parasites

B Choose the correct option.

1. Which of the following is habitat of a cow?
A) Desert B) River C) Tree D) Open land.
2. Which of the following is an adaptive feature of a penguin?
A) strong legs B) thick skin C) gills D) fur on body.
3. is an arboreal animal.
A) opossum B) cat C) lion D) tiger
4. have a combination of tearing, biting and grinding teeth.
A) Herbivores B) Carnivores C) omnivores D) Parasites
5. Which of the following is not a feature for protection?
A) Shell B) horn C) wings D) scales

C. Read the clues and guess the answers.

1. This animal lives in a burrow
2. This is a bird but cannot fly.
3. It has fins and it breathes through gills.
4. It has a moist skin and can live both in water and on land
5. It lives inside the human body.

D. Write T for True statements or F for False statements.

1. Adaptation helps as animal to live uncomfortably.
2. The artic fox can change its colour.
3. The animals that live in cold places have thick fur on body.
4. Leech is a parasite.

E. Match the following:

1	Wings	Fish
2	Limbs	Snake
3	Scales	Squirrel
4	Fins	Bird
5	Claws	Tiger

THEORETICAL QUESTIONS

A. Answer the following questions in brief.

1. What are terrestrial animals?
2. Difference between arboreal animals and aerial animals.
3. Define camouflage. Explain how camouflage is useful to artic fox.
4. What is migration? Name any three animals that migrate from their original place.
5. Explain some adaptations in animals living in polar regions.

ANSWERS

QA

1- crabs and turtles

2- Penguin and polar bear

3- Monkeys and koalas

4- Horns and scales

5- Leech and tapeworm

QB

1-(d), 2- (b), 3-(a), 4-(c), 5-(c)

QC

1- rabbit

2-ostrich

3-fish

4-frog

5-tapeworm

QD

1- False, 2- True, 3-True, 4-False, 5-True

QE

1-(d), 2-(c), 3-(b), 4-(a), 5(e)

THEORITICAL QUESTIONS

QA

1. Animals that live on land either on the surface of the ground or in burrows below the surface of the ground are known as terrestrial animals. Snakes , rabbits, mice and foxes live in burrows.

2.

Arboreal Animal	Aerial Animal
<ul style="list-style-type: none">• Arboreal animals spend most of their lives on trees. They eat sleep and play in the tree canopy	Animals which can fly are called aerial animals.
Eg Monkeys and Koalas	Eg Birds and Insects

3. **Camouflage is the ability to blend into the surrounding environment . It is a useful self defence method for an animal when trying to avoid a predator.**

As summer begins, the arctic fox sheds its white coat for a grey one, perfect for blending in during summer. Arctic foxes use camouflage for both hunting and hiding. They use the colour of their fur to sneak up on their prey and hide from predators.

4. The mass movement of animals and birds from one place to another for breeding, feeding or to protect themselves from harsh weather condition is called migration. Eg; Arctic tern, whales and swallows.

5. Some adaptations in animals living in Polar Regions

- Animals living here have fur on their bodies to protect them from cold.
- Penguin and polar bear have a thick layer of fat called **blubber** under their skin to keep them warm.
- Emperor penguin and their chicks huddle together. The birds take turns to occupy the outermost positions.
