

Animals and Their Varying Lifestyles

SPECIFIC OBJECTIVES

The students learn about

- habitat and adaptations
- varying adaptations in animals – adaptations for breathing, movement, feeding and protection
- migration and some migratory animals

TEACHING AIDS

Pictures/chart/animations on gaseous exchange in microbes, land animals (through lungs), fish (through gills), frog (through skin, lungs), insects (through spiracles); movement in different animals (as given in chapter); teeth of herbivores, omnivores, teeth and claws of carnivores, beaks of herbivorous birds, beaks and claws of carnivorous birds, prey catching by frog, eagle, feeding butterfly; scorpion showing its poisonous stings, fangs of snake, lizard breaking off its tail, curling of millipede and pangolin, ink jetting of cuttlefish/octopus, grasshopper/chameleon camouflaging; birds flying in V-shape, world map, bat, eel, salmon

LESSON PLAN

- Teacher will start the chapter with 'Warm Up' section by giving a brief idea of different systems and structures in animals for protection.
- Teacher will help the students to fill in the blank.
- Now, teacher will define the terms 'habitat' and 'adaptations' and explain that animals are adapted to live in different types of environments.

Now, teacher will explain adaptations in different body functions of animals (as given in chapter).

- **Adaptations for Breathing:** With the help of teaching aids, teacher will explain the gaseous exchange in microbes, land animals, aquatic animals, amphibians and insects (as described in chapter).
- **Adaptations for Movement:**
 - With the help of teaching aids, teacher will explain the movement in land animals, aquatic animals and aerial animals (as given in chapter).
 - Teacher will also explain that some animals have two modes of movement, e.g., frog hops on land but swims in water, duck and penguin walk on land but swim in water.

- Teacher will tell that animals like emu, ostrich, rhea, cassowary and kiwi are called birds because they have all features of birds except flying. Therefore, they move by walking.
- Now, to check the understanding of students about the topic, teacher will ask them to solve 'Checkpoint 1'.
 - **Adaptations for Feeding:** With the help of teaching aids, teacher will explain
 - the length of digestive system and shape of teeth of an animal depend on the type of food it eats.
 - feeding organs of herbivorous, carnivorous and omnivorous animals and how they help animals in getting their food.
 - carnivores like lion, tiger, etc. have strong sense of smell and carnivorous birds like eagle have sharp eyesight.
 - frog has sticky tongue that helps it in catching its prey.
 - insects like butterfly have sucking type of mouthparts called proboscis that help them feed on liquid food.
 - **Adaptations for Protection:** With the help of teaching aids, teacher will explain that animals have different systems for protection from their enemies.
 - Scorpion has poisonous sting and snake has poisonous teeth called fangs for protection.
 - Lizard breaks off its tail, millipede and pangolin curl up, cuttlefish and octopus release ink-like substance when attacked.
 - Grasshopper and chameleon camouflage to protect themselves.
- Now, teacher will define migration and its need among animals. With the help of teaching aids, teacher will explain that some migratory birds fly in V-shape. Teacher will give the examples of some birds and fishes (as given in chapter) and on world map will show their native as well as migratory places.
- Now, teacher will ask the students to solve 'Checkpoint 2'.
- At last, teacher will sum up the chapter by going through all the points given under the head 'At One Go' and make students revise the new terms introduced in the chapter and given under the head 'Remember These Terms'.
- Teacher will help students to solve all the questions given under the head 'Check Your Study'.

BOOST UP

- Teacher should encourage students to watch National Geographic and Discovery channels.
- Students should be encouraged to explore some more defence mechanisms in animals other than those given in chapter.

EXPECTED LEARNING OUTCOMES

The students

- understand about habitat and adaptations
- know about various adaptive features in animals for breathing, movement, feeding and protection.

- understand about migration, its causes and need.
- know about some migratory birds and animals and their migratory routes.

EVALUATIVE QUESTIONS

The teacher may ask the following questions for evaluating the understanding of students.

1. What is habitat?
2. What do you mean by adaptations?
3. What are the breathing organs of insects called?
4. How does cockroach move?
5. What is locomotion?
6. What are cilia? What is their use?
7. Name some flightless birds.
8. Why do rabbit and deer have large incisors?
9. How do millipede and pangolin protect themselves?
10. Why do eel and salmon migrate?