

# Chapter 4

## Ecosystem

### LESSON PLAN

#### SPECIFIC OBJECTIVES

The students will learn about

- ❖ ecosystem
- ❖ biotic and abiotic components of ecosystem
- ❖ interaction between biotic and abiotic components
- ❖ interdependence between organisms
- ❖ different ecosystems

#### Teaching Aids

**Pictures/charts/models/animation** on components of ecosystem; nutritional relationships among different biotic components of an ecosystem; three-trophic-level food chain, four-trophic-level food chain; food web; pyramid of number in a grassland ecosystem, showing pyramid of number is always upright.

#### Teaching Strategy

- ❖ Teacher will start the chapter by defining the terms – habitat, community, ecology and population and will introduce the term ecosystem.
- ❖ Now, teacher will discuss characteristics of ecosystem.
- ❖ Teacher will discuss biotic and abiotic components of ecosystem.
- ❖ To evaluate students, teacher will ask them to solve 'Check Point 1'.
- ❖ Teacher will discuss interaction between biotic and abiotic components of ecosystem.
- ❖ Teacher will define food chain, its features and its types in different ecosystems.
- ❖ Teacher will explain food web.
- ❖ Teacher will introduce ecological pyramids and discuss pyramid of number in detail.
- ❖ To evaluate students, teacher will ask them to solve 'Check Point 2'.

- ❖ Now, teacher will discuss interdependence between organisms for food, oxygen, energy and protection and will explain symbiosis, parasitism and predation.
- ❖ Teacher will discuss abiotic components of ecosystem in detail and will demonstrate Activities 1 and 2.
- ❖ Teacher will discuss different ecosystems and will explain forest as an ecosystem.
- ❖ Now, to evaluate students, teacher will ask them to solve 'Check Point 3'.
- ❖ At last, teacher will sum up the lesson by going through the points given under the head 'Wrapping It Up'.
- ❖ Teacher will finally help students to answer the questions given under the head 'Test Yourself'.

### Boost Up

- ❖ Teacher can make students revise new terms given under the head 'Know These Terms'.
- ❖ Teacher can encourage students to learn the facts given under the head 'Something More'.
- ❖ Teacher can show animations related to the topics taught, if possible.
- ❖ Teacher should assign Activity 3 as home assignment and discuss the results in the class.

### Expected Learning Outcomes

The students understand and know:

- ❖ ecosystem, its characteristics, components and types.
- ❖ food chain and its types, food web and ecological pyramids
- ❖ symbiosis, parasitism and predation

### Evaluative Questions

The teacher should ask the following questions to evaluate the students:

1. Define ecosystem.
2. What are abiotic components of an ecosystem?
3. What is a food chain?
4. What are ecological pyramids?
5. What are interspecific interactions between living beings?
6. Name different types of terrestrial and aquatic ecosystems.