

# ECOSYSTEMS / LESSON OVERVIEW

## Objectives

### The students will:

- learn the components of an ecosystem;
- define producers, consumers, and decomposers;
- learn the components of a food chain;
- be able to describe how organisms co-exist;
- learn about biodiversity and conservation measures;
- learn about energy transfer within a food chain.

## Lesson Summary

### Part 1. What is an Ecosystem? (10 minutes)

Define ecosystem, community, biotic factors, and abiotic factors. Give examples.

### Part 2. Food Chains (15 – 20 minutes)

Define food chains and webs, primary producers, primary consumers, secondary consumers, tertiary consumers, quaternary consumers, and decomposers.

### Part 3. Biodiversity and Relationships (30 – 60 minutes)

- Learn why biodiversity is crucial for healthy ecosystem. Examples are provided.
- Define species interactions, including predator-prey interactions, parasites, hosts, symbiotic relationships, mutualism, and commensalism. Examples provided.
- Biodiversity decline. Explain what happens when one species is removed.

### Part 4. Ecological Succession (20 – 30 minutes)

Explain how ecosystems are constantly changing and understand primary and secondary succession. Examples are provided.

### Activity 1. Memory Game – Ecosystems (30 – 45 minutes)

This interactive game is designed to test not only the student's knowledge of vocabulary but also their observation, concentration, and memorization skills. Playing cards provided.

### Activity 2. Ecosystem Tag (45 – 60 minutes)

This activity will demonstrate how each part of an ecosystem, including both living and nonliving things, has a specific function.

Materials: balls, frisbees, crumbled paper, or any other objects that can be easily tossed around (one for every player).