

SUMMARY

NCERT Class 6 Science Chapter 2: Diversity in the Living World

Overview

This chapter introduces the fundamental concept of the vast diversity of life on Earth and how scientists categorize living organisms. It serves as a foundational chapter for biology, which is a key subject for the General Science section of competitive exams.

Key Concepts

- **What is Diversity?**
 - Diversity means the existence of a wide variety of organisms on Earth.
 - Found in all environments land, water, air, deserts, forests, polar regions.
 - Examples: Ants, birds, whales, trees, fungi, microbes.
- **Why is Diversity Important?**
 - Enables balance in ecosystems plants produce oxygen, animals maintain food chains, microbes recycle nutrients.
 - More diversity = more resilience to environmental changes.
- **Classification of Living Organisms**
 - Grouping helps to organize and study organisms effectively.
 - Basis for classification:
 - Habitat (e.g., land, water)
 - Structure (e.g., with/without backbone)
 - Number of cells (unicellular/multicellular)
 - Mode of nutrition (autotroph/heterotroph)
- **Categories of Living Organisms**
 - **Animals**
 - Move, eat other organisms, most have sensory organs.
 - Includes mammals, reptiles, birds, amphibians, insects.
 - **Plants**
 - Green plants make food via photosynthesis.
 - Cannot move, have roots, stems, leaves.

- **Fungi**
 - Do not make their own food.
 - Example: Mushrooms, bread mold.
- **Algae**
 - Aquatic plants; green, slippery growth on wet surfaces.
- **Microorganisms**
 - Too small to see without a microscope.
 - Include bacteria, protozoa can be helpful or harmful.
- **Habitat and Adaptation**
 - Habitat: Natural home of an organism.
 - Adaptation: Features that help an organism survive in its habitat.
 - Examples:
 - Fish have gills, fins for swimming.
 - Camels store water in humps to survive deserts.
 - Cactus has spines instead of leaves to reduce water loss.
- **Characteristics of Living Beings**
 - All living things:
 - Grow and develop.
 - Reproduce (have offspring).
 - Respond to stimuli (touch, light, sound).
 - Move, though not always from place to place.
 - Breathe and use energy (respiration).
 - Excrete waste.
 - Die after completing their life span.

Application-Based Questions Competitive Exams Focus

- **Frequently asked concepts:**
 - Grouping organisms based on habitat or structure.
 - Identifying adaptations (e.g., fins in fish, spines in cactus).
 - Classifying organisms (plant, animal, fungi, microbe).
 - Recognizing characteristics of living beings.
- **Useful for:**

- UPSC (CSAT): Observation-based reasoning, biology basics
- SSC/RRB/TNPSC: General science living world, classification
- Olympiads & School Exams: MCQs on features, habitats, adaptations

Source: NCERT Class 6 Science Chapter 2