

Textbook on Science for Class Five

Understanding the Wonders of Nature and Everyday Science

According to CBSE Curriculum and NCERT Guidelines

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Preface

Science is not merely a collection of facts; it is a way of understanding the world. Every child, from the earliest stages of life, interacts with science through everyday experiences—observing plants growing in a garden, feeling the warmth of sunlight, noticing the movement of animals, or wondering why the sky changes colors at sunset.

The purpose of this book, **Textbook on Science for Class Five**, is to introduce young learners to the fascinating world of scientific thinking in a simple, engaging, and meaningful manner. Written according to the **CBSE curriculum and NCERT learning philosophy**, this book aims to nurture curiosity, observation skills, and logical thinking among students.

In modern education, science must not be confined to memorization. Instead, it should encourage children to ask questions such as:

- Why do plants need sunlight?
- How does the human body function?
- Why do objects float or sink?
- What causes day and night?

Through such questions, children begin their journey toward becoming **critical thinkers and future innovators**.

This textbook has been carefully structured with **clear explanations, real-life examples, activity-based learning, and conceptual clarity** so that young learners can develop a strong foundation in science.

The chapters are written in a **child-friendly language**, yet they maintain conceptual accuracy aligned with the pedagogical standards recommended by **NCERT**.

Science education at the primary level should inspire wonder. When children learn to observe nature, understand their environment, and appreciate the interconnectedness of life, they begin to develop a lifelong love for learning.

It is my sincere hope that this book will help students explore the beauty of science and encourage them to become **curious learners, responsible citizens, and thoughtful individuals**.

Why This Book

The development of a scientifically literate society begins with early education. Class Five represents an important stage in a child's intellectual growth. At this level, students transition from simple observation-based learning to more structured scientific understanding.

The primary aim of this book is to provide a **strong conceptual foundation** in science while maintaining the curiosity and enthusiasm that characterize young learners.

This book has been written with the following objectives:

1. Conceptual Understanding

Instead of rote memorization, the chapters emphasize **understanding scientific concepts** through everyday examples.

2. Inquiry-Based Learning

Students are encouraged to ask questions, explore their surroundings, and develop observational skills.

3. Alignment with CBSE and NCERT Framework

The content follows the educational philosophy of **activity-based learning, experiential understanding, and environmental awareness**.

4. Development of Scientific Temper

Science education should cultivate logical reasoning, problem-solving ability, and curiosity.

5. Environmental Awareness

Children must learn the importance of protecting nature and maintaining ecological balance.

6. Foundation for Future Scientific Learning

A clear understanding of basic scientific principles prepares students for advanced studies in higher classes.

In an era where science and technology influence every aspect of human life, nurturing young minds with the right knowledge and curiosity becomes essential.

This book aims to serve as a **guiding companion for students, teachers, and parents** in making science both understandable and enjoyable.

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****Chapter 1**

The World of Plants**

Plants are one of the most important living organisms on Earth. They provide food, oxygen, shelter, and medicines to humans and animals. Without plants, life on Earth would not be possible.

Plants grow in many different environments such as forests, deserts, mountains, and even in water. Some plants are small like grass, while others are large like banyan trees.

Parts of a Plant

A typical plant has several important parts:

Roots

Roots grow under the soil. They help the plant absorb water and minerals from the soil. Roots also hold the plant firmly in the ground.

Stem

The stem supports the plant and carries water and nutrients to different parts of the plant.

Leaves

Leaves are called the **food factories of plants**. They prepare food through a process called **photosynthesis** using sunlight, water, and carbon dioxide.

Flowers

Flowers are the reproductive parts of plants. They later develop into fruits and seeds.

Types of Plants

Plants can be classified into several groups:

Trees

Tall and strong plants with thick stems.

Example: Mango, Neem, Banyan.

Shrubs

Medium-sized plants with woody stems.

Example: Rose, Hibiscus.

Herbs

Small plants with soft stems.

Example: Mint, Spinach.

Climbers and Creepers

Plants that grow along the ground or need support to climb.

Example: Pumpkin, Grapevine.

Importance of Plants

Plants are essential for life because they:

- Produce oxygen
- Provide food
- Prevent soil erosion
- Maintain ecological balance
- Provide medicines

Activity

Observe plants around your home or school. Try to identify different types of plants and their parts.

Key Points

- Plants are living organisms.
 - They prepare their own food.
 - Different plants grow in different environments.
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