

ENVIRONMENTAL STUDIES

TEXTBOOK FOR CLASS III





राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद् NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

First Edition

February 2006 Phalguna 1927 **Reprinted**

November 2006 Agrahayana 1928 November 2007 Agrahayana 1929 January 2009 Magha 1930 January 2010 Magha 1931 January 2011 Magha 1932 January 2012 Magha 1933 March 2013 Phalguna 1934 February 2014 Magha 1935 December 2014 Pausha 1936 December 2017 Pausha 1939 December 2018 Agrahayana 1940 August 2019 Bhadrapada 1941

PD 440T RPS

© National Council of Educational Research and Training, 2006

₹ 65.00

Printed on 80 GSM paper with NCERT watermark

Published at the Publication Division by the Secretary, National Council of Educational Research and Training, Sri Aurobindo Marg, New Delhi 110 016 and printed at Deep Trading Co., H-203, Sector-63, Noida - 201 301

ISBN 81-7450-490-7

ALL RIGHTS RESERVED

- No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the publisher.
- This book is sold subject to the condition that it shall not, by way of trade, be lent, resold, hired out or otherwise disposed of without the publisher's consent, in any form of binding or cover other than that in which it is published.
- The correct price of this publication is the price printed on this page, Any revised price indicated by a rubber stamp or by a sticker or by any other means is incorrect and should be unacceptable.

OFFICES OF THE PUBLICATION DIVISION, NCERT

NCERT Campus Sri Aurobindo Marg New Delhi 110 016

108, 100 Feet Road Hosdakere Halli Extension Banashankari III Stage **Bengaluru 560 085**

Navjivan Trust Building P.O.Navjivan Ahmedabad 380 014

CWC Campus Opp. Dhankal Bus Stop Panihati Kolkata 700 114

CWC Complex Maligaon Guwahati 781 021 Phone: 011-26562708

Phone: 080-26725740

Phone : 079-27541446

Phone: 033-25530454

Phone : 0361-2674869

Publication Team

Head, Publication Division	: M. Siraj Anwar	
Chief Editor	: Shveta Uppal	
Chief Production Officer	: Arun Chitkara	
Chief Business Manager	: Bibash Kumar I	Das
Production Assistant	: Prakash Veer Si	ngh

Cover, Layout and Illustrations Anita Verma

FOREWORD

The National Curriculum Framework (NCF) 2005, recommends that children's life at school must be linked to their life outside the school. This principle marks a departure from the legacy of bookish learning which continues to shape our system and causes a gap between the school, home and community. The syllabi and textbooks developed on the basis of NCF signify an attempt to implement this basic idea. They also attempt to discourage rote learning and the maintenance of sharp boundaries between different subject areas. We hope these measures will take us significantly further in the direction of a child-centred system of education outlined in the National Policy on Education (1986).

The success of this effort depends on the steps that school principals and teachers will take to encourage children to reflect on their own learning and to pursue imaginative activities and questions. We must recognise that, given space, time and freedom, children generate new knowledge by engaging with the information passed on to them by adults. Treating the prescribed textbook as the sole basis of examination is one of the key reasons why other resources and sites of learning are ignored. Inculcating creativity and initiative is possible if we perceive and treat children as participants in learning, not as receivers of a fixed body of knowledge.

These aims imply considerable change in school routines and mode of functioning. Flexibility in the daily time-table is as necessary as rigour in implementing the annual calendar so that the required number of teaching days are actually devoted to teaching. The methods used for teaching and evaluation will also determine how effective this textbook proves for making children's life at school a happy experience, rather than a source of stress or boredom. Syllabus designers have tried to address the problem of curricular burden by restructuring and reorienting knowledge at different stages with greater consideration for child psychology and the time available for teaching. The textbook attempts to enhance this endeavour by giving higher priority and space to opportunities for contemplation and wondering, discussion in small groups, and activities requiring hands-on experience.

The National Council of Educational Research and Training (NCERT) appreciates the hard work done by the textbook development committee

responsible for this book. We wish to thank the Chairperson of the advisory group at the primary level, Professor Anita Rampal and the Chief Advisor for this book, Savithri Singh, *Principal*, Acharya Narendra Dev College, New Delhi, formerly *Fellow*, Centre for Science Education and Communication, University of Delhi, Delhi for guiding the work of this committee. Several teachers contributed to the development of this textbook. We are grateful to their principals for making this possible. We are indebted to the institutions and organisations which have generously permitted us to draw upon their resources, material and personnel. We are especially grateful to the members of the National Monitoring Committee, appointed by the Department of Secondary and Higher Education, Ministry of Human Resource Development under the Chairpersonship of Professor Mrinal Miri and Professor G.P. Deshpande, for their valuable time and contribution.

As an organisation committed to systemic reform and continuous improvement in the quality of its products, NCERT welcomes comments and suggestions which will enable us to undertake further revision and refinement.

New Delhi 20 December 2005 Director National Council of Educational Research and Training

Textbook Development Committee

CHAIRPERSON, ADVISORY COMMITTEE FOR TEXTBOOKS AT THE PRIMARY LEVEL

Anita Rampal, Professor, Department of Education (CIE), University of Delhi, Delhi

CHIEF ADVISOR

Savithri Singh, *Principal*, Acharya Narendra Dev College, New Delhi, formerly *Fellow*, Centre for Science Education and Communication, University of Delhi, Delhi

MEMBERS

Baljeet Kaur, *Primary Teacher*, MCD Primary Model School, Zamrudpur, New Delhi Dilip Singh, *Programme Coordinator*, Digantar Shiksha Avam Khelkud Samiti, Jaipur Juhi Srivastava, *Programme Coordinator*, Nirantar, New Delhi Kavita Sharma, *Lecturer*, Department of Elementary Education, NCERT, New Delhi Mamata Pandya, *Programme Coordinator*, Centre for Environmental Education, Ahmedabad Poonam Mongia, *Assistant Teacher*, Sarvodaya Kanya Vidyalaya, Vikas Puri, New Delhi Preeti Chadha, *Primary Teacher*, Experimental Basic School, CIE, University of Delhi, Delhi Ravinder Pal, *Sr. Lecturer*, DIET, Rajinder Nagar, New Delhi Reetu Singh, *Lecturer*, Department of Education in Social Sciences (DESS), NCERT, New Delhi Simantini Dhuru, *Director*, Avehi Abacus Project, Mumbai, Maharashtra Smriti Sharma, *Lecturer in Education*, Lady Sri Ram College, New Delhi

Sushmita Malik, D-4/4091, Vasant Kunj, New Delhi-70

MEMBER-COORDINATOR

Manju Jain, Professor, Department of Elementary Education, NCERT, New Delhi

THE CONSTITUTION OF INDIA PREAMBLE WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a ¹[SOVEREIGN SOCIALIST SECULAR **DEMOCRATIC REPUBLIC**] and to secure to all its citizens : JUSTICE, social, economic and political; LIBERTY of thought, expression, belief, faith and worship; **EQUALITY** of status and of opportunity; and to promote among them all FRATERNITY assuring the dignity of the individual and the ²[unity and integrity of the Nation]; IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949 do HEREBY ADOPT, ENACT AND GIVE TO **OURSELVES THIS CONSTITUTION.** Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977) Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Unity of the Nation" (w.e.f. 3.1.1977)

Acknowledgements

The National Council of Educational Research and Training (NCERT) gratefully acknowledges the contribution and cooperation of various organisations, subject experts, teachers and departmental members in the development of this book.

The Council thanks the authors and poets who have granted permission to use their work in this book — Vijendra Pal Sisodia (*Leaves*); Shri Prasad (*Water*); Secretary, Bharat Gyan Vigyan Samiti (*Home Sweet Home*); Jean Whitehouse Peterson (*I have a sister, My sister is deaf*) published by Bharat Gyan Vigyan Samiti; Harish Nigam (*Cloud*) published by Eklavya; Harendranath Chattopadhyay (*Train*); and Annapurna Sinha (*Bhanate and Phudgudi*).

The contributions of various organisations and the experts deputed by them, are also highly appreciated – Centre for Environmental Education, Ahmedabad; Avehi Abacus, Mumbai; Eklavya, Bhopal; Digantar, Jaipur; Nirantar, New Delhi; National Book Trust, New Delhi; SCERT, Delhi; Centre for Science Education and Communication, University of Delhi, Delhi; and Homi Bhabha Centre for Science Education (Small Science), Mumbai.

We are specially grateful to K.K. Vashishtha, *Professor and Head*, Department of Elementary Education, NCERT, who has extended every possible help in developing this book.

The contributions of Professor Amitabh Mukherjee, Centre for Science Education and Communication, University of Delhi, Delhi; Sushmita Malik, formerly *Consultant* Punjab School Education Board, Chandigarh; Poonam Mongia, *Assistant Teacher*, SKV School, Delhi; and Manpreet, *Lecturer*, Shyama Prasad Mukherjee College, New Delhi are duly acknowledged for finalising the English version of this book. We also acknowledge the contributions of Sushmita Malik for translating the Hindi poems into English and of Dwaipayan Banerjee, *freelance Editor, Katha*, for editing these poems. Thanks are acknowledged to Anjni Koul, *Lecturer*, DESM and M.K. Satpathy, *Professor*, NERIE, Shillong, NCERT; Usha Chaujer, *Primary Teacher*, Air Force Bal Bharti School, New Delhi; Deepa Hari, *Writer and Editor*, Avehi Abacus Project, Mumbai; Anita Julka, *Reader*, Department of Education with Special Needs, Sushma Jairath, *Reader*, Department of Women's Studies, and R.B.L. Soni, *Reader*, Department of Elementary Education, NCERT.

We are grateful to Kavita Chaudhary and Arvind Sharma, *DTP Operators;* Kamal Bhardwaj and Hari Darshan Lodhi *Proof Reader;* Sushila Sharma, Nirmal Mehta (DEE); Shakambar Dutt, *Incharge Computer Station,* DEE, in shaping the book.

The efforts of the Publication Department, NCERT, in bringing out this publication are also appreciated.



A Note for the Teachers and Parents

The team for the development of this book found it a challenging task to translate the objectives as defined in the National Curriculum Framework (NCF) 2005 while preparing this national-level textbook. The writing team would like to share some of the issues that were discussed during the process.

The child looks at the environment around her/his in a holistic manner and does not compartmentalise any topic into 'science' and 'social science', hence it was thought essential that we too aim for this integration within the book, instead of having two disparate sections. Instead of proceeding with lists of 'topics' the syllabus itself has proposed themes that allowed a connected and inter-related understanding to develop. An attempt has been made in the book to locate every theme in physical, social and cultural contexts critically so that the child can make informed choices.

The challenge, when writing at a national level, was to reflect the multicultural dimensions of diverse classrooms. It was felt necessary that all children feel important: everyone's community, culture and way of life should be given equal importance. While writing the book, *Who is the child we are addressing* was the big question. Is she/he the child in big schools of the metro, or the school in the slums, a small-town child, one in a village *shala* or the one in the remote mountainous areas? How do we address such diverse groups? One also needed to tackle the differences of gender, class, culture, religion, language, geographical location, etc. These are some of the issues addressed in the book, which the teacher will also have to handle sensitively in her own ways.

Before discussing the concerns/issues related with this area, you go through the syllabus of this area, which is broadly divided into six themes, namely, family and friends, food, water, shelter, travel and things we make and do. It is available on the NCERT website (www.ncert.nic.in). It will help you understand the subject better and plan your teaching-learning more effectively.

The content in the book is centred on the child, providing her/him a lot of space to explore. There is a conscious effort to discourage rote learning and hence descriptions and definitions were totally avoided. It is always easy to give information; the real challenge was to provide opportunities to a child where she/he can vocalise, build upon her/his curiosity, learn by doing, ask questions, experiment, etc. In order that the child is happy to engage with the book, a variety of formats have been used – narratives, poems, stories, puzzles, jigsaw, comic strips, etc. Stories and narratives have been used as a tool for sensitising the child since a child can probably more easily empathise with

characters in a story/narrative. The language used in the book is not 'formal' but is in the 'commonly spoken' form.

Active participation of children is very important in constructing knowledge. Activities in the book that demand that children be taken for observations to the parks, fields, water bodies, into the community, etc., reiterates that EVS learning primarily occurs outside the walls of the classrooms. An effort has been made to relate the child's local knowledge to the school knowledge. It is important to state here that the activities given in the book are only suggestive, and that both the activities and the materials can and should be modified by the teacher according to the local contexts. Activities and Exercises have been inbuilt into the chapters instead of being pushed to the end. The nature of activities in the book are of various kinds so that the children get opportunities to explore, observe, draw, categorise, speak, question, write, list, etc. Several activities allow their to manipulate things with their hands so that their psychomotor skills are developed. Some of them explore their creativity and design skills as well as hone their aesthetic sense. All activities need to be followed by discussions to facilitate children in consolidating what they have observed and learnt. With an appropriate question or suggestion, the child's understanding can be extended far beyond the point which she/he could have reached alone.

Children are encouraged to tap sources other than the textbook and teachers, such as family members, members of the community, newspapers, books, etc. This stresses the fact that textbooks are not the only sources of information. To develop a sense of history the children are encouraged to question the elderly about the past. These activities also promote the parents' and community's involvement in the school and the teacher gets an opportunity to know a child's background.

Illustrations form an important component of children's books. The writing team has kept in mind that the illustrations in this book reflect the ethos of the written material. Content development through illustrations was a major consideration. The illustrations have been used such that they complement the writing style fully. The illustrations should provide joy, and also a challenge, to the child. Icons have been used to differentiate activities. A list of these has been included in the book.

The book provides varied kind of opportunities for the child to work – individually, in small groups or even in larger groups. Group learning promotes peer learning and improves social interactions. Children particularly enjoy learning crafts and arts while working in groups. Children are very happy and respond with enthusiasm when their creative ventures are appreciated rather than being rejected or left unnoticed by the elders, as unimportant.

The objective of the activities and questions in the book is not only to evaluate the child's knowledge but also to provide an opportunity to the children to express themselves. The children should be given enough time to work on these activities and questions; they should not be rushed since each child learns at her/his own pace. It is envisaged that each teacher will develop her/his own evaluation tools suitable for her/his students based on her/his own method of teaching and local contexts. For better understanding on assessment practices and evaluation procedures in EVS, NCERT has developed a source book in this area for the primary stage. It will be useful if you go through this document as well. The child should be evaluated primarily on the competencies/skills she/he has acquired while working in class or outside. Evaluation, of course, should be a continuous and comprehensive process and the child should be assessed as she/he observes, asks, draws, discusses, write in groups, etc. In order to follow continuous and comprehensive evaluation in the classroom, teaching-learning activities and questions have been inbuilt into the text. You need to follow the same manner.

One of the major concerns while developing textual materials was to find suitable ways to sensitise the child to the wide differences that exist within our society – in our physical abilities, economic backgrounds, behavioural patterns etc. – things which get reflected in the way and where we live, what kind of school we go to, the way we talk, the way we think, what we eat, what we wear, our access to basic amenities, etc. We would like every child to recognise that in any society there are differences; we need to learn to appreciate and respect these differences. Teachers have to be extra-careful that such social issues are handled in a sensitive manner, especially when there are children with special needs or in difficult circumstances, in the class.

The writing team looks not only at the children, but at the teachers also, as individuals who construct knowledge and build on their own experiences. The textbook is only one of the many teaching-learning materials used by teachers. Thus, this textbook should only be viewed as an aid to the teacher, around which the teacher could organise her teaching to provide learning opportunities to children.

As per NCF-05, Environmental Studies is not accepted as a curricular area at Classes I and II. However, it recognises the need of transacting the necessary skills and concerns related to it in an integrated manner through language and mathematics. In this direction, NCERT has published a teacher's handbook entitled 'EVS skills through Language and Mathematics in Early grades' which includes a number of activities that will help you integrate the environmental components with language and mathematics at these levels. If you go through it before initiating the teaching-learning process in Class III, it will help enrich your understanding of this subject area.

Symbols and Icons used in the Textbook



A Note for the Teacher

(xii)



Foods We Eat

6.



38

		. K
14.	The Story of Food	94
15.	Making Pots	98
16.	Games We Play	103
17.	Here comes a Letter	111
18.	A House Like This	118
19.	Our Friends — Animals	126

20.	Drop by Drop	134
21.	Families can be Different	139
22.	Left–Right	146
23.	A Beautiful Cloth	156
24.	Web of Life	158





ma