

**PROJECT BOOK IN**  
**ENVIRONMENTAL EDUCATION**  
**FOR CLASS IX**



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

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## FOREWORD

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The National Curriculum Framework (NCF) – 2005, recommends that children’s life at school must be linked to their life outside school. This recommendation has been implemented in the new textbooks published since 2006, in all major subjects. In the context of environment-related awareness, NCF-2005’s vision implies an approach which cuts across the traditional boundaries separating one subject from another. According to this approach, knowledge of environmental concerns and the activities, which might deepen this knowledge and develop a positive attitude, need to be infused in the subject matter of all areas of the school curriculum at different stages. *The National Focus Group on Habitat and Learning*, which amplifies the NCF-2005 perspective, says: “The human habitat displays tremendous variability in space and time and its understanding has to be locale specific albeit in the context of a global vision. A great deal of the knowledge of the environment lies with India’s barefoot ecologists, the people at the grassroots...”

NCF-2005 perceives school children as ecologists in their own right who need to be nurtured by a flexible school routine and teachers who engage with children in the construction of knowledge. In addition to the environment-related subject matter and activities incorporated in the syllabus and textbooks of all the major subjects, the National Council of Educational Research and Training (NCERT) has now decided to bring out project books for students of Classes VI to X. The books comprising this series attempt to build capacity for critical and multi-disciplinary thinking and a positive and problem-solving attitude. They aim at exposing students to the real-life world around them, both in nature and society, in order to enable them to examine, assess and interpret the problems and concerns related to the environment. The ultimate goal is to promote a socio-cultural ethos which facilitates India’s attempt to pursue the path of ethically sound and sustainable development. The activities included in this series of books require extensive and continuous observation and

documentation which would enable students and teachers to notice patterns in phenomena. Uploading of the results of such projects on publicly accessible websites will gradually help the nation to create a transparent and comprehensive database on the environment.

The success of this effort crucially depends on the interest and enthusiasm that school principals, teachers, parents and civil society in general show in encouraging children to carry out the projects and activities outlined in the present series. It is extremely important that students' project work is assessed in a holistic manner, giving due regard to the motivation and enthusiasm of each student rather than through the conventional system of evaluation which ignores individuality and originality.

NCERT appreciates the hard work put in by the Project Book Development Committee in preparing this series and we are especially grateful to Professor Madhav Gadgil for guiding the work of this Committee. Several teachers contributed to the development of this book; 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. NCERT is thankful to Professor Mrinal Miri and Professor G.P. Deshpande who co-chaired the National Monitoring Committee appointed by the Ministry of Human Resource Development to oversee the implementation of NCF-2005. We thank Dr Kiran Chhokar, Programme Director, Centre for Environmental Education, Delhi, for her invaluable inputs during the meeting of the National Monitoring Committee. As an organisation committed to systemic reforms and continuous improvement in the quality of its products, NCERT welcomes comments and suggestions which will enable us to undertake further revision and refinement of this important series.

New Delhi  
9 January 2009

*Director*  
National Council of Educational  
Research and Training

## NOTE TO THE STUDENTS

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Environmental issues have become a topic of discussion and debate in every nook and corner of the world. The print as well as electronic media has been giving a special attention to these issues. At this very crucial juncture, it is but our responsibility to contribute every possible bit to safeguard our environment. By now you are well aware about the various environmental concerns, such as, pollution; scarcity of food and water; health and diseases; deforestation, flood, earthquake, etc. You have also learnt about many of these concerns in various chapters in the textbooks. We already have enough awareness about environmental issues pertaining to our locality, state or country. Let us now become active participants in these issues so that we ourselves work on the problems, find out the causes, and also come out with certain solutions and share our findings with our society. This is the basic purpose of bringing out this project book.

It would be a futile attempt to work on problems for which we will not succeed in collecting the data required for our study. Also, it would not be possible to work on problems, which are encountered not in our vicinity but somewhere very far from where we stay. Therefore, in this project book the development team has tried its best to come out with twenty such projects which you can take up, irrespective of the place you belong to. Yet, you may still find that some of the methodologies suggested may not be exactly workable for you. You have every freedom to modify them to your convenience in consultation with your teachers.

You may not be able to take up all the twenty projects in one academic session due to time constraint. But we encourage you to complete as many projects as possible, with a minimum of two projects. For group work, we suggest each member contribute equally towards the completion of the project. Many

of the projects would require collection of information or data from various sources. While obtaining this information we advise you to be prepared and meticulous. Also be calm, modest and do not hurt the sentiments of others. Do not forget to take prior permission or authorisation letter from your school in case you have to visit any institute organisation or offices.

It is our inherent duty to preserve and conserve the planet we live in. So, we must all try to contribute in whatever possible way we can. Take up the project in this spirit and work with a new zeal and enthusiasm. *'You must be the change you wish to see in the world'*.

## NOTE TO THE TEACHERS

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Keeping the ideology of infusing environmental issues and concerns in different textbooks intact as in the Upper Primary stage, the textbooks for Class IX, irrespective of the subjects, have adequately discussed these issues wherever it found its relevance. Ample opportunities have been provided to students to actively engage themselves in activities pertaining to these. This project book has been prepared as an attempt to further students' involvement and active participation in environmental issues. This will enable them to understand the environmental problems in their vicinity, work on them to obtain first hand information, and come out with their own meaningful solution. This book also contains twenty projects with the headings–title, background, methodology, conclusion and activities that can be taken up as follow up actions. The topics have been chosen keeping in view the environmental concerns that have been discussed in various textbooks for the class. An attempt has been made to make the projects workable in different corners of the country. However, modifications in the methodology or in the title itself are expected to meet the diverse local specific environmental concerns of different regions.

As the students reaches Class IX, they will be able to identify their local environmental concerns to a certain extent. It is here that they be given more space and opportunity to come out with innovative ideas and approaches to work on projects. Nevertheless, the role of teachers as a facilitator and guide will be instrumental for the successful completion of the projects. For this, teachers would be required to assign appropriate projects to each student, modify and fine tune the methodologies, keep track of the developments and also help the students wherever necessary to complete the task smoothly.

Teachers are expected to ensure that students take up as many projects as possible but with a minimum of two projects by each student.

Evaluation strategy can be prepared independently by the teacher concerned to evaluate the projects. The teacher concerned will decide whether evaluation should be done for every step of the project or on completion of each project. Whether marks or grades are to be allotted is left to the discretion of the teacher or the school authorities. Whatever pattern the teacher or school employs for evaluation, the marks or grades should be shown in the students' report card. There should be no pass or fail grading. Every student should have completed a minimum of two projects at the end of the academic session and thus should be considered pass.

Last, but not the least, this attempt of introducing project book is to bring about attitudinal change in the students towards environmental concerns and nurture them to become a concerned and responsible citizen.



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