

ENVIRONMENT EDUCATION



STANDARD ELEVEN



The Coordination Committee formed by GR No. Abhyas - 2116/(Pra.Kra.43/16) SD - 4
Dated 25.4.2016 has given approval to prescribe this textbook in its meeting held on 20.06.2019 and it has been
decided to implement it from academic year 2019-20.

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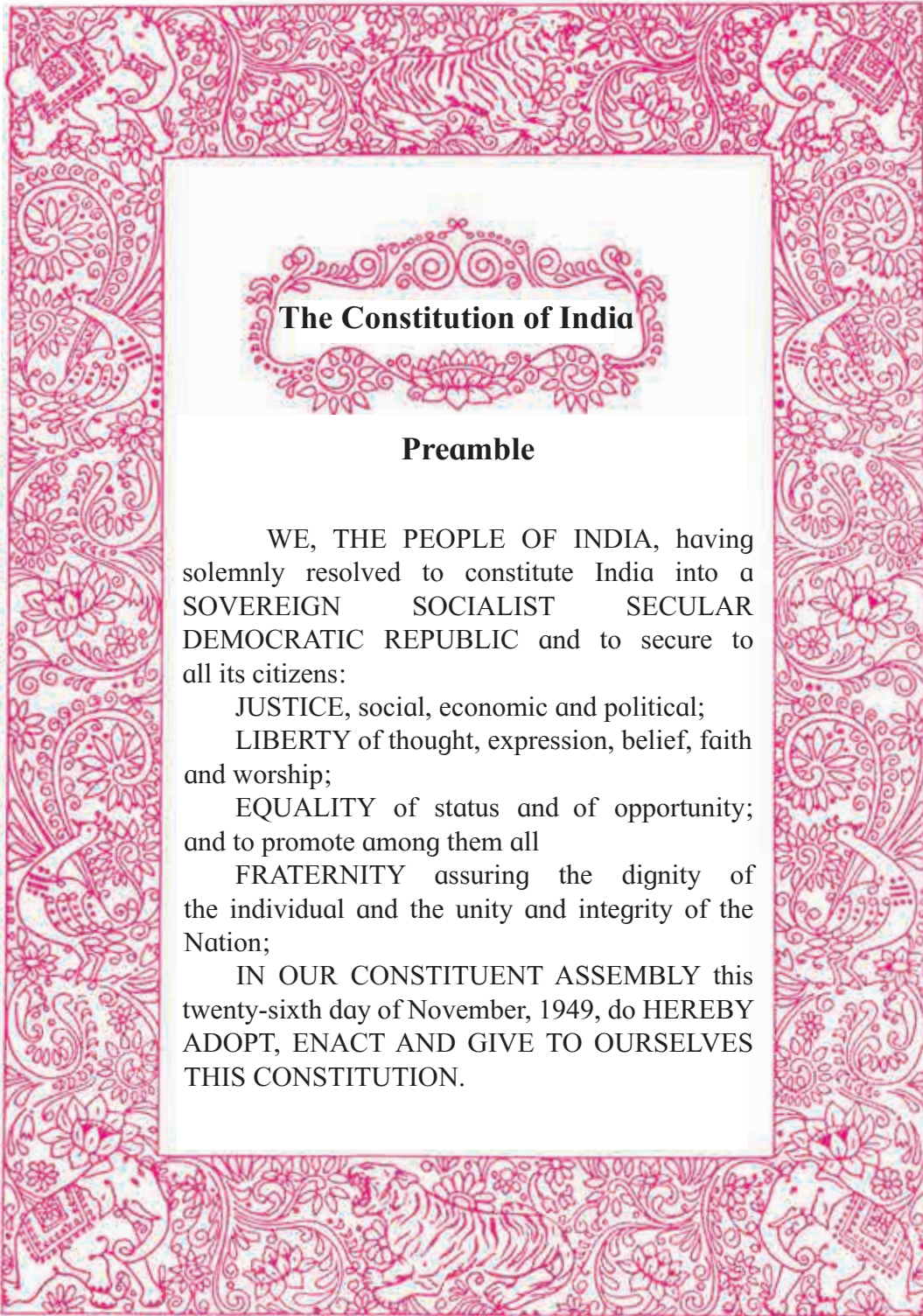
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The Constitution of India

Preamble

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a 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 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.

NATIONAL ANTHEM

Jana-gana-mana-adhināyaka jaya hē
Bhārata-bhāgya-vidhātā,

Panjāba-Sindhu-Gujarāta-Marāthā
Drāvida-Utkala-Banga

Vindhya-Himāchala-Yamunā-Gangā
uchchala-jaladhi-taranga

Tava subha nāmē jāgē, tava subha āsisa māgē,
gāhē tava jaya-gāthā,

Jana-gana-mangala-dāyaka jaya hē
Bhārata-bhāgya-vidhātā,

Jaya hē, Jaya hē, Jaya hē,
Jaya jaya jaya, jaya hē.

PLEDGE

India is my country. All Indians
are my brothers and sisters.

I love my country, and I am proud
of its rich and varied heritage. I shall
always strive to be worthy of it.

I shall give my parents, teachers
and all elders respect, and treat
everyone with courtesy.

To my country and my people,
I pledge my devotion. In their
well-being and prosperity alone lies
my happiness.

Preface

Dear Students/Readers,

The Maharashtra State Curriculum Framework 2010 (SCF 2010) has been prepared in accordance to the National Curriculum Framework 2005. The present book is organised according to teaching and learning approaches and materials based on SCF 2010. The Hon'ble Supreme Court (SC) has directed that Environment Education (EE) to be compulsory at all levels of education. Following the directives given by the SC, EE has been decided to be a separate and compulsory subject at 11th and 12th standard.

Maharashtra State has prepared the book which includes major concepts of environment which shall encourage collaborative learning and group activities to facilitate peer learning. The book has been prepared for constructivist approach and activity based teaching-learning. The contents have been presented in a graded manner to facilitate knowledge building with the illustrations relevant to the content of the syllabus. The textbook highlights the measures for protection and care of the environment, conservation of Biodiversity, Natural resources and management of disasters. The topics are included to facilitate understanding of the sustainable development. The interactive processes of social, environmental and economic problems and the ways and means to solve them are presented.

This textbook also considers appropriate environmental case studies related to various topics in the book. The teachers are encouraged to emphasize this view and try to apply it during transaction of the syllabus. The curriculum, emphasises student activities as the main vehicle of learning. At the higher secondary stage, to ensure the continuation of proactive action towards the environment, the core course is considered compulsory course in a project and theory exam-based evaluation mode.

Such approach would help in understanding of practical environmental issues and will also enhance student's motivation and contribution towards solving current problems. Different exemplar activities and project work suggested (but not restricted to) in the textbooks provide exposures to the practical environmental issues. The project-based learning would ensure learning to bring forth good, sensitive, rational citizens. A careful planning and preparation can lead to successful implementation of this approach. Expert views and suggestions are included in this book. Hope that the content of this book will help students and teachers understand and act upon responsibly towards environment.

The Maharashtra State Bureau of Textbook Production and Curriculum Research, Pune, looks forward for feedback and suggestions from teachers, parents and other readers.



(Dr. Sunil Magar)

Director

Maharashtra State Bureau of
Textbook Production and
Curriculum Research, Pune

Pune

Date : 20 June 2019

Bharatiya Saur Dinank : 30 Jyeshtha 1941

CLASS 11 ENVIRONMENT EDUCATION

COMPANTORY STATEMENT

- Develop skills of observation and explore the natural and social environment, gradually moving from immediate to the wider environment.
- Develop a concrete understanding of integrated perspective of environment.
- Explore, understand, appreciate and value his/her opinion on local and regional environmental issues.
- Share the details of the observed objects/events/ phenomenon orally/ written/ drawings/any other ways of choice with reference to the explained/observed scope and importance of environment.
- This produces a deeper understanding of issues related to sustainability at national, state and local levels.
- Gain knowledge, discuss and appreciate the efforts of different organizations.
- Describe and document the efforts involved in supporting actions that shall positively affect the attitudes to subscribe to the vision and adopt global environmental welfare and eventually develop sensitivity towards concerned environmental issues.
- Accepts and takes responsibility in a more refined manner, poses questions and finds answers through reflection, discussion, designing and performing appropriate activities.
- Generate awareness, explore, share, narrate the natural and social environment from lived experiences.
- Understand the relationships between natural and social environment within and beyond classroom through the opportunity providing concrete learning experiences.
- Develop various processes/skills through the interaction with the natural and social environment.
- Generate an understanding of the classified structure and related function of ecosystems.
- Identify surrroundings based on observable features, similarities and differences in ecosystems, sorts/groups features based on observations.
- Observe, relate, share and explain experiences about the dynamics of ecosystem, processes and phenomenon with causes.
- Finds an opportunity to apply learnt scientific concepts in day-to-day life.
- Relate to the real situations in their surroundings.
- Understand the term biodiversity and the levels of biodiversity.

CLASS 11 ENVIRONMENT EDUCATION

COMPANTORY STATEMENT

- Understand, get sensitized and be able to explain the values of biodiversity with the help of examples.
- Appreciate the variations/ diversity in natural and social environment and develop a scientific understanding of the variations and the need to respect them.
- Obtain information regarding 'India a megadiversity nation'.
- Explain the threats of biodiversity and its effects.
- Understand the conservation of biodiversity as a social responsibility.
- Explore different types of natural resources, appreciate the interdependence and interrelatedness of all living things and life support systems.
- Comprehend various environmental problems and develop necessary insights and attitudes towards solving them methodically.
- Collect the informationn of conservation of natural resources.
- Develop a concrete understanding of the risk of disasters and appreciate types and effects of natural and man-made disasters.
- Develop skills for preparedness before potential disasters and be able to prepare a disaster emergency kit and management strategie.
- Be equipped to avoid or to minimize damage during disasters following precautionary measures and systematic preparedness.
- Prove to be an immense aid for community welfare in managing the event.

- For Teachers -

To begin with, get familiar with the textbook yourself.

- ✓ Please refer to the related textbooks of earlier classes before teaching the topics of this textbook.
- ✓ Please plan carefully and independently for the activities of each chapter.
- ✓ The teaching-learning interactions, processes and participation of all students is necessary through your active guidance.
- ✓ Please use proper teaching aids in the class room for appropriate understanding of the subject such as audio-visual aids, apps etc.
- ✓ You are expected to use the given number of periods fully. Do not finish the chapter in short. This will help the students to assimilate the content without feeling the 'burden of learning'.
- ✓ Major concepts of environment have a scientific base and they also deal with social aspects. Encourage group activities, learning through each other's help etc. Facilitate peer learning as much as possible by recognizing the class structure frequently.
- ✓ Do not ask questions on statistical information. Instead, ask questions on their trends or patterns.
- ✓ The present book has been prepared for constructivist and activity-based teaching-learning.
- ✓ Follow the order of the chapters as given because the concepts have been introduced in a graded manner to facilitate knowledge building.

- ✓ Use QR code given in the textbook. Some websites have been given for reference. A list of references used is provided. You as well as the students are expected to use these references. These references will surely help you to go beyond the textbook. Please bear in mind that extra reading is always helpful for understanding any subject in depth.
- ✓ The thought-provoking, activity-oriented, open ended, multiple choice-questions, short and long questions are considered for evaluation. Some examples are given at the end of the chapters in the 'exercise'.

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S.O.I. Note : The following foot notes are applicable : (1) © Government of India, Copyright : 2019. (2) The responsibility for the correctness of internal details rests with the publisher. (3) The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line. (4) The administrative headquarters of Chandigarh, Haryana and Punjab are at Chandigarh. (5) The interstate boundaries amongst Arunachal Pradesh, Assam and Meghalaya shown on this map are as interpreted from the “North-Eastern Areas (Reorganisation) Act. 1971,” but have yet to be verified. (6) The external boundaries and coastlines of India agree with the Record/Master Copy certified by Survey of India. (7) The state boundaries between Uttarakhand & Uttar Pradesh, Bihar & Jharkhand and Chattisgarh & Madhya Pradesh have not been verified by the Governments concerned. (8) The spellings of names in this map, have been taken from various sources.

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Front Page : The componenets of earth and positive actions for envioronment and sustainability.

Back Page : In day to day life what do's and don'ts regarding recyclable product.