

MATH - MAGIC



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**OFFICES OF THE PUBLICATION
DIVISION, NCERT**

NCERT Campus
Sri Aurobindo Marg
New Delhi 110 016

Phone : 011-26562708

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

Phone : 080-26725740

Navjivan Trust Building
P.O. Navjivan
Ahmedabad 380 014

Phone : 079-27541446

CWC Campus
Opp. Dhankal Bus Stop
Panihati
Kolkata 700 114

Phone : 033-25530454

CWC Complex
Maligaon
Guwahati 781 021

Phone : 0361-2674869

Publication Team

Head, Publication Division : Anup Kumar Rajput

Chief Editor : Shveta Uppal

Chief Production Officer : Arun Chitkara

Chief Business Manager (In charge) : Vipin Dewan

Editor : Bijnan Sutar

Assistant Production Officer : ??

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.

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 Committee, Professor Anita Rampal and the Chief Advisor for this book, Professor Amitabha Mukherjee 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 the 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
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Director
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TEXTBOOK DEVELOPMENT COMMITTEE

CHAIRPERSON, ADVISORY COMMITTEE FOR TEXTBOOKS AT THE PRIMARY LEVEL

Anita Rampal, *Professor*, Department of Education, Delhi University, Delhi

CHIEF ADVISOR

Amitabha Mukherjee, *Director*, Centre for Science Education and Communication (CSEC), Delhi University, Delhi

MEMBERS

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Preeti Chadha Sadh, *Primary Teacher*, Basic School, CIE, Delhi University, Delhi

Suneeta Mishra, *Primary Teacher*, N.P. Primary School, Sarojini Nagar, New Delhi

MEMBER-COORDINATOR

Inder Kumar Bansal, *Professor*, DEE, NCERT, New Delhi

ILLUSTRATIONS AND DESIGN TEAM

Nancy Raj, Chennai

Anita Varma, Bangkok

S. Nivedita, Chennai

Srivi Kalyan, Harvard University

Sujasha Dasgupta, Gurgaon

Sougata Guha, The Srijan School, Model Town, Delhi

Arup Gupta, New Delhi

Cover Design: Sujasha Dasgupta

Layout and design support:

Anita Rampal, Sadiq Saeed and Sandeep Mishra



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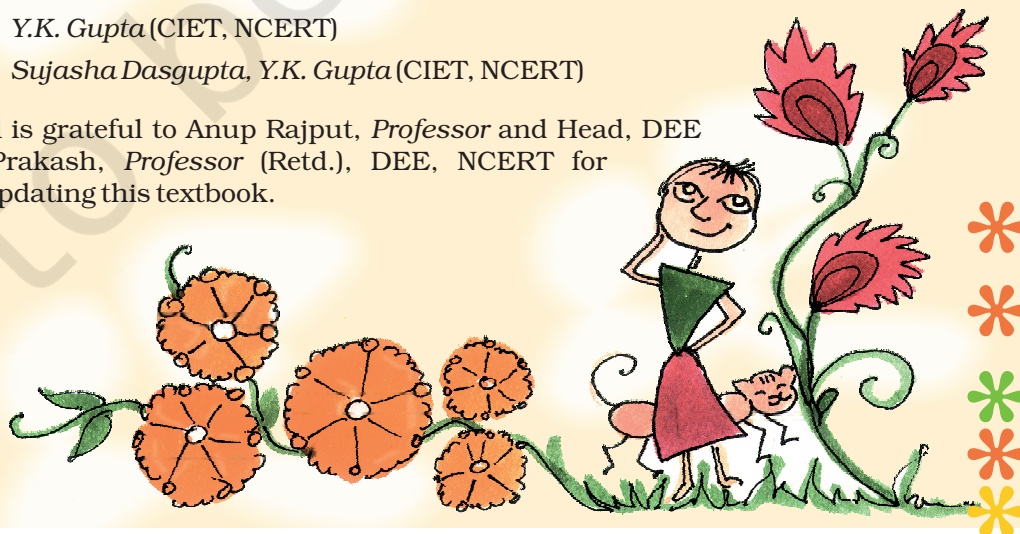
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