

# MATHEMATICS

## CLASS - IV

### TEXTBOOK DEVELOPMENT & PUBLISHING COMMITTEE

- Chief Production Officer : **Sri. A. Satyanarayana Reddy,**  
Director, SCERT, A.P., Hyderabad.
- Executive Chief Organiser : **Sri.B. Sudhakar,**  
Director, A.P. Govt. Text Book Press, Hyderabad.
- Organising Incharge : **Dr.N. Upender Reddy,**  
Prof. & Head, Curriculum & Text Book Department,  
SCERT, A.P., Hyderabad.



Published by  
**The Government of Andhra Pradesh, Hyderabad**

**Respect the Law**  
**Get the Rights**

**Grow by Education**  
**Behave Humbly**

© Government of Andhra Pradesh, Hyderabad.

*New Edition*  
*First Published 2013*

**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 without the prior permission in writing of the publisher, nor be otherwise circulated in any form of binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

The copy right holder of this book is the Director of School Education, Hyderabad, Andhra Pradesh.

This Book has been printed on 70 G.S.M. SS Maplitho  
Title Page 200 G.S.M. White Art Card

**Free distribution by A.P. Government**

---

*Printed in India*  
at the Andhra Pradesh Govt. Text Book Press,  
Mint Compound, Hyderabad,  
Andhra Pradesh.

— 0 —

## TEXTBOOK DEVELOPMENT COMMITTEE MEMBERS

### WRITERS

- Sri. Ch. Keshava Reddy**, SGT, PS Motla Palli, Srirampur Mandal, Karimnagar District.  
**Sri. A. Saidi Reddy**, SGT, PS Zapthi Veerappa Gudem, Miryalaguda Mandal, Nalgonda District.  
**Sri. Ch. Keshava**, SGT, UPS Vattipally, Marriguda Mandal, Nalgonda District.  
**Sri. T. Suresh**, SGT, UPS Lingampet, Jagityal Mandal, Karimnagar District.  
**Sri. M. Srinivas**, SGT, PS Y. Sembi, Salur Mandal, Vizianagaram District.  
**Sri. S. Dharmender Singh**, SA, UPS Ponna, Ichoda Mandal, Adilabad District.  
**Sri. N. Ravi Goud**, SA, Z.P.H.S. Lokeshwaram, Adilabad District.  
**Sri. K. Sreedhara Charyulu**, SA, Z.P.H.S. Rangayyapally, Medak District.  
**Sri. K. Ramaiah**, SA, Z.P.S.S. Kasimdevpet, Mulugu Mandal, Wrangal District.  
**Sri. Khaja Bande Nawaz**, SA, Z.P.H.S. Kalugotla, Kurnool District.  
**Sri. S. Rajashekar Reddy**, SA, Z.P.H.S. Medivemula, Kurnool District.  
**Sri. K. Nageshwar Rao**, HM, G.H.S. Peravalli, West Godavari District.  
**Sri. T. Sairamakrishna**, HM, BFMHS Samalkot, East Godavari District.  
**Sri. M. Ramanjaneyulu**, Lecturer, DIET Vikarabad, Ranga Reddy District.

### WRITER & COORDINATOR

- Sri. Kakulavaram Rajender Reddy**, Coordinator, Mathematics Textbooks, S.C.E.R.T., A.P., Hyderabad.

### EDITORS

- Dr. S. Suresh Babu**, Professor, SCERT, A.P., Hyderabad.  
**Sri. K. Brahmaiah**, Retd. Professor, SCERT, A.P., Hyderabad.  
**Sri. B. Harisarvothama Rao**, Retd. Lecturer, SCERT, A.P., Hyderabad.

### CHAIR PERSON FOR POSITION PAPER AND MATHS CURRICULUM AND TEXT BOOK DEVELOPMENT

- Prof. V. Kannan**, Department of Mathematics & Statistics, University of Hyderabad.

### CHIEF ADVISORS

**Sri Chukka Ramaiah**,  
Educationist,  
Andhra Pradesh, Hyderabad.

**Dr. H.K. Dewan**,  
Education Advisor, Vidya Bhawan Society  
Resource Centre, Udaipur, Rajasthan.

### ACADEMIC SUPPORT GROUP MEMBERS

- Smt. Padma Priya Shirali**, Community Mathematic Centre, Rishi Vally School, Chittoor District.  
**Smt. Namirta Batra**, Vidya Bhawan Society, Resource Centre, Udaipur, Rajasthan.  
**Kumari Varsha Gupta**, Vidya Bhawan Society, Resource Centre, Udaipur, Rajasthan.  
**Ms. Preeti Mishra**, Vidya Bhawan Society, Resource Centre, Udaipur, Rajasthan.  
**Sri. Sharan Gopal**, Dept. of Mathematics & Statistics, University of Hyderabad.

### ILLUSTRATIONS AND DESIGN TEAM

- Sri. Prashanth Soni**, Vidya Bhawan Society, Resource Centre, Udaipur, Rajasthan.  
**Sri. Bhawani Shankar**, Vidya Bhawan Society, Resource Centre, Udaipur, Rajasthan.  
**Sri. Kailash Yadav**, Vidya Bhawan Society, Resource Centre, Udaipur, Rajasthan.

## FORE WORD

*Mathematics is a part of every child's daily life. A child who is helping her parents in the kitchen or in the field or is even playing with her friends is constantly engaging with mathematical problems of various types. So, far from knowing 'no mathematics' a child who starts coming to school brings with herself a variety of experiences about numbers and space, often much richer than any one of us appreciate.*

*Children also have immense potential to learn and more importantly all children are capable of learning mathematics. Their curiosity about the world and the need to understand it complements their capability. Children's innate abilities for mathematics such as those for classification, matching, estimation, analysis, mapping, generalization etc., along with their experiences of quantity and space are aids to classroom teaching which all of us as teachers should utilize during classroom time.*

*It is also important to appreciate that while Mathematics learns from human experiences, its growth and progression is not dependent on them; what it relies on is the logic and creativity of the human mind. So, the goal of mathematics teaching goes beyond developing 'useful' numeracy capabilities and the ability to reason mathematically and handle abstraction are central to mathematics learning. Mathematics learning also should not be equated to learning only numbers and spatial visualizations, patterns etc., are an integral part of mathematical knowledge that children should be asked to engage with.*

*The aforesaid vision of mathematics teaching presented in Andhra Pradesh State Curriculum Framework (APSCF)-2011 has been elaborated in its Mathematics Position Paper which also clearly lays down the Academic Standards of mathematics teaching in the State. The textbooks make an attempt to concretize all these sentiments in these documents.*

*Concepts are placed in meaningful contexts and they are also arrived at by observing patterns, and providing children opportunities to state them in their own words. Use of definitions and irrelevant terminology has been avoided. Multiple ways in which children can solve a problem are encouraged and various attempts have also been made to help children understand the algorithm than engage with it mechanically. Problem posing is an important part of math and children have been encouraged create a variety of problems. Space has been provided for both individual work and collaborative learning. Pictures have been used thoughtfully to both aid concept building and also act as fillers to encourage ideas such as collaborative learning. The book is designed in colour to add to a child's interest.*

*The State Council for Education, Research and Training, Andhra Pradesh appreciates the hard work of the textbook development committee. Several teachers from all over Andhra Pradesh have contributed to the development of this textbook. We are grateful to the district education officers, mandal education officers and head teachers for making this possible. We also thank the institutions and organizations which have given their time in the development of this textbook. We are grateful to the office of the Commissioner Director- School Education for extending its co-operation in developing this textbook. In the endeavor to continuously improve the quality of our work, we welcome your comments and suggestions on this book.*

**Director,  
SCERT, A.P., Hyderabad**

# CONTENTS

S. NO.	CONTENTS	SYLLABUS TO BE COVERED DURING	PAGE NO.
1.	Many objects - different shapes	July	1-7
2.	Different views - different sides	July	8-14
3.	Some more shapes	July	15-22
4.	Knowing numbers	July, August	23-37
5.	How much more - how much less?	August	38-48
6.	How many times	August, September	49-60
7.	Equal shares and groups	September	61-70
8.	How long is it?	October, November	71-79
9.	How much does it weigh?	November	80-90
10.	How much do these bottles hold?	November	91-98
11.	Tick-Tock goes the clock	November, December	99-107
12.	Dividing into equal parts	December	108-117
13.	Smart tables	January	118-124
14.	Borders and boundaries	January	125-129
15.	Halves that look a like	February	130-133
16.	Patterns	February	134-140
17.	Maths around us	February, March	141-146

## OUR NATIONAL ANTHEM

- Rabindranath Tagore

Jana-gana-mana-adhinayaka, jaya he

Bharata-bhagya-vidhata.

Punjab-Sindh-Gujarat-Maratha

Dravida-Utkala-Banga

Vindhya-Himachala-Yamuna-Ganga

Uchchala-Jaladhi-taranga.

Tava shubha name jage,

Tava shubha asisa mage,

Gahe tava jaya gatha,

Jana-gana-mangala-dayaka jaya he

Bharata-bhagya-vidhata.

Jaya he, jaya he, jaya he,

Jaya jaya jaya, jaya he!

## 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. I shall be kind to animals

To my country and my people, I pledge my devotion.

In their well-being and prosperity alone lies my happiness.”