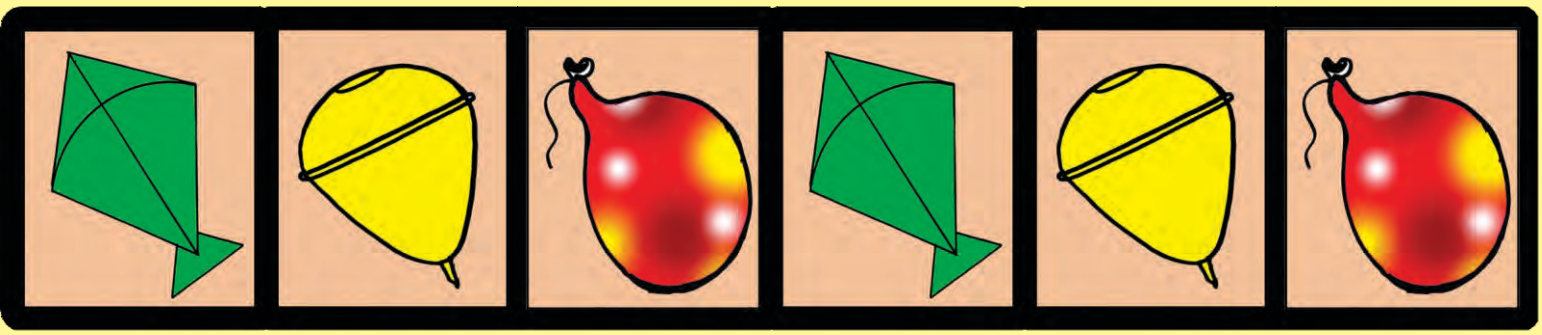
MATHEMATICS

STANDARD THREE



The Constitution of India

Chapter IV A

Fundamental Duties

ARTICLE 51A

Fundamental Duties- It shall be the duty of every citizen of India–

(a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;

(b) to cherish and follow the noble ideals which inspired our national struggle for freedom;

(c) to uphold and protect the sovereignty, unity and integrity of India;

(d) to defend the country and render national service when called upon to do so;

(e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities, to renounce practices derogatory to the dignity of women;

(f) to value and preserve the rich heritage of our composite culture;

(g) to protect and improve the natural environment including forests, lakes, rivers and wild life and to have compassion for living creatures;

(h) to develop the scientific temper, humanism and the spirit of inquiry and reform;

(i) to safeguard public property and to abjure violence;

(j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement;

(k) who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years.

Education Department's Sanction Number :
Pra-Shi-Sa/2014-15/2101/Manjuri/D-505/757
Date 4/2/2014

MATHEMATICS

STANDARD THREE

Name : _____

School : _____

MAHARASHTRA STATE BUREAU OF TEXTBOOK PRODUCTION
AND CURRICULUM RESEARCH, PUNE.

The digital textbook can be obtained through DIKSHA App on a smartphone by using the Q. R. Code given on title page of the textbook and useful audio-visual teaching-learning material of the relevant lesson will be available through the Q. R. Code given in each lesson of this textbook.

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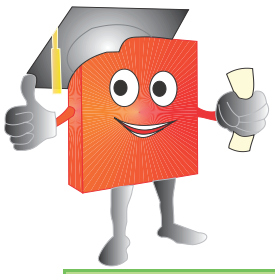

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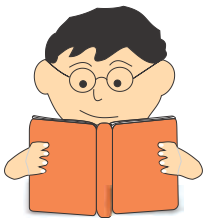

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The Constitution of India

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

The 'Primary Education Curriculum - 2012' was prepared in the State of Maharashtra following the 'Right of Children to Free and Compulsory Education Act, 2009' and the 'National Curriculum Framework 2005'. The Textbook Bureau has launched a new series of Mathematics textbooks based on this syllabus approved by the State Government for Stds I to VIII from the academic year 2013-2014. We are happy to place the textbook of Standard Three in this series in your hands.

Our approach while designing this textbook was that the entire teaching-learning process should be child-centred, emphasis should be given on active learning and constructivism and at the end of Primary Education the students should have attained the desired competencies and that the process of education should become enjoyable and interesting.

Children have a natural liking for pictures and constantly try to 'do' things on their own. Considering these factors, we have tried to make this book pictorial and activity-oriented. As far as possible, expressive illustrations have been used which will lead to a clearer understanding of mathematical concepts.

Graded exercises and conversations have been included in order to ensure revision and reinforcement of mathematical concepts and to facilitate self-learning. It is expected that the children will solve the questions in the exercises on their own. We have tried to provide a variety of exercises to make it interesting for the students.

The language of presentation that the teacher is expected to use has been provided in the textbook. Also, there are some instructions for the teachers themselves. The instructions and the activities aim at making their teaching more activity-oriented.

This book was scrutinized by teachers, educationists and experts in the field of mathematics at all levels and from all parts of the State to make it as flawless and useful as possible. Letters from teachers and parents as also reviews in newspapers have been taken into account while preparing this textbook. The Bureau is grateful to all of them for their co-operation. Their comments and suggestions have been duly considered by the Mathematics Subject Committee while finalising the book.

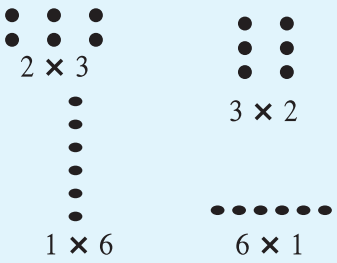
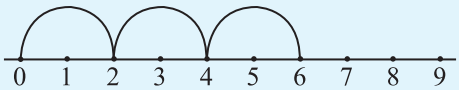
The Mathematics Subject Committee of the Bureau, the Panel, Shri. V. D. Godbole (Invitee) and the artists have taken great pains to prepare this book. The Bureau is thankful to all of them.

We hope that this book will receive a warm welcome from students, teachers and parents.

(C. R. Borkar)
Director
Maharashtra State Bureau of Textbook
Production and Curriculum Research, Pune.

Pune
Date : December 4, 2013
Agrahayan 13, 1935

English Mathematics - Standard III - Learning Outcomes

Suggested Pedagogical Processes	Learning Outcomes
The learner may be provided opportunities in pairs/groups/ individually and encouraged to — • count large number of objects from their surroundings by making groups of 100, 10 and ones • write a number (up to 999) and the other group reads it. • apply place values for writing greatest/ smallest numbers with three digits. (Digits may or may not repeat.) • arrange concrete objects and draw different multiplication facts/combinations of a given number • for example, 6 mangoes can be arranged as • for example.  • develop multiplication facts of 2, 3, 4, 5 and 10 using different ways, for example, skip counting and by using repeated addition • Start  • experience equal sharing and grouping and connecting them mathematically in their own context. For example, sharing of equal number of sweets among children • observe various 3D shapes available in the surroundings and discussions may be held for identification of similarities and differences with respect to their corresponding shapes like triangle, square, circle cut outs of cardboard • make 2D shapes through paper folding/paper cutting activities • describe the properties of 2D shapes in their own words/languages like number of corners, edges on a shape, etc. Discuss their observation regarding various shapes they observe in their surroundings— on the floor, on the footpath, etc., to draw conclusion that all shapes do not tile • conduct role play of seller and buyer in selling/ buying situation where lots of addition and subtraction of amounts using play money may be done	**The learner —** 03.71.01 works with three-digit numbers. – reads and writes numbers up to 999 using place value. – compares numbers up to 999 for their value based on their place value. – solves simple daily life problems using addition and subtraction of three-digit numbers with and without regrouping, sums not exceeding 999. – analyses and applies an appropriate number operation in the situation/ context. – explains the meaning of division facts by equal grouping/sharing and finds it by repeated subtraction. For example, 12÷3 can be explained as number of groups of 3 to make 12 and finds it as 4 by repeatedly subtracting 3 from 12. – adds and subtracts small amounts of money with or without regrouping. – makes rate charts and simple bills. 03.71.02 acquires understanding about 2D shapes – identifies and makes 2D-shapes by paper folding, paper cutting on the dot grid, using straight lines etc. – describes 2D shapes by the number of sides, corners and diagonals. For example, the shape of the book cover has 4 sides, 4 corners and two diagonals. – fills a given region leaving no gaps using a tile of a given shape. 03.71.03 estimates and measures length and distance using standard units like centimetres or metres and identifies relationships. 03.71.04 weighs objects using standard units– grams and kilograms using simple balance. 03.71.05 estimates and measures lengths/ distance using uniform non-standard units like a rod/pencil. Similarly measures and estimates the capacities of container like a vessel, tank etc. using uniform non-standard units like cup/ spoon/bucket etc. 03.71.06 compares the capacity of different containers in terms of non standard units. 03.71.07 adds and subtracts measures involving grams and kilograms in life situations. 03.71.08 identifies a particular day and date on a calendar.

Suggested Pedagogical Processes	Learning Outcomes
• measure different lengths/distance by using uniform but non-standard unit. • measure the length of objects in their surroundings by using scale/ tape. Students may be encouraged to estimate the length first and then verify it by actual measurement • use simple balance to compare and find weight of common objects in terms of non-standard units likes small stones, packets of objects, etc. • measure capacities of different containers and describe their experiences of doing so, for example, finding how many jugs can fill a bucket or how many glasses can be filled from one jug full of water • compare the capacity of two or more containers. • use of vocabulary about time and calendar through discussions/ story telling • attempt to read a clock and calendar • observe patterns both geometrical and numerical and discuss them. (Presentation by the group may be done in front of the whole class) • collect and record data in their own way and use pictograph to represent it. For example, flower of different colours in the school garden or the number of boys and girls present in a class • to interpret pictographs from magazines and newspapers which can be displayed in the classroom.	03.71.09 sequences the events occuring according to their duration in terms of hours/days. For example, does a child remain in school for longer period than at home? 03.71.10 reads the time correctly to the hour using a clock/watch. 03.71.11 extends patterns in simple shapes and numbers. Understands the management of data. 03.71.12 observes, identifies and extends geometrical pattern based on symmetry. 03.71.13 records data using tally marks, represents pictorially and draws conclusions.

Contents

Part One

Part Two

English Mathematics - Standard III

❖ To the Teacher ❖

At this stage, the textbook is a very important tool of the teaching-learning process. We urge you to make full use of the following special features of this textbook.

- The games, conversations, demonstrations, practical work and activities included for explaining mathematical ideas and concepts.
- Activities like picture-observation and use of strings of beads to make learning more enjoyable.
- Practical work of tying objects into groups of ten, untying them to get back the single objects, etc.
- Use of beads, stones, seeds, etc. to carry out operations on numbers.
- Give learning experiences based on the content of one page every day.
- Have a question-and-answer session based on the subject-content of the page and give learning experiences using teaching/learning aids.
- As the children carry out an activity, move amongst the groups to observe what they are doing. Give guidance if necessary.
- Give practice with the help of the activities given on a page.
- Give practice with the help of supplementary activities as and when it is found to be necessary.
- From time to time, ask thought-provoking questions based on previous lessons and encourage the children to find the answers on their own.
- Encourage children to ask questions about their difficulties. In fact, help them develop the habit of asking questions.
- Make consistent efforts to develop the children's ability to read and write numbers and to add and subtract numbers in their mind.
- Also, help children to develop a good hand for writing numbers and the skill of presenting a sum or problem in the proper way.