



# Subodh Public School Rambagh

Session: - 2017-2018

**Subject- Mathematics**

**Subject Code -041**

**Flyers-1**

## **Introduction:-**

The Syllabus in the subject of Mathematics has undergone changes from time to time in accordance with growth of the subject and emerging needs of the society. The present revised syllabus has been designed in accordance with National Curriculum Framework 2005 and as per guidelines given in the Focus Group on Teaching of Mathematics which is to meet the emerging needs of all categories of students. For motivating the teacher to relate the topics to real life problems and other subject areas, greater emphasis has been laid on applications of various concepts.

The curriculum at Secondary stage primarily aims at enhancing the capacity of students to employ Mathematics in solving day-to-day life problems and studying the subject as a separate discipline. It is expected that students should acquire the ability to solve problems using algebraic methods and apply the knowledge of simple trigonometry to solve problems of height and distances. Carrying out experiments with numbers and forms of geometry, framing hypothesis and verifying these with further observations form inherent part of Mathematics learning at this stage. The proposed curriculum includes the study of number system, algebra, geometry, trigonometry, mensuration, statistics, graphs and coordinates geometry, etc.

The teaching of Mathematics should be imparted through activities which may involve the use of concrete materials, models, patterns, charts, pictures, posters, games, puzzles and experiments.

## **Objectives**

The broad objectives of teaching of Mathematics at secondary stage are to help the learners to:

- consolidate the Mathematical knowledge and skills acquired at the upper primary stage;
- acquire knowledge and understanding, particularly by way of motivation and visualization, of basic concepts, terms, principles and symbols and underlying processes and skills;
- develop mastery of basic algebraic skills;
- develop drawing skills;
- feel the flow of reason while proving a result or solving a problem;
- apply the knowledge and skills acquired to solve problems and wherever possible, by more than one method;
- to develop positive ability to think, analyze and articulate logically;
- to develop awareness of the need for national integration, protection of environment, observance of small family norms, removal of social barriers, elimination of gender biases;
- to develop necessary skills to work with modern technological devices such as calculators, computers, etc.
- to develop interest in mathematics as a problem-solving tool in various fields for its beautiful structures and patterns, etc.
- to develop reverence and respect towards great Mathematicians for their contributions to the field of Mathematics;
- to develop interest in the subject by participating in related competitions;
- to acquaint students with different aspects of Mathematics used in daily life;
- to develop an interest in students to study Mathematics as a discipline.

## **General Instructions:**

- As per CCE guidelines, the syllabus of Mathematics for classes IX and X has been divided term wise.

- The units specified for each term shall be assessed through both Formative and Summative Assessments.
- In each term, there will be two Formative Assessments, each carrying 10% weightage.
- The Summative Assessment in term I will carry 30% weightage and the Summative Assessment in term II will carry 30% weightage.
- Listed laboratory activities and projects will necessarily be assessed through formative assessments.

**Name of Book (s) with name of Publication: -**

- (1) Mathematics by NCERT
- (2) Comprehensive Mathematics activities and projects by laxmi Publication.

**Recommended Books: -**

Faculty Head	Name	Phone no.	Email-Id
	Mr. Deepak Makhija	9413345695	deepak.makhija@spsjaipur.com
Faculty Members	Mr. B.L. Sharma	9413345696	Sharmabl32@gmail.com
	Mr. Pradeep Kr. Lodha	9413345694	Pradeep.kumarlodha@spsjaipur.com
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**Periodic Test-1 (By July, 2017)**

**Syllabus 30%**

Ch.	Name of Chapter	Marks	Time Frame	%
1	Number System	4	April	20
2	Polynomials	4	April	20
3	Co-ordinate Geometry	4	April	20
4	Linear Equations in two Variables	4	April /May	20
5	Introduction to Euclid Geometry	4	May	20

**Activity**

Month	Activity Description	Chapter/Topic	Marks (5)	Resources	Activity Details	Learning outcomes	Virtue
April-August	Notebook Assignment	All chapters of alpha 1 CH.1,2,3,4,5		NCERT TEXT BOOK	Students to do various types of questions in note book	to strengthen various aspects e.g. knowledge , application , skills	
AUGUST	plotting of linear equations in	linear equations in two variables		as per lab guidelines	lab manual	to develop the skill of plotting the graph with	Collaboration

	two variables					applications of linear equations	
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### Periodic Test-2 (September 11-27,2017)

**Syllabus 50%**

Ch.	Name of Chapter	Marks 80	Time Frame	%
1	Number System	8	April	10
2	Polynomials	8	April	10
3	Co-ordinate Geometry	4	April	5
4	Linear Equations in two Variables	4	April/May	5
5	Introduction to Euclid Geometry	8	May	10
6	Lines and Angles	16	July	20
7	Triangles	16	July	20
8	Quadrilaterals	16	August	20

### Periodic Test-3 (By Nov.,2017)

**Syllabus 30%**

Ch.	Name Of Chapter	Marks	Time Frame	%
9	Area of Parallelograms and Triangles	4	October	20
10	Circles	4	October /November	20
11	Constructions	4	November	20
12	Heron 's Formula	4	November	20
15	Probability	4	November	20



## Activity

Month	Activity Description	Chapter/Topic	Marks (10/2=5)	Resources	Activity Details	Learning outcomes	Virtue
November	<b>Subject enrichment Activity</b>	lab activity as per CBSE guide lines	5	lab manual	Students to perform activities in math lab and same to be written in practical files.	conceptual clarity of theoretical knowledge and its application in day to day life	
Oct.-Jan.	<b>Notebook Assignment</b>	ch 6,7,8,9,10,11,12,13,14,15	(5)		to construct geometrical figures as per requirement	to develop the skill of construction of geometrical figures	Obedience

## Final Exam 100% Syllabus

Chapter weightage as per CBSE Directives /Norms.

Consult Curriculum 2017-18 for Topics

## Teaching Strategies

S.No	Unit/Topics To Be Covered	Teaching Strategies
1	Number System	Ability based learning , Active Learning , Accelerated Learning , Discussion Strategies , Smart Class / Black Board Method , Learning By Doing Method
2	Polynomials	Ability based learning , Active Learning , Accelerated Learning , Peer Tutoring , Problem Based Learning , Writing Assignments , Smart Class / Black Board Method , Learning By Doing Method
3	Coordinate Geometry	Ability based learning , Active Learning , Accelerated Learning , Clicker use in class , Inclusive education , Team Based Learning , Smart Class / Black Board Method , Learning By Doing Method , Team Based Learning , Smart Class / Black Board Method , Learning By Doing Method
4	Linear Equations In Two Variables	Ability based learning , Active Learning , Accelerated Learning , Peer Tutoring , Problem Based Learning , Writing Assignments , Smart Class / Black Board Method , Learning By Doing Method
5	Introduction To Euclid's Geometry	Ability based learning , Active Learning , Accelerated Learning , Clicker use in class , Critical thinking Strategies , Experiential Learning , Smart Class / Black Board Method , Learning By Doing Method , Writing Assignments , Discussion
6	Lines And Angles	Ability based learning , Active Learning , Accelerated Learning , Critical thinking , Discussion Strategies , Experiential Learning , Clicker use in class , Smart Class / Black Board Method , Learning By Doing Method , Writing Assignments
7	Triangles	Ability based learning , Active Learning , Accelerated Learning , Critical thinking , Discussion Strategies , Experiential Learning , Clicker use in class , Smart Class / Black Board Method , Learning By Doing Method , Writing Assignments
8	Quadrilaterals	Ability based learning , Active Learning , Accelerated Learning , Clicker use in class , Critical thinking , Discussion Strategies , Experiential Learning , Writing Assignments , Smart Class / Black Board Method , Learning By Doing Method
9	Areas Of Parallelograms And Triangles	Ability based learning , Active Learning , Accelerated Learning , Clicker use in class , Critical thinking , Discussion Strategies , Experiential Learning , Writing Assignments , Smart Class / Black Board Method , Learning By Doing Method
10	Circles	Ability based learning , Active , Clicker use in class , Critical thinking , Discussion Strategies , Experiential Learning Writing Assignments , Smart Class / Black Board Method , Learning By Doing Method , Accelerated Learning
11	Constructions	Ability based learning , Active Learning , Accelerated Learning , Learning by doing , experimental learning
12	Heron's Formula	Ability based learning , Active Learning , Accelerated Learning , Peer Tutoring , Problem Based Learning , Smart Class / Black Board Method , Learning By Doing Method , Critical thinking
13	Surface Areas And Volumes	Ability based learning , Active Learning , Accelerated Learning , Peer Tutoring , Problem Based Learning , Smart Class / Black Board Method Learning By Doing Method
14	Statistics	Ability based learning , Active Learning , Critical thinking , Experiential Learning , Games/Experiments/Simulations , Interdisciplinary Teaching , Project Based Learning , Writing Assignments , Smart Class / Black Board Method , Learning By Doing Method , Accelerated Learning
15	Probability	Ability based learning , Active Learning , Accelerated Learning , Clicker use in class , Games/Experiments/Simulations , Humor in the classroom , Problem Based Learning , Writing Assignments , Smart Class / Black Board Method , Learning By Doing Method