TERMWISE SYLLABUS
SESSION-2018-19
CLASS-VIII
SUBJECT: MATHEMATICS (PRATIBHA)

TERM-I (April 2018 to September 2018)			
Chapter Name	**Content**	**Learning Outcomes**	**Suggested Activities**
Chapter-1 Rational numbers	Introduction, Negative of a rational number, representation of a rational numbers on the number line, Properties of rational numbers, Rational numbers between two rational numbers. **Note: As per SCERT guidelines - content not to be taught- section 1.2 and terminology Ex 1.1 (except 1.2.6 Negative of a number)**	The learner: • generalises properties of addition, subtraction, multiplication and division of rational number through pattern. • Find out as many rational numbers as possible between two given rational numbers. • Represent rational number on number line.	• Concept using conversation of various types of numbers. • Shading/Colouring equal parts of various shapes. • Conversion of decimal number into the rational number using ruler.
Chapter-2 Linear equation in one variable	Introduction, solving equations which have linear expressions on one side and numbers on the other side, some applications solving equations having the variable on both sides, some more applications, reducing equations to simpler form, equations reducible to linear form.	The learner: • Solve problem based on linear equation in variable. • Solve puzzles and daily life problem using variables.	• Play with numbers game, Picture / card game. • Story: Crocodile Dada
Chapter-3 Understanding Quadrilaterals	Introduction, polygons, sum of the measures of the exterior angles of a polygon, kinds of quadrilaterals, some special parallelograms.	The learner: • Solves problems related to angles of quadrilateral using angle sum property. • Verifies properties of parallelogram and establishes the relationship between them through reasoning. • Generalizes properties of different types of quadrilateral.	• Diagonals of a polygon: Making, identification of vertices & counting of Diagonals of a polygon with the help of students. • Making of circle & Quadrilateral with the help of DOTs. • Paper cutting: Making Different type of Quadrilateral. • Game of KITEs: A Role Play/Story in Mathematics.
Chapter-4 Practical Geometry	Introduction, construction of quadrilaterals, some special cases.	The learner: • Construct different quadrilaterals using compasses and straight edge.	• Mr. Robot (fill the colours in robot made up of different shapes). • Head craft (Cutting and colouring

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			different geometrical shapes and paste like head craft).
Chapter -6 squares and square roots	Introduction, properties of square numbers, some more interesting patterns, finding the square of a number, square roots, square roots of decimals, estimating square roots	The learner: • Finds square and square roots of numbers using different methods. • Uses square roots in solving problems of daily life.	• To make square using straw and reshape the figure by shifting the straws - play with straws. • Draw the square on a graph paper and count them /Tower Pattern. • Square MAZE
Chapter-7 cubes and cube roots	Introduction, cubes and cube roots	The learner: • Finds cube and cube roots of a number.	• Finding Volume of different size RUBRIC CUBE. • cube root MAZE
Chapter-8 Comparing Quantities	Recalling ratios and percentages, finding the increase of decrease percent, finding discounts, prices related to buying and selling (profit and loss), sales tax/VAT , compound interest, deducing a formula for compound interest, rate compounded annually or half yearly (semiannually), applications of compound interest formula.	The learner: • Applies the concept of percent in profit and loss, situation in finding discount, sales tax/VAT and compound interest.	• Role play

Mental Maths, Maths Lab Activities & YUVA sessions
Revision of syllabus for Mid Term Exam

TERM-II (October 2018 to March 2019)

Chapter Name	Content	Learning Outcomes	Suggested Activities
Chapter-5 Data Handling	Looking for information, organizing data, Circle graph or pie chart. **Note: As per SCERT guidelines - content not to be taught- section 5.3 and Exercise 5.1, section 5.5 and exercise 5.3**	The learner: • Draw and interprets pie charts.	• Collect the data related to the birth month of each student of your class and write it in the space given below.
Chapter-9 Algebraic Expressions and Identities	What are expressions?, terms, factors, coefficients, monomials, binomials and polynomials, like and unlike terms, addition and subtraction of algebraic expressions, multiplication of algebraic expression, Introduction multiplying a monomial by a monomial, multiplying a monomial by a	The learner: • Addition, subtraction and multiplication of algebraic expression. • Uses various algebraic identities in solving problem of daily life.	• Sorting and writing surrounding patterns. • Checking $(a + b)^2 = a^2 + 2ab + b^2$ through paper cutting. • Checking $(a-b)^2 = a^2 - 2ab + b^2$ through paper cutting. • Checking $(a + b)(a-b) = a^2 - b^2$ through paper cutting.

	polynomial, multiplying a polynomial by a polynomial, what is an identity?, standard identities, applying identities		
Chapter-10 Visualizing Solid Shapes	Introduction, views of 3D shapes, mapping space around us, faces, edges and vertices.	The learner: • Represents 3D shapes on a plane surface such as sheet of paper, block board etc.	• Find out vertices, faces and edges of different 3-D objects.
Chapter-11 Mensuration	Introduction, let us recall, area of trapezium, area of a general quadrilateral, area of a polygon. **Note: As per SCERT guidelines - content not to be taught (section 11.6 to 11.9 and exercise 11.3 and 11.4)**	The learner: • Estimates the area of shapes like trapezium and other polygon by using square grid/ graph sheet and verifies using formulas. • Finds the area and perimeter of polygon.	• An activity for establishing a relationship between circumference and diameter, representing their ratio as π. • Dividing a circular region into small sectors and arranging them in the form of rectangle and finding the area of circle.
Chapter-12 Exponents and Powers	Introduction, powers with negative exponents, laws of Exponents, use of Exponents to express small Numbers in standard form.	The learner: • Solves problem with integral exponents. • Use the laws of exponent. • Express numbers in standard form.	• Game of reading and writing of numbers. • Recognition of changing in numbers through patterns.
Chapter-13 Direct and Inverse Proportions	Introduction, direct proportion, inverse proportions.	The learner: • Solves problem based on direct and inverse proportion.	• Details of Riyan's Birthday party • Real life examples: Direct and Inverse Variation. • Distinguish different situation of Direct and Inverse Variation by mean of colours.
Chapter-14 Factorization	Introduction, what is factorization?, division of algebraic expression, division of algebraic expression, can you find errors?	The learner: • Finds factors of algebraic expression. • Division of algebraic expression. • Find the errors in mathematical statement and correct it.	• Role play
Chapter 15- Introduction to graphs	Introduction, linear graphs some applications	The learner: • Draws and interprets linear graph.	• Finding exact location of flower painted on a table cloth. • Identify the location of different seats in a theatre hall.
Chapter-16 Playing with Numbers	Introduction, Number in general form, games with Numbers, letters for digits. **Note: content not be taught- section 16.4 and exercise 16.1**	The learner: • Check divisibility rules of 2, 3, 4, 5, 6,8, 9 and 11	• Games with numbers

Chapter-1 Rational numbers (This content of Term I is to be repeated and evaluated in term II)

Introduction, Negative of a rational number, representation of a rational numbers on the number line, Rational numbers between two rational numbers.

Note: As per SCERT guidelines - content not to be taught- section 1.2 and terminology Ex 1.1 (except 1.2.6 Negative of a number)

Chapter-4 Practical Geometry(This content of Term I is to be repeated and evaluated in term II)

Introduction, construction of quadrilaterals, some special cases.

Chapter -6 Squares and Square roots (This content of Term I is to be repeated and evaluated in term II)

Introduction, properties of square numbers, some more interesting patterns, finding the square of a number, square roots, square roots of decimals, estimating square roots.

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Revision of Syllabus for Common Annual School Examination