

Annual Syllabus
Class-VIII (2023-2024)
Subject: Mathematics

Chapter Name	Content	Learning Outcomes	Suggested Activities
Chapter – 2 Linear Equation in One Variable	<p>Class VI:- Addition & Subtraction of Integers, Addition & Subtraction of Fraction, Addition & Subtraction of Decimal (Use Worksheet No. 14, 15, 16, 17, 18, 19, 20, 21, 22, 23)</p> <p>Class VII:- Multiplication & Division of Integers, Multiplication & Division of Fraction, Multiplication & Division of Decimal, Equivalent ratios, percentage (Use Worksheet No. 5, 6, 7, 8, 10, 11, 12, 13)</p> <p>Class VIII:- Introduction, Solving equations having the variable on both sides, Reducing equations to simpler form, (Use Worksheets No. 5, 6, 7, 8, 9)</p>	<p>The learner will be able to:</p> <ul style="list-style-type: none"> • Solve problems based on linear equation in one variable. • Solve puzzles and daily life problems using variables. 	<ul style="list-style-type: none"> • Play with numbers game, Picture / card game. • Story: Crocodile Dada.
Chapter – 3 Understanding Quadrilaterals	<p>Class VI:- Points, A Line Segment, A Line, Intersecting Lines, Parallel Lines, Ray, Curves, Polygons, Angles. (Use Worksheet No. 29, 31, 32, 33, 34)</p> <p>Class VII:- Pair of lines, checking for parallel lines, Medians of a triangle, altitudes of a triangle, Exterior angle of a triangle, angle sum property of a triangle, equilateral and isosceles triangle, sum of the lengths of two sides of a triangle, right angled triangle and Pythagoras property. (Use Worksheet No. 4, 14, 15, 27, 28, 29, 30)</p> <p>Class VIII:- Concave and Convex polygons, Regular and irregular polygons, Sum of the measures of the exterior angles of a</p>	<p>The learner will be able to:</p> <ul style="list-style-type: none"> • Solve problems related to angles of quadrilateral using angle sum property. • Verify properties of parallelogram and establishes the relationship between them through reasoning. • Generalize properties of different types of quadrilaterals. 	<ul style="list-style-type: none"> • 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.

	<p>polygon, Kinds of quadrilaterals: Trapezium, Kite, Parallelogram, Elements of parallelogram, Angles of a parallelogram, Diagonals of parallelogram, Some special parallelograms: Rhombus, Rectangle, Square (Use Worksheets No. 20, 21, 22, 23, 24, 25, 26)</p>		
<p>Chapter – 5 Squares and Square roots</p>	<p>* Class VI:- Multiplication of number by itself. Place & Face value. (Use Worksheet No. 1, 9)</p> <p>* Class VII:- Exponents, Laws of Exponents (Use Worksheet No. 16, 17, 18)</p> <p>Class VIII:- Introduction, Properties of square numbers, Some more interesting patterns, Finding the square of a number, Pythagorean triplets, Square roots through repeated subtraction, Prime factorization and division method, Square roots of decimals. (Use Worksheets No. 10, 11, 12, 13, 14, 15, 16, 17, 18, 19)</p>	<p>The learner will be able to:</p> <ul style="list-style-type: none"> • Find square and square roots of numbers using different methods. • Use square roots in solving problems of daily life. 	<ul style="list-style-type: none"> • Play with straws: To make square using straw and reshape the figure by shifting the straws • Tower Pattern: Draw the square on a graph paper and count them • Square root MAZE
<p>Chapter – 6 Cubes and Cube Roots</p>	<p>* Class VI:-same as Chapter 5</p> <p>* Class VII:-same as Chapter 5</p> <p>Class VIII: Introduction, Cubes and Cube roots (Use Worksheets No. 29, 30, 31, 32, 33, 34)</p>	<p>The learner will be able to:</p> <ul style="list-style-type: none"> • Find cube and cube roots of a number. 	<ul style="list-style-type: none"> • Finding Volume of different size RUBRIC CUBE. • Cube root MAZE
<p>➤ The above content must be completed for Mid Term Examination by 15th September, 2023.</p> <p>➤ Mental Maths & Maths Lab Activities</p> <p>➤ Revision of syllabus for Mid Term Examination.</p>			
<h2>MID TERM EXAMINATION</h2>			
<p>Chapter – 7 Comparing Quantities</p>	<p>CLASS VII: Percentage-another way of comparing quantities, use of percentages, prices related to an item or buying and selling, charge given on borrowed money or simple interest. (Use Worksheet No. 31, 32, 33, 34, 35)</p>	<p>The learner will be able to:</p> <ul style="list-style-type: none"> • Apply the concept of percent in profit and loss situation, in finding discount, GST and compound interest. 	<ul style="list-style-type: none"> • Conversation between friends (Role play) to understand profit/loss % and interest. • Connect the concept and

	Class VIII: Recalling ratios and percentages, finding discounts, prices related to buying and selling (profit and loss), sales tax/VAT/GST, compound interest, deducing a formula for compound interest, applications of compound interest formula.		procedure to get result
Chapter – 8 Algebraic Expressions and Identities	Class VIII:- Addition and subtraction of algebraic expressions, Multiplication of algebraic expression: Introduction, Multiplying a monomial by a monomial, Multiplying a monomial by a polynomial, Multiplying a polynomial by a polynomial. (Use Worksheets No. 35, 36, 37, 38, 39, 40,41)	The learner will be able to: <ul style="list-style-type: none"> • Addition, subtraction and multiplication of algebraic expression. • Use various algebraic identities in solving problem of daily life. 	<ul style="list-style-type: none"> • 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.
Chapter – 9 Mensuration	Class VII:- Visualizing plane figures (Use Worksheet No. 19, 22) Class VIII:- Introduction, Area of a polygon, Solid Shapes, Surface area of cube, cuboid and cylinder, Volume of cube, cuboid and cylinder. (Use Worksheets No. 27, 28)	The learner will be able to: <ul style="list-style-type: none"> • Find the area of polygon. • Find the Surface area and volume of 3-D objects in their surroundings. 	<ul style="list-style-type: none"> • Demonstrate to differentiate between Surface area and volume of football, lunchbox, cylindrical water bottle etc. • Connect the concept with procedure to get result • Nets of 3D figures to understand surface area • Real life applications
Chapter – 11 Direct and Inverse Proportion	Class VIII:- Introduction, direct proportion, inverse proportions.	The learner will be able to: <ul style="list-style-type: none"> • Solve problem based on direct and inverse proportion. 	<ul style="list-style-type: none"> • 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 – 12 Factorization	Class VIII:- Introduction, What is factorization?, Method of common factors, Factorisation by regrouping terms, Factorisation using identities, Factors of the form $(x + a)(x + b)$, Division of algebraic expression, Division of a monomial by another monomial, Division of a polynomial by a monomial, Division of a polynomial by a polynomial. (Use Worksheet No. 41)	The learner will be able to: <ul style="list-style-type: none"> • Find factors of algebraic expression. • Divide algebraic expression. 	<ul style="list-style-type: none"> • TLM (flash cards) for clarification of concept

Chapter – 13 Introduction to Graphs	Class VIII:- Introduction, linear graphs, some applications	The learner will be able to: <ul style="list-style-type: none"> • Draws and interpret linear graph. 	<ul style="list-style-type: none"> • Finding exact location of flower painted on a table cloth. • Identify the location of different seats in a theatre hall. • Identification of a position on globe using latitude as x-axis & longitude as y-axis
<ul style="list-style-type: none"> ➤ The whole syllabus must be completed for Annual Examination by 31st January, 2024. ➤ Mental Maths & Maths Lab Activities ➤ Revision of syllabus for Annual Examination. 			
<h2>ANNUAL EXAMINATION</h2>			
<p>Note: The above said syllabus is for assessment purpose only and remaining topics/chapters may be taught as Subject Learning Enrichment.</p>			