

OVERVIEW OF SYLLABUS AND SKILLS

Chapter No.	Chapter	Activities	Skills	Values	Cross-Curricular Links
1	Rational Numbers <ul style="list-style-type: none"> Rational number revision Properties of rational numbers Additive and multiplicative identity Reciprocal of a number Rational numbers on number line Rational numbers between two rational numbers 	<ul style="list-style-type: none"> Activity: Making groups based on the names of properties of rational numbers Group Work: Let's Try 1, 2, 3 and 4 Peer Discussion: <ul style="list-style-type: none"> Rational numbers and their operations How distributive property helps in solving rational number problems Board Work with Discussion: <ul style="list-style-type: none"> Solving Rational number problems using properties and without properties and observing the difference Finding Rational numbers between two rational numbers Marking Rational numbers on number line Thinking Questions: <ul style="list-style-type: none"> Was using properties really helpful in solving rational number questions? Which method took less time – using property or without using property? Interactive Discussion: <ul style="list-style-type: none"> Difference between fractions and rational numbers Negative rational numbers Quiz: Recapitulation 	<ul style="list-style-type: none"> Recall Classify Explain Solve Use Organise Discover Differentiate 	<ul style="list-style-type: none"> Cooperation Independent learning Different kinds of number systems used in history 	<ul style="list-style-type: none"> Visual – Rational Numbers on number line Rational numbers between two rational numbers Story – Different number systems in history Physical – Properties of rational numbers
2	Linear Equations in One Variable <ul style="list-style-type: none"> Simple equations revision Solving equations with expression on one side and numbers on the other side Application of linear equation Solving equations having variables on both sides Reducing equations to simpler form Equations reducible to linear form 	<ul style="list-style-type: none"> Activity: Problem is on the chit Let's go to school Peer Work: Types of linear equations Group Work: Several topics Writing Explanations: for several concepts Board Work with Discussion: <ul style="list-style-type: none"> Framing linear equation and then solving them Linear equations with variable on one side or both sides Group Activity: Let's Try 1, 2, 3, 4, 5 and 6 Discussion: railway control, Solving different types of word problems, reducible problems Story Writing: Types of Problems, Application of linear equations 	<ul style="list-style-type: none"> Recall Classify Explain Apply Use Organise Create Solve Use Differentiate 	<ul style="list-style-type: none"> Cooperation Independent learning Field of movers and packers Logistics and swift movement of heavy vehicles 	<ul style="list-style-type: none"> Railway control Visual – Application of equations in real life Story – Application of linear equation Physical – Solving equations Craft – Chit activity Language – Writing explanation
3	Understanding Quadrilaterals <ul style="list-style-type: none"> Introduction Polygons Diagonals Convex and concave polygons Interior and exterior of a polygon Regular and irregular polygons Angle sum property Sum of measures of exterior angles of a polygon Quadrilaterals Elements of a quadrilateral Kinds of quadrilaterals Parallelogram Some special parallelograms 	<ul style="list-style-type: none"> Activity: Chit activity Board Work and Discussion: Introduction of various concepts Group Study: Types of polygons, properties of different quadrilaterals Discussions: Types of curves, Pool party, Triangular pools and various construction of quadrilaterals Writing Explanation: Angle sum property, Sum of exterior angles of a polygon Project: Construction of different types of quadrilaterals Self-learn: Let's Try 1 to 6, My Turn 1 to 6 Quiz: Recapitulation 	<ul style="list-style-type: none"> Recall Classify Explain Create Use Differentiate Choose Construct Compare 	<ul style="list-style-type: none"> Cooperation Independent learning Creativity and innovation of artists Independent learning – Connection of artwork with history 	<ul style="list-style-type: none"> Art – Construction of Quadrilaterals Craft – Chit activity Visual – Different types of quadrilaterals and polygons Language – Writing explanation
4	Practical Geometry <ul style="list-style-type: none"> Constructing a quadrilateral When length of four sides and a diagonal are given When two diagonals and three sides are given When two adjacent sides and three angles are given When three sides and two included angles are given Some special cases 	<ul style="list-style-type: none"> Activity: Chit activity Board Work and Discussion: Different parameters required for construction of quadrilaterals Group Study: Necessary and sufficient conditions for construction of quadrilaterals Discussions on: Properties of quadrilaterals Project: Construction of different types of quadrilaterals Self-learn: Let's try 1 to 5, My Turn 1 to 5 Recapitulation: properties of quadrilaterals 	<ul style="list-style-type: none"> Recall Classify Create Use Choose Construct 	<ul style="list-style-type: none"> Cooperation Independent learning Skyscrapers and Disaster management team Floods and its effects 	<ul style="list-style-type: none"> Art – Construction of Quadrilaterals Craft – Chit activity Visual – Different types of quadrilaterals
5	Data Handling <ul style="list-style-type: none"> Looking for information Organizing data Grouping data Bars with a difference Properties to check for parallel lines Circle/pie chart Drawing pie chart Chance and probability Getting a result Equally likely outcomes Outcomes as events Chance and probability related to real life 	<ul style="list-style-type: none"> Activity: Tossing a coin, rolling a dice and playing cards Group Work: Role play Rapid Fire: Recapitulation of use of data, bar graph and frequency table Writing Explanations: For several concepts Board Work with Discussion: <ul style="list-style-type: none"> Difference between bar graph and histogram Finding Probability Group Activity: Let's Try 1 to 7 Discussion: Bars with a difference, kink, class intervals, pie charts and histograms Project: Drawing pie charts, histograms Peer Work: Application of probability in real life 	<ul style="list-style-type: none"> Recall Create Explain Solve Use Distinguish Construct 	<ul style="list-style-type: none"> Cooperation Independent learning 	<ul style="list-style-type: none"> Art – Drawing Histograms and pie charts Craft – Using playing cards Visual – Tossing a coin, rolling a dice Language – Writing explanation
6	Squares and Square Roots <ul style="list-style-type: none"> Introduction Properties of square numbers Some more interesting Patterns Pythagorean triplet Finding square of a number Square roots Finding square roots Finding square roots by division method Square root of rational numbers Square root of decimals Estimating square roots 	<ul style="list-style-type: none"> Discussion: Pythagoras theorem, square numbers, square roots Board Work with Discussion: Multiple concepts Art and Craft: Creating geometrical patterns Writing Explanations: for several concepts Pair Work: Several concepts Group Work: Multiple topics Discussion: Several topics Quiz: Recapitulation 	<ul style="list-style-type: none"> Describe Discuss Recall Demonstrate Identify Apply Differentiate Solve Divide Find Estimate 	<ul style="list-style-type: none"> Cooperation Independent learning Carpenter's skills and calculations 	<ul style="list-style-type: none"> Science – Ergonomics Craft – creating geometrical patterns Language – Writing explanation
7	Cubes and Cube Roots <ul style="list-style-type: none"> Introduction Cubes Properties of cubes Cubes of bigger numbers Patterns in cubes Cubes of a rational number Smallest multiple that is a cube Cube roots Finding cube root Cube root of a cube number by estimation Cube of a rational number 	<ul style="list-style-type: none"> Discussion: Cubes and cube roots Classroom Activity: Properties of cubes, cubes and their prime factors Board Work with Discussion: Multiple concepts Writing Explanations: for several concepts Pair Work: Several concepts Group Work: Multiple topics Project: Finding cube root by Vedic maths method Discussion: Several topics Rapid Fire: Recapitulation 	<ul style="list-style-type: none"> Describe Discuss Recall Demonstrate Identify Apply Differentiate Solve Estimate 	<ul style="list-style-type: none"> Cryptographers Cooperation Independent learning Achievements of women outside the home 	<ul style="list-style-type: none"> Language – Writing explanation
8	Comparing Quantities <ul style="list-style-type: none"> Recalling ratios and percentages Finding increase and decrease in percentage Profit and loss Overhead expenses Finding cost price or selling price and profit % or loss % Finding discounts Estimation in percentages Tax Sales tax Goods and Services Tax (GST) Compound interest without formula Deducing a formula for compound interest Rate compounded annually or half yearly (semi-annually) or quarterly 	<ul style="list-style-type: none"> Discussion: Various concepts Classroom Activity: Role play (shopkeeper and customer) Board Work with Discussion: Multiple concepts Writing Explanations: For several concepts Pair Work: Several concepts Group Work: Multiple topics Project: Derivation of compound interest formula from simple interest formula Discussion: Several topics Rapid Fire: Recapitulation 	<ul style="list-style-type: none"> Discuss Memorise Recall Recognise Identify Match Observe Identify Apply Differentiate Solve Find 	<ul style="list-style-type: none"> Cooperation Independent learning Importance of nutrients in food and balance diet 	<ul style="list-style-type: none"> Science – Plant life cycle Language – Writing explanation