CONTINUOUS LEARNING PROCESS (CLP)

CLASS VIII

MATHEMATICS

S.No	Month	Chapter	Learning Outcomes
1	April	Chapter no. 1: Rational Numbers	The learner: • Defines rational numbers. • Generalizes properties of addition, subtraction, multiplication and division of rational numbers through patterns. • Finds out desired amount of rational numbers between two given rational numbers. • Represents rational numbers on a number line. Skills: Aesthetic skills and thinking capacity
		Chapter no. 2: Linear equations in one variable	The learner: • Identifies a linear equation in one variable. • Finds solution of a linear equation in one variable. • Verifies the solution of a linear equation. • Applies concept of linear equation to deal with real life problems. Skills: Logical thinking, problem solving.
2	May	Chapter no. 6: Squares and square roots	The learner: • Identifies a square number • Generalizes the properties of square numbers. • Proves divisibility rules of 2, 3, 4, 5, 6, 9 and 11. • Applies patterns in square numbers to solve puzzles. • Finds squares and square roots of numbers using different methods. Skills: Intellectual reasoning and creativity.
		Chapter no. 10: Visualizing solid shapes	The learner: • Recognizes 2D and 3D shapes. • Recognizes different shapes in nested objects. • Represents 3D shapes on a plane surface such as sheet of paper. • Verifies Euler's relation through pattern. Skills: Observation, power of imagination.

3	July	Chapter no. 7: Cubes and cube roots Chapter no. 3: Understanding quadrilaterals	The learner: • Expresses cube number and explores the one's digit of cubes of numbers ending in 2, 3, 4 etc. • Generalizes interesting patterns of cube numbers. • Finds cubes and cube root of numbers through prime factorization method. Skills: Organization and observation skills. The learner: • Represents convex and concave polygons. • Classifies polygon on the basis of its sides. • Solves problems related to angles of a quadrilateral using angle-sum property. • Verifies properties of parallelogram and establishes relationship between them through reasoning. Skills: Reasoning ability and creativity.
4	August	Chapter no. 12: Exponents and powers Chapter no. 5: Data handling	The learner: • Writes large and very small umbers using exponents. • Solves problems with integral exponents. • Generalizes laws of exponents through simplifications. • Finds the sum of very large numbers using standard form. Skills: Concentration and problem solving. The learner: • Organizes the data systematically for a given piece of information. • Presents a raw data through 'grouped frequency distribution'. • Draws bar graphs, double- bar graphs and pie charts. • Interprets a data using bar graphs and circle graphs. Skills: Organization and accuracy
5	September	Chapter no. 9: Algebraic expressions and identities	The learner: • Classifies a polynomial as monomial, binomial or trinomial. • Constructs as many polynomials as possible using variables. • Perform different operations such as addition, multiplication and subtraction of algebraic expressions. • Uses various algebraic identities in solving problems of daily life. Skills: Power of expression and problem solving.

6	October	Chapter no. 4: Practical Geometry	The learner: • Verifies the requirement of five measurements to determine a quadrilateral uniquely. • Constructs different quadrilaterals using compasses and straight edge. • Draws rough sketches of the quadrilateral to justify the construction. Skills: Power of imagination, logical thinking.
		Chapter no. 8: Comparing quantities	The learner: • Finds ratio to compare two quantities of the same type. • Calculates increase or decrease percent. • Applies the concept of percent in profit and loss situation. • Finds discount percent and value added tax applying the concept of percent. Skills: Social skills such as honesty, utilitarian values.
7	November	Chapter no. 11: Mensuration	The learner: • Estimates the area of shapes like trapezium and other polygons by using square grid/ graph sheet. • Verifies the area of trapezium and other polygons using formulae. • Finds the area of a polygon. • Finds surface area and volume of cuboidal and cylindrical objects. • Applies the concept of surface area and volume to solve real life problems. Skills: Practical values (constructions and architecture).
		Chapter no. 13: Direct and inverse proportions	The learner: • Writes few situations where change in one quantity leads to change in another quantity. • Cites examples from real- life situations based on the concept of direct and inverse proportions. • Solves problems based on direct and inverse proportions. Skills: Reasoning power and problem solving attitude.
8	December	Chapter no. 14: Factorization	The learner: • Expresses algebraic expressions as product of their factors. • Factorizes algebraic expressions by the method of common factors and regrouping terms. • Solves problems based on the division of one polynomial by another. • Verifies the idea of inverse operation of multiplication (i.e. division) for algebraic expressions. Skills: Hard work, simplicity and accuracy.
		Chapter no. 16: Playing with numbers	The learner: • Writes a given number in its general form. • Solves number games and puzzles through general form of numbers. • Checks the divisibility of a number by 2, 3, 4, 5, 9 and 10. Skills: Aesthetic skills, intellectual power.

9	January	Chapter no. 15: Introduction to graphs	The learner: • Extrapolates (a graph, curve, or range of values) by inferring unknown values from trends in the known data. • Locates points on a graph sheet. • Fixes a point in a Cartesian plane. • Finds the coordinates of a point in a Cartesian plane. • Draws a linear graph and verifies relation between dependent and independent variable. Skills: Accuracy, justification and concentration.