

CAMBRIAN PUBLIC SCHOOL, KANKE ROAD, RANCHI
SESSION (2024-25)

CLASS - X

Subject- Mathematics

LEARNING PLAN OUTCOMES

Sl. No.	Month	Chapter	Learning Outcomes
01.	April	Real Numbers Polynomials Pair of Linear Equations in Two Variables	<p>Students will grasp the foundational concepts of integers, rational and irrational numbers, and their properties. They will learn to perform operations such as addition, subtraction, multiplication, and division on these numbers and apply them to solve practical problems accurately.</p> <p>Students will comprehend the fundamentals of polynomials, including their types, degree, and operations such as addition, subtraction, multiplication, and division. They will learn to factorize polynomials, identify their roots, and apply these skills in real-world scenarios for problem-solving.</p> <p>Students will grasp the concept of pairs of linear equations in two variables, understand methods to solve them (such as substitution, elimination, and graphical methods), and apply these techniques to solve real-life problems involving simultaneous equations accurately and efficiently.</p>
02.	May	Quadratic Equations	<p>Students will understand quadratic equations and their properties, including discriminant, roots, and vertex. They will learn methods to solve quadratic equations such as factorization, completing the square,</p>

			and using the quadratic formula. Additionally, they will apply these methods to solve problems in various contexts accurately.
03.	June	Arithmetic Progressions	Students will comprehend arithmetic progressions, identifying common differences and nth terms. They will learn to calculate the sum of terms in arithmetic series using formulas, interpret real-life situations modeled by arithmetic progressions, and solve related problems with precision and accuracy.
		Triangles	Students will grasp the fundamental concepts of triangles, including their properties, congruence criteria, and similarity criteria.
04.	July	Triangles (Continued)	They will learn to apply trigonometric ratios, Pythagoras theorem, and the laws of sines and cosines to solve problems involving triangles accurately and efficiently in various contexts.
		Co-ordinate Geometry	Students will comprehend the principles of coordinate geometry, including Cartesian coordinates, distance formula, and section formula. They will learn to represent geometric shapes and solve problems involving lines, circles, and conic sections using coordinate techniques accurately and efficiently in various contexts.
05.	August	Introduction to Trigonometry	Students will grasp the foundational concepts of trigonometry, including trigonometric ratios, identities, and functions. They will learn to apply trigonometric concepts to solve problems involving angles and sides of triangles, as well as real-world scenarios requiring trigonometric calculations, with precision and accuracy.

		Some Applications to Trigonometry	Students will understand the practical applications of trigonometry in real-life scenarios, such as heights and distances, navigation, and periodic phenomena. They will learn to apply trigonometric ratios, identities, and functions to solve problems related to these applications accurately and effectively, gaining practical problem-solving skills.
06.	September	Circles	Students will comprehend the properties of circles, including tangents, chords, and angles subtended by arcs. They will learn to solve problems involving circle theorems, such as theorems related to angles in the same segment, cyclic quadrilaterals, and tangents to circles, accurately and efficiently, applying geometric principles.
07.	October	Areas Related to Circles Surface Areas and Volumes	Students will understand the concepts related to areas of circles and their sectors, as well as the lengths of arcs. They will learn to calculate the areas of circles, sectors, and lengths of arcs using formulas, and apply these concepts to solve real-world problems accurately and efficiently. Students will grasp the principles of surface areas and volumes of various geometric solids, including cubes, cuboids, cylinders, cones, and spheres. They will learn to calculate surface areas and volumes using appropriate formulas and apply these concepts to solve practical problems accurately and efficiently.
08.	November	Statistics	Students will comprehend statistical concepts such as measures of central tendency (mean, median, mode) and dispersion (range, variance, standard deviation). They will learn to analyze

		<p>Probability</p>	<p>and interpret data using graphical representations, calculate these statistical measures, and apply them to real-life situations accurately for informed decision-making.</p> <p>Students will understand the fundamentals of probability, including theoretical and experimental probability, probability distributions, and rules such as addition and multiplication laws. They will learn to calculate probabilities of events, analyze outcomes, and apply probability concepts to solve problems accurately, aiding in decision-making processes.</p>
09.	December/January /February/March	<p>Revision Annual Exam</p>	<p>During revision for the annual exam, students will consolidate their understanding of all topics covered throughout the academic year. They will review key concepts, solve practice questions, and clarify doubts to reinforce their knowledge and skills.</p>