

S.No	Content	Objectives	Skills	Learning Styles	Activity	Subject Integration	Outcome	Assessment
1	CHAPTER-6 : LINES AND ANGLES	<p>* To understand line segments and how they are measured</p> <p>*To draw shapes accurately using the given measurement.</p> <p>* To recognise shapes based on their number of sides and angles.</p> <p>*To identify the types of angles on the basis of measurement and relationship with other angles.</p> <p>* To know the relationship between angles formed by a transversal if the lines are parallel.</p>	<p>IDENTIFICATION SKILL Identify angles after observing figures.</p> <p>DRAWING SKILLS: By drawing figures.</p> <p>CALCULATION SKILLS: By finding angles using different properties of angles.</p> <p>REASONING SKILLS: Able to differentiate between pair of angles.</p> <p>APPLICATION SKILLS: Able to apply of different type of angles in solution of sums based on it.</p>	<p>Verbal/ linguistic</p> <p>(word smart)</p> <p>Bodyily/ kinesthetic (body smart)</p> <p>Interpersonal (people smart)</p> <p>Logical/ Mathematical (logical smart)</p> <p>Visual</p> <p>Intrapersonal</p>	<p>By explaining the pair of angles, and exterior angle property.</p> <p>By explaining the pair of angles, angles with the help of crossing fingers.</p> <p>Recaptulation of basic of lines and angles by discussion method.</p> <p>By using properties of pair of angles and angles made by transversal in solving sums.</p> <p>By observing the figures to identify different pair of angles and angles made by transversal.</p> <p>For solving the sums by using different properties of lines and angles.</p>	<p>SCIENCE: Ray diagrams</p> <p>DRAWING: Drawing of figures and shapes. (Rangoli, Mandala)</p>	<p>Students will be able to identify and differentiate between various kind of angles.</p> <p>Students will be able to use the concept of lines and angles for further topics of geometry, Quadrilaterala, area of parallelgram and Triangles.</p>	<p>*Class Tests</p> <p>* PreMid Term</p> <p>*Mid Term</p> <p>*Finals.</p>
2	CHAPTER: CONGRUENT TRIANGLES	<p>* To identify various parts of a triangle.</p> <p>* To identify the types if triangles.</p> <p>*To understand the use of angle sun property of a triangle , exterior angle property of a triangle.</p> <p>*To understand the criteria of congruency of triangles- SSS , SAS , AAS , ASA and RHS.</p> <p>* To understand the triangle inequalities and relation between ' angle and facing side'.</p>	<p>DRAWING SKILLS: Able to draw different types of triangles</p> <p>OBSERVATION SKILLS: By observing the figure able to identify the criteria of congruency.</p> <p>ANALYTICAL SKILL: Able to analyse the given problem and identify the property which isto be used.</p> <p>CALCULATION SKILL: Able to find the measure of angles of trianble by using different properties.</p>	<p>Verbal/ linguistic</p> <p>(word smart)</p> <p>Interpersonal (people smart)</p> <p>Logical/ Mathematical (logical smart)</p> <p>Visual smart</p> <p>Intrapersonal</p>	<p>By explaining the defination ,types and properties.</p> <p>By explaining the proves of theorem used in triangles.</p> <p>By discussing criteria of congruency.</p> <p>By proving theorems of triangles and for finding measure of angles through calculations.</p> <p>By observing and drawing figurs of triangles.</p> <p>By solving sums related to topic.</p>	<p>DRAWING:In drawing geometrical shapes and figures.</p> <p>COMPUTER: In flow charts.</p> <p>SUPW: For making . congruent moulds</p> <p>SCIENCE: Use of pythagoras theorem in finding length of shadows.</p> <p>ENGLISH: Statement of questions.</p>	<p>Students will be able to identify types of triangles and their properties.</p> <p>Students will be able to use criteria of congruency to prove various theorems.</p>	<p>*Class Tests</p> <p>*Mid Term</p> <p>*Finals.</p>
3	CHAPTER: HERON'S	<p>*To find the area of a triangle scalene , isosceles , equilateral</p>	<p>CALCULATION SKILL: To calculate the area</p>	<p>Verbal/ linguistic</p>	<p>By explaining the defination and units of area and</p>	<p>ENGLISH: Word problems.</p>	<p>The students will be</p>	<p>*Class Tests</p> <p>* PreMid Term</p>

	FORMULA	<p>using Heron's formula</p> <p>*To find the area of Quadrilaterals with the help of Heron's Formula.</p>	<p>of triangles and quadrilaterals by using Heron's formula.</p> <p>OBSERVATION SKILL: By observing the figure for finding the area.</p> <p>MEASURING SKILL: By measuring the dimensions of figures for finding its area.</p>	<p>(word smart)</p> <p>Interpersonal (people smart) Logical/Mathematical (logical smart)</p> <p>Visual smart Intrapersonal</p>	<p>perimeter of 2-D figures.</p> <p>By discussing area of 2-D for recapitulation of topic. By providing steps to find out the area of equilateral and isosceles triangle with the help of Heron's formula of scalene triangle.</p> <p>By observing the figure, able to analyse which formula is to be used. By solving the sums related topic.</p>	<p>S.Sc: To find the area of cultivated land.</p> <p>DRAWING: By drawing geometrical shapes and figures.</p>	<p>understand the difference between area and perimeter.</p> <p>Students will be able to solve problems in real life situations.</p> <p>the students will get good spatial understanding of shapes and figures.</p>	<p>*Mid Term</p> <p>*Finals.</p>
4	Chapter: Polynomials	<p>To differentiate the polynomials with algebraic expressions.</p> <p>To know the definitions of degree, coefficient, terms and types.</p> <p>To find the zeroes of polynomials. To use Factor and Remainder theorem for factorisation of polynomial.</p> <p>To use Algebraic identities to make calculation easy.</p>	<p>CALCULATION SKILLS: To calculate the zeroes of polynomials.</p> <p>ANALYTICAL SKILL: To analyse the nature and coefficient of terms of polynomials.</p>	<p>VERBAL</p> <p>Interpersonal</p> <p>Logical</p> <p>Visual</p> <p>Intrapersonal</p>	<p>By explaining the definition of polynomials, its degree, types, terms and coefficients.</p> <p>By discussing Factor and remainder theorem.</p> <p>By explaining the use of factor and remainder theorems for finding remainder without doing LONG DIVISION. Proves of algebraic identities in origami sheets. By solving sums related to factorisation, zeroes of polynomials.</p>	<p>SCIENCE: For solving numerals.</p>	<p>Able to find zeros, factors, remainder of polynomials by factor and remainder theorem.</p> <p>Able to factorise the polynomials by using factor and remainder theorem.</p>	<p>Class tests</p> <p>Pre Mid Term</p> <p>Post Mid Term</p> <p>Finals.</p>
5	CHAPTER:NUMBER SYSTEM	<p>To represent rational and irrational numbers on number lines.</p> <p>To rationalise the given irrational numbers.</p>	<p>OBSERVATIONAL SKILLS: TO observe the given rational numbers as terminating or non-terminating decimal expansion.</p> <p>ANALYTICAL SKILL: To analyse the nature of given rational or irrational numbers.</p>	<p>Verbal</p> <p>Interpersonal</p>	<p>By explaining the concept of types of real numbers</p> <p>By discussing definitions of different types of numbers.</p>	<p>ENGLISH: Statement of question.</p> <p>SCIENCE: For solving the numerals.</p>	<p>Able to represent rational or irrational numbers on number line.</p> <p>Able to convert terminating or non-terminating decimals in the form of p/q.</p>	<p>Class tests</p> <p>Pre Mid Term</p> <p>Post Mid Term</p> <p>Finals.</p>

		To recall the laws of exponents with integral powers.	CALCULATION SKILL: To calculate the number of rational or irrational numbers lies between two rational or irrational numbers.	Logical Visual Intrapersonal	By explaining the method for location of rational and irrational numbers on number line. By drawing spiral of irrational numbers. By solving problems related to laws of exponents and rationalisation of irrational numbers.		Able to make spiral root by paper folding or by compass.	
6	CHAPTER:Co-Ordinate Geometry	To locate point and co-ordinate on number line and cartesian plane To present graph of linear equation	Drawing Skill: By constructing cartesian plane on graph paper Observation Skills: By observing cartesian plane for location of points. Analytical Skills: By analysing the graph of linear equation to locate the points on cartesian plane	Verbal Kinesthetic Bodily Interpersonal Logical Visual Intrapersonal	By explaining the concept of Cartesian Plane, co-ordinate axis, origin, quadrants etc. By explaining the concept of horizontal and vertical axis through pointing of thumb and fingers By discussion on cartesian plane By explaining the location of points on cartesian plane or by plotting graph of linear equation By drawing cartesian plane on graph paper By solving the problem related to given topic	SSC- Able to locate the position of cities, countries on the map + Able to create the map of their own locality in cartesian plane.	The students will be able to make cartesian plane, identify co-ordinate axes, co-ordinates and quadrant Able to draw the graph of linear equation in cartesian plane	Class Test, Mid-term, Post Mid-Term, Finals
7	CHAPTER:Introduction to Euclid's Geometry	To enable the students to know the history of geometry To know the basic terms of geometry like, point, line, surface edges, angles	Imaginary Skill - By imaging the time of ancient period when the geometry was introduced Observation Skill - By observing different geometrical concepts	Verbal/Linguistic (Word Smart) Interpersonal (People Smart)	By explaining the Euclid's axioms and postulates Recaptulation of basic terms of geometry by discussion	Physics - Ray Diagrams Drawing - Shapes and Figures	Students will be able to know how geometry was originated Able to know the difference between axioms, postulates and theorems	Class Test, Mid-term, Post Mid-Term, Finals

		To know the difference in between axioms, postulate and theorems To know Euclis's five postulates and Flaws in Euclid's postulates	<u>Analytical Skill -</u> Able to analyse the use of axiom, postulates and theorems in different geometrical concepts	LogicalMathematical (Logic Smart)	By explaining the different between axioms, postulates and theorems			
8	CHAPTER:Statistics	To group data into grouped frequency table To represent grouped data pictorially with the help of a histogram To represent grouped data with the help of frequency polygon To qualitative analysis of data to choose the correct form of presentation of the collected data To calculate the mean, median and mode of ungrouped data To group data into grouped frequency table	<u>Drawing Skill -</u> By drawing different type of histogram bar graphs, double bar graphs and frequency polygons on graph paper <u>Observation Skills:</u> By Observing bar graph, histograms and frequency polygon, able to answer the required questions <u>Analytic Skill:</u> Able to analyse the ups and downs shown in the bar - Graph and Frequency Polygon <u>Application Skill:</u> Able to apply it on real life situation <u>Calculative Skill:</u> Able to calculative the mean, median and mode of the given data <u>Drawing Skill -</u> By drawing different type of histogram bar graphs, double bar graphs and frequency polygons on graph paper	Verbal Kinesthetic /Bodily Interpersonal Logical Visual Verbal	By explaining the concept and requirement of grouped data By measuring height and weight of students present in the class activity to represent data through frequency polygon By discussing graphs of different situation By giving formula for finding mean, median and mode of a data By drawing and observing the histogram and frequency polygons By explaining the concept and requirement of grouped data	Social Science - 1. Increase in population by histogram, frequency polygons etc. 2. Economies growth of a country Etc. Science : Representation of lifecycle of human life by histogram Physical Education: 1. Histogram of height, weight, scores of a particular sports Social Science - 1. Increase in population by histogram, frequency polygons etc. 2. Economies growth of a country Etc.	Students will learn to draw and read the information given in the form of bar graph, histogram, which will help them to understand statistical information available in the newspaper etc. Students will learn to draw and read the information given in the form of bar graph, histogram, which will help them to understand statistical information available in the newspaper etc.	Class Test, Mid-term, Post Mid-Term, Finals, Practical Exam
9	CHAPTER:Linear Equation in two variables	<u>General Objective</u> To enhance calculative, reasoning, logical, analytic and critical thinking	<u>Analytic Skill:</u> Analyse the type of linear equation and find its solution	Verbal /Linguistic (Smart)	By explaining the concept of linear equation	English - Word Problems	Students will be able to convert word problems into linear equations and then solve them.	Class Test, Mid-term, Post Mid-Term, Finals, Practical Exam

		<p><u>Specific Objectives</u> To learn and practice the methods of solving linear equation in one and two variables</p> <p>To verify the solution of an equation</p> <p>To convert real life situation into linear equations To show the solution of linear equation in graph</p>	<p><u>Calculative Skill:</u> By solving the problem to get solution of equations</p> <p><u>Drawing and Creative Skill:</u> By drawing the line of an equation in graph paper</p> <p><u>Expression:</u> By converting day to day life situation into linear equation</p>	<p>Kinestic/Bodily</p> <p>Interpersonal</p> <p>Logical/Mathematical</p> <p>Visual Spatial Intrapersonal</p>	<p>By performing graph activity in the class</p> <p>By discussing wordproblems from day to day life situation which has to be converted into linear equation</p> <p>By finding solutions to linear equations By drawing the graph of linear equations By solving the problem</p>	<p>Physics - Formulae of motion $S=ut+1/2at$</p> <p>Chemistry - Balancing of a chemical equation</p>	<p>They will understand that solution of a linear equation can be an integer or a rational number or a decimal number</p> <p>Students will be able to draw the graph of linear equation for finding its solution.</p>	
10	CHAPTER:Quadrilateral	<p><u>General Objectives:</u> To give knowledge about the broad objective of teaching mathematics such as knowledge, understanding application etc.</p> <p>To prepare the child for purposeful, productive, creative and construction living.</p> <p><u>Specific Objectives:</u> To identify the polygons and their properties To understand the properties of various types of quadrilaterals like parallelogram, rectangle, square, Rhombus etc.</p> <p>To understand the different theorems and motives related to types of quadrilateral</p>	<p><u>Drawing Skills:</u> By drawing different types of quadrilateral</p> <p><u>Observation Skills:</u> By observing different quadrilateral to solve the problems- relating to sides and angles</p> <p><u>Reasoning Skills:</u> By identifying the properties of different type of quadrilaterals which is to be used for solving problems</p>	<p>Verbal/Linguistic</p> <p>Kinestic/Bodily</p> <p>Interpersonal</p> <p>Logical/Mathematical</p> <p>Visual Interpersonal</p>	<p>By explaining the properties of quadrilateral(Square, Rhombus etc.)</p> <p>By explaining the activity related to midpoint of a quadrilateral</p> <p>By performing activity of Parallelogram by cut and paste method</p> <p>By discussing problems</p> <p>By giving reasons for using properties of quadrilateral in diagrammatical problems By drawing and observing figures of quadrilaterals By solving problems</p>	<p>Drawing: In drawing different types of quadrilateral</p> <p>Science: Daigrams</p> <p>Computer: Flowcharts</p> <p>SST: Daigrams</p>	<p>They will be able to explore different types of quadrilateral to find similarities and differences among them.</p>	<p>Class Test, Mid-term, Post Mid-Term, Finals, Practical Exam</p>

				Naturalistic	By using the application quadrilateral and its application in division of land			
11	Area of parallelogram and triangles	<p>To Recall the concept of area and perimeter of different 2-D figures like triangle, quadrilateral etc.</p> <p>To prove the theorem that parallelograms on the same base and between the same parallels have the same area</p> <p>To recall the theorem that the triangle on same base and between the same parallels are equal in area.</p>	<p><u>Drawing Skill</u> To construct different figures of triangles and parallelogram required for problem</p> <p><u>Observation Skill</u> By observing the given figure and information regarding the problem, able to solve it.</p> <p><u>Reasoning Skill:</u> Reason will be given while proving the theorem</p>	<p>Verbal</p> <p>Kinesthetic/Bodily</p> <p>Interpersonal</p> <p>Logical</p> <p>Visual</p> <p>Intrapersonal</p>	<p>By explaining the concept of area of parallelogram and triangles</p> <p>By constructing triangles and parallelogram</p> <p>By performing activity based on area of parallelogram (by paper folding and cutting)</p> <p>By discussing the properties of triangles and parallelogram</p> <p>Justification will be given for the proof of the theorem</p> <p>By constructing and observing the figures of triangles and parallelogram used in problem</p> <p>By solving problem related to topic</p>	<p>SST/Geography</p> <p>By dividing the land equally among farmers by using the concept of area of different figures</p> <p>English - Word problems</p>	Students will be able to use the concept while dividing a land (In real life Situation)	Class Test, Mid-term, Post Mid-Term, Finals, Practical Exam
12	CHAPTER:Construction	<p>To construct the bisectors of line segment and angles of 60degrees, 90 degrees, 45 degrees etc., equilateral triangle.</p> <p>To construct a triangle with given base, sum/difference of the other two sides and base angle</p>	<p><u>Drawing Skill</u> - To construct different angles, perpendicular bisector and triangle</p> <p><u>Observation Skill</u> - Able to observe the given condition (From rough Sketch) for the construction of triangle with protactor, compass and ruler.</p>	<p>Verbal</p> <p>Kinesthetic/Bodily</p>	<p>By explaining the concept of construction of triangles and its types</p> <p>By constructing types of triangle by using ruler, compass and protactor</p>	<p>Physics - Construction of ray daigrams</p> <p>Drawing - Drawing different geometrical figures with accuracy</p>	Students will practice the use of geometrical instrument like scale, compass, protactor etc. They will value and appreciate the accuracy and neatness required in construction	Class Test, Mid-term, Post Mid-Term, Finals, Practical Exam

		<p>To construct a triangle of given perimeter and base angles.</p> <p>To identify whether it is possible to construct a triangle with three given measurement</p>	<p><u>Analytical skills</u> - By recollecting the properties of triangle, students will corelate its properties in the construction of triangle.</p> <p><u>Measuring Skill</u> - To measure line segment and angles with reler and protactor</p>	<p>Interpersonal</p> <p>Logical</p> <p>Visual</p> <p>Intrapersonal</p>	<p>By discussing the properties and types of triangles</p> <p>Justification will be given for construction of triangle by using different properties of triangle</p> <p>By constructing and observing (rough sketch) of triangles</p> <p>By constructing problems themselves</p>			
13	<p>CHAPTER:Geometry (Circles)</p>	<p>To recall the concept of circle definition of circle, radius, daimeter, chord, circumference arc and subtended angles</p> <p>To prove the theorem that the equal chords of a circle subtend equal angles at the centre and the angle subtended by an arc at the centre is double the angle subtended by it at any point on the remanining part of the circle</p> <p>To motivate the students `for the use `of properties of circle and theorems while proving of problems</p>	<p><u>Drawing Skills</u> - By drawing different circles related to problem</p> <p><u>Observation Skills</u> - By observing the figures able to use the properties of circle to solve the problems</p> <p><u>Analytic Skills</u> - By recollecting the properties of circles, able to corelate the with the solution of problems related to circle.</p>	<p>Verbal</p> <p>Kinestic/Bodily</p> <p>Interpersonal</p> <p>Logical</p> <p>Visual</p> <p>Intrapersonal</p>	<p>By explaining the concept terms, definitions related to circles</p> <p>By constructing circles using compass and performing an activity by paper cutting of circles.</p> <p>By discussing and recaptulation the properties of circles and its users</p> <p>Justification will be given for the proof of the theorem</p> <p>By observing and construction of circle for solution of problems</p> <p>By solving problems related to topic</p>	<p>English - Word Problems</p> <p>Drawing - Drawing of different geometrical figures consisting of circles</p> <p>Science - Structure of atom and universe</p> <p>Social Science - Structure of earth, planets etc.(in 2-D)</p>	<p>Students will be able to use the properties, motives and theorems while solving the problems</p>	<p>Class Test, Mid-term, Post Mid-Term, Finals, Practical Exam</p>
14	<p>CHAPTER:Surface Area and volumes (Mensuration)</p>	<p>To identify curved surface and total surface area of solids</p>	<p><u>Drawing Skills</u> - By making solid figures</p>	<p>Word Smart - Through explanation of topic</p>	<p>Surface area of cyclinder by paper folding method</p>	<p>English - Word problems</p>	<p>Studts will learn the difference between surface area and volume of a solid</p>	<p>Class Test, Mid-term, Post Mid-Term, Finals, Practical Exam</p>

		<p>To calculate the surface area and volume of solids like cuboid, cube, cylinder, cone, sphere and hemisphere</p> <p>To understand the difference of 2-D figures and 3-D figures</p> <p>To derive the formula for 3-D figures of surface area and volume</p>	<p><u>Calculation Skills</u> - By solving problems by using formula</p> <p><u>Ordering Skills</u> - Naming and ordering of sides and angles</p> <p><u>Expression</u> - By converting word problems into mathematical equation</p>	<p><u>Body Smart</u> - By participating in activities</p> <p><u>Intrapersonal</u> - Group discussion on the difference of curved area and total surface area of a solid</p> <p><u>Logical</u> - Solve the problems by using formula</p> <p><u>Visual</u> - By drawing diagram/figures</p> <p><u>Interpersonal</u> - By doing calculation</p> <p><u>Nature Smart</u> - By correlating the topic with object present in nature</p>	<p>By cutting and folding to obtain the surface area of a right triangular prism</p> <p>Conversion of 2-D figures into 3-D by revolving method</p>	<p>Social Studies - Sphere universe (shapes of planet, sun Etc + Area of land)</p> <p>Science - Surface covered by ball, cylinder in plane surface</p>	<p>Students will be able to calculate the volumes and surface area of a solid by given dimension</p>	
15	CHAPTER:Probability	<p>To enable the students -</p> <p>Definition of probability</p>	<p><u>Conceptual Skill</u> - Is used in the understanding of happening and non-happening of an event</p> <p><u>Logical Skills</u> - Use logics to solve the problems</p>	<p><u>Verbal Smart</u> - By explanation of the concept of probability</p> <p><u>Kinesthetic Smart</u> - By performing activities of dice and coin</p>	<p>Prediction of favourable outcomes of a number by throwing a dice</p> <p>Use of coin in tossing process, to give the idea of favourable and total number of outcomes</p>	<p>SST - Weather forecast</p> <p>English - Statement of problems</p>	<p>Students will appreciate that possibility of happening of any event can be calculated as a value between 0 and 1</p> <p>How to determine the probability of an event</p>	<p>Class Test, Mid-term, Post Mid-Term, Finals, Practical Exam</p>

Favourable outcomes and total outcomes

Elementary events - Impossible Event & Possible Event

Empirical formula of probability

Calculative Skill - To solve the numericals

People Smart -

Group discussion on happening and non-happening of an event

Logic Smart - In solving problems

Picture Smart -

Explanation of black board

Nature Smart -

Discussion on the prediction of the weather report

Science - Outcome of an experiment

Computer - Conditional Statement



