

ST.ALBANS SCHOOL CLASS:V MATHEMATICES CURRICULAM (2018-19) TERM-I

S.N	Content	Objectives (Class V)	Skills	Learning Styles	Activity	Subject Integration	Outcome	Assessment
1	Large numbers	<p>To evaluate the students to:</p> <p>a) look at big numbers and express their numerical form.</p> <p>b) apply their understandings in real life situations.</p> <p>c) compare two or more 8-digit numbers and arrange them in ascending and descending orders.</p> <p>d) change numbers from standard form to number names & vice-versa.</p> <p>e) round off the numbers to nearest tens, hundreds & thousands.</p> <p>f) writing the numbers in Roman numerals & vice-versa.</p>	<p>Calculative skills-able to count beads and draw then in spikes according to the numbers given in Indian or International place value system.</p> <p>Observation skill- able to place digits according to their place value & then expanding it accordingly.</p> <p>Representing skill- able to present the numbers in two forms Indians & International and also in roman numerals.</p> <p>Ordering details- able to arrange the numbers in ascending & descending order.</p>	<p>Verbal:</p> <p>Kinesthetic/ Bodily:</p> <p>Interpersonal-</p> <p>Logical-</p> <p>Intrapersonal-</p> <p>Visual-</p>	<p>By explaining the place value systems, their ordering, expanded form number names etc.</p> <p>Place value cards. Through abacus showing big numbers using beads.</p> <p>Act: area of different states and questions related to large numbers. Discussing the numbers & their place value done in previous classes.</p> <p>Writing the numbers under the place values, arranging them in ascending & descending order etc. By doing the sums themselves in the notebook their numbers names, expanded form etc.</p> <p>population of different states and then arranging the population of it in ascending or descending order.</p>	<p>S.Sc- population of different countries.</p> <p>G.Sc- 1) Distance covered by a space craft from earth to moon.</p> <p>2) Number of platlets in the blood of a human body.</p>	<p>Students will acquire the knowledge of-</p> <p>a) big numbers in numerical form i.e. Indian & International form. b) applying them in real life situations. c) comparing two or more 8-9 digit numbers & arrange them in ascending & descending order. d) changing numbers from standard form to number names & vice-versa. e) rounding off the numbers to nearest 10's , 100's , 1000's. f) writing the numbers in Roman numerals.</p> <p>Mental maths quiz been taken. 10 questions were given students have to answer to their chapter based knowledge.</p>	<p>MCQ's- Fill in the blanks form etc.</p> <p>Pen paper test -based on number system</p> <p>Activity- based on Indian or international system in map reading.</p>
2	Addition & Subtraction	<p>To evaluate the students to:</p>	<p>Calculative skills- able to arrange the numbers columnwise & then add or subtract them.</p>	<p>Verbal-</p>	<p>By expressing the way of arranging big numbers columnwise and then adding or subtracting it.</p>	<p>S.Sc- Trade fair organised in a city & number of people came on each day & then total number of people came during the trade fair was held.</p>	<p>Students will acquire the knowledge of-</p> <p>a) the use of appropriate operation, at the appropriate place. b) analysing problems by identifying relationships. c) communicating their understanding while applying the concepts in their day to day life.</p>	<p>MCQ's based on addition & subtraction.</p>

		<p>a) analyse problems to understand which operation should be applied.</p> <p>b) acquire the knowledge of terms related to addition & subtraction.</p> <p>c) understand the relationship between addition & subtraction.</p> <p>perform the operations.</p>	<p>Expressing skill-by reading a word problem and then making its statement according to the given operation.</p>	<p>Logical-</p> <p>Interpersonal-</p> <p>Intrapersonal-</p>	<p>By calculating the numbers according to the operation given i.e. addition or subtraction.</p> <p>Discussing the numbers according to their place values & then recalling the work done in previous class</p> <p>By doing the sums in the notebook and finding the sums or the difference.</p>	<p>Daily transactions done by the bank in terms of money.</p> <p>Gallons of water pumped up by a dam in various months.</p>	<p>iii. regrouping the numbers to perform the operations.</p>	<p>Fill in the blanks</p> <p>Written test of statement questions</p> <p>Pen paper test based on addition & subtraction.</p>
3	<p>Multiplication</p>	<p>* To understand multiplication as an easier way of adding the same number several times.</p> <p>* To multiply numbers by regrouping.</p> <p>* To find multiple of a given number.</p> <p>multiplication.</p>	<p>Ordering details:- By putting the digits according to their place while performing multiplication.</p> <p>Self study: by solving sums on their own.</p> <p>Expression:By solving statement questions.</p>	<p>verbal-linguistic:</p> <p>Logical-Mathematical:</p> <p>Intra personal:</p> <p>Intrapersonal:</p>	<p>By understanding terms related to topic.</p> <p>By solving sums of regrouping $4 \times 7 \times 25 = 700$.</p> <p>By forming big tables on their own.</p> <p>Activity based on their birth date.</p>	<p>Sports: Calculating number of runs in 10 overs.(Cricket)</p> <p>Science: Living things grow due to cell multiplication.</p>	<p>Students will understand the concept of multiplication & apply this skill to solve statement sums related to daily life also.</p> <p>They will find its relation to division & provide answers quickly.</p>	<p>Pen paper test</p> <p>Quiz: (Multiplication tables)</p> <p>Question based on previous knowledge of multiplication</p>
4	<p>Division</p>	<p>* To understand division as repeated subtraction of same number.</p> <p>* To understand division as opposite of multiplication.</p> <p>* To learn the method of solving statement sums.</p>	<p>Ordering details: By putting the digits according to their place while performing division.</p> <p>Self study: By solving sums on their own.</p> <p>Expression: By solving statement sums.</p>	<p>Verbal Linguistic :</p> <p>Logical mathematical:</p> <p>Intra personal:</p> <p>Interpersonal:</p>	<p>By understanding terms related to topic.</p> <p>By learning the method of solving statement sums.</p> <p>By answering quickly in division tables.</p> <p>quiz.</p>	<p>S.Sc: Division of land (plain, plateaus, mountain)</p> <p>Division of a country into states. States into districts.</p>	<p>Students will be able to understand the concept of division.</p> <p>They will be able to share equally.</p> <p>They will apply the knowledge of division to their daily life.(Distributing a class into number of groups.)</p>	<p>FA (mental ability)</p> <p>$104/12 = \underline{\hspace{2cm}}$</p> <p>Written assessment.</p>
5	<p>Factors and multiples:</p> <p>* Divisibility Tests</p> <p>*Prime and composite</p>	<p>To enable the students to-</p>	<p>Drawing skill:-(By drawing factor tree for finding factors of a number.)*By drawing tables for prime and composite numbers in the form of sieve of Eratosthenes.</p>	<p>Verbal/Linguistic (Word smart):</p>	<p>By explaining the rules of divisibility, definition of prime and composite numbers, meaning of prime factorisation and methods for finding LCM and HCF of a number.</p>	<p>English: statement questions.</p>	<p>The students will be able to understand the usefulness of learning the tests of divisibility in their day to day life.</p>	

	<p>numbers *Prime factorisation * HCF and LCM</p>	<p>* learn the rules of divisibility. * Determine if the test based on the rules works. * Identify numbers as prime and composite using <u>Sieve of Eratosthenes</u>. *Understand the relationship between factors and multiplies. numbers by using methods of primefactorisation.</p>	<p>Calculation skill: By finding HCF and LCM of the numbers. Content organisation: By arranging number to find factors and multiflies.</p>	<p>Kinesthetic/ Bodily (Body smart): Interpersonal: Logical/ Mathematical: Visual Spatial Interpersonal</p>	<p>By playing a game with numbers for understanding of factors and multiplies. By discussing rule of divisibility. By explaining the steps for finding L.C.M and H.C.F of the numbers. By showing charts of factors of numbers. factors, multiplies, LCM and HCF.</p>		<p>The students will be able to understand that the basic arithmetic operations, such as multiplication and division are interconnected. They will also be able to identify patterns in numbers, as they work with factors and multiplies. Students will be able to identify divisors of numbers quickly and easily.</p>	<p>Penpaper test Unit test.</p>
6	<p>Shapes and figures * Definition foe different types of angles. * Construction of angles by protractor. * Definition for different types of triangles. * Types of quadrilateral * Circle and its related Term.</p>	<p>The students will be enable: * To learn integrate measurement into Geometry. * To measure angles. * To construct different angles, using the available information. * To apply spatial reasoning while constructing angles and triangles.</p>	<p>Drawing skills: By constructing different types of angles by protractor and triangles. Measuring skill: By measuring angles by protractor to classify them into different catagories. Ordering skill: For labelling angles, triangles and circle. Calculation skill: By calculating radius and diameter of circle.</p>	<p>Verbal/ Linguistic : Kinesthetic/ Bodily : Interpersonal : Logical/ Mathematical : Visual smart :</p>	<p>By explaining the definition of angles, its type, triangles and its type and circle. By construction of protractor with the help of paper folding of a semi-circle. By discussion on types of angles and triangles. By explaining the use of protractor for measuring angles. By observing different angles and triangles for its further classification.</p>	<p>English: statement questions Drawing: By drawing different shapes and figures. G.S.C: construction of Diagrams. S.Sc: Maps and diagrams.</p>	<p>The students will be able to understand, how angles and triangles are formed and apply their spatial reasoning while constructing angles. They will also learn the use of protractor for constructing angles and compass for constructing circles with given radius. The students will be able to understand and appreciate a circle as different kind of plane shape.They will be able to identify and understand its geometric properties.</p>	<p>Penpaper test MCQ</p>

	<p>* To visualise and communicate understanding of triangles with the helps of models.</p> <p>* To construct circle and defination of related terms.</p>			<p>Self smart : Naturalistic:</p>	<p>By constructing angles themselves with help of protractor. By giving examples of shapes and figures present in our surroundings.</p>		
				TERM II			
Decimals & Percentages	<p>General Objectives:</p> <ol style="list-style-type: none"> 1. to develop numerical ability in a child. 2. To nurture a child's mathematical thinking and systematic reasoning. 3. To help a child to observe relationships & to find connections. 4. to equip a child to correlate the four mathematical operations in everyday life. 5. To inspire critical thinking & widens a child scope in problem solving. <p>Specific Objectives:</p> <ol style="list-style-type: none"> 1. To perform the four operations of arithmetic by using numbers with decimals. 2. To compare decimal numbers. 	<p>Measuring skills & Observing skills:They will be able to observe decimals in measuring objects around them like length of their notebook,height of desks etc.</p> <p>Representing skills:They will understand the representation of decimals on pictures.</p>	<p>Interpersonal:In trapersonal:Logical-Matematical:</p> <p>Visual spatial:</p> <p>Logical mathematical:</p>	<p>Class data will be made according to their favourite subjects. It will be then converted into fractions & then further converted into percentages. Students will be then make a pie chart of class with the help of teacher.</p> <p>Through explanation of various decimals with the help of pictures.</p> <p>Through solving sums on decimals & percentages.</p>	<p>Social Science: 25% of earth is land & 75% is water. Science: 70% of human body has water in it.</p>	<p>* Students will be able to rename decimals as fractions. *They will be able to calculate operations on numbers involving decimals.</p> <p>* Students will understand the concept of percentage,They will apply the concept to evaluate their own performance in classroom.</p>	<p>Written assesssment for solving sums.</p>

		<p>3. To understand the relationship between fractions, decimals & percentages.</p> <p>4. To convert fractions, decimals & percentages into each other.</p> <p>5. to find the no. when percentage is given.</p>					
Operations on 8 numbers.	<p>* To analyse problems to understand which operation should be applied.</p> <p>* To understand terms related to all four operations.</p> <p>* To understand relationship between operations.</p> <p>* To regroup numbers to perform operations.</p>	<p>Ordering details: By keeping the number in proper order according to the sign.</p> <p>Self study: By solving sums.</p>	<p>Verbal-Linguistic:</p> <p>Bodily-kinesthetic:</p> <p>Interpersonal:</p> <p>Logical/mathematical:</p> <p>Visual/spatial:</p> <p>Intrapersonal:</p>	<p>Understanding the terms related to four operations.</p> <p>By enacting on a statement questions involving more than one operation.</p> <p>Through group activity ("</p> <p>Through solving sums.</p> <p>Through group activity. (mentioned above)</p> <p>Through solving sums on their own.</p>	<p>English: To frame a sentence it is important to place different parts of a sentence in order. In the similar way, to solve a particular sum with all operation DMAS rule to be followed.</p>	<p>* The students will be able to use the appropriate operation at appropriate place.</p> <p>* They will be able to analyse problems by identifying relationships.</p> <p>* They will communicate their understanding to day to day life.</p>	<p>Through assignment.</p> <p>Mental ability assessment (involving fillups of two operations only).</p>
Measurement and 9 temperature	<p>* To learn the standard units of measurement.</p> <p>* To convert smaller units of length, mass and capacity to large units and vice versa.</p> <p>* to solve the problems related to measurement and its conversion.</p>	<p>Calculative skill: able to solve the problems related to topic.</p> <p>Observing skill: By observing the temperature of a day and night during different time slot.</p> <p>Measuring Skill: By measuring length, mass and capacity of different object in different units.</p>	<p>Verbal:</p> <p>Kinesthetic/Bodily:</p> <p>Interpersonal :</p>	<p>By explaining the concept of measurement, its unit and temperature.</p> <p>By using thermometers, able to measure the temperature of an object etc.</p> <p>Activity: Visit to science Lab (To measure the hotness of water.)</p> <p>Discussion on the requirement of conversion of smaller units into larger units and vice-versa.</p>	<p>English: statement questions.</p> <p>Drawing: In drawing various figures with accuracy.</p> <p>S.S.T: (Temperature of different countries) and states in India.</p>	<p>* The students will know and recognise the basic, lower and higher units of length, mass and capacity.</p> <p>* The students will be able to convert larger units into smaller units and vice-versa.</p> <p>* Able to perform various operations like addition, subtraction, multiplication and division on units.</p>	<p>MCQ and penpaper test</p>

		<p>* To learn how to use thermometer while checking temperature.(In celsius scale and fahrenheit scale)</p> <p>* To construct the table of conversion of units.</p>		<p>Logical:</p> <p>visual:</p> <p>Intrapersonal:</p> <p>Naturalistic:</p>	<p>formulae (orally only) will be given for conversion of units and temperature in selsius scale and Fahrenheit scale.</p> <p>By observing temperature in thermomter.</p> <p>By solving problems related to topic.</p> <p>By measuring length mass,and capacity of different things present in nature.</p>	<p>Science: Freezing and boiling point (temperature of water.)</p>	<p>*Students will be able to use thermometer to check temperature.</p> <p>* The students will understand the importance of earning, saving and spending money and its wise usage.</p>	Pen paper Test
10	Commercial Mathematics	<p>* To learn to separate rupees and paise by decimal point.</p> <p>* To learn to multiply and divide money in real life situations.</p> <p>* To learn to value money.</p> <p>* To make and check bills.</p> <p>*To understand the meaning of profit and loss.</p> <p>* To interpret the given data and solve problems to find profit or loss.</p> <p>* To explain the kind of decision they can take to solve problems.</p> <p>* To solve the real life situations using unitary method.</p> <p>* To handle money properly and accurately.</p>	<p>Calculative skills: Able to solve the problems related to topic.</p> <p>Comparing skills: Able to compare whether there will be a profit or loss in a given transaction.</p> <p>Reasoning skill: Able to give reason for profit or loss.</p> <p>Evaluation skill: Able to evaluate profit and loss.</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 profit ,loss, cost price and selling price.</p> <p>By performing role play on 'A visit to market' [Activity] +Framing of word problem by observing pictures given to them.By using fake minwy words.</p> <p>By discussion on profit and loss. Formulae will be given for the calculation of profit,loss,C.P. and S.P.</p> <p>By performing role play and by observing pictures for framing statement questions.</p> <p>By solving problems related to topic.</p>	<p>English:- statement questions</p> <p>Hindi: लाभ - हानि (विलोम शब्द)</p>	<p>* They will be able to see the relationship between C.P and S.P and decide whether there is loss or profit.</p> <p>* They will be able to concept in real life situations while doing money transactions.</p>	

11	Fractions	<p>* To enable the students to understand that fractions can be multiplied & divided.</p> <p>* To make students look at fractional parts of things in their immediate environment.</p> <p>* To make students learn to convert mixed numbers into improper fractions and vice-versa.</p> <p>* To enable them to convert & order fractions.</p>	<p>Making diagrams:- By dividing the figures into the fraction given.</p> <p>Content organisation:- By arranging the fractions in order to do various operations (+, -, ×, ÷)</p> <p>Ordering details: By identifying the type of fraction and then placing it at the right place.</p>	<p>Verbal:</p> <p>Kinesthetic/ Bodily:</p> <p>Interpersonal:</p> <p>visual:</p> <p>Naturalistic:</p>	<p>By explaining the concept of functions , its add,sub,multiplication & division.</p> <p>By using fraction kit and with the help of it showing different fractions, their additions, sub etc.Conversion of mixed fraction to improper fraction & explaining $5 \times \frac{1}{3} = \frac{5}{3}$ by fraction kit.</p> <p>Discussing different topics related to different subjects corelated to fractions.</p> <p>Fraction kit is shown their divisions and again formation into a whole. earth is divided into water form & land form.</p>	<p>S.ST: 3/4th of earth is covered by water and 1/4th is land.</p> <p>G.Sc: Composition of air.</p> <p>English & hindi: Is divided into literature and grammar.</p> <p>Physical Edu:The ground is divided into basket ball court, badminton court etc.</p>	<p>The students will undstand different ways of looking at portions of a whole. Learning the concept helps them to distribute things in a group equally in real life situations.</p> <p>They will also learn to add up portions to make whole lots.</p> <p>They would be able to do different operations related to fractions.</p>	<p>Written work: Write equivalent fractions, change improper into mixed fraction etc.</p> <p>Mental Ability: In the form of MCQ related to comparision of fractions , addition & subtraction etc.</p> <p>Activity: arrange the given fraction kit into the given fraction and then make one equivalent fraction out of it.</p>
12	Perimeter, Area & Volume:	<p>* To enable the students to learn the difference between area & perimeter.</p> <p>* To be able to demonstrate the relationship between area & perimeter.</p> <p>* To make them use the formulae to find arfea & perimeter.</p> <p>* To enable them to determine the volume of objection by using the formulae.</p> <p>* know the nets of 3D solid figures in shapes & figures cahpter.</p>	<p>Making diagrams:- By drawing figures of different shapes according to the information given.</p> <p>Ordering details: Using various formulae and finding out area, volume & perimeter of a figure.</p> <p>Identifying the measurements through units given.</p> <p>Self study: By calculating area & perimeter of 2 D shapes and area, perimeter & volume of 3 D shapes.</p>	<p>Verbal:</p> <p>Kinesthetic/ Bodily:</p> <p>visual:</p> <p>Naturalistic:</p> <p>Intrapersonal:</p>	<p>By explaining the concept of perimeter, area & volume.</p> <p>By using solid shapes and placing it into the jar of water to see the displacement or the area covered by the object.</p> <p>By observing the water displaced in a jar by the various objects.</p> <p>By observing the area covered by a forest etc.</p> <p>By solving the problems with the help of formulae.</p>	<p>S.S.T: Area covered by a particular country.</p> <p>G.Sc: Height of a person, length of a tree etc.</p> <p>Physical Education: Area covered by a stadium, length of a racing track etc.</p>	<p>* the students will understand the difference between perimeter, area and volume.</p> <p>* they will have good spatial understanding.</p> <p>* The students will also learn to solve problems in their immediate environment.</p> <p>* They would understand that with the same perimeter we can have different areas.</p>	<p>Written work: Find the area perimeter & volume of the given problem.</p> <p>Mental ability: MCQ related to the chapter.</p> <p>Activity: To find the volume of solids be measuring the amount of water displaced.</p>