CHOITHRAM SCHOOL, MANIK BAGH, INDORE
ANNUAL CURRICULUM PLAN SESSION 2020 -21

CLASS: VI
SUBJECT: Mathematics

Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities &Resources	Expected Learning Outcomes	Assessment
		Subject Specific (Content Based)	Behavioral			
June 14 days	1.Knowing our numbers	The students will be able to: ● Understand the importance of place value. ● Read and write numbers (more than 5 digits) in the Indian and the International system of numeration. ● Compare two or more numbers and order them in ascending or descending order applying knowledge of place value. ● Perform the four basic arithmetic operations . ● Make reasonable estimates. ● Apply the knowledge acquired to word problems . ● Convert Roman numerals into Hindu Arabic numerals and vice versa.	● Students will be able to manage their pocket money. ● Students will be able to estimate their marks. ● Students will be able to recognize Roman numerals in daily life.	1) To express large numbers in international and Indian number system. 2) To arrange large numbers in ascending and descending order.	Student would be able to ● Understand the importance of place value. ● Read and write numbers (more than 5 digits) in the Indian and the International system of numeration. ● Compare two or more numbers and order them in ascending or descending order applying knowledge of place value. ● Perform the four basic arithmetic operations ● Make reasonable estimates. ● Apply the knowledge acquired to word problems. ● Convert Roman numerals into Hindu Arabic numerals and vice versa.	Assessment will be done on the basis of decided Rubrics.

		• **Understand DMAS.**			• **Understand DMAS .** • **Manage their pocket money.** • **Estimate their marks.** • **Recognize Roman numerals in daily life.**	
June 3 days July 15 days	**2.Whole numbers**	**I - <u>Specific Objectives :-</u>The students will be able to:** • **Understand and define natural numbers and whole numbers** • **Knowing about Predecessor and Successor** • **Application of number line** • **Addition, subtraction and multiplication of whole numbers on number line.** • **Appreciating, understanding and demonstrating the properties of whole numbers.** • **Understanding the difference between additive and multiplicative Identity.** • **Understanding the**	**<u>Behavioral Objectives</u>** • **Students will be able to manage their pocket money.**	**Activities** **1)To draw the chart for all the properties of whole numbers.**	**Student would be able to:** • **Understand and define natural numbers and whole numbers** • **Knowing about Predecessor and Successor** • **Application of number line** • **Addition, subtraction and multiplication of whole numbers on number line.** • **Appreciating, understanding and demonstrating the properties of whole numbers.** • **Understanding the difference between additive and multiplicative Identity.** • **Understanding the**	**Assessment will be done on the basis of decided Rubrics.**

		existence and importance of Identity element. ● **Identify patterns and formulate rules**			**existence and importance of Identity element.** ● **Identify patterns and formulate rules** **Manage their pocket money.**	
July 11 days **Aug 7 days**	**3.Playing with numbers**	**- <u>Specific Objectives</u>** **Student will be able to:** ● **Understand the terms prime and composite numbers and identify them.** ● **Apply divisibility rules.** ● **Identify factors and multiples** ● **Construct factor-tree and finding prime factors.** ● **Understand common factors and common multiples.** ● **Calculate the HCF and LCM.** ● **Understand the relation HCF X LCM = Product of two numbers** ● **Understand the applications of HCF and LCM.**	**<u>Behavioral Objectives</u>** ● **Student will learn to do smart work (through application of divisibility test)** ● **Patterns with numbers are useful especially for verbal calculations and help them to understand properties of number better.**	**. Activities** **1. To find multiples using paper strips.** **2. To draw factor tree.** **.**	**Student would be able to:** ● **Understand the terms prime and composite numbers and identify them.** ● **Apply divisibility rules.** ● **Identify factors and multiples** ● **Construct factor-tree and finding prime factors.** ● **Understand common factors and common multiples.** ● **Calculate the HCF and LCM.** ● **Understand the relation HCF X LCM = Product of two numbers** ● **Understand the applications of HCF and LCM.** ● **Do smart work (through application of divisibility**	**Assessment will be done on the basis of decided Rubrics.**

					test) ● **Understand patterns with numbers are useful especially for verbal calculations and help them to understand properties of number better.**	
Aug 13 days	**4.Basic geometrical ideas**	**<u>Specific Objectives</u>** **Students will be able to** ● **Understand and differentiate between line, line segment and ray.** ● **Identify the pair of lines and differentiates between intersecting and parallel lines** ● **Define and name angle vertex and its arm, identifies interior and exterior region of an angle.** ● **Understand open curve, closed curve, simple closed curve** ● **Name triangle, its vertices, sides, angles, interior and exterior** ● **Name quadrilateral, its sides, vertices, angles, diagonals, adjacent sides and opposite sides (only**	**- <u>Behavioral Objectives</u>** ● **Understands and explores linkage of geometry in daily life.** ● **Use of parallel lines in sports, wires of electric pole.** ● **Imagination power will increase.** ● **Apply geometrical ideas in art and craft.**	**.Activities** **1. Identification of types of angles from their surroundings.** **2. To form a polygon with sticks /strips.**	**Students would be able to** ● **Understands and differentiates between line, line segment and ray.** ● **Identifies the pair of lines and differentiates between intersecting and parallel lines** ● **Define and name angle vertex and its arm, identifies interior and exterior region.** ● **Understand open curve, closed curve, simple closed curve** ● **Name triangle, its vertices, sides, angles, interior and exterior** ● **Name quadrilateral, its sides, vertices, angles, diagonals, adjacent and opposite sides.**	

		convex quadrilateral) ● Define circle, its centre, radius, diameter, arc, sector, chord, segment, and semicircle, circumference, interior and exterior region.			● Define circle, its centre, radius, diameter, arc, sector, chord, segment, and semicircle, circumference, interior and exterior region. ● Understands and explore linkage of geometry in daily life. ● Increase their reasoning skill. ● Increase their imagination power.	
Sep7 days	5.Understanding Elementary shapes	The students will be able to: ● Compare line segments ● Understand parallel lines ● Understand perpendicular line ● Understand Classification of angles. ● Understand Classification of triangle on basis of ● Understand Classification of triangles of basis of sides. ● Understand quadrilateral. ● Understand adjacent sides and angles	<u>Behavioral Objectives</u> Following behavioral objectives can be achieved- ● Imagination power will be increased ● Students will be able to identify different 3D shapes from surrounding. ● Understands and explore linkage of geometry in daily life. ● Apply the	Activities 1. To understand faces edges and vertices of 3D shapes and their nets. 2. To draw different clock times to understand different angles.	<u>Expected Learning Outcomes</u> Students would be able to ● Compare line segments, ● Understand parallel lines ● Understand perpendicular line ● Classification of angles. ● Classification of triangle on basis of angles ● Classification of triangles of basis of sides. ● Understand quadrilateral. ● Understand adjacent sides and angles ● Understand Opposite sides	Assessment will be done on the basis of decided Rubrics.

		• **Understand Opposite sides and angles** • **Understand Properties of trapezium, parallelogram rhombus, square, and rectangle.** • **Understand circle and concentric circle.** • **Understand different types of shapes like cube, Cuboid and pyramid.** • **Net of 3d shapes**	**geometrical ideas in art and craft.** • **Use of shapes in our day today life like in architecture and in field of production.**		**and angles** • **Properties of trapezium, parallelogram rhombus, `square, and rectangle.** • **Understand circle and concentric circle.** • **Understand different types of shapes like cube, cuboid and pyramid.** • **Understand Net of 3d shapes** • **To develop Imagination power** • **Identify different shapes from their surroundings.**	
Sep 9 days	**6.Integers**	**- <u>Specific Objectives:</u> The students will be able to:** • **Understand integers as collection of whole numbers and negative counting numbers.** • **Understand the concept of additive inverse.** • **Understand the concept that the value of Integers**	**- <u>Behavioral Objectives</u>** • **Students will be able to differentiate between positive and negative aspects of life.** • **Understand use of negative numbers in daily life like altitude below sea level is represented by**	**Activities** **1. Operation on Integers in a pictorial form.** **2. To Frame real life situations where integers are involved and express them as integers.**	**<u>Expected Learning Outcomes</u>** **Students would be able to:** • **Understand integers as collection of whole numbers and negative counting numbers.** • **Understand the concept of additive inverse.** • **Understand the concept**	**Assessment will be done on the basis of decided Rubrics.**

		become smaller as one moves to the left and bigger as one moves to the right on the number line. ● **Explore and identify an integer on a number line,** ● **Perform addition and subtraction of integers using the number line** ● **Perform addition and subtraction of integers without using the number line** ● **Application of integers in real life situation.**	**negative integers.** ● **+ ve and –ve integers are used in measuring temperature.** ● **Banks and credit unions represent debit and credit through integers.**		**that the value of Integers become smaller as one moves to the left and bigger as one moves to the right on the number line.** ● **Explore and identify an integer on a number line,** ● **Perform addition and subtraction of integers using the number line** ● **Perform addition and subtraction of integers without using the number line** ● **Apply the concepts learned in real life situation.** ● **Differentiate between positive and negative aspects of life.** ● **Understand use of negative numbers in daily life.**	
			Term I exam revision			

Oct14 days	**7.Fractions**	**Specific Objectives The students will be able to:** ● **Define fractions, its components and types of fractions.** ● **Represent fractions on the number line.** ● **Convert improper to mixed fraction and vice versa.** ● **Define equivalent fractions.** ● **To find the simplest form of fraction.** ● **Compare and order two or more fractions.** ● **Perform addition and subtraction on fractions and extend it to solving word problems**	**Behavioral Objectives** ● **Ability of reasoning** ● **Problem solving**	**Activities** **1.Quantity as a part of a whole .** **2.Figures representing mixed fraction and conversion of mixed into improper fraction.** **.**	**Expected Learning Outcomes :** **Students would be able to:** ● **Define fractions, its components and types of fractions.** ● **Represent fractions on the number line.** ● **Convert improper to mixed fraction and vice versa.** ● **Define equivalent fractions.** ● **To find the simplest form of fraction.** ● **Compare and order two or more fractions.** ● **Perform addition and subtraction on fractions and extend it to solving word problems** ● **Develop ability of reasoning** ● **Develop problem solving skills**	**Assessment will be done on the basis of decided Rubrics.**
OCT 8 days	**8.Decimals**	**Learning Objectives:**	**Following behavioral**	**Activities**	**Students would be able to:**	**Assessment will be**

NOV 4 days		**The students will be able to:** ● **Understand Decimals as fractions** ● **Represent decimals on number line** ● **Understand Decimals as an extension of place value system** ● **Write Expanded form of Decimals.** ● **Understand Use of decimals in daily life** ● **Understand measures of money value. (Conversion of units.)** ● **Understand measures of length, weight and capacity. (Conversion of units.)** ● **Perform addition of decimals** ● **Perform subtraction of decimals** ● **Perform multiplication of**	**objectives can be achieved-** ● **Unity strengthens, no matter how small the individual unit is (Addition of decimals).** ● **A record can be broken by a difference of a few decimal places.** ● **A life can be saved or lost by a difference of a few decimal places in seconds.** ● **Seemingly insignificant things can make a huge difference, so we must never underestimate small things.** ● **Proper and accurate concentration of chemicals is very important in drugs and medicines.**	**1. To find the product of decimal numbers (like 0.7 X 0.3) using graph paper.** **2. To frame and solve a real life situation where addition or subtraction of decimals are involved.**	● **Understand Decimals as fractions.** ● **Represent decimals on number line.** ● **Understand Decimals as an extension of place value system.** ● **Write expanded form of Decimals.** ● **Understand Use of decimals in daily life.** ● **Understand measures of money value. (Conversion of units.)** ● **Understand measures of length, weight and capacity. (Conversion of units.)** ● **Convert unlike decimals to like decimals.** ● **Perform addition of decimals.** ● **Perform subtraction of decimals.** ● **Perform multiplication of**	**done on the basis of decided Rubrics.**

		decimals ● **Performed division of decimals.** ● **Solve Word Problems on decimals** ● **Daily life applications of decimals.**	**Even a difference by 0.001 or smaller can cause severe health issues.**		**decimals.** ● **Performed division of decimals.** ● **Solve Word Problems on decimals .** ● **Daily life applications of decimals.** ● **Value the smallest part or unit regardless of how insignificant it might seem.** ● **Manage time and value each and every second.** ● **Understand that unity strengthens, no matter how small the individual unit is.** ● **Understand that a record can be broken by a difference of a few decimal places.** ● **Understand that a life can be saved or lost by a difference of a few decimal places in seconds.** ● **Understand that a seemingly insignificant**	

					things can make a huge difference, so we must never underestimate small things. ● **Understand that a proper and accurate concentration of chemicals is very important in drugs and medicines.**	
Nov10 days	**9.Data handling**	**<u>Specific Objectives</u>** **The students will be able to understand:** ● **To organize data.** ● **To calculate data.** ● **Preparation of frequency distribution table.** ● **Construction and interpretation of pictographs.** ● **Construction and interpretation of bar graphs.**	**<u>Behavioral Objectives</u>** ● **It's important to keep things and information organized to work properly.** ● **In our life, there will be both, ups and downs, we should be always grateful while the ups and should have enough courage to make it through the downs.** ● **Every unit is important in a**	**<u>Activities</u>** **1. To prepare a frequency distribution table for given situation.** **2. Reading and interpretation of bar graph.**	**<u>Expected Learning Outcomes</u>** **Students would learn** ● **About the term data.** ● **To organize data and significance of organizing data** ● **To prepare frequency distribution table.** ● **To construct and interpret pictographs.** ● **To construct and interpret of bar graphs.** ● **To solve problems and situation based questions.** ● **To solve application based problems.** ● **That studying can be**	**Assessment will be done on the basis of decided Rubrics.**

			group. ● **Information can be represented in an interesting ways like pictograph.** ● **Learning can be fun if you take it in a positive way.**		**enjoyable.** ● **To understand that it's important to keep things and information organized to work properly.** ● **To realize that in our life, there will be both, ups and downs, we should be always grateful while the ups and should have enough courage to make it through the downs.** ● **That every unit is important in a group.** ● **To realize that information can be represented in an interesting ways like pictograph.** ● **To understand that learning can be fun if you take it in a positive way.** ● **To develop drawing skill by constructing pictograph.```**	
NOV 6 days **DEC 6 days**	**10.Mensuration**	**<u>Specific Objectives</u>:** **The students will be able to understand:** ● **The perimeter of regular and**	**<u>Behavioral Objectives</u>:-** **Following behavioral objectives can be achieved-** **Not all people are alike; however each and every**	**<u>Activities</u>** **(in door /out door)** **1. To find the area and perimeter of the things which are available in**	**<u>Expected Learning Outcomes</u>** **Students would learn** ● **about the concept of perimeter for any polygon.** ● **to calculate Perimeter of rectangle.**	**Assessment will be done on the basis of decided Rubrics.**

		irregular polygon ● **The concept of perimeter and Area** ● **The perimeter and Area of** ❖ **Rectangle** ❖ **Square** ● **Application of Perimeter and area of square, and rectangle** ● **Word problems based Perimeter of any polygon and area of square, and rectangle** ● **The conversion of units**	**one of us is a human and holds his own importance.** ● **There can't be a single way to tackle everything in life. (Just like the formulas for calculating perimeter and area of different figures are different.)** ● **Learning can be fun if you take it in a positive way.** ● **A single wrong step can deviate you from the path.** ● **The smallest seeming mistake can completely change the situation and we won't get outcomes as we wanted.**	**surrounding?**	● **to calculate Perimeter of square.** ● **to calculate Perimeter of triangle.** ● **to calculate Perimeter of regular polygon is the product of number of sides x length of each side** ● **and understand the concept of Area.** ● **to calculate Area of square.** ● **to calculate Area of rectangle.** ● **the addition and subtraction of Algebraic Expression.** ● **about applications of perimeter and area.** ● **to solve problems and situation based questions.** ● **to solve application based problems.** **They wil also be able to** ● **apply their own tricks to solve higher order problem based on the content.** ● **Understand the conversion of units.** ● **Understand that there can't be only a single way to tackle everything in life. (Just like the formulas for calculating perimeter and area of different figures are different.)** ● **Learning can be fun if you**	

					take it in a positive way. ● Understand that only a single wrong step can deviate you from the path. Understand that the smallest seeming mistake can completely change the situation and we won't get outcomes as we wanted	
DEC 14 days **Jan 4 days**	**11.Algebra**	**<u>Specific Objectives</u>** **The students will be able to understand:** ● **The concept of and difference between variables and constants.** ● **Algebraic terms and expressions** ● **To frame the expression for the given cases.** ● **To frame the Equations** ● **Hit and trial method to find the solution of an equation** ● **Direct method to find the solution of an equation**	**<u>Behavioral Objectives</u>** ● **Every unit is important in a group.** ● **Learning can be fun if you take it in a positive way.** ● **While comparing any two things or situations, or people, the parameters and scales must be same.** ● **A single wrong step can deviate you from the path.** ● **There is more than just one way to solve any problem.** ● **The smallest seeming mistake**	**<u>Activities</u>** **1.To Frame expression for given situation using constant and variables.**	**<u>Expected Learning Outcomes:-</u>** **Students would learn/ develop** ● **about the concept of and difference between variables and constants.** ● **about algebraic terms and expressions.** ● **to frame and solve equations.** ● **to apply direct method to find the solution of an equation** ● **to calculate probability of a given event.** ● **to solve problems and situation based questions.** ● **To solve applications based problems.** ● **that every unit is important in a group.** ● **that learning can be fun if you take it in a positive**	**Assessment will be done on the basis of decided Rubrics.**

			can completely change the situation and we won't get outcomes as we wanted.		**way.** ● **that comparing any two things or situations, or people, the parameters and scales must be same.** ● **that a single wrong step can deviate you from the path.** ● **that there is more than just one way to solve any problem.** ● **that the smallest seeming mistake can completely change the situation and we won't get outcomes as we wanted.** ● **that every unit is important in a group.** ● **that learning can be fun if you take it in a positive way.** ● **While comparing any two things or situations, or people, the parameters and scales must be same.** ● **A single wrong step can deviate you from the path.** ● **There is more than just one way to solve any problem.**	

Jan 12 days	**12.Ratio and Proportion**	**<u>Specific Objectives</u> The students will be able to:** ● **Define ratio** ● **Compare ratio.** ● **Find equivalent ratio.** ● **Understand concept of proportion.** ● **Understand concept of continued proportion** ● **Understand unitary method.** ● **Reduce ratio in simplest form.** ● **Apply above concepts in daily life situations. U**	**- <u>Behavioral Objectives</u>** **Students will try to apply concept of ratio and proportion in daily life such as** ● **while cooking different recipes we will take ingredients in proper ratios to have good taste,** ● **While painting walls combination of colours is taken in proper ratios.** ● **In Chemistry, this is especially important because improper ratios can result in experiments or in medicine.** ● **If the ratios of hormones or enzymes in our body are not sync, it could result in illness in the**	**<u>Activities</u>** **1. Application of unitary method in daily life situation.**	**.<u>Expected Learning Outcomes</u>** **Students would be able to:** ● **Define ratio** ● **Compare ratio.** ● **Find equivalent ratio.** ● **Understand concept of proportion.** ● **Understand concept of continued proportion.** ● **Understand unitary method.** ● **Apply above concepts in daily life situations** ● **Understand while cooking different recipes we will take ingredients in proper ratios to have good taste,** ● **Understand while painting walls combination of colors is taken in proper ratios.** ● **Understand in Chemistry, this is especially important because improper ratios can result in experiments.** ● **Understand if the ratios of hormones or enzymes in our body are not sync, it**	**Assessment will be done on the basis of decided Rubrics.**

			organism.		**could result in illness in the organism.**	
Jan 7 days **Feb 3 days**	**13.Symmetry**	**- <u>Specific Objectives</u>** **The students will be able to understand:** ● **The concept of Symmetry** ● **Axis of Symmetry** ● **Mirror or Reflection Symmetry** ● **Figures with two or more lines of symmetry** ● **Using symmetry in day to day life**	**<u>Behavioral Objectives</u>** ● **Not all people are alike or similar; however each and every one of us is a human and holds his own importance.** ● **Learning can be fun if you take it in a positive way.** ● **Beauty is irrespective of symmetry or asymmetry.** ● **Students will develop Creative thinking.** ● **Students will develop Aesthetic Sense.** ● **Students will be able to improve their imagination.**	**<u>Activities</u>** **1. Symmetry in Alphabets.** **2. TO find Axis of Symmetry of Square, Rectangle, Circle, Rhombus and some Regular Shapes by paper folding**	**<u>Expected Learning Outcomes:</u>** **<u>Students would be able to:</u>** ● **Learn about the concept of Symmetry.** ● **Learn about axis of symmetry.** ● **Understand Mirror or Reflection Symmetry.** ● **Learn the properties of Mirror reflection.** ● **Understand uses of Symmetry in day-to-day-life.** ● **Solve problems and situation based questions.** ● **Solve application based problems.** ● **Learn that not all people are alike; however each and every one of us is a human and holds his own importance.** ● **Realize that learning**	**Assessment will be done on the basis of decided Rubrics.**

					can be fun if you take it in a positive way. • **Understand that beauty is irrespective of symmetry or asymmetry** • **Develop Creative thinking.** • **Develop Aesthetic Sense.** • **Improve their imagination.**	
Feb 20 days	**14.Practical geometry**	**<u>Specific Objectives</u> The students will be able to:** • **Construct circle and concentric circles with given radius** • **Draw line segments with special conditions** • **Construction of copy of line segments**	**<u>Behavioral Objectives :</u>** **Following behavioral objectives can be achieved:** • **Imagination power will be increased** • **Students will learn to do work with accuracy.(importance of accuracy)** • **Students will learn to achieve desired**	**Activities** **1. To find angle of 30^0, 90^0, 45^0 and 135^0 paper by folding.** **2. To find perpendicular bisector of chord and check whether it will pass through centre or not by**	**<u>Expected Learning Outcomes</u>** **The students would be able to** • **Construct circle and concentric circles with given radius** • **Draw line segments with special conditions** • **Construction of copy of line segments** • **Construct perpendicular to a line through a point on it**	**Assessment will be done on the basis of decided Rubrics.**

		• **Construct perpendicular to a line through a point on it or not on it** • **Construct a copy of an angle.** • **Construct perpendicular bisector.** • **Construct angles which are multiple of 15^0.** • **Construct angle bisectors.**	**goal by systematic approach** •	**paper folding.**	**or not on it** • **Construct a copy of an angle.** • **Construct perpendicular bisector.** • **Construct angles which are multiple of 15^0.** • **Construct angle bisectors.** • **Imagination power will be increased** • **Students will learn to do work with accuracy.(importance of accuracy)** • **Students will learn how to do step by step work to achieve decided goal.**	
REVISION AND CONDUCTION OF SUMMATIVE ASSESSMENT-II						