

CHOITHRAM SCHOOL, MANIK BAGH, INDORE
ANNUAL CURRICULUM PLAN SESSION 2017 – 2018

CLASS: VII
SUBJECT: MATHS

Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities & Resources	Expected Learning Outcomes	Assessment
		Subject Specific (Content Based)	Behavioral (Application based)			
June 12 days	Integers	Students will be able to learn: <ul style="list-style-type: none"> • Concept and examples of Integers. • Addition, subtraction as well as properties of integers • Multiplication, Division and properties of integers • DMAS rule for integers 	students will develop understanding for use of integers in banks(credit and debit) measuring temperatures	properties of integers/ NCERT book	Students learned about: <ul style="list-style-type: none"> • Concept and examples of Integers. • Addition, subtraction as well as properties of integers • Multiplication, Division and properties of integers • DMAS rule for integers • develop like Application skill, Higher order thinking and Numeracy skill , Ability of reasoning and Team spirit • relate the content with practical life like every number has its negative number e.g. every coin has two faces • Positive and negative integers are used in measuring temperature. • Realization of negative marking in competitive exams. • Altitude that below sea level is represented with negative integers • Banks and credit unions represent debit and credit through integers. 	Assessment will be done on the basis of decided Rubrics.
June 3 days July	Fractions and Decimals	The students will be able to: <ul style="list-style-type: none"> • Define fraction as a part of whole • Understand the concept of 	Following behavioral objectives can be achieved-	multiplication of decimal numbers on	The students will be able to: <ul style="list-style-type: none"> • Apply the concept of different types of fraction 	Assessment will be done on the

15 days		<p>different types of fraction</p> <ul style="list-style-type: none">• Learn how to convert any one type of fraction to other• Recognize the difference between different types of fractions• Compute addition and subtraction of fraction• Solve word problem involving fractions.• multiply and divide two fractions• Like and unlike decimals• Addition and subtraction of decimals• Multiplication of decimals• Division of decimals• Dividing decimals by multiples of 10• Dividing a decimal by a non-zero whole number• Dividing a decimal by another decimal• Decimal based units in day-to-day life• Word problems based on division of decimals	<ul style="list-style-type: none">• A part of a whole is important to make up the whole, for example, students are a part of their class, but they are important to form the whole class because even if one student is missing, the class wouldn't be complete.• In event managements like parties.• They use the operations on fractions in dealing with money.• Students can learn to check their progress by calculating the fractions of the work they've done and whole work they've to do.• 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	10 x 10 grid/ NCERT book	<ul style="list-style-type: none">• Recognize the different types of fractions• Compute addition and subtraction of fractions.• Solve word problems involving fractions.• multiply and divide two fractions• Learn to value the smallest part or unit regardless of how insignificant it might seem.• Learn to manage events like parties.• Learn the use of fractions in various daily life aspects like calculations relating to money.• Learn to calculate their progress by using fractions.• Identify like and unlike decimals.• Compute various decimals.• Find out the product of multiplication of two given decimals.• learn the operation of division of (a) Whole number by decimal (b) Decimals by a non-zero number, and (c) Decimals by decimals.• Solve application based problems.• Solve word problems and situation based questions.• Learn to value the smallest part or unit regardless of how insignificant it might seem.• learn to manage time and value each and every second.• learn the use of decimals in various daily life aspects like calculations relating to money.	basis of decided Rubrics.
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			<p>difference, so we must never underestimate small things.</p> <ul style="list-style-type: none"> • Proper and accurate concentration of chemicals is very important in drugs and medicines. Even a difference by 0.001 or smaller can cause severe health issues. 			
<p>July 9 days August 4 days</p>	<p>Data Handling</p>	<p>The students will be able to understand:</p> <ul style="list-style-type: none"> • organization of data • preparation of frequency distribution table • Measure of central tendencies: Mean, Mode, Median and Range • Construction and interpretation of different types of bar graphs • Chance and Probability 	<p>Following behavioral objectives can be achieved-</p> <ul style="list-style-type: none"> • 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 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 	<p>Find mean, median, mode and range for collected data/ NCERT book</p>	<p>The students would be able to</p> <ul style="list-style-type: none"> • Organize data • prepare frequency distribution table • Construct and interpret different types of bar graphs. • Chance and Probability • Solve problems and situation based questions. • Learn that studying can be enjoyable. • Realize importance of keeping things and information organized to work properly. 	<p>Assessment will be done on the basis of decided Rubrics.</p>

			scales must be same.			
August 12 days	Simple Equation	<p>The students will be able to understand:</p> <ul style="list-style-type: none"> • Linear Equations • Solving an equation • Word problems based on applications of simple equation 	<p>Following behavioral objectives can be achieved-</p> <ul style="list-style-type: none"> • Knowing every argument correctly matters to reach a conclusion. • It's necessary to know all variables to solve an unsolved mystery. • We need to keep trying to succeed. • Errors and mistakes make us learn more and teach us new ways to look at the problem. 	Frame the equation for the given situation and solve it/ NCERT book	<p>Students will be able to</p> <ul style="list-style-type: none"> • Frame Linear Equations. • Apply transposition method to solve equations. • solve word problems based on applications of simple equation • Solve situation based questions. • Understand that knowing every argument correctly matters to reach a conclusion. • Realize that we need to keep trying to succeed. • Learn that errors and mistakes make us learn more and teach us new ways to look at the problem. 	Assessment will be done on the basis of decided Rubrics.
September 12 days	Lines and Angles	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Understand linear pair, complementary angles and supplementary angles. • Define Parallel lines, intersecting lines, Interior angles, Exterior angles, and Transversal and Linear pair. • Vertically opposite angles • Understand when a transversal intersects a pair of parallel lines • The alternate angles are equal • The corresponding angles are equal <p>Co-interior angles are supplementary</p>	<p>Students will develop</p> <ul style="list-style-type: none"> • Visualizing skill • Imagination skill 	Quiz will be conducted/ NCERT book	<p>Students would be able to</p> <ul style="list-style-type: none"> • Calculate complements and supplements of the given angles. • Apply the mathematical terms like Parallel lines, Non parallel lines. Interior and Exterior angles, vertically opposite angles, Transversal and Linear pair. • find differences between intersecting and non intersecting lines • Identify adjacent angles and linear pair. • Apply their own logics to solve the problems based on the content. • Develop Imagination skill • • 	Assessment will be done on the basis of decided Rubrics.

September 8 days	Symmetry	<p>Student will be able to:</p> <ul style="list-style-type: none"> Recall line symmetry and reflection symmetry Identify the axis of symmetry. Identify and apply the concept of rotational symmetry of 2 -D figures. Find the centre, order and angle of rotation for a simple figure. Identify the figures having both reflection and rotational symmetry. 	<p>Students will develop</p> <ul style="list-style-type: none"> Creative thinking by drawing their own symmetrical designs. Able to improve their imagination power. Application skills. Observatory skills. 	Paper folding activity for reflection and rotational symmetry/ NCERT book	<p>Students will be able to</p> <ul style="list-style-type: none"> Recognize symmetrical figures from the surroundings. Identify the axis of symmetry for various symmetrical figures. define, identify and apply the concept of rotational symmetry of 2 -D figures and find order and angle of rotation Identify the figures having both reflection and rotational symmetry. 	Assessment will be done on the basis of decided Rubrics.
October 5 days November 10 days	Triangle and its properties	<p>The students will be able to understand:</p> <ul style="list-style-type: none"> Medians and Altitudes of a Triangle Angle Sum Property of a triangle Exterior angle of a triangle and its properties Pythagoras Property of Right angled Triangle. 	<p>Following behavioral objectives can be achieved-</p> <ul style="list-style-type: none"> All shapes are beautiful in their own way. Learning can be fun if you take it in a positive way. Some common characteristics are required to be a part of a group (properties of triangles). 	Triangle inequality property/ NCERT book	<p>Students will be able to</p> <ul style="list-style-type: none"> Identify Medians and Altitudes of a Triangle Apply angle Sum Property of a triangle Apply Exterior angle of a triangle and its properties Apply Pythagoras Property of Right angled Triangle. Realize that some common characteristics are required to be a part of a group (properties of triangles). Learn to solve problems and situation based questions. 	Assessment will be done on the basis of decided Rubrics.
November 5 days	Congruency of triangle	<p>Students will be able to:</p> <ul style="list-style-type: none"> Understand the meaning of congruence, congruent figures and CPCT. Necessary conditions of two figures for being congruent for example <p>1. Two line segments are congruent</p>	<p>Students will develop</p> <ul style="list-style-type: none"> Critical thinking logical thinking Analytical and Imagination 	NCERT book	<p>As a result of studying this topic students will be able to-</p> <p>(a) Decide which conditions are necessary in order to show that two triangles are Congruent.</p> <p>b) Produce counterexamples to show that we cannot always draw congruent triangles</p>	Assessment will be done on the basis of decided Rubrics.

		<p>if they have same length</p> <ol style="list-style-type: none"> Two angles are congruent if they have same measure Two circles are congruent if they have same radius Two same sided regular polygons are congruent if they have equal length of side Two rectangles are congruent if they have same length and breadth <ul style="list-style-type: none"> Understand the concept the congruence conditions of triangles which are SSS, ASA (AAS), SAS and RHS. Symbol of congruence and related terms as well as applications on congruence. Solve the problems based on congruence of condition. 			<p>Using any three measurements (in particular, show that AAA and SSA are not Sufficient conditions for congruence)</p> <p>(c) Know that without knowing at least one side, we can't be sure if two triangles are congruent</p> <p>(d) Understand how corresponding parts of congruent triangles are equal.</p> <p>(e) Solve problems based on the content</p> <p>(f) Students would be able to strengthen their designing skills</p> <p>(g) They will be able to present logical ideas to their peers.</p>	
<p>November 8 days</p>	<p>Comparing Quantities</p>	<p>The students shall be able to</p> <ul style="list-style-type: none"> Recall the concept of ratio as an extension of fraction. Find the equivalent ratios as an extension of equivalent fraction. Recall the concept of proportion as an equality of two ratios. To recall unitary method and apply it in word problems. Understand the term percentage as a fraction with denominator 100. Convert fractions and decimals into percentage and vice-versa. 	<p>The students will be able to</p> <ul style="list-style-type: none"> Develop calculative skills by using unitary method. Develop communication skills while working in group- cricket mania. Develop comparative skills by finding percentage. Develop understanding related 	<p>Cricket Mania (Group Activity)/ NCERT book</p>	<p>Students will be able to</p> <ul style="list-style-type: none"> find the simplest form of ratio, equivalent ratios and compare ratios understand and apply the concept of proportion Understand unitary method and apply it in real life situations. Define percentage and convert fractions and decimals into percentage and vice versa. compare quantities using percentage, find increase and decrease of a quantity in terms of percentage apply percentage in problems involving 	<p>Assessment will be done on the basis of decided Rubrics.</p>

		<p>Compare quantities using percentage.</p> <ul style="list-style-type: none"> Find the increase and decrease of a quantity in terms of percentage. Apply percentage in problems involving profit and loss and interest. 	<p>to profit and loss while dealing with prices of different commodities.</p> <ul style="list-style-type: none"> Develop ability of reasoning by finding rate of interest on different schemes available. <p>Problem solving</p>		<p>profit and loss and apply the same to real life situations</p>	
December 7 days	Rational Numbers	<p>Students will be able to learn /define /apply/ find</p> <ul style="list-style-type: none"> Concept and examples of Rational numbers. Positive and negative Rational numbers Equivalent Rational numbers. That Rational numbers can be shown on number line. Rational numbers equidistant from 0 in the number line. Comparing Rational numbers. Rational numbers between two Rational numbers. Addition, Subtraction, Multiplication and Division of Rational numbers. 	<p>Related with the day today life-Rational numbers are used all the time! From buying and selling products using money and terminating decimals to cooking with fractions, people use rational numbers just about every day!</p>	NCERT book	<p>Students would be able to learn /define /apply/ find</p> <ul style="list-style-type: none"> Concept and examples of Rational numbers. Positive and negative Rational numbers Equivalent Rational numbers. That Rational numbers can be shown on number line. Rational numbers equidistant from 0 in the number line. Comparing Rational numbers. Rational numbers between two Rational numbers. Addition, Subtraction, Multiplication and Division of Rational numbers. 	<p>Assessment will be done on the basis of decided Rubrics.</p>
December 15 days	Practical Geometry	<p>The students will be able to :</p> <ul style="list-style-type: none"> Construct parallel lines Understand that in the following cases, triangle can be constructed If 3 sides of the triangles are given 	<p>Following behavioral objectives can be achieved-</p> <ul style="list-style-type: none"> Creativity will be increased. 	Construction of a triangle, whose two angles and non included	<p>Students would be able to develop the skills</p> <ul style="list-style-type: none"> Construct parallel lines Understand that in the following cases, triangle can be If 3 sides of the triangles are given (SSS) 	<p>Assessment will be done on the basis of decided Rubrics.</p>

		<p>where sum of every two sides must be greater than third side (SSS)</p> <ul style="list-style-type: none"> ▪ If 2 sides and the angle contained between them are given (SAS) ▪ If 2 angles and the side contained between them are given(ASA) ▪ If the hypotenuse and a side of a right angled triangle are given (RHS) ▪ If the hypotenuse and an angle of a right angled triangle are given (RHA) 	<ul style="list-style-type: none"> • 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. • To do presentable work 	side is given/ NCERT book	<ul style="list-style-type: none"> ▪ If 2 sides and the angle contained between them are given (SAS) ▪ If 2 angles and the side contained between them are given(ASA) ▪ If the hypotenuse and a side of a right angled triangle are given (RHS) ▪ If the hypotenuse and an angle of a right angled triangle are given (RHA) ▪ 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. <p>Apart from these students would be able to develop the Observatory skills, Analytical skills Demonstration skill, Application skills among themselves.</p>	
January 15 days	Perimeter and Area	<p>Students will be able to</p> <ul style="list-style-type: none"> • generate formula for area of Parallelogram, Triangle, Rhombus and Circle as • find formula for perimeter of Parallelogram, Triangle, Rhombus as well as circumference of circle • apply the generated formulae to solve the problems • find ratio of two areas, circumferences, radii and perimeters • conversion of unit • learn concept of π 	<p>Students will be able to</p> <ul style="list-style-type: none"> • apply concept of perimeter while preparing track to conduct sports; in drawing boarder around rectangular soft board; while counting distance covered by an athlete, while fencing their park to keep cattle away • apply concept of area in deciding how much carpet size is needed 	To drive the formula for area of parallelogram/ NCERT book	<p>Students would be able to learn</p> <ul style="list-style-type: none"> • calculate area and perimeter of Square, Rectangle, Parallelogram and Rhombus • area and circumference of circle • solve application based problems on the content • learn conversion of units • students would also be able to develop the skills like Analytical , Application , Estimation, Awareness and Accuracy <p>Apart from these they would be able to handle successfully many situations in life</p> <ul style="list-style-type: none"> • In field of architecture • In Athletic fields field for dimensions and marking • In Irrigation systems over the entire 	Assessment will be done on the basis of decided Rubrics.

			<p>for a dining room; in determining how much paint is needed</p> <ul style="list-style-type: none">• develop the skills like Observatory, Analytical, Application, and Estimation.• develop the skills by applying various formulae.		<p>playing area, to occasional outlets on the perimeter</p> <ul style="list-style-type: none">• In Fencing off an area to plot a crop• In planning the construction of a house or building• In building a swimming pool• Area could be used in figuring out how much carpet is needed for a room• To construct run way in airport etc.	
<p>January 5 days February 8 days</p>	<p>Algebraic Expressions</p>	<p>The students will be able to understand:</p> <ul style="list-style-type: none">• The concept of and difference between like terms and unlike terms• Addition and subtraction of Algebraic Expression• Applications of Algebraic Expression• Uses of Algebraic Expressions	<p>Following behavioral objectives can be achieved-</p> <ul style="list-style-type: none">• Not all people are alike; however each and every one of us is a human and holds his own importance.• Every unit is important in a group.• While comparing any two things or situations, or people, the parameters and scales must be same.• There is more than just one way to solve any problem.• The smallest seeming mistake can completely change the situation and we won't get outcomes as we	<p>NCERT book</p>	<p>Students would be able to</p> <ul style="list-style-type: none">• Learn the concept of and difference between like terms and unlike terms.• Find algebraic terms and expressions.• Understand and solve equations.• Add and subtract Algebraic Expression.• Learn that not all people are alike; however each and every one of us is a human and holds his own importance.• Understand that while comparing any two things or situations, or people, the parameters and scales must be same.• Realize that there is more than just one way to solve any problem.• Realize that the smallest seeming mistake can completely change the situation and we won't get outcomes as we wanted.	<p>Assessment will be done on the basis of decided Rubrics.</p>

			wanted.			
February 13 days	Exponent s and Powers	<p>Student will be able to:</p> <ul style="list-style-type: none"> • Write number in its expanded form and will be able to compare any two numbers. • Express a given number in its prime factorization in their powers. • Define exponents for natural numbers. • Know various laws of exponents. • Applying the laws of exponents to solve the problems with different operations. • Know standard form / scientific notation for numbers. 	<p>Students will understand that some common characteristics/qualities are required to be a part of a group.</p> <ul style="list-style-type: none"> • Students will learn to follow the principles/ethics to make their lives easier (as they study the different laws of exponents to make the calculations easier). • Students will learn to elaborate / brief their views as per requirement. • Students will learn to connect exponents in real life situations as we use units like square feet, square meters, cubic meters, etc. 	Laws of exponents through Paper folding Activity/ NCERT book	<p>Students will be able to</p> <ul style="list-style-type: none"> • express a given number in exponential form • apply laws of exponents • Apply understanding of exponents to solve the problems with different operations. • Write large numbers in standard form/scientific notation. • Follow the principles/ethics to make their lives easier. • Elaborate / brief their views as per requirement. • Connect exponents in real life situations as we use units like square feet, square meters, cubic meters, etc. 	Assessment will be done on the basis of decided Rubrics.
March 5 days	Visualizin g Solid Shapes	<p>Student will be able to:</p> <p>Identify and draw 2- dimensional and 3 dimensional figures.</p> <p>State the number of vertices, edges and faces of 3 dimensional figures.</p> <p>Draw nets for cubes, cuboids, cylinders and cones.</p> <p>Identify the solid formed by a given net.</p>	<p>Behavioral objectives</p> <ul style="list-style-type: none"> • Students will be able to visualize all the faces of the images of 3D shapes. • Students will be able to develop drawing skills by using isometric dotted 	Nets of solid shapes (by paper cutting and folding)/ NCERT book	<p>Students will be able to</p> <ul style="list-style-type: none"> • Recognize 2D and 3D figures from the surroundings. • Identify and count vertices, edges and faces of 3D figures. • understand the nets for various solid shapes • Identify the solid obtained by a given net. • Draw solids on a flat surface. 	Assessment will be based on rubrics

		<p>Visualize different cross sections (horizontal and vertical) of solid objects.</p>	<p>paper for representing various 3 D shapes.</p> <ul style="list-style-type: none"> Team spirit will be developed while working in group to prepare nets of 3D shapes. 		<ul style="list-style-type: none"> Visualize cross sections (horizontal and vertical) of solid objects. 	
<p align="center">REVISION AND CONDUCTION OF SUMMATIVE ASSESSMENT-II</p>						