

HAPPY DAYS SCHOOL, SHIVPURI (M.P.)
DEPARTMENT OF MATHEMATICS

CLASS: I

Session – 2026-27

MONTH	CHAPTER	EXPECTED LEARNING OUTCOMES	PEDAGOGICAL APPROACH (TEACHING METHODS/ STRATEGIES)	ASSESSMENT TOOLS	RUBRICS	ART INTEGRATION	ICT INTEGRATION
APRIL	Numbers 1 to 9	Students will understand that numbers are related to the numbers around them (numbers 1 to 9, number names, bigger or smaller, more or less, before, after, between, equal or not equal and ordering)	Constructive, Inquiry Based	Worksheet Hands on activity Asking riddles Home assignments	Approach meeting exceeding Based on topic, Sequence, neatness	Draw missing numbers, before, after, between, ordering in the note book. Make a necklace with beads and string	Video based on topic
JULY	Addition	Students will understand that adding '+' means finding how many in all when groups are put together or something new is added.	Constructive, Inquiry Based	Worksheet Hands on activity Asking riddles	Approaching meeting exceeding. Relevant to the topic, creativity, neatness	Make story based on addition,	Animated video based on addition
August	Subtraction	Students will understand that subtraction shows things away & there are strategies for subtracting quickly.	Constructive, Integrative	Worksheet and different objects	Approaching meeting exceeding.	Draw three colourful strings and paste Bindi in the strings and match the numbers in notebook.	Animated video on different numbers.

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DEPARTMENT OF MATHEMATICS

SEPTEMBER	Position	Students will understand that we can describe the position of different objects around us using everyday language. On - under, above - below, before, between, after, inside - outside, top- bottom, near - far	Constructive, Integrative, Inquiry Based	Worksheet Hands on activity Home assignment	Approaching meeting exceeding	Make or draw a picture story about position	Animated video. Show different objects
FIRST TERME							
OCTOBER	Shapes	Students will understand about different shapes, similar shapes, same size shapes, shapes that slide and roll	Constructive, Integrative	Worksheet Hands on activity Home assignment	Approaching meeting exceeding. Relevant to the topic, creativity, neatness	Colored paper folding activity	Video based on addition.
	Numbers 10 to 20	Students will understand that numbers are related to the numbers around them (numbers 10 to 20), number names, tens or ones concept, more or less, backward counting, ordering.	Constructive, Inquiry based	Worksheet Hands on activity Home assignment	Approaching meeting exceeding	Toothpick activity	Video based on subtraction.
NOVEMBER	Numbers 21 to 99	Students will understand that numbers are related to the numbers around them (21 to 99), number names, more or less, backward counting, ordering	Constructive, integrative	Hands on activity	Relevant to the topic, creativity, neatness	Draw abacus and paste colourful bindi	Video based on length.

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DEPARTMENT OF MATHEMATICS

	Addition and Subtraction	Adding 2-digit and 1- digit number, addition of 2 - digit numbers, number line, carry over method, word problems. Subtracting 1-digit number from 2- digit number, subtracting 2- digit number, number line, subtraction by borrowing, word problems.	Constructive, Inquiry	Worksheet Hands on activity	Approaching meeting exceeding.	Number stickers activity	Animated video based on activity.
	Patterns	Students will understand that a pattern repeats and patterns can be seen around us.	Constructive, Inquiry	Class test	Relevant to the topic, creativity, neatness	Pattern activity using different objects.	Animated video based on patterns.
December	Time	Students will understand the reading of time, days of the week.	Constructive, Inquiry	Home assignment		Draw and colour watch	Animated video based on time
	Money	Students will understand that Indian currency uses coins and notes that can be combined in different ways (rupees up to 2000)	Constructive, Inquiry based	Worksheet Hands on activity	Approaching meeting exceeding	Draw/paste stickers of currency notes and coins.	Video based on Money
	Measurement	Students will understand that length measures how long something is, weight measures how heavy something feels and capacity measures the amount a container can hold.	Constructive, integrative	Class test Home assignment	Relevant to the topic, creativity, neatness	Students will check the length, weight and capacity according to the given objects..	Video based on topic.

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DEPARTMENT OF MATHEMATICS

JANUARY 27	Data handling	Students will understand that things with different uses and features can be organized into tables	Constructive, Inquiry based	Worksheet	Approaching meeting exceeding.	Counting back, and find the difference	Animated video based on data handling.
	Ordinal Numbers	Students will understand that we place things in order to tell their positions.	Constructive, integrative	Hands on activity	Approaching meeting exceeding.	Activity using some objects.	video based on ordinal numbers
FEBRUARY 27	Multiplication	Students will understand that multiplication means adding the same number repeatedly to get the product.	Constructive, Inquiry based	Worksheet Home assignment	Approaching meeting exceeding		Animated video based on multiplication
March 27	FINAL TERM						

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HAPPY DAYS SCHOOL, SHIVPURI (M.P.)
DEPARTMENT OF MATHEMATICS

CLASS: II

Session – 2026-27

MONTH	CHAPTER	EXPECTED LEARNING OUTCOMES	PEDAGOGICAL APPROACH (TEACHING METHODS/ STRATEGIES)	ASSESSMENT TOOLS	RUBRICS	ART INTEGRATION	ICT INTEGRATION
APRIL	Let's Revise	Students will understand that the numbers from 0 to 99. number name, after and before, smallest and biggest pattern	Constructive, Inquiry based	Worksheet, Hands on activity	Approach Meeting Exceeding	Draw place value blocks	video
	Number 100 to 200	Students will understand number from 100 to 110, expanded form, face value, place	Constructive, Inquiry based	Worksheet Home assignment	Sequence neatness	Diagram and chart, balloon based activity	Number Song
JULY	Number up to 200 to 999	Students will understand Number from 201 to 300, 401 to 500, 601 to 700, 801 to 900, counting in hundreds tens and one's place value and face value, numbers ordering of numbers. And numbers from 301 to 400, 501 to 600, 701 to 800, 901 to 1000, counting on the because expanded form before after and between making new numbers	Constructive, Inquiry based	Worksheet,	Approach Meeting exceeding	Use a number line, the numbers are marked at equal distances and in order from left to right Match ordinal with their cardinal numbers	video on a number line
August	Addition	student will understand adding 2-digit and 3-digit numbers, addition on a number line, expanded form, carry over method, skip counting, word problems	Constructive, Integrative	Worksheet Class test	Approach meeting exceeding	Demonstration by objects	Video on addition and subtraction

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DEPARTMENT OF MATHEMATICS

SEPTEMBER	Subtraction	Students will understand addition and subtraction facts, column method, checking subtraction, word problems, subtraction by borrowing, finding the missing digits add or subtract	Constructive, Integrative, collaborative	Worksheet, Hands on activity	Approach meeting exceeding	Smash play doh	Video song on subtraction
FIRST TERM							
October	Measurement	Student will understand measuring length (paper clip) and subtraction of length measuring weight (Clay balls)	Constructive, Collaborative, Integrative	Concept Interesting involvement	Approach meeting exceeding	Make a model of beam balance with waste material, Activity for judge capacity	Video of measurement
	Measurement	Students will understand addition and subtraction of weight, measuring capacity (Cups), addition and subtraction of capacity	Constructive, integrative, Inquiry method	Home assignment and class test	Approach meeting Exceeding	Learn to use of beam balance	video
NOVEMBER	Multiplication	understand station on a number line tables, multiplication, offer two-digit number by one digit number, multiplication of a three-digit number by a one-digit number, carry over multiplication facts, multiplication methods,	Constructive, integrative, Inquiry method	Worksheet	Approach meeting Exceeding	Activity through ice-cream stick, beads Activity	

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DEPARTMENT OF MATHEMATICS

	Division	Students will understand division as a repeated subtraction, relation between multiplication and division, facts concept of remainder	Constructive, integrative, Inquiry method	Worksheet home assignment	Approach meeting Exceeding	Division through story of MP	Animated video on division
DECEMBER	Basic Geometry	Students will understand solid shapes, vertical and horizontal line, tracing shapes, straight and curved line	Constructive Inquiry based integrative	Worksheet	Approach Meeting Exceeding	Draw or make different types of shapes	Video Based on songs on shapes
	Time	Students will understand how to read time calendar and word problem	Constructive Inquiry based integrative	Worksheet	Approach Meeting Exceeding	Draw a clock of chart paper and color it	Video song on time
JANUARY 27	Money	Students will understand that we can pay and get back change using different combinations of rupees and paise.	Constructive Integrative	Worksheet	Approach meeting exceeding	Role play for currency game, Money market	Video on money
FEBRUARY 27	Data handling	Students will understand that we can organize and display data in different way to understand and use the information quickly	Constructive	Make a graph	Approach meeting exceeding	Draw and make table according to given data.	
	Pattern	Students will understand that a pattern can repeat or grow in a way that we can predicts.	Integrative	Worksheet	Approach meeting exceeding	Draw your own pattern with matchstick.	
MARCH 27	FINAL TERM						

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CLASS: III

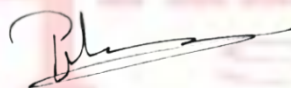
Session – 2026-27

MONTH	CHAPTER	EXPECTED LEARNING OUTCOMES	PEDAGOGICAL APPROACH (TEACHING METHODS/ STRATEGIES)	ASSESSMENT TOOLS	RUBRICS	ART INTEGRATION	ICT INTEGRATION
APRIL	Numbers up to 999	Number Name. Place value and face value. Understand 4-digit number. Ascending and descending order	Constructive, Integrative. Inquiry based	Worksheet	Approach, Meeting, Exceeding	Make abacus using clay.	Animated video on mental problem solving
JULY	Addition and subtraction.	Adding and subtracting by carrying or borrowing	Constructive, Story based	Worksheet	Approach, Meeting, Exceeding	Lady bug game	Animated video on addition
AUGUST	FIRST PERIODIC ASSESSMENT						
	Multiplying	Multiplying 2-digit by 1-digit number	Constructive Inquiry based	Worksheet survey	Approach, Meeting, Exceeding Concept presentation	Multiplying flower	Animated video on multiplying by skip counting
SEPTEMBER	Division	Division of 2-digit by 1-digit number	Constructive	Worksheet Block assessment	Approach, Meeting, Exceeding	Division with kidney beans	
	REVISION FOR MID TERM EXAM						
OCTOBER	MID-TERM EXAMINATION						
	Money	Symbol of Rupee, Conversion of Rupee into paisa and paisa into Rupee	Constructive integrative	Worksheet	Approach, Meeting, Exceeding	Identification of currency	Animated video on multiplication
NOVEMBER	Fraction	Part of whole, as half, one third and one fourth	Constructive, Integrative	Worksheet MCQ	Approach, Meeting, Exceeding	Activity	Animated video
	REVISION FOR SECOND PERIODIC ASSESSMENT						

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DEPARTMENT OF MATHEMATICS

SECOND PERIODIC ASSESSMENT							
DECEMBER	Measurement of length and weight	Understand capacity and conversion	Constructive integrative	Worksheet	Approach, Meeting, Exceeding	Balance model	Animated video
JANUARY 27	Capacity	Understanding concept of capacity	Constructive integrative			Activity using liters	
	Time	Understand, Reading and writing the time, Conversion time to days, hours, minutes and seconds	Constructive, Integrative Inquiry based	Worksheet		Making clock using cardboard	Animated video
FEBRUARY 27	Data Handling	Understand Data By pictograph	Constructive, Integrative Inquiry based	Test	Lab Activity		Animated video
	Pattern	Identify pattern	Constructive, Integrative Inquiry based	Worksheet		Make a neckless using different pattern	Animated Video
REVISION FOR EXAM							
MARCH 27	ANNUAL EXAMINATION						

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DEPARTMENT OF MATHEMATICS

CLASS: IV

Session – 2026-27

MONTH	CHAPTER	EXPECTED LEARNING OUTCOMES	PEDAGOGICAL APPROACH (TEACHING METHODS/ STRATEGIES)	ASSESSMENT TOOLS	RUBRICS	ART INTEGRATION	ICT INTEGRATION
APRIL	Numbers upto 9,99,999	Write the place value, face value of 5-digit numbers. Write in expanded form. Compare 5-digit numbers using symbols. Arrange 5-digit numbers in ascending and descending order. Write Roman to Hindu Arabic and Hindu Arabic to Roman Numbers	Constructive and Inquiry based	Worksheet	Approaching Meeting, Exceeding	Place value mystery number	Video
JULY	Addition	Adding by the column method with carrying over.	Story Drill and practice	Class test	Approaching Meeting, Exceeding	Prepare bill	Animated video
	Subtraction	Understanding subtraction of 5-digit and 6-digits number	Constructive, Integrative and Inquiry based	Lab activity	Analysis, accuracy, presentation Creativity Performance,	Subtraction wheel	Video
	REVISION FOR FIRST PERIODIC ASSESSMENT						

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FIRST PERIODIC ASSESSMENT							
AUGUST	Multiplication	Multiplying 3-digit by 2-digit numbers.	Constructive, Integrative and Inquiry based	Worksheet	Approach Meeting Exceeding	Role and multiply	Animated Video
SEPTEMBER	Dividing by 3-digit numbers by 1-digit	Divide 3-digit by 1-digit numbers.	Constructive, Integrative and Inquiry based	Quiz	Approach Meeting Exceeding	Division wheel	Animated video
	Revision FOR MID TERM EXAMS						
MID TERM EXAM							
OCTOBER	Multiple and factors	Factor tree, LCM and HCF using prime factor	Constructive, Integrative and Inquiry based	Worksheet	Analysis Approach Meeting Exceeding	Venn diagram	
NOVEMBER	Data Handling	Understanding data using pictograph and bar graph	Constructive, Integrative and Inquiry based			Making pictograph by using shape	video
	Time	Reading and writing time through clock. Conversion of Time	Constructive, Integrative and Inquiry based	Lab activity	Research Analysis Presentation	Make a clock using waste material	
Revision FOR SECOND PERIODIC ASSESSEMNT							
SECOND PERIODIC ASSESSEMNT							
DECEMBER	Fraction	Convert mixed to improper and improper to mixed fraction, Addition and Subtraction of fraction.	Constructive, Integrative and Inquiry based		Research Analysis Presentation	Class room activity	Animated video
JANUARY 27	Measurement of length, Mass and capacity.	Convert bigger to smaller and smaller to bigger unit.	Constructive, Integrative and Inquiry based	Work sheet	Analysis Approach Meeting	Class room activity	Video
	Money	Convert rupees into paise and paise into rupees	Constructive, Integrative and Inquiry based		Analysis	Prepare a bill of any 5 fruits	

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DEPARTMENT OF MATHEMATICS

					Approach Meeting	purchased from the market.	
FEBRUARY 27	Pattern	Understanding the pattern, Interpret relationship	Inquiry based	Lab Activity Story			
	Geometrical shapes.	Understand 2-D and 3-D shapes	Constructive, Integrative and Inquiry based	Work sheet	Analysis Approach Meeting Exceeding	Make a robot by using shape	
MARCH 27	Annual Examination						

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[ANJU SHARMA]



CLASS: V

HAPPY DAYS SCHOOL, SHIVPURI (M.P.)
DEPARTMENT OF MATHEMATICS
Session – 2026-27

MONTH	CHAPTER	EXPECTED LEARNING OUTCOMES	PEDAGOGICAL APPROACH (TEACHING METHODS/ STRATEGIES)	ASSESSMENT TOOLS	RUBRICS	ART INTEGRATION	ICT INTEGRATION	
APRIL	Large Numbers	Represent 7digit numbers in the Indian and International system. Write in words, figures, Predecessor and successor of 7- and 8-digit numbers, Write Roman to Hindu Arabic and Hindu Arabic to Roman Numbers.	Constructive and Inquiry based	Home assignment	Performance, Accuracy	Lab activity Use different colures to circle the numbers in the number grid		
JULY	Operations on large numbers	Understanding operations on large numbers.	Constructive, Integrative and Inquiry based	Class test Mental math's Lab activity	Performance, Accuracy Analysis, accuracy		Animated video	
	Factors and Multiples	Understand Factors and Multiples	Constructive, Integrative and Inquiry based		Research Analysis Presentation		Animated Video	
	REVISION FOR FIRST PERIODIC ASSESSMENT							
AUGUST	FIRST PERIODIC ASSESSMENT							
	Fractions	Addition and Subtraction of fraction with unlike denominators. Multiplication of fractional numbers.	Constructive, Integrative and Inquiry based	Worksheet	Approach Meeting Exceeding	Fractions face(emoji)	PPT	
SEPTEMBER	Decimals	Represent the tenth and hundredth of a decimal number. Identify the place of the digits in a decimal number up to the thousandths and expanded	Constructive, Integrative and Inquiry based		Approach Meeting Exceeding	Collage(shoping key)	Animated video	
	REVISION FOR MID TERM EXAMS							

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DEPARTMENT OF MATHEMATICS

MID-TERM EXAM							
OCTOBER	Time	Convert minutes to second and second to minute. Elapsed time.	Constructive, Integrative and Inquiry based		accuracy, presentation		Animated video
	Measurement of length, mass and capacity	Convert bigger to the smaller unit and smaller to the bigger unit.	Constructive, Integrative and Inquiry based.	Lab Activity	Accuracy		Animated Video
NOVEMBER	Money	Making bills, Making expense list, profit and loss.	Constructive, Integrative and Inquiry based.	Story	Creativity Research Analysis		Role play
	REVISION FOR SECOND PERIODIC ASSESSMENT						
SECOND PERIODIC ASSESSMENT							
DECEMBER	Perimeter and Area	Find the area and perimeter of regular and irregular shapes	Constructive, Integrative and Inquiry based.	Lab activity	Creativity Research Analysis		Role play
	Temperature	Conversion of temperature	Constructive, Integrative and Inquiry based.	Story	Accuracy		Animated Video
JANUARY 27	Measurement of Volume	Find Volume by counting Cubes	Constructive, Integrative and Inquiry based.		Creativity Research Analysis		Animated Video
	Geometrical shapes	Learn to draw different types of angles and triangles.	Constructive, Integrative and Inquiry based		Research Analysis Presentation	Make different types of angles	Animated Video
February 27	Data Handling	Learn to read pictograph and bar graph, Draw bar graph	Constructive, Integrative and Inquiry based		Research Analysis Presentation		Animated Video
MARCH 27	ANNUAL EXAMINATION						

CLASS: VI

HAPPY DAYS SCHOOL, SHIVPURI (M.P.)
DEPARTMENT OF MATHEMATICS
Session – 2026-27

MONTH	CHAPTER	EXPECTED LEARNING OUTCOMES	PEDAGOGICAL APPROACH (TEACHING METHODS/ STRATEGIES)	ASSESSMENT TOOLS	RUBRICS	ART INTEGRATION	ICT INTEGRATION	
APRIL	Patterns in Mathematics	Patterns in Numbers and Pattern in Shapes, Relation among numbers Visualizing number and shape sequences.	Constructive, Integrative and Inquiry based	class test Activity worksheet Activity chart	Performance, creativity and accuracy	Pictorial representation of number and shape sequences	Animated videos (story of numbers)	
	Number Play	Super cells, Patterns on number line, Palindrome, Magic number of Kaprekar Collatz conjecture	Constructive, Integrative Inquiry based	Worksheet Activity class test	Performance, creativity and accuracy	Number Game (Games and winning strategies)	Videos on kaprekar and collatz conjecture numbers	
JULY	Lines and Angles	Point Line, Ray, Line segment, Angles and its types, Measurement and Comparison	Constructive, Integrative Collaborative Reflective	Worksheet, Class test Activity	Accuracy, Performance	Paper folding Draw angles in the given grid	Video on lines and angles	
	First Periodic Assessment							
AUGUST	First Periodic Assessment							
	Prime time	Prime numbers ,co-prime numbers,Factors and multiples,HCF,LCM, Prime Factorization, Divisibility test	Constructive, Integrative Inquiry based	Worksheet classtest Activity	Performance accuracy	Fun with numbers (Puzzle)	Video on Factors and Multiples	
SEPTEMBER	Fractions	Fractions, Fraction on number line, types of fractions, measuring using fractional units, comparing fractions, marking fraction lengths on number line, mixed	Constructive, Integrative and Inquiry based	Worksheet class test Activity	Creativity, Performance, Accuracy	Paper art, fraction disc (let's speak)	Video on types of fractions	

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DEPARTMENT OF MATHEMATICS

		and equivalent fractions, addition and subtraction of fractions.					
MID TERM EXAM							
Mid Term Exam							
OCTOBER	Perimeter and Area	Perimeter, Perimeter of irregular and regular polygons, area of regular shapes.	Constructive, Integrative Inquiry based Collaborative	Class test worksheet Activity	Creativity, Performance, Accuracy	Cut out the tangram pieces and find out the area of shapes	Animated video
NOVEMBER	Data handling and presentation	Introduction of data, arrangement of data in tabular form, interpretation and drawing of pictograph, Bar Graph	Constructive, Integrative Inquiry based	Worksheet Activity chart class test	Content Research Analysis	Presentation Chart making	Video on Pictograph
	Revision for Second Periodic Assessment		Drill and Practice	Class test (for revision)			
Second periodic assessment							
JANUARY 27	Playing with constructions	Construction of Square and Rectangle: diagonals, construction of circles: points equidistant from two given points	constructive, Integrative Inquiry based Reflective	Hands on activity worksheet class test	Creativity, Accuracy	Drawing rangoli including shapes	Animated Video
FEBRUARY 27	The other side of Zero	Integers, Comparing integers, addition and subtraction through number line, Token model, integers in terms of credits and debits	constructive, Integrative Inquiry based Reflective	Worksheet class test Activity chart	Creativity accuracy, debit and credit sheet	Hollow integer grid	videos

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MARCH 27

ANNUAL EXAM

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DEPARTMENT OF MATHEMATICS

CLASS: VII

Session – 2026-27

MONTH	CHAPTER	EXPECTED LEARNING OUTCOMES	PEDAGOGICAL APPROACH (TEACHING METHODS/ STRATEGIES)	ASSESSMENT TOOLS	RUBRICS	ART INTEGRATION	ICT INTEGRATION
APRIL	A peak beyond the point	Understanding fractions and decimals along with their operations	Constructive, Integrative Inquiry based	Class test	Creativity, Performance, accuracy, presentation	Fraction story (Role play) on Manipur/ Nagaland	
JULY	Working with fractions	Multiplication and division of fractions	Constructive, Integrative Inquiry based	Class test	creativity, concentration presentation		Online module
	Parallel and intersecting lines	Understanding the concept of geometry, Differentiation between parallel and intersecting lines and angles forming between them	Constructive, Integrative Inquiry based	Home assignment	Research Analysis, accuracy, presentation	Using sticks explain different angles	Animated video, geo-gebra
	REVISION FOR FIRST PERIODIC ASSESSMENT						
AUGUST	FIRST PERIODIC ASSESSMENT						
	A tale of three intersecting lines	Understanding the concept of triangles, Types of triangles and their properties along with their onstruction	Constructive, Integrative Inquiry based	Lab activity	Creativity Performance, accuracy, presentation	Drawing and scketing	Animate d video
	Expressions using letters	Terms (like and unlike), coefficient and constants Types of expressions, Addition and subtraction of algebraic expressions	Constructive, Integrative Inquiry based	Work sheet	Concept map	Perform ance, creativit y	Animate d video

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DEPARTMENT OF MATHEMATICS

SEPTEMBER	Large Numbers around us	National and International number name and operations between them.	Constructive, Integrative Inquiry based, research based	Home assignment	Research Analysis, accuracy, presentation	Place value chart of National and International number system	Module and case study on MP, Nagaland/ Manipur	
	Arithmetic expression	Solving the multiple operations between the numbers using BODMAS	Constructive Integrative Inquiry based	Home assignment	Creativity Research Analysis Presentation	Number game	Animated video	
	REVISION FOR MID TERM EXAMS							
OCTOBER (Vol-II)	MID TERM EXAMS							
	Number Play	Finding patterns in numbers, solving magic square	Constructive Integrative Inquiry based	Home assignment	Research Analysis Presentation	Forming and solving magic square	Online module	
	Operations with Integers	Performing addition, subtraction, multiplication and division of integers	Experiential and Activity Based Learning	Class Test, Oral Quiz	Accuracy, Logical Thinking	Integer card game	Online module and PPT	
NOVEMBER	Geometric Twins	Understanding congruent figures and geometrical relationships between shapes	Constructive , Integrative, Inquiry Based Learning	Worksheet,	Creativity, Accuracy, Presentation	Paper folding and shape drawing	GeoGebra and animated videos	
	Finding Common Ground	Understanding factors, multiples, HCF and LCM	Constructive and Research Based Learning	Worksheet, Home Assignment	Research Analysis, Accuracy	Prime factorization tree	Interactive online exercises	
DECEMBER	REVISION FOR SECOND PERIODIC ASSESSMENT							

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DEPARTMENT OF MATHEMATICS

SECOND PERIODIC ASSESSMENT							
	Connecting the Dots	Understanding coordinate geometry and plotting points	Activity Based and Experiential Learning	Lab Activity, Worksheet	Creativity, Participation	Coordinate graph drawing	GeoGebra and graphing software
	Finding the Unknown	Solving simple equations and algebraic problems	Constructive and Inquiry Based Learning	Class Test, Worksheet	Logical Thinking, Accuracy	Balance method activity	Interactive equation solving module
JANUARY 27	Another Peek Beyond the Point	Understanding advanced decimal operations and applications	Inquiry Based and Integrative Learning	Class Test	Presentation, Accuracy	Decimal grid colouring activity	Animated videos and smart board
	Constructions and Tiling	Understanding geometrical constructions and tiling patterns	Constructive and Demonstration Based Learning	Practical Activity	Precision, Creativity	Tile pattern making	Animated construction videos
FEBRUARY 27	Revision for ANNUAL EXAM						
MARCH 27	ANNUAL EXAMS						

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[ANJU SHARMA]

HAPPY DAYS SCHOOL, SHIVPURI (M.P.)
DEPARTMENT OF MATHEMATICS

CLASS: VIII

Session – 2026-27

MONTH	CHAPTER	EXPECTED LEARNING OUTCOMES	PEDAGOGICAL APPROACH (TEACHING METHODS/ STRATEGIES)	ASSESSMENT TOOLS	RUBRICS	ART INTEGRATION	ICT INTEGRATION
APRIL	A Square and a cube	Students will be able to understand square numbers, square roots cubic numbers, cube roots and all their related patterns and properties, Taxicab number.	Constructive Integrative	Square maze game/ activity Oral quiz, Homework, Worksheet	Application in problems	Draw pattern through dots, short tricks to find square and square roots	Locker story of Square, Online module
JULY	Power Play	Understanding powers and exponents ,Exponential notations and operations ,Negative exponent ,power lines, Linear and exponential growth, Standard form of large numbers(Scientific notation), A pinch of history.	Collaboration problem solving ,Guided discovery	Power line activity, concept map	Knowledge of laws, accuracy in simplification Logical steps	Colorful power line	Interactive video on exponential growth. laws
	Quadrilaterals	Understanding Quadrilaterals, Angle sum property, Types and properties of quadrilaterals, Properties of special quadrilaterals, Construction of quadrilaterals , Diagonal concept of quadrilaterals	Constructive Integrative Inquiry based ,Real life applications	Lab activity , Class test	Relevance Sequencing Creativity Presentation	Geoboard activity, paper folding activity	Carpenter Problem story.
	A story of numbers	Properties of different number system, Numerals, Landmark numbers, Base -n	Storytelling , Inquiry based learning , Experiential tasks	Project on number history	Creativity in presentation ,Relevance of examples	Timeline poster of Mathematicians	Story of history of number system,

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		number system, positional number system, Place value representation in Mesopotamian (Babylonian), Mayan, Chinese and Indian, Hindu- Arabic number system.					Interactive quiz.
First periodic assessment							
AUGUST	Number play	Exploring number patterns, Properties, parity and logical reasoning of numbers , parity(even/odd), Algebraic expression parity ,Divisibility rules, Cryptarithms, Consecutive numbers, Palindromic numbers, Magic squares.	Constructive Integrative Inquiry based Real life simulation	Class test, Worksheet	Timing Performance Accuracy	Navakankari Traditional Indian board game	Explanation of divisibility through Algebra with visualisation
SEPTEMBER	We distribute yet things multiply	Different patterns , and Explored them using Algebra, Distributive Property, Algebraic identities , and the Expansion of algebraic expressions ,Fast calculation technique, Simplifying expression Variables constants and operations on algebraic expressions	Manipulative based learning	Activity, Class test	Simplification ,application to context different patterns and Accuracy Performance creativity	Algebra tile model ,Coin conjoin puzzle game	Smartboard algebra tiles simulation

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	Proportional Reasoning - 1	Understand ratio and proportion ,simplest form of ratio ,problem solving with proportional reasoning , Trairasika - The rule of three , Unit conversions	Experiential learning, Problem solving		Scale drawing	Binairo puzzle game of square grid(Takujzu)	Ratio modelling
	Revision for MID TERM EXAMS			Worksheet, Drill and practice			
	Mid- Term Exam						
OCTOBER	Fraction in disguise	Fractions as a percentage, Expressing ,Real life Examples of fraction , The FDP trio ,Percentage increase or decrease, Profit and loss ,Taxes, Growth and compounding , Decline(Depriciation)	Activity based fraction games, Integrative Inquiry based	Worksheet and quiz	Knowledge of operations Calculation Accuracy in simplification	Fraction art collage	Online module
	The Baudhayana – Pythagoras theorems	State and prove theorem, Apply to right triangles,, Solve contextual problems	Proof, Construction tasks	Constructions task, Class test	Application in program, Diagram neatness	Paper folding right triangle activity	Geogebra Proof demonstration,
NOVEMBER	Proportional reasoning -2	Extend ratio proportion concepts, Apply to advanced concepts, Solve real life application problems , pie chart, Inverse proportions, Divide whole in given ratio	Collaborative modelling Integrative Inquiry based	Home assignment, Neatness in drawing pie chart	Accuracy Creativity Performance	Case study on inverse proportion	Interactive classroom quiz

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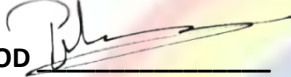
	Revision second periodic assessment			Worksheet, Drill and practice			
DECEMBER	Second periodic assessment						
	Tales by dots and lines	Data organization (Balancing act-Mean, Mode ,Median) Data visualization and Interpretation , (Line graph ,Bar graph, Infographics),Concept of Probability(chance)	Constructive Integrative Inquiry based	Home assignment ,class test	Accuracy Presentation	Game of Hex,	Video on data analysis
JANUARY 27	Algebra play	Simplify expressions; solve linear equations; apply algebra to contextual problems, Distributive property, Identities,Number Pyramids, Calendar magic, Algebra grids	Constructive, Integrative, Inquiry based	Home assignment	Calculation accuracy	Create own calendar trick Choosing grid of different size and shape	
	Area	Fundamental geometric concept, Focusing on measuring and calculating, Area of 2-D shapes(Triangle, parallelogram, Rhombus, different polygons),Area in real life, Mid point theorem Triangles between parallel lines with a common base	Constructive Integrative Inquiry based	Home assignment	Drawing accuracy	Trace and identify the figure and explain. Rangoli art form activity	
FEBRUARY 27	Revision for ANNUAL EXAMS		Drill and practice			Activity	

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MARCH 27

ANNUAL EXAMS

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Education to Change Lives...

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DEPARTMENT OF MATHEMATICS

CLASS: IX

Session 2026-27

MONTH	CHAPTER	EXPECTED LEARNING OUTCOMES	PEDAGOGICAL APPROACH (TEACHING METHODS/ STRATEGIES)	ASSESSMENT TOOLS	RUBRICS	ART INTEGRATION	ICT INTEGRATION
APRIL	Coordinate Geometry	Specify locations and the position of one point relative to another point. Compute the distance between two points. Determine collinearity, midpoint, check whether a triangle is right angled using coordinates. Apply computational thinking to model situations on coordinate plane.	Constructivist Inductive-Deductive Activity-Based Learning Practice-oriented	Activity (locating position in the class to make collinear points, a triangle or quadrilateral)	Relevance to content Precision Neatness Presentation	Plotting of coordinate on Graph	Animated Video of plotting coordinate
	Introduction of Polynomial	Understand the meaning of an algebraic expression. Define a polynomial, Identify the degree, terms and coefficients of terms, linear growth and decay, Graph a linear equation in two variables. Use computational thinking to identify patterns, construct linear expressions,	Constructivist Inductive Progressive Practice-oriented	Activity (algebra tiles) Class Test	Relevance Sequencing Creativity	Graph of linear polynomial	Animated Video
JULY	Algebraic Identities	Visualize algebraic identities using geometric models. Determine the factors of algebraic expressions using identities.	Constructivist Inductive-Deductive Step-by-Step Learning	Activity (Find the Mistake in algebraic identities)	Relevant Accuracy	Verification of algebraic identities	Animated Video
	Number System	Understand the concept of a rational number, number line. properties of rational numbers. Finding rational and irrational numbers between any two numbers. Prove the irrationality. Construct the square root spiral.	Constructivist Inductive Experiential Learning Activity-Based Learning	Activity (Decimal Expansion- Understand terminating and non-	Approach Performance Accuracy	Draw a square root spiral	Animated Video on Square Root Spiral

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		Apply computational thinking to represent rational and irrational.		terminating decimals)			
	Introduction to Probability	Understand the concept of probability and randomness. empirical probability, Define theoretical probability. Compute probability of events with the help of tree diagrams and tables. Use computational thinking strategies	Constructivist Collaborative Experiential Learning Activity-Based Learning	Activity (Card Picking - connected to reallife) Class Test	Concept Presentation	Rangoli Design (Outcomes & Probability)	Animated Video of Outcomes of throwing coin and dice
FIRST PERIODIC ASSESSMENT							
	Introduction to Euclid's Geometry: Axioms and Postulates	Describe History of geometry and how geometry grew from the practical needs ancient civilizations. role of definitions, axioms, and postulates. Explain the construction of a square as given in the Baudhayana's Sulbasutras.	Constructive Integrative Inquiry-Based Learning	Activity (Drawing one straight line joining two points) Class Test	Approach, Performance Accuracy	Geometry Mandala Art design (Using only Points, lines, circles)	Animated Video
AUGUST	Sequences and Progressions	Understand the concept of a sequence of numbers. Identify the pattern, Identify Arithmetic Progressions (AP). Determine nth term of an AP, sum of nth term of an AP, Identify Geometric Progressions (GP). Solve the Tower of Hanoi puzzle. Use computational thinking to identify patterns,	Constructivist Logical and Conceptual Inquiry-Based Learning Activity-Based Learning	Activity (AP Stair Pattern Design) Class Test	Relevance Analysis Accuracy	Making stair in 3D colourful pattern design	Animated Video to find sum of n natural numbers
	Linear Equations in Two Variables	Understand the concept of a linear equation in two variables. Graph a pair of linear equations and their solution graphically and through the methods of substitution and elimination. Use computational	Constructivist Interactive Collaborative	Activity (Distance and Time Journey Map - To	Accuracy Concept Presentation	Making Railway Ticket Fare Chart (Real-Life Application)	Animated Video to making graph

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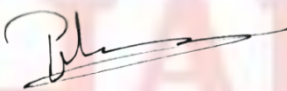
		thinking to systematically represent,	Visual and Conceptual Activity-Based Learning	connect with real life) Class Test			
SEPTEMBER	Mensuration (Area and Perimeter)	Define perimeter as the length around the boundary of any shape. Compute the circumference (Perimeter) of a circle and the length of an arc, List historical approximations to π . Use Heron's formula to compute the area of a triangle. State Brahmagupta's Use computational thinking to break down shapes,	Constructivist Inductive Experiential Visual and Conceptual Practice-Based Learning	Activity (Shape Comparison Game - Compare perimeter and area of different shapes) Class Test	Relevant Contents Performance	My Dream House Drawing (Art + Real-Life Application)	Animated Video to find difference between Perimeter and Area
	Lines and Angles	Explain the notion of an angle and a ray. Classify angles as acute, right, obtuse, zero and reflex. Explain angle sum property and why a triangle must have at least two acute angles. Apply computational thinking to analyse geometric ideas by breaking constructions	Constructivist Collaborative Concrete to Abstract Visual and Conceptual Activity-Based Learning	Activity (Architecture Angle Hunt - To connect with real structures) Class Test	Performance Accuracy	Creative Architecture Poster (Art and Design Thinking)	Animated Video to make different type of lines and angles
MID TERM EXAM							
OCTOBER	Triangles (Congruence Theorems)	Explain that a triangle is rigid, Describe what it means for two triangles to be congruent. Identify correspondence between the vertices, sides, and angles of two congruent triangles using SSS, SAS, ASA, AAS and RHS congruence axiom. Justify the role of diagram accuracy.	Constructivist Collaborative Concrete to Abstract Visual and Conceptual Activity-Based Learning	Activity (Verification of Angle Sum Property of a Triangle) Class Test	Draw set of congruent triangles	To verify angle sum property using paper folding art technique	Animated Video to compare different type of triangles

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DEPARTMENT OF MATHEMATICS

NOVEMBER	4-Gons (Quadrilaterals)	Frame a precise definition of a 4-gon. Prove various characterisations of a parallelogram, midpoint theorem, converse of the midpoint theorem, medians of a triangle are concurrent and each median is divided in the ratio 2:1 at the point of concurrence, 4-gon formed by joining the midpoints of a given 4-gon is a parallelogram.	Constructivist Collaborative Concrete to Abstract Visual and Conceptual Activity-Based Learning	Activity (Making Chart of Exploring Properties of Quadrilaterals) Class Test	Relevant concept Performance	Make a "Geometry Poster" shapes in real-life like window, kite, table, road sign	Animated Video to know different property of quadrilateral
	SECOND PERIODIC ASSESSMENT						
DECEMBER	Circles	State the definition of a circle, chord, diameter, radius, arc, segment and sector, Prove theorems based on circle. Explain how circular wheels have influenced transport, farming, building, and technology and Identify cultural motifs involving circles like the Dharmachakra, Ashoka Chakra, Sudarshan Chakra. Use computational thinking to break down circle	Constructivist Collaborative Concrete to Abstract Visual and Conceptual Activity-Based Learning	Activity (Find π Experiment) Class Test	Analysis Performance Involvement	Create a " π Wall" poster with different circles	Animated Video to know different between sector and segment
	Mensuration (Surface Area and Volume)	Recognise cones in daily life, a pyramid, and identify its base and apex and compute the surface area and volume of a pyramid. Recognise spheres in real-life situations and compute the surface area and volume of a sphere. Use computational thinking to systematically calculate, and	Concrete to Abstract Visual and Conceptual Inquiry-Based Learning Activity-Based Learning Real-Life Applications	Activity (Water Filling Experiment) Class Test	Concept Presentation	Draw colourful diagrams of containers on chart paper and Show water levels parts (height, radius, length, breadth)	Animated Video to compare of cone and sphere

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DEPARTMENT OF MATHEMATICS

		compare surface areas and volumes of 3-D shapes				using colour shading	
JANUARY 27	Statistics	Collect, organise, visualise and interpret data to answer a statistical investigative question. Compute and apply weighted average in different settings. Apply computational thinking strategies to analyse real-life data.	Concrete to Abstract Visual and Conceptual Inquiry-Based Learning Activity-Based Learning Real-Life Applications	Activity (Classroom Survey Chart – Real life data and creative presentation) Class Test	Concept Neatness presentation	Make colourful Frequency Table and a Bar Graph to represent classroom survey chart	Animated Video to make bar graph and histogram
FEBRUARY 27	ANNUAL EXAMINATION						

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HAPPY DAYS SCHOOL, SHIVPURI (M.P.)
DEPARTMENT OF MATHEMATICS

CLASS: X

Session 2026-27

MONTH	CHAPTER	EXPECTED LEARNING OUTCOMES	PEDAGOGICAL APPROACH (TEACHING METHODS/ STRATEGIES)	ASSESSMENT TOOLS	RUBRICS	ART INTEGRATION	ICT INTEGRATION
APRIL	Real Number	Students will be able to understand the set of all real numbers and their properties, apply Fundamental Theorem of Arithmetic to solve problems related to real life contexts including LCM and HCF, prove irrationality of numbers such as $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$.	Constructivist approach Inquiry based learning Think–Pair–Share	Concept Mapping Class Test Activity Worksheet	Knowledge Application Creativity Accuracy Relevance	Diagrammatic representation of factor trees	Animated Video
	Polynomial	Students will be able to develop a relationship between algebraic and graphical methods of finding the zeroes of a Polynomial and verify the relation between zeros and coefficients of quadratic polynomials.	Constructive Reflective Inquiry based	Class Test Activity Worksheet	Application Creativity Accuracy	Graphical representation of quadratic polynomials	Graphical analysis of polynomials using Desmos
	Pair of Linear Equations in Two Variables	Students will be able to plot and solve a pair of linear equations graphically, solve them algebraically by substitution and elimination methods, analyse consistency/inconsistency, model contextual problems.	Constructive Visual Reflective Activity based	Class Test Activity Worksheet	Relevance Analysis Presentation Accuracy	Graphical Representation of linear equations	Animated Video
JULY	Quadratic Equations	Students will be able to solve quadratic equations using	Constructive Reflective Inquiry based	Class Test Activity Worksheet	Application Interpretation	Story of Sridharacharya	Quadratic Equation Song

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		factorization and quadratic formula, find their roots and determines their nature using discriminant; formulates and solves problems based on real life context					
	Arithmetic Progression	Students will be able to apply concepts of AP to find the n^{th} term and sum of n terms and in solving real life problems.	Discovery method Reflective	Class Test Activity Worksheet	Pattern Recognition Computatio n	Matchstick patterns (Build 3D structures or 2D patterns)	Animated Video
	FIRST PERIODIC ASSESSMENT						
AUGUST	Triangle	Students will be able to differentiate between congruent and similar figures, Prove Basic Proportionality theorem and applying the theorem and its converse in solving questions; prove similarity of triangles using different similarity criteria	Deductive Reasoning	Class Test Activity Worksheet Viva (Theorems recitation)	Logical Consistency Critiquing	"Scale Model" poster (similarity poster)	Animated Video
	Introduction to Trigonometry	Students will be able to evaluate trigonometric ratios, describes them for standard angles and solving related expressions, proves trigonometric identities	Drill and Practice	Class Test Activity Worksheet	Fluency Identity application	Table of Trigonometri c Ratios	Animated Video
SEPTEMBER	Some Applications of Trigonometry	Students will be able to find heights and distances in real life word problems using trigonometric ratios	Project-Based Learning	Class Test Activity Worksheet	Visualization Execution	Making a handmade Clinometer	Animated Video

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	Coordinate geometry	Students will be able to apply concepts of coordinate geometry to derive distance formula and section formula, and apply them in solving problems related to geometric contexts.	Contextualized Learning	Class Test Activity Worksheet	Formula application Accuracy	Floor-plan mapping using coordinates	GeoGebra coordinate tools, Google Maps integration.
	MID TERM EXAM						
OCTOBER	Statistics	Students will be able to calculate Mean, Median & Mode for different sets of data related with real life contexts	Data Analytics	Class Test Activity Worksheet	Data Organization Accuracy	Infographic Data Wall	Animated Video
	Probability	Students will be able to apply concepts from probability to solve problems on the likelihood of everyday events.	Experiential Games Puzzles	Class Test Activity Worksheet	Sample space Mapping Prediction	Probability Tree Murals	Animated Video
NOVEMBER	Circles	Students will be able to derive proof of theorems related to the tangents of circles and apply its concept to solve various problems	Hands-On Geometry	Class Test Activity Worksheet	Relevance Analysis Accuracy	Cultural Motifs	Animated Video
	Areas related to circles	Students will be able to evaluate areas of sector and segment of a circle	Visual Discovery	Class Test Activity Worksheet	Conceptual Depth Accuracy	Pizza Sector Art	Video on circular tracks
DECEMBER	FIRST PRE-BOARD EXAM						

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DEPARTMENT OF MATHEMATICS

	Surface Area & Volume	Students will be able to visualise and use mathematical thinking to discover formulae to calculate surface areas and volumes of solid objects (cubes, cuboids, spheres, hemispheres, right circular cylinders/cones, and their combinations)	3D Modeling	Class Test Activity Worksheet	3D Representation Volume Estimation	Model- Building Task	
SECOND PRE BOARD EXAM							
JANUARY 27	Revision	Students will be able to consolidate all concepts and formulas	Formula charts quick tricks doubt-clearing sessions	Weekly mock tests Sample papers	Time management accuracy presentation	formula posters	ICT-based revision apps
FEBRUARY 27	Revision	Students will be able to practice full-length papers under exam conditions	Timed practice marking scheme analysis	sample papers previous year papers	Stepwise solutions neatness logical flow		ICT exam simulations digital timer practice
BOARD EXAMINATION							
MARCH 27							

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