NAVY CHILDREN SCHOOL – AY 2024-25
SPLIT UP SYLLABUS

CLASS IV **SUBJECT : MATHEMATICS** **NUMBER OF CHAPTERS : 14**

MONTH	CHAPTERS AND NUMBER OF PERIODS	COMPETENCY	LEARNING OUTCOME	SUGGESTED ACTIVITIES	TLM	ASSIGNMENT
April/ May	**1. Building with bricks (14 Periods)**	Concepts • Shapes and Spatial understanding • Drawing of patterns of wall, floor, jharokas and jaalies. • Introduction of basic concept of arch • Number and operations- up to one lakh (place value chart) • Knowledge of price and quantity of different things. Tessellation (Tiling)	• To know the difference between 2D and 3D shapes • Able to understand different patterns of wall, floor and jaalies. • Write number names and numerals. • Understands Indian and International place value chart (up to lakh) • Able to write greatest and smallest number using the given digits. • Able to solve simple word problems. • Able to understand the relation between Price and Quantity. Pattern designing	• Explore some more 2D and 3D shapes/objects related to daily life and compare them on the basis of 1. Edges 2. Corners 3. Faces 4. Length, breadth and height. • Make models of cube and cuboid. • Make a jaali pattern in a wall. • Make a floor pattern in a circle. • Visit to bridges, religious worship places, historical monuments etc.	Inter lock cubes, and charts. • Bricks. • Chart papers, colour papers, glue and clay	• Worksheet based on – 1) Indian and International place values 2) Forming greatest and smallest number. Word problems

				to show the different types of arches. • Solves problems in real life context. • Visit to the nearest shop and make a list of different things with their prices. • Paste coloured pieces of shapes and form patterns of choice		
	2. Long and Short (12 Periods)	• Understand the basic concept of measuring length. • Estimation and comparisons of length of various figures and things • Ability to compute the distance, tallest /shortest member in your group, guessing the approx. height. • Conversion of	• Recognize the • Compare length using an improvised standard unit or metric system. • Identify long length are measured in (m) and short lengths are measured in (mm) and (cm) and distance through (km), able to calculate	• Find the shortest and tallest from the class. • Find the length of Math text book, desk, and teacher's table. • Measuring table, desk and chairs in the class room.	• Measuring tape • Scale. Group activity charts, paints.	• Worksheet based on metric measures of length. • Make them to collect information about • Who is tallest in your family? Who is shortest in your family?

		metre to kilometre and kilometre to metre • Analyzing and differentiating things as long or short. • Calculating the height of different people.	dm, dam, hm, etc. • Able to measure longer and shorter distances using the tape or scale. • Able to convert small unit of length into bigger unit and vice versa	• Measure the racing track in your school		
			ASSESSMENT-1			
June	**3. A Trip to Bhopal (13 Periods)**	**NUMBER OPERATIONS (+, -, x,÷)** • Add and subtract 3- or 4- digit numbers. • Multiply and divide 2- or 3-digit numbers by 1- or 2-digit number • Smallest and Greatest 3/4/5-digit numbers Number puzzle • Apply four basic number operations (+,-,x, ÷) to life situations **Mental arithmetic:** • Add, subtract &	• Understands the properties of addition, subtraction, multiplication, division. • Identifies greatest and smallest number from the given numbers. • Solves Number puzzles • Solves basic problems related to everyday life based on numbers. • Frames word problems. • To Compare	• The students will be given different situations to add and subtract hours and minutes mentally. • Children can be asked to solve many more similar questions or puzzles, both orally and in writing. • Plotting different places in map • Using duplicate	• Map of India showing states and districts. • Abacus, flash cards of numbers and duplicate money	Worksheet based on 4 operations and money.

		multiply • Multiples of 10 & 100 .	the numbers and Solve addition/ subtraction/ multiplication sums mentally involving multiples of 10 & 100 • To estimate sum, difference, product of given numbers.	money playing games by arranging a field trip.		
July	**4. Tick, Tick, Tick. (13 Periods)**	• Time • Different ways to measure time • Introduction of Calendar • Introduction of Clock • Addition and Subtraction of time • Introduction of 12 hrs. clock • Introduction of 24 hrs. clock. • Find approximate and elapsed time	• Importance of time • knowledge about Different ways to measure time • Learners would appreciate the use of calendar and different format of date • Calculate hours/minutes using given two dates • Addition and subtraction • Concept of AM & PM • Difference between	• Make a clock and draw the hands • Make your daily routine time table. • List the activities done in 5 minutes, less than 1 hour, more than 1 hour. • Making of calendar and mark Sundays and any special day comes in the month • Draw hand of watch for the given time. • Growth of plant or life span • Observe the	• Clock • Old calendar • Chart and sketch • Used wrappers or boxes of food items and medicine	Worksheets based on finding AM and PM, converting 12 hours to 24 hours, converting hours to minutes, minutes to seconds and solving word problems

			normal watch and a 24 hrs. clock. • Understanding the manufacture and expiry dates on edibles, medicines, etc.	calender and write the sunrise/sunset. • Calculate day span		
Assessment I						
August	**5.The way the world looks (9 Periods) (Activity based)**	• .Front, side & top view of different object • Route map & Directions • Shapes of cubes and cuboids	• To able to understand concepts of different views of objects from your surroundings. • Visualization of objects from different angles. • To able to mark the directions on route maps. • To get an intuitive idea of map. • Understands the four directions and is able to locate the given area in the map. • Understands the directions related to one's position • Make shapes of cube and cuboids using nets	• Make shapes of cube and cuboid using nets • Draw a map on the floor and ask the children to stand on the map and locate different things and places • Draw any picture like bowl, chair, etc. and draw top, side and front views of different objects. • By showing route map from any place. • Read a map of your school or city and write precise directions to reach different places	• Nets of different shapes • Objects in the surroundings • Map	Worksheets based on top, front and side views, routes, directions and nets

	6. The junk seller (16 Periods)	• Addition and subtraction of money. • Conversion of rupees into paise and vice versa • Multiplication of two- and three-digit numbers using lattice algorithm and standard algorithm. • Concept of loan, profit and loss. • Estimate roughly the total cost • Daily life problems on Multiplication	• Addition, Subtraction, Multiplication and Division. • Awareness about loan, profit, loss. • Understands basic operations on money. • Solves problems related to money transactions. • Can purchase things from the market and compare their prices. • Illustrate lattice multiplication using expanded notation. • Knows the value of different currency notes and coins. • Makes the bill.	• Make a shopping bill. • Ask the students to go to nearby market and purchase a few things. At home they will check the price tags. They will prepare a bill and find how much money did he/she spend. • Mock bank showing lending and borrowing money • Make different combination for a given amount using different denomination of notes.	• Duplicate notes and coins • Chart	• Word problems • Estimate the answer and then calculate. • Worksheets based on addition, subtraction and multiplicatio n of money. • Worksheets based on conversion of money.
ASSESSMENT - 2						
Septem ber	**7. Jugs and mugs (15 Periods)**	• Understanding and measuring the capacity of a given	• Understanding which unit of capacity is to be	• Showing measuring containers	• Measuring jars • Different	• Problems related to capacity

		liquid using containers marked with standard units. • Determining sums and differences of capacity • **Volume-** Estimating the capacity of a liquid containing in a vessel and verifying by measuring. • Understanding the units of capacity in liters and milliliters. • Conversions of litre to millilitre and millilitre to litre • Solving Puzzles related to capacity	used for smaller quantities and bigger quantities • Making liters in different ways • Solving word problems related to capacity • Know which items are measured in liters and milliliters • Making own measuring bottles • Sums on Addition and subtraction related to capacity. • Conversion of larger unit into smaller and vice versa • Solving puzzles	available in the market for oil, milk, soft drinks etc. • Observe the different capacities in mL and L • Guess how much water can jugs, mugs, bottles and glasses of different measures hold • List 5 items which are measured • Find the capacity in wrappers/labels like plastic bottle of water, cooking oil, tetra packet of milk etc. • Make own measuring bottles/cups of different capacities	types of container available in the market of oil, milk, soft drinks etc. • Different sizes of bottles/jar s	• Puzzles • Worksheet based on converting smaller unit to larger unit and vice versa • Matching correct units to the object • Solving word problems

October	**8. Carts and wheels (12 Periods)**	• Drawing a circle free hand or with compass • Knowledge about round objects • Understanding to draw circleusing compass • Relationship between length ofthe string and sizeof the circle. • Finding the centre	• Make circles using coins, bangles etc. • Observe and identify round and circular objects from the surroundings • Collect objects which are circular like bottle cap bangles, rings, coin etc. • Teacher will show the geometrical instruments and children will name and identify them. • Finding the centre of a circle by paper folding. • Finding the radius of different types of wheels. • Make your spin top by taking a piece of cardboard and tracin circle on it, then making a hole and putting a matchstick in it • Using compass	• Children will play some games by making circles with a string /rope and nail. • Identify round & circular objects from surroundings. • Play game using spin top. • Children will draw Rangoli Designs using circles • Construction of circle of given radius. • Take a wire and make a bangle/anklet for yourself • Cut out circles of different radii on a paper and find the centre by folding it.	• Round objects in the classroo m • Bottle caps, coins, bangles, ring etc. • Geometry box, wire, thread, nail • Colour papers, Compass or bangles of different size, scissors	• Worksheets based on finding radius, and diameter • Drawing circles with different radius using compass

			make designs in circles of different radii • Drill and practice exercises to find radius and diameter			
November	**9. Halves and quarters (12 Periods)**	• Knowledge of the fractional numbers. Concept of fraction. • Introduction of the new terms like half, quarter • Types of fractions, Ability to draw half part of the pictures. • To show equivalent fractions • Conversion of mixed fraction to improper fraction and vice versa	• Understands the part or a fraction of the whole. • Able to shade the said part of the given shape • Able to write the fractional number for the shaded part of the shape. • Understanding the concepts half, quarter and three-fourth and etc. • Understands the types of fractions – like/unlike fractions. • Find the cost of ½ kg, ¼ kg, ¾ kg of different objects • Able to make half of given objects. • Identify equivalent fraction and generate equivalent fraction to a given fraction	• Divide the given objects into halves in different ways. • Finding fraction of a collection. • Complete the picture by drawing the other half • Solve day- to-day problem • Roleplay-Mock shopping. find the cost of given items and make list • Solve day-to-day problems using a price list	• Square sheets, rectangle sheet and circular sheets • Price list of different items	• Worksheet based on identifying like, unlike, proper, improper and unit fractions • Worksheet based on conversion of fractions

	10. Playing with patterns (12 Periods) (Activity based)	• Recognizing rules in different number and alphabet patterns. • Identifies geometrical patterns based on symmetry. • Identifies patterns in surrounding. E.g., bedsheet, grill and tiles. • Makes pattern and designs from straight line and other geometrical shapes.	• To observe and understand the patterns in our surrounding . • To realize the rule of creativity in a pattern. • Able to know about symmetrical and non-symmetrical shapes, letters, alphabet and numbers. • Able to know patterns involving basic operation. • Ability to compute • To compute the number pattern using addition/ subtraction/ multiplication/ division. • Understands and applies the rules to floor pattern. • To recognize the rule for coding/ decoding the messages. • Able to know the rule used in	• Observe the pattern in grill, saree, curtains, floor etc. and recognize the sequences • Make patterns with numbers and alphabets encoding and decoding patterns and write their name in encoded and decoded way. • Complete magic squares and triangles • Making patterns using geometrical shapes. • Make patterns with vegetable cuttings	• Flash cards of numbers and alphabets • Worksheets and pictures drawn on the floor. • Geometrical shapes Ladies finger, Water colour, Paper	• Worksheet based on number patterns and alphabets • Complete the pattern to encode/decode the message

			puzzles and games. • Applies the knowledge to form a pattern.			
ASSESSMENT - 3						
December	**11. Tables and shares (15 Periods)**	• Multiply and divide using different ways. • Division as repeated subtraction. • Divide into equal groups • Doing daily life calculations based on division. • Arranging the things in different groups in different ways. • Frame word problems	• Understand the properties of multiplication. • Divide one, two, three digits numbers by 1 digit numeral • Solve word Problems involving division and multiplication. • Understand that division is repeated subtraction and uses symbol of division. • Multiply a 3- digit number by 2-digit number. • Divides 3-digit numbers with 2-digit number and 1 digit number	• Arrange bindhi in sequence of the given multiplication fact • Skip counting • Framing questions by looking pictures • Sorting the marbles equally	Bindhi packet, marbles	• Worksheet based on all four operations • Solve word problems
January	**12. How heavy? How**	• Weighs objects using a balance and standard	• Recall imperial system of	• Compare the items which are	• Objects available in class	• Measuring the weights through

	light? (15 Periods) **13. Fields**	units. • Determine sum and difference of weights. • Estimates the weights of an object and verifies using a balance.	measurement and metric system of measurement • Recognizing SI units • List the table used in SI system from the lowest to highest units • Collect history about fake weighing balance. • Awareness about fake weighing balance. • Observe and understand the higher and lower units of measureme nt. • Make balance and find weight. • Select the correct unit of weight of given objects • Understanding	heavy/heavier/ heaviest • Estimate the weight of objects in class and find exact weight through weighting balance. • List the things bought in grams and kilograms. • Compare the weight and height and the units used. • Bring 1kg, ½ kg of some pulses. Tell the students to assume that and then make them to weigh the pulses. • Use rolling cards and make them to convert lowest unit to highest unit and vice versa. • Measure the	room. • Measuring g tape and weighing machine • Rajma seeds, ground nuts, bananas, oranges, vegetable s etc	weighing machine. • Worksheets based on addition, subtraction and conversion of weights. • Draw the table to show the lowest to highest unit of weight.

	and fence s (10 Periods)	• Understanding the concepts of area and perimeter of simple geometrical figures. • Ability to compute area and perimeter of regular and irregular shapes. • Solving problems based on area and perimeter	the meaning of fields (area) and fences (perimeter) • Understanding boundary (perimeter) is the sum of the sides of the given figure • Finding area and perimeter of different things in the surrounding using scale or tape. • Calculate the area and perimeter of regular shapes like rectangle, square etc. • Finding the number of squares in inside a regular shape using 1-centimeter square paper. • Solving day-to-day life problems related to area and perimeter	length and breadth of a given figure and find their area and perimeter. • Measure area and perimeter using ribbons of 1 meter length arrange on the floor. • Determine area and perimeter using square thread of the irregular shapes. • Compare the area and perimeter using threads, graphs paper	• Math textbook , table, desk, etc. • Scale and measuring g tapes. • Squared ruled papers and threads. • Graph paper	• Worksheets based on finding area and Perimeter of simple geometrical figures. • Solving word problems-based area and perimeter.
Februar y	**14. Smart chart s (9 Periods)**	• Collection of data and representation through pictograph. • Conclusion from data	• Collect data by tally marks and represent in the form of bar graph.	• Collect and record data of favorite hobby, snacks, sports etc. by using tally	• Cubes • Charts, newspaper etc.	• Collecting data and framing own questions based on bar graph or pie

			• Draw inferences by discussing with teacher. • Represent data graphically (bar and pie charts) • Collect/interpret data from the newspaper and represent in tabular form. • Solving word problems related to data collection. • Represent fraction through chapatti or pie chart.	marks, then make bar graphs and frame own questions based on bar graph. • Make a pie chart to show the different types of books in library. • Draw pie chart to show the number of students in different house colour in primary section.		chart
ASSESSMENT - 4						