NAVY CHILDREN SCHOOL, KARANJA – AY 2023-2024 Split Up Syllabus

Class: V Subject: Mathematics

Number of Chapters: 14

Month	Chapter name &	Competency	Learning Outcome	Suggested Activities	TLM	Assignments
April / May	no. of periods. 1. The Fish Tale (20 periods)	 Concepts Large numbers upto 10 crores. Indian and international system of numeration. Short form and Expanded form – Comparing Numbers. Rounding numbers to the nearest 10,100 and 1000. Unitary method (profit/loss, cost price/selling price). Word problems on 4 operations. Relationship between speed, distance and time. Loan, interest, savings, amount deposited, withdrawn in a bank. 	 Use appropriate shapes to draw different sea animals. Making Big numbers in Indian and International place value system. Formation of smallest and greatest number using 3,4 & 5 digits Use appropriate measures (length, mass, etc) to measure units. Conversion of units. Rounding numbers to the nearest 10,100,1000. Solves word problems involving basic operations on large numbers. 	 Make a picture frame based on theme "SEA". Collection of pictures of different types of boats. Find the speed and fare for one round trip. Mock fish market showing buying and selling of fish and finding distance, speed, time taken by the boats to catch the fish. Find out about the lifestyle of fishermen. Recite any poem on fishes / aquatic life or create a short story related to marine life/ fishermen's life. 	 Pictures of different types of boats. Place value chart. 50g/100g/500g /1kg weights and weighing machine. Measuring tape & cylinder. Display the different types of fish and boats in the class. 	Worksheet based on the 4 operations, unitary method, finding interest, loan etc and conversion of unit.
Month	Chapter name & no. of periods.	Competency	Learning Outcome	Suggested Activities	TLM	Assignments
	2. Shapes and Angles (10 periods)	 <u>Concepts</u> Define geometry. Point, line, line segment, ray, 	 Differentiate between open and closed shapes. 	 Drawing of different open and closed figures. Make shapes using match 	 Geometrical instruments like protractor, 	 Worksheet based on constructio

		 curved line etc. Open and closed curves made by line segments. Plane figures. Polygons. Finding angles through activity, yoga, body postures. Less than right angle (acute angle), right angle, more than right angle (obtuse angle). Finding angles in clock and things in the surroundings using degrees. Constructing angles by using D in the geometry box. Complementary and supplementary angles. 	 Understanding that polygon with same sides have different shapes because of different angles. Look for the different angles in and around classroom or home. Formation of angles by using different objects and gestures of body. Constructing angles using protractor. 	 sticks. Drawing and comparing different angles using line segment and rays. Make an angle tester using card board and drawing pin. Formation of angles using different gestures of body (different yoga poses) On the square paper fold and show the right angle, less than right angle and more than a right angle. Write three names using straight lines and count the angles Make shapes using match sticks and rubber tubes, then show the change in angles. Angles made by clock and its names. Making a paper degree clock. Angles in a paper aeroplane / paper boat. 	 scale and divider. Visuals of Yoga postures. Coloured paper. Clock and sticks. Things around us and their angles 	n of angles and measuring angles using protractor.
Month	Chapter	Competency	Learning Outcome	Suggested Activities	TLM	Assignments
	3. How many squares? (12 periods)	 Concepts Define perimeter and area. Find the area of regular shapes by counting squares and perimeter by measuring the boundary by counting sum of all the sides not by 	 Student will develop a sense of the concept through suitable examples like stamps, leaves, footprints, walls of the class room, etc and find its area. Identify the correct method to find the area of regular and 	 Finding the perimeter by placing things on a square grid/graph paper. Drawing shapes for the given number of squares on a graph paper / square grid. Measuring the perimeter of irregular shapes using thread. 	 Graph paper / square grid. Objects from classroom environment. Thread and scale. Visuals of patterns. Area (unit 	 Worksheet based on finding the area and perimeter of regular shapes only by counting squares. Worksheet

June/ July		 using formula. Drawing different shapes having same area. Find the area and perimeter of square, rectangle and triangle. Finding perimeter of irregular shapes by using thread. Finding area of irregular shapes by making squares and rectangles. Creating floor patterns and making patterns on tiles. 	 irregular shapes. Draw many shapes using straight and curved edges on square paper for the given area and find the perimeter using scale or thread. Create new shapes out of a square tile. Figures having same area will have different perimeters. 	 Finding the area of a triangle using square grid making them to squares and rectangles. Compare perimeter / area of different shapes. Drawing of different shapes. Drawing of different shapes having same area on the graph sheet. Creating new shapes out of square tile to make their floor patterns using chart paper. Completing tiling patterns. Make your own tile pattern. 	squares) by folding papers	based on finding the area of irregular shapes.
			ASSESSMENT-1			
	4. Parts and	Concepts	Understanding	Fraction Art.	Cutouts of	Worksheet
	Wholes	Define fraction.	equivalent fractions	Draw our national flag and	different	s based on
July	(20 periods)	 Shade and name the given fraction. Equivalent fraction. Like and unlike fraction. Proper, improper or mixed fraction. Addition, subtraction of like fraction. Addition and subtraction of unlike fraction through equivalent fraction method. Multiplication of fractional numbers. 	 by drawing different flags and by cutting halva. Explain like / unlike fractions, unit fractions, proper / improper fractions or mixed fractions. Converting improper fractions into mixed numbers and vice versa. Illustrate through examples fractions in our daily life. Use correct method to solve 4 operations 	 write fraction for the different colours. Paper folding activities to show different parts of a whole/equivalent fraction. Draw different flags and write fraction for the different colours. Generation of fractions equivalent to a given fractions Make a magic top. Colour square grid / make design and write fraction. Divide the given shapes in equal parts. Paper folding activity to show equivalent fractions. 	 shapes. Coloured paper. Fraction kit (math lab). Squared paper. 	finding equivalent fractions and conversion of improper fractions into mixed numbers and vice versa.

Month	Chapter 5. Does it look the same? (8 periods) Activity 6. Be my	 Division of fractional numbers. Reciprocal. 4 operations on number line. Word Problems involving fractions in daily life activities. Competency ACTIVITY BASED Make patterns on paper by folding it and show the line of symmetry. Finding symmetrical and asymmetrical figures from the given figures or objects / pictures of clock / other diagrams. Mirror image or reflection symmetry. Turning shapes, numbers, alphabet by ½, 1/3, ¼, 1/6 rotation. 	 of fractional numbers. Different places on figures. Differentiate between symmetrical and asymmetrical shapes. Observe and draw different shapes on rotating ½,1/3, ¼, 1/6turn etc Understanding the 	 Conversion of improper fractions into mixed numbers using Games and puzzles Quiz Preparing vegetable or grocery bills. Make a Fractional wheel. Suggested Activities Thread Art (using a drop of paint / ink & a piece of thread) Mirror game of figures and drawings. Draw the mirror images of the given figures. Activity on drawing and observing different shapes on rotating ¹/₂, 1/3, ¹/₄, 1/6, etc Make a toy windmill. 	 TLM Mirror Flash cards of number / geometrical patterns / alphabets. Paper, pin and stick. 10x10 grid 	 Assignments Worksheets based on symmetrical and asymmetric al objects, patterns and rotations. Worksheets
	o. Be my multiple, I'll be your factor (18 periods)	 Concepts. Define multiples. Listing the multiples. Find common multiples. Define factors. 	 Onderstanding the concept of multiples by playing games. Write multiples of given numbers and also find common multiple and LCM. 	 Ose Toxito grid to colour odd and even numbers in different colours, to find the odd and even multiples. Play meow and dice game to give the concept 	 Bangles, dice, beads, colour pencils, tamarind seeds etc Cuisenaire 	based on finding multiples and factors of a number,

August		 Listing the factors. Find common factors. Tests of Divisibility (2 to 12). Prime and composite numbers. Prime factorization: factor tree method, short division method. <u>LCM</u> listing multiples, 2 prime factorization, 3.common division method. <u>HCF</u> listing factors, 2 prime factorization, 3.common and long division method. Relationship between HCF and LCM. 	 Find LCM by prime factorization method. Arranging the group of different things with a fixed number in different ways to understand the concept of factor. List the factors of given numbers and also find common factors and HCF. Find HCF by prime factorization method. Learn to make factor tree of a given number by prime factorization method. Solve word problems related to daily life situations. 	 of multiple. On a 1 to 100 grid colour multiples of 2, 3, 5, 7 in different colours except 2, 3, 5, 7 to find prime and composite numbers. Find LCM using 1 to 100 grid by colouring the multiples of given numbers and find the common multiples and Least Common Multiple (LCM). Complete the multiplication chart and find common factors and Highest common factor (HCF). Tamarind seeds(puzzle) Arranging bangles in different groups for the same number. Finding HCF and LCM using Cuisenaire strips. Tiling problems. 	strips (math lab).	LCM, HCF and prime factorisation using factor tree method, short division method, common division and long division method.
Month	Chapter	Competency	Learning Outcome	Suggested Activities	TLM	Assignments
	6. Be my multiple I'll be your factor (cont)					
	7. Can you see the pattern? (10 periods) (Activity)	 ACTIVITY BASED Types of patterns. Sequence and series in patterns. Turns, angles and direction in patterns. Magic square. 	 Learn to observe the patterns on gift wrappers / cloths and deduce the rules. Making patterns in cloth or paper taking ½, ¼,1/3,1/6 and ¾ turns. 	 Make a vegetable block and using colours print on paper / cloth taking ½, ¼ turns (clockwise / anticlockwise). Observe the patterns and complete it using the rules. 	 Samples of patterns. Magic square / triangle. Printing block Patterns of 	 Worksheet on patterns using rules. Turning patterns of objects or letters and

September		 Magic hexagon. Palindromes. Calendar magic. Number patterns. Secret numbers. Number surprises. 	 Observe the patterns and complete the patterns using the rule. Explain clockwise or anti clockwise rotation. Relate angles in the turns. 	 Making their own magic square ,magic hexagon, palindromes, Calendar magic. 	angles	numbers.
			ASSESSMEN	IT-2		
8	Chapter 3. Mapping your way(10 periods) (ACTIVITY)	 Competency ACTIVITY BASED Concepts. Finding the location, places using maps. Views, route, directions. Find distance on map by reading scale and convert distance on ground. Distance on map is same as distance on ground by converting using scale. Find the distance between states and sea. Make the area bigger and smaller using square sheet of ½ cm, 1 cm, 2 cm. If the sides of the square get increased by 2 	 Learning Outcome Learn to read the map and trace the route. Learn to mark the route and find out the distance using map. 	 Suggested Activities Finding the location of Agra and Delhi in the map of India. Trace the routes using map towards north, east, west, south, etc Enlarging or reducing pictures or maps, can be done in a square grid. Finding the distance between cities with the help of map/Atlas. Direction game can be played on a playground keeping one direction fixed . Prepare a route map from your house to your school marking all the important landmarks. 	 TLM Map of India Map of world Compass needle. 	• Worksheet based on Maps.

		times the area will get increased by four times.				
Month	Chapter	Competency	Learning Outcome	Suggested Activities	TLM	Assignments
	Chapter 9. Boxes and sketches (10periods)	 Competency Concepts. Solid shapes (3 Dimensional shape). Closed box (cube) can be made using hexominoes(6faces squares. Open box can be made using pentominoes(5 faces)squares. Match the solid shape with the correct net. Deep drawings of floor map. Visualize the net of box, to think of how 	 Learning Outcome Learn to count faces, edges and corners of a cube or cuboid. Find the area of each face of the cube or cuboid. Making a list of things which looks like a cube or cuboid in their surroundings. Visualization of 3- dimensional shapes and how they can be represented on paper (2-dimensions). 	Making 3 D Shapes using	 TLM Dice Model of a cube / cuboid. Cartons/ boxes / match boxes. Nets (math lab) 	 Assignments Worksheets based on finding the nets of a cube or a cuboid, drawing front, side and top view of the given models.
October / November		 it looks when flattened and check which nets do not make a box. How to draw a cube and cuboid and count the number of cubes. 				
	10. Tenths and Hundredths (18 periods)	 <u>Concepts.</u> Decimal place value chart. Relationship between decimals and fractions. 	 Learn to measure different objects using scale. Learn to convert mm to cm and vice versa. Understand the 	 Using blocks understand the concept of 1 out of 10 parts, 1 out of 100 parts and 1 out of 1000 parts (the decimal concept) Measure the length of different things in mm and comes like notebook, pencil. 	 Decimal place value chart. Scale / Measuring tape. Price tags. 	 Worksheet based on measureme nt of length in cm and mm.

		Conversion of	relationship between	Solve the four operations	Decimal kit	Worksheet
		fraction into	decimals and	using decimal kit.	(math lab)	based on
		decimal number	fractions.	 Find the value of other 		decimals.
		and vice versa.	Observe the decimal	country currency in Indian		
		Expanded form and	notation of rupees	currency.		
		short form of	and paisa and	 Find the maximum and 		
		decimal numbers.	understanding tenths	minimum temperatures of		
		Comparing decimal	and hundredths place	different cities and find		
		numbers.	in decimal place	differences too.		
		Addition,	value system.	 Collect the grocery bill and 		
		subtraction of		observe the decimal		
		decimals.		notation of Rupees and		
		 Multiplication and 		Paisa. Teacher explains the hundredths place.		
November		division of decimal		the hundredths place.		
		numbers by 10,100				
		and 1000.				
		Multiply and divide				
		the decimal				
		numbers by				
		changing the				
		decimal into				
		fraction and divide				
		by long division.				
		Conversion of cm				
		to mm and vice				
		versa	ASSESSMEN	T 3		
Month	Chapter	Competency	Learning Outcome	Suggested Activities	TLM	Assignments
	11. Area and	Concepts	Finding the area and	Measure the length and	Scale /	Worksheet
	its	Finding area and	perimeter of class-	breadth of the given	Measuring	on finding
	Boundary	perimeter of given	room, display board,	things and find their area	tape.	area and
	(14 periods)	figures using	black board, etc.	and perimeter.	Cutouts of	perimeter of
		formula.	 Find the area and 	Paste different cutouts	different	given
		Find the missing	perimeter of a given square and	and find their area and	shapes.	shapes.
		side, length and		perimeter.	Metre	

Month	Chapter		Learning Outcome	Suggested Activities	TLM	Assignments
		 If the side of 1 square is 1cm and the sides getting double the side of given square then each side is 2 cm. Now the area is 4 times and the perimeter got increased by two times by drawing squares on the note. Finding perimeter and area of irregular shapes. 		 their area and perimeter and compare it too. Make all possible rectangles and squares with the given number of squares. Area of the classroom. Longest belt using post card. Thread play. Take a cardboard piece (15x15 cm) and find perimeter. Then remove small squares (2cm) from the corners and now find the perimeter of cardboard piece again. Find out if there is any difference in perimeter. 		
December		 breadth. Word problems. Application through activity. 	 rectangle. Problem solving related to area and perimeter of square and rectangle. 	 Make a birthday or greeting card and find its area and perimeter. Draw two squares (one is double of the other). Find eraser etc. Measure the length and width of currency notes of different denominations and write them in mm and cm. 	tape(math lab).	

January	12. Smart Charts (8 periods)	 <u>Concepts</u> Define data collection. Tally marks. Pictograph Chapatti chart / pie chart / circle graph. Bar graph. Family tree. Growth chart. 	 Understand the recording of data using the method of tally marks. Use appropriate chart types for a particular data. Differentiate between chart types like Bar, pie chart, etc. 	 Use of tally marks for different numbers. Observe the ½ an hour program and make tally marks for the different advertisements. Make a table to record temperature of 5 cities and represent the data as a Bar Graph. Represent birthdays of children in your class through pictograph (month wise) and find the months with least and most birthdays. Make your family tree up to 3rd generation. Record the growth of any plant / animal and 	 Data collection. Newspaper to collect economic data survey analysis. Family details. 	Worksheets based on handling of different types of charts and answer the questions.
	13. Ways to	Concepts.	Multiplying numbers	 represent it on a graph paper in form of a growth chart. Collect simple objects like 	Objects like	Worksheet
	multiply and divide (14 periods)	 Multiplication by splitting and column method. Division by splitting and long division 	 Multiplying numbers in two different ways by splitting method and column method. Problem sums related to daily life. 		erasers, pencils, sharpeners, etc. available in the	based on multiplicatio n and division including
		method. Do sums of division and check the result by 	 Divide and check the answer by multiplication. 	students to frame a question related to concept of division and multiplication.	classroomenvironment.Base ten set(math lab).	word problems.

January		 multiplication. Word problems based on day to day life. 		 Mock shopping situations created(for mental calculations). Solve multiplication and division sums using base ten set. 		
Month	Chapter	Competency	Learning Outcome	Suggested Activities	TLM	Assignments
	14. How Big?	Concepts.	Comparing the	Making geometrical	Cubes.	Worksheet
	How	Solid shapes and	volume of different	shapes (cube / cuboid)	Cards of	based on
February	Heavy? (14 periods)	 their nets. Find the volume of different objects by filling sand or water. Find the volume of cube and cuboid. Application through activity and observe circle has the biggest area in this children will observe which solid shape has the biggest volume. Measuring weight. Word problems. 	 things by putting them into jar filled with water. Making a measuring bottle of different measures of capacity. Finding the volume by arranging the cubes and counting them. Finding the volume of cube and cuboid. 	 using origami techniques. Match box play – arrange a particular number of boxes to make platform of different heights. Take 4 cards of the same size make pipes (i) length wise (ii) width wise (iii) triangle shaped pipes (iv) square shaped pipes. Fill one with sand and pour it into another. Finding volume of a match box by measuring its length, width and height On a physical balance measure and compare weights of small objects like eraser, piece of paper , chalk piece etc and write on a paper. 	same size. • Sand. • Jar of water.	finding volume of cube and cuboid.
March	Revision					
	-	ASS	ESSMENT 4 (Annual	Examination)		

TERM	S. No.	Month	Name of the Chapter
	1	April	THE FISH TALE
1	2	May/June	SHAPES AND ANGLES
	3	July	HOW MANY SQUARES?
	4	July	PARTS AND WHOLES
	5	August	DOES IT LOOK THE SAME?
	6	August	BE MY MULTIPLE, I'LL BE YOUR FACTOR
	7	September	CAN YOU SEE THE PATTERN?
	8	October	MAPPING YOUR WAY
1	9	November	BOXES AND SKETCHES
	10	November	TENTHS AND HUNDREDTHS
	11	December	AREA AND ITS BOUNDARY
	12	January	SMART CHARTS
	13	February	WAYS TO MULTIPLY AND DIVIDE
	14	February	HOW BIG? HOW HEAVY?