NAVY CHILDREN SCHOOL, INS AGRANI, COIMBATORE **AY- 2024-25**

Split Up Syllabus

Class: V **Subject: Mathematics** **Number of Chapters : 14**

Month	Chapter name & no. of periods.	Competency	Learning Outcome	Suggested Activities	TLM	Assignments
April / May	**1. The Fish Tale (20 periods)**	• <u>Concepts</u> • Large numbers up to 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. • Measurement- length, mass, 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 • Loan, interest, savings, amount deposited, withdrawn in a bank.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. • Use appropriate measures (length, mass, etc.) to measure units. • Conversion of units. • Rounding numbers to the nearest 10, 100, 1000. • Solves word problems using the correct method.	• Make different types of fish that are available in the fish market near you. • 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.	• Pictures of different types of boats. • Place value chart. • 50g/100g/500/ 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.	• Differentiate between open and closed shapes.	• Drawing of different open and closed shapes. • Make shapes using match sticks.	• Geometrical instruments like protractor,	• Worksheet based on construction of angles

		• Point, line, line segment, ray, 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.	• Drawing and comparing different angles using line segment and rays. • Make an angle tester using card board and drawing pin. • 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 in names. • Making a paper degree clock. • Angles in a paper aeroplane.	scale and divider. • Visuals of Yoga postures. • Coloured paper. • Clock and sticks. • Things around us and their angles	and measuring angles using protractor.
Month	**Chapter**	**Competency**	**Learning Outcome**	**Suggested Activities**	**TLM**	**Assignments**
	3. How many squares? (12 periods)	• <u>Concepts</u> • Define perimeter and area. • Find the area of regular shapes by counting squares and perimeter by measuring the boundary by counting sum of all	• 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	• Drawing shapes for the given number of squares on a graph paper / square grid. • Finding the area and perimeter of Stamps, Math textbook, pencil box, etc. on a square grid. • Measuring the perimeter of irregular shapes using thread.	• Graph paper / square grid. • Objects from classroom environment. • Thread and scale. • Visuals of patterns.	• Worksheet based on finding the area and perimeter of regular shapes only by counting squares. • Worksheet based on

June/ July		the sides not by 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.	area of regular and 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. • 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 • Puzzles with five squares (12 different shapes). Find the perimeter of each and compare them. • Arrange the 12 pieces in a 10x6 rectangle. • Make your own tile pattern.	• Area (unit squares) by folding papers	finding the area of irregular shapes.
• **Term -1 Assessment-1**						
July	**4. Parts and Wholes (20 periods)**	• <u>Concepts</u> • Mental ability • Define fraction. • 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.	• Understanding equivalent fractions 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.	• Draw our national flag and write fraction for the different colours. • Draw different flags and write fraction for the different colours. • Generation of fractions equivalent to a given fractions o Make a magic top. o Colour square grid/ make design and write fraction. o Divide the given shapes in equal parts. o Paper folding activity to show	• Cutouts of different shapes. • Coloured paper. • Fraction kit (math lab). • Squared paper.	• Worksheets based on finding equivalent fractions and conversion of improper fractions into mixed numbers and vice versa.

		• Multiplication of fractional numbers. • Division of fractional numbers. • Reciprocal. • 4 operations on number line. • Word Problems involving fractions in daily life activities.	• Use correct method to solve 4 operations of fractional numbers.	equivalent fractions. • Conversion of improper fractions into mixed numbers using ○ Games and puzzles ○ Quiz ○ Preparing vegetable or grocery bills		
Month	**Chapter**	**Competency**	**Learning Outcome**	**Suggested Activities**	**TLM**	**Assignments**
August	**5. Does it look the same? (8 periods)** **Good to teach (only activities)**	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, ¼, 1/6 rotation.	• Making a pattern on drop of colours. • Understand shapes can be obtained by putting the mirror on different places on figures. • Differentiate between symmetrical and asymmetrical shapes. • Observe and draw different shapes on rotating ½, ¼, 1/6turn etc..	• Making a pattern from a drop of a colour. • Mirror game of figures and drawings. • Activity on drawing and observing different shapes on rotating ½, ¼, 1/6, etc.. • Make a toy windmill.	• Mirror • Flash cards of number / geometrical patterns / alphabets. • Paper, pin and stick.	• Worksheets based on symmetrical and asymmetrical objects, patterns and rotations.
	6. Be my multiple, I'll be your factor (18 periods)	• Concepts • Define multiples. • Listing the multiples. Find common multiples. • Define factors.	• Understanding the concept of multiples by playing games. • Write multiples of given numbers and also find common multiple and LCM.	• Use 10x10 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 of multiple.	• 10x10 grid • Bangles, dice, beads, colour pencils, tamarind seeds etc..	• Worksheets based on finding multiples and factors of a number, LCM, HCF and prime

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> 1.listing multiples, 2. Prime factorization, 3. Common division method. <u>HCF</u> 1.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.	• 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.	• Cuisenaire strips (math lab).	factorization 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)**	<u>Activity based</u> • Mental ability • Types of patterns. • Sequence and series in patterns.	• Learn to observe the patterns on gift wrappers / cloths and deduce the rules. • Making patterns in cloth or paper	• Make a vegetable block and using colours print on paper / cloth taking ½, ¼ turns (clockwise / anticlockwise). • Observe the patterns and complete the patterns	• Samples of patterns. • Magic square / triangle. • Printing blocks.	• Worksheet on patterns using rules. • Turning patterns of objects or

September		• Turns, angles and direction in patterns. • Magic square. • Magic hexagon. • Palindromes. • Calendar magic. • Number patterns. • Secret numbers. • Number surprises.	taking ½, ¼, 1/6 and ¾ turns. • Observe the patterns and complete the patterns using the rule. • Explain clockwise or anti clockwise rotation. • Relate angles in the turns.	using the rule. Making their own magic square, magic hexagon, palindromes, and calendar magic.	• Patterns of angles	letters and numbers.
Term 1 Assessment-2						
TERM 2						
Month	**Chapter**	**Competency**	**Learning Outcome**	**Suggested Activities**	**TLM**	**Assignments**
October	**8. Mapping your way(10 periods)**	<u>Concepts.</u> • 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.	• Learn to read the map and trace the route. • Learn to mark the route and find out the distance using map.	• 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 • Finding the distance between cities with the help of map/Atlas.	• Map of India • Map of world • Compass needle.	• Worksheet based on Maps.

		If the sides of the square get increased by 2 times the area will get increased by four times.				
Month	**Chapter**	**Competency**	**Learning Outcome**	**Suggested Activities**	**TLM**	**Assignments**
November	**9. Boxes and sketches(10 periods)**	<u>Concepts</u>. • 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 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.	• 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 the nets of a cube and an open box and check which net does not make cube / open box. • Making cubes, cuboids, etc using nets, empty match boxes and thick papers. • Making deep drawing of a house and a cube. • Drawing front view, side view and top view of given models, objects, etc..	• Dice • Model of a cube / cuboid. • Cartons/ boxes / match boxes. • Nets (math lab)	• Worksheets based on finding the nets of a cube or a cuboid, drawing front, side and top view of the given models.
	10. Tenths and Hundredths (18 periods)	<u>Concepts.</u> • Decimal place value chart.	• Learn to measure different objects using scale.	• Measure the length of different things in mm and cm like notebook, pencil, eraser, etc	• Decimal place value chart. • Scale / Measuring tape.	• Worksheet based on measurement of length in cm and mm.

November		• Relationship between decimals and fractions. • Conversion of fraction into decimal number and vice versa. • Expanded form and short form of decimal numbers. • Comparing decimal numbers. • Addition, subtraction of decimals. • Multiplication and division of decimal 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.	• Learn to convert mm to cm and vice versa. • Understand the relationship between decimals and fractions. • Observe the decimal notation of rupees and paisa and understanding tenths and hundredths place in decimal place value system.	• Guess the length and width of Indian rupee notes and measure the actual length. • Solve the four operations using decimal kit. • Find the value of other country currency in Indian currency. • Find the maximum and minimum temperatures of different cities and find differences too.	• Price tags. • Decimal kit (math lab)	• Worksheet based on decimals.
Term 2 Assessment-3						
Month	**Chapter**	**Competency**	**Learning Outcome**	**Suggested Activities**	**TLM**	**Assignments**
	11. Area and its Boundary (14 periods)	<u>Mental ability.</u> • Finding area and perimeter of given figures using formula. • Find the missing side, length and breadth. • Word problems.	• Finding the area and perimeter of class-room, display board, black board, etc. • Find the area and perimeter of a given square and rectangle.	• Measure the length and breadth of the given things and find their area and perimeter. • Paste different cutouts and find their area and perimeter.	• Scale / Measuring tape. • Cutouts of different shapes. • Metre tape (math lab).	• Worksheet on finding area and perimeter of given shapes.

December		• Application through activity. • 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.	• Problem solving related to area and perimeter of square and rectangle.	• Make a birthday or greeting cards and find its area and perimeter. • Draw two squares (one is double of the other). Find 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.		
Month	**Chapter**	**Competency**	**Learning Outcome**	**Suggested Activities**	**TLM**	**Assignments**
January	**12. Smart Charts (8 periods)**	Mental ability. • Define data collection. • Tally marks. • Chapatti chart. • 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 making tally marks for the different ads. • Making a table to record temperature of different cities and represent the data as Bar Graph. • Make your family tree up to 4^{th} generation. • Record the growth of any plant / animal and represent it on a graph paper in form of a growth chart.	• Data collection. • Newspaper to collect economic data survey analysis. • Family details.	• Worksheets based on handling of different types of charts and answer the questions.

January	**13. Ways to multiply and divide (14 periods)**	Concepts. • Multiplication by splitting and column method. • Division by splitting and long division method. • Do sums of division and check the result by multiplication. • Word problems based on day to day life.	• Multiplying numbers in two different ways by splitting method and column method. • Problem sums related to daily life. • Divide and check the answer by multiplication.	• Determine the multiplication and division facts of a number. • Fun with multiplication. • Give a situation and ask students to frame a question related to concept of division and multiplication. • Mock shopping situations created (for mental calculations). • Solve multiplication and division sums using base ten set.	• Objects like erasers, pencils, sharpeners, etc. available in the classroom environment. • Base ten set (math lab).	• Worksheet based on multiplication and division including word problems.
Month	**Chapter**	**Competency**	**Learning Outcome**	**Suggested Activities**	**TLM**	**Assignments**
February	**14. How Big? How Heavy? (14 periods)**	Concepts. • Solid shapes and 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.	• Comparing the volume of different 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.	• Making a paper cube. • 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 • Make a list of food items each person carry when they plan a trip for one month and find total weight.	• Cubes. • Cards of same size. • Sand. • Jar of water.	• Worksheet based on finding volume of cube and cuboid.
March	**Revision**					
Term 2 – ASSESSMENT 4						

TERM	S. No.	Month	Name of the Chapter
I	1	April	THE FISH TALE
	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?
II	8	October	MAPPING YOUR WAY
	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?