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| **ASSAM RIFLES PUBLIC SCHOOL PALLEL**  **HQ 26 SECT ASSAM RIFLES**  **Split Up Syllabus 2023-24**  **Class:V Subject:Mathematics** | | | | | |
| **TERM 1** | | | | | |
| **Month** | **Chapter name** | **Competency** | **Learning Outcome** | **Suggested Activities** | **Assignments** |
| **April** | **1. The Fish Tale** | **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  Loan, interest, savings, amount deposited, withdrawn in a bank.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 different 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 & 5digits  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 a picture frame based on theme “SEA”.  Collection of pictures of different types of boats.  Find the speed and fare for one roundtrip.  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 life style of fishermen.  . | Worksheet based on the 4 operations, unitary method, finding interest, loan etc and conversion of unit. |

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| **JUNE** | **2. Shapes and Angles** | **Concepts**  Define geometry.  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. | Differentiate between open and closed shapes.  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 open and closed figures. Make shapes using match sticks. Drawing and comparing different angles using line segment and rays.  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.  . | Worksheet based on construction of angles and measuring angles using protractor |

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| **JULY** | **3. How many squares?** | **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 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. | 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 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.  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 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 | Worksheet based on finding the area and perimeter of regular shapes only by counting squares.  Worksheet based on finding the area of irregular shapes |

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| **AUGUST** | **4. Parts and Wholes** | **Concepts**  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.  Multiplication of  Fractional numbers.  Division of fractional numbers.  Reciprocal.  4 operations on number line.  Word Problems involving fractions in daily life  activities. | 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.  Use correct method to solve 4operations of fractional numbers | Draw our national flag and 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  Colour square grid /make design and write fraction.  Divide the given shapes in equal parts.  Paper folding activity to show equivalent fractions.  Conversion of improper fractions into mixed numbers using  Preparing vegetable or grocery bills.  Make a Fractional wheel | Worksheet s based on finding equivalent fractions and conversion of improper fractions into mixed numbers and vice versa. |

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| **August** | **5. Does it look the same?**  **Activity** | **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. | 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 ½,1/3,  ¼, 1/6turn etc. | **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 ½, 1/3, ¼, 1/6,etc..  Make a toy windmill. | Worksheets based on symmetrical and asymmetric al objects, patterns and rotations. |
| **September** | **6. Be my**  **multiple, I’ll be your factor** | **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 | Worksheets based on finding multiples and factors of a number, |

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| **September** |  | Listing the factors. Find common factors.  Tests of Divisibility (2 to12).  Prime and composite numbers.  Prime factorization: factor tree method, short division method.  LCM listing multiples, 2 prime factorization, 3.commondivision method.  HCF  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. | 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).  Arranging bangles in different groups for the same number.  Finding HCF and LCM using Cuisenaire strips.  Tiling problems. | LCM, HCF  and prime factorisation using factor tree method, short division method, common division and long division method. |
|  | **7.Can you see the pattern?**  **(Activity** | **ACTIVITYBASED**  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 | Worksheet on patterns using rules.  Turning patterns of objects or letters and numbers. |

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|  |  | | 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. |  |
| **October** | | **8. Mapping your way**  **(ACTIVITY)** | **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, 1cm,  2 cm.  If the sides of the  square get increased by 2  times the area will get increased by four times. | 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 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. | Worksheet based on Maps. |

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| **November** | **9. Boxes and sketches** | **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.  How to draw a cube and cuboid and count the number of cubes. | Learn to count faces, edges and corners of a cube orcuboid.  Find the area of each face of the cube or cuboid.  Making a list of things which looks like a cube or cuboid in theirsurroundings.  Visualization of 3- dimensional shapes and how they can be represented on paper (2-dimensions). | Making 3 D Shapes using Origami techniques.  Making the nets of a cube and an open box and check which net does not make cube / openbox.  Making cubes, cuboids, etc using nets, empty match boxes and thick papers.  Making deep drawing of a house and acube.  Drawing front view, side view and top view of given models, objects,etc.. | 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** | **Concepts.**  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 1000parts  ( the decimal concept ) | Worksheet based on measurement of length in cm and mm. |

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| **November** |  | 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. | relationship between decimals and fractions.  Observe the decimal notation of rupees and paisa and understanding tenths and hundredths place in decimal place value system. | 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.  Collect the grocery bill and observe the decimal notation of Rupees and Paisa. Teacher explains the hundredths place. | Worksheet based on decimals. |

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| **December** | **11. Area and its Boundary** | **Concepts**  Finding area and perimeter of given figures using formula.  Find the missing side, length and breadth.  Word problems.  Application through activity.  If the side of1  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. | Finding the area and perimeter of class- room, display board, black board, etc.  Find the area and perimeter of a given square and rectangle.  Problem solving related to area and perimeter of 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.  Make a birthday or greeting card 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.  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. | Worksheet on finding  Area and perimeter of given shapes. |

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| **January** | **12. Smart**  **Charts**  **13. Ways to multiply and divide** | **Concepts**  Define data collection.  Tally marks.  Pictograph  Chapatti chart / pie chart / circle graph.  Bar graph.  Family tree.  Growth chart.  **Concepts.**  Multiplication by splitting and column method.  Division by splitting and long division method | 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.  Multiplying numbers in two different ways by splitting method and column method.  Problem sums related to daily life. | 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.  Collect simple objects like pencils, eraser, sharpener etc and arranging them in different groups.  Determine the multiplication and division facts of a number.  Fun with multiplication.  Give a situation and ask | | Worksheets based on handling of different types of charts and answer the questions. |
| **January** |  | Do sums of division and check the result by multiplication.  Word problems based on day to day life. | Divide and check the answer by multiplication. | 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. | word problems. | |
| **February** | **14. How Big? How Heavy?** | 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 cuboids. | Making geometrical shapes (cube / 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. | Worksheet based on finding volume of cube and cuboids. | |