Split up Syllabus

CLASS V

MONTH	SYLLABUS	LESSON	CONCEPT/KEY AREAS	SUGGESTED ACTIVITIES	EXPECTED LEARNING OUTCOMES	TLM/ RESOURCES	VALUES/SKILLS	PERIOD
April/ May	**Geometry** Shapes & Spatial Understanding **Numbers** Numbers And Operations **Measurement** (Weight, Capacity, Time)	The Fish Tale	**Recapitulation of work done in previous classes** **Geometry** (Shapes & spatial understanding) • Understanding of shapes **Numbers** Numbers and Operations • Estimation and comparison • Understanding of large numbers • Basic Operations of large numbers • Rounding of numbers **Measurements** (Weight, Capacity, Time**)** • Understanding the units of weight &	• Make different sea animals using various shapes • Collection of pictures of different types of boats • Find the speed and fare for one round trip. • Representing numbers on a Place value chart (Indian & International) • Numeral and number names • Short form/ expanded form of numbers • Formation of smallest and greatest number using 3,4 & 5 digits • Compare numbers (> = <) • Rounding of numbers to nearest tens, hundreds and thousands • Word problems on addition and subtraction, measurement- length, weight, capacity, speed, distance and time. • Conversion of units • Mock fish market showing buying and selling of fish	• Draws different figures using different shapes. • Reads and writes large numbers • Compares large numbers • Adds, subtracts, divides and multiplies large numbers • Round numbers to nearest tens ,hundreds and thousands • Understands various units of measurement • Converts higher units to lower units and vice versa • Understands the relation ship between speed, distance and time. • Understands concept of loan, interest and savings • Solves word problems related to large numbers, time	-Pictures of different types of boats -Indian & International Place value chart -50 grams/100 grams/500 grams/1 kilogram weights -Measuring tape -Measuring cylinder -Flash cards of numbers -Internet resources -Worksheets	Recapitulates the various shapes/number operation and units of capacity /weight/length, it conversion. Develops Creative thinking,	26

Month	Topic	Sub-topic	Concepts/Objectives	Activities	Learning Outcomes	TLM/Resources	Assessment	
			capacity, time& distance and differences between them. • Understanding the conversion of units • Knowledge about different kinds of water transport system; its speed, capacity to carry and time to cover certain distances. • Solving word problems	• Mock bank showing borrowing of money, interest and savings. [prepare simple questions on conversion /addition /subtraction/multiplication of Unit and ample questions for practice should be given to students]. Follow up the learning levels of students. Student who lacks basic understanding of the concept(s) be given extra support. Note-Integrated with "What if it finishes?" Looking Around class 5	speed and capacity. • Integration with EVS and language(s) - a fairly good idea about:- i) aquatic life ii) Types of fishes. iii) Water transport system in river/lake. iv) Idea of local markets. V) Recitation/narration of poems / stories on fish.			
April/ May	**Geometry** Shapes & spatial understanding • Gets the feel of an angle through observation and paper folding • Identifies right angles in the environmen	Shapes and Angles	• Understanding of ray, line, line segment • Understanding the concept of an angle • Knowledge about different plane figures • Knowledge about different types of angles • Ability to	• Make shapes using match sticks, understand that polygon with same sides have different shapes because of different angles • Make an angle tester using card board and drawing pin • Look for the different angles in and around class/home. • Angles made by hands of a clock	• Understands the concept of a ray, line , line segment • Recognizes plane figures • Distinguishes between corners, edges, straight and curved edge. • Understands the meaning of an angle and comparison of angles.	Geometrical instruments- Protractor, Scale, Divider Visuals of Yoga postures Coloured paper Clock Sticks	Reflect upon the angles and sides of a given shapes. Uses protractor and other instrument to measure the same.	9

	t • Classifies angles into right, acute and obtuse angles • Represents right angle, acute angle and obtuse angle by drawing and tracing		measure angles using a protractor and degree clock • Ability to draw angles of given measures	• Angles in names • Paper folding to show different angles (Paper aero plane) • Angles in Yoga postures • Observe bridges and tower [diagonal beams which divide the shapes into triangle. • Constructing angles of given measurement using Protractor • Formation of angles by using different objects. • Formation of angles using different gestures of body and BALA. • Making different shapes with cycle tube and match stick. • Making a paper degree clock • Worksheets and Practice exercises for drill work	• Knows about different types of angles. i.e. (Right angle /less than right angle /more than right angle.) • Classifies angles as acute, obtuse and right angle • Knows why triangles are used in towers and bridges etc. • Uses degree clock and protractor to draw and measure different angles. • Solves simple problems related to the measurement of different angles in day today activity. Note- Integrated with " Up You Go" Looking Around Class 5			
June	**Measurement** Length • Determine the area and perimeter of simple	How many Squares ?	• Understanding of concept of area and perimeter • Ability to find area/perimeter of regular	• Drawing shapes for the given number of squares on a graph paper/square grid. • Finding area and perimeter by placing things on a square	• Understands the concept of area and perimeter. • Measures area of regular and irregular shapes using 1cm square paper or geo-	Graph paper/ Square grid Objects from classroom environment	Able to measure the perimeter and area of regular and irregular figure. Develop concepts and discuss about	8

	geometrical figures			• and irregular figures • Comparison of area and perimeter • Ability to modify basic shapes to create different tiling shapes • Solving problems based on area and perimeter	grid/graph paper. • Finding area/perimeter of Maths notebook, pencil box, stamps etc. • Measuring the perimeter of irregular shapes using thread. • Creating new shapes out of a square (tile) to make floor patterns. • Complete tiling patterns. • Visit to a mathematical garden • Draw rectangles of 12 squares in different ways on a dot grid. Find the perimeter. • Make shapes with straight lines to cover the given area on a graph paper. • Puzzles with five squares (12 different shapes). Find perimeter of each and compare them. Arrange the 12 pieces in a 10X6 rec. • Make your own tile • Worksheets and Practice exercises for drill work	board. • Derives formulae for finding the perimeter and area of given figure. • Determines the perimeter and area of given figures with given dimensions and express its relevant unit. • Solves simple problems related to the measurement of area and perimeter in day today activity. • Integrated with drawing	Measuring tape/scale Visuals of tile patterns Puzzles Internet resources	arious figure.	
July	**Numbers** **Fractional Numbers** • Finds the	Parts and	• Understanding of parts of a whole and a collection – ½	• Draw our national flag. Write fraction for the different colours.	• Identifies fraction of part of a whole and of a collection	Cut outs of different shapes	Develops a clear idea of fractional number and its	24

fractional part of a collection • Compares fractions • Identifies equivalent fractions • Estimates the degree of closeness of a fraction to known fractions • (1/2,1/4,3/4)	wholes	,¼ , ¾ etc • Understanding of different types of fractions • Understanding of equivalent fractions • Ability to generate equivalent fractions • Conversion of improper fractions to mixed fractions and vice versa • Comparison of fractions • Ability to find fractional part of a number • Solving problems involving fractional numbers	• Design a flag with logo for your Maths club. • Paper folding activities to show different parts of a whole/equivalent fraction • Fraction wall to show equivalent fractions • Make a magic top. • Divide a rectangle into 6 parts in different ways. • Take a square grid colour/make design, write fraction for the coloured part • Part/fraction of a collection • Divide the given shapes in equal parts in different ways • The colouring circle game • Paper folding/cutting the Roti/pizza– equivalent fractions • Flash cards with collection and partition of objects e.g. pencils, erasers, books, fruits etc. • Use concrete objects such as marbles, sticks, bottle caps etc to show equivalent fractions • Make a time table of your daily routine. Write a fraction to show what part of a	• Uses active vocabulary related to fractions in his/her conversation. • Understands the concept of whole numbers and part of the numbers. • Understands fraction as a division • Understands the term equivalent fractions • Generates fractions equivalent to a given fraction • Understands different type of fractions- Like/Unlike fractions, Unit fractions, Proper and Improper fractions, mixed fractions. • Compares fractions • Converts improper fractions into mixed numerals and vice versa • Calculates fractional part of a number/quantity. • Develops understanding of decimal through fraction with denominators	Collection of sticks/marbles/toffees/ bottle caps Coloured paper Graph paper Fraction Kit Internet resources Flash cards Worksheets Chapati/Pizza/ Apple Games/Puzzles	equivalence. Able to represent fractional number in various forms.

Month	Topic		Concepts	Activities	Learning Outcomes	Resources	Life Skills	
				day is spent for each activity?/ Show different activities of a day on a paper strip with different colours • Games and puzzles • Quiz • Preparing vegetable/grocery bills • Worksheets • Word problems involving fractions from daily life activities. • Worksheets and Practice exercises for drill work Note- Integrated with " Super Senses" Page 11, Looking Around Class 5	10,100 or 1000. • Makes design and shapes by paper folding (halves, quarter etc.) • Solves simple problems related to the fractional numbers in our day to day activities.			
August	**Geometry** Shapes & spatial understanding • Explores intuitively rotations and reflections of familiar 2-D shapes • Explores intuitively symmetry in familiar 3-D shapes	Does it look the same?	• Understanding of geometrical patterns • Understanding of symmetrical and non-symmetrical shapes • Ability to generate number /geometrical patterns • Solving problems related to patterns	• Make a pattern from a drop of colour • Drawing the other mirror half of the given picture • Mirror game (Putting the mirror on different places on figures and drawing the shapes obtained) • Distinguish symmetrical and asymmetrical figures from the given figures/objects	• Observes, describes and continues simple geometrical patterns. • Identifies symmetrical and non-symmetrical shapes, alphabets etc. • Discovers and narrates simple characteristics of shapes. • Identifies symmetry and shapes of design using the idea of	Mirror Flash cards of number/geometrical patterns Cut outs of shapes/alphabets/numbers	Develops logical Thinking. Generates patterns depicting two dimensional and three dimensional shapes.	8

Month								
				• Pictures of clock/mouth of different animals /exercise postures or other diagrams to show different symmetrical and asymmetrical shapes • Observing and drawing different shapes on rotating 1/3, 1/2, 1/4, 1/6 etc • Worksheets and Practice exercises for drill work	paper folding. • Generates patterns involving numbers and operations. • Solves simple problems related to symmetrical and asymmetrical patterns. • Integrated with EVS and drawing			
August (cont)	**Numbers** Numbers and operations • Explains the meaning of factors and multiples	Be my multiple , I'll be your factor	• Understanding of Multiples and factors • Understanding of odd and even numbers • Understanding of prime and composite numbers • Understanding of common multiples and factors • Ability to compute the LCM and HCF • Solving problems	• Use 10 x 10 grid and colour all the even and odd numbers in different colours.. • Play meow and dice game to give the concept of multiple. • Write multiples of given numbers and also find out common multiples. • Arrange the groups of different things with a fixed number in different ways (concept of factor) (Things used Bangles, seeds, pencils etc)	• Understands the concept of factors and multiples of a number. • Understands the relationship between multiples and factors. • Understands even and odd numbers. • Understands the concept of prime and composite numbers. • Understands the concept of common multiples and common factors. • Sorts out the even and odd numbers that come between	10 x 10 grid Bangles, beads, pencils etc. Internet resources Worksheets	Represents various Prime and composite numbers in factors and multiples.	18

Month								
			related to multiples and factors	• Make factor trees for the given number • Puzzles • Arranging bangles into equal groups possible for a given no. of bangles. For ex. 6, 1X6, 2X3, 3X2, 6X1 • List the factors of given two no. and write the common factors in the common region • On a 1 to 100 number grid colour multiples of 2 with red, 3 with blue and 4 with yellow. Pick the numbers which have all the three colours(Prime and composite numbers) • Worksheets and Practice exercises for drill work	the given numbers. • Sorts out the prime and composite numbers that come between the given numbers. • Finds factors and multiples of a given numbers. • Solves simple problems related to multiples and factors in day today activities.			
September	**Patterns** • Identifies patterns in square numbers, triangular numbers • Relates sequences of odd numbers between	Can you see the pattern?	• Understanding of patterns • Ability to make patterns	• Observe the patterns on gift wrappers/cloth/and try to deduce the rule. • Make a vegetable block and using colours print on paper/cloth taking ¼, ½turns. (clockwise/anticlockwise)	• Observes and understands the pattern • Recognizes the basic unit which generates the pattern. • Makes patterns with numbers and letters. • Computes the given patterns using four basic operation of mathematics	Samples of patterns Magic square/ magic triangle Printing blocks Internet resources Worksheets	Identification of various number patterns.	12+8

Month	Topic	Lesson	Knowledge/Skills	Activities	Learning Outcomes	Resources	Expected Outcome	Periods
	consecutive square numbers • Makes border strips and tiling patterns			• Observe the rule in the given patterns and complete the pattern using the rules. [Magic square, Magic Hexagon, number and number (change in order of number in the addends) Palindromes, Magic calendar etc.] • Worksheets and Practice exercises for drill work	• Applies the knowledge to form pattern. • Integrated with drawing			
October	**Geometry** Shapes & spatial understanding • Intuitive idea of a map • Reading maps and calculating distances	Mapping Your Way	• Knowledge and understanding of reading maps • Understanding of directions • Understanding of scale of a map	• Finding the location of Agra from Delhi in the map of India. • Take a map of your city and tell the location of one locality to others and its associated objects like park, hospital, temple etc. • Drawing a map on the floor and ask the children to stand on the map and saying the location of different things around them using the words towards north, in the east etc. • Enlarging or reducing of pictures or maps on graph paper, the class room floor, the mud	• Is able to read a map. • Understands the need of a scale of a map used to locate the given area. • Develops the concept of enlarging/reducing the area in the given map. • Understands the four directions and is able to locate the given area in the map. • Draws conclusions and inferences from the map. • Converts one unit of length to	Map of India Map of Delhi Map of World Graph paper Compass needle Floor maps Layout plans	Develops ability to read map and understands the scales.	16

					another unit of length. Compares data and solves simple problems using maps.			
				ground etc. • Finding actual (approximate) distance between cities with the help of political maps. • Drawing map of your class room and primary wing and expressing the different objects e.g. black board, window, door, display board etc • Worksheets and Practice exercises for drill work Note- Integrated with " Whose Forests" Page 188, Looking Around, class 5				
Novem ber	**Geometry** Shapes & spatial understanding • Gets the feel of perspective while drawing a 3-D object in 2-D • Makes the shapes of cubes, cylinders and cones using nets especially	Boxes and Sketche s	• Understanding of 2 dimensional and 3 dimensional shapes • Visualization of 3 dimensional shapes and its representation in 2 dimensional • Ability to differentiate between deep drawing and	• Counting of faces, edges and corners of a cube/cuboid. • Finding the area of each face of the cube/cuboid. • Making a list of things which look like a cube/ cuboid in their surroundings. • Practicing to visualize the net of box, to think of how it looks when flattened, and also to check which nets do not make a box.	• Understands the concept of 2 dimensional and 3 dimensional shapes • Understands deep drawing (the 3 dimensional perspective drawing. • Differentiates between the 2-dimensional and 3-dimensional figures. • Solves simple problems in daily life situation based on 2- dimensional and 3 dimensional shapes.	Dice Model of a cube/cuboid Cartons/boxes/matc h box Chart paper	Learns about three dimensional shapes its layout and drawing.	12

	designed for this purpose		layout plans	• Making of cubes/cuboids/cylinder etc using dice, empty match boxes and thick papers. • Drawing front view, side view and top view of given models, objects etc. • Worksheets and Practice exercises for drill work • Integrated with drawing				
November	**Fractional numbers** • Uses decimal fractions in the context of units of length and money • Expresses a given fraction in decimal notation and vice versa	Tenths and Hundre dths	• Understanding of decimals • Understanding the basic operations of decimals • Understanding of relationship between measures(Km/m/cm/mm) • Conversion of higher units into mower units • Conversion of decimals into fractions and vice versa • Ability to add and subtract decimals	• Measure the length of different things in mm and cm like notebook, pencil, eraser, pen, desk etc. • Convert cm into mm and vice versa • Measure the height of boys and girls in the class/height of family members • Measure the length and width of currency notes of different denominations and write them in mm and cm. • With of graph paper, teacher will explain	• Develops understanding of decimals through fractions with denominators 10 and 100 • Converts a decimal into fraction and vice versa. • Expresses a given measurement in higher or lower units. • Derives formulae for finding the decimal and percentage. • Converts a given measurement in higher or lower units. • Measures	Decimal place value chart Scale/ Measuring tape Graph paper Newspaper Internet resources Worksheets Price tags	Relates fractional number and concept of decimal. Learns conversion of ecimals. Use of graph aper.	15

			• Measurement of temperature • Problem solving	decimals, fractions and relation between them. • Represent the given decimal on a square grid/graph paper • Find the value of currency of other countries in Indian currency. • Find the maximum and minimum temperatures of different cities and find their differences too • Collect the price tags of objects/items. Observe the decimal notation of Rupees and Paisa. Teacher explains the hundredths place. • Create a market scene. Buying and selling things will give an understanding of money transaction. • Worksheets and Practice exercises for drill work	temperature • Adds and subtracts decimals • Solves simple problems related to decimals/money transactions.			
Decem ber	**Measurement** Determines the area and perimeter of simple geometrical figures	Area and its Bounda ry	• Understanding of concept of area and perimeter. • Understanding of units of area and perimeter. • Ability to	• Measure the length and breadth of the given things and finding their area and Perimeter. • Paste different cutouts and find their area and perimeter. • Make a	• Understands the meaning of fields (area) and fences (perimeter/bou ndary). • Understands that the boundary is the	Scale/ Measuring tape Cut outs of different shapes Worksheets	Clear cut idea about area and boundary. Uses standard units to measure it.	11

	compute area and perimeter of regular and irregular shapes. • Solving problems based on area and perimeter.	birthday/greeting card and find its area and perimeter. • Finding the perimeter and area of class-room, display board, black board etc. • Draw two squares (one is double of the other) .Find their perimeter and area and compare too. • Draw different shapes by using a thread of fixed length. (Perimeter same but area is different). • Take a drawing sheet and find its area and perimeter. Then cut it into small strips. Join the strips to form a belt and find the area and perimeter. (Same area can have different perimeter.) • Make all possible rectangles and squares with the given number of squares • Worksheets and Practice exercises for drill work	sum of the sides of the given figure. • Measures the area of regular and irregular shapes using 1cm square paper or geo-board. • Derives formulae for finding the perimeter and area of a square or rectangle. • States the unit of area and perimeter. • Solves simple problems related area and perimeter. • Understands that things of same area can have different perimeters.	

Januar y	**Data Handling** Collects two dimensional quantitative data Represents data in form of a table Draws a bar graph or pictograph to present a data	Smart Charts	• Understand the graphical representation of data (bar graph, pie chart) • Ability to represent data in tabular form • Ability to interpret data • Solve word problems	• Use the tally marks to show the mode of transport used by students to commute to school • Collect the strength of students in classes I to V of primary section and find the total strength. Which class has the maximum/minimum strength? • Observe the 1/2 an hour TV programme and making tally marks for the different advertisements. • Making a table to record temperature of different cities and represent the data as Bar Graph. • Make your family tree up to IV generation (Great grand parents) • Record growth of any plant/animal and represent it on a graph paper in form of growth chart • Collect information from the newspaper and tabulate the information (Daily temperature, scores, economic data) • Worksheets and Practice exercises for drill work Note- Integrated with " What if it Finishes"(Page 118) Looking Around, class 5	• Collects and records data • Represents the data in tabular form or bar graph. • Understands fractions through chapatti chart or pie chart. • Draws conclusions and inferences from the data. • Compares the data • Solves simple problems using charts/data.	Data collection Newspaper to collect economic data, survey analysis Family details Internet resources Worksheets	Recognitio n Observatio n Classificatio n Collection of data Interpretati on Able to depict fact in pictorial /graphical manner.	10
					• Knows the properties of multiplication. • Multiplies 2 or 3			
Januar	**Numbers**	Ways				Objects like erasers,	Estimation.	17

y(Cont)	Numbers and Operations - Appreciates the role of place value in addition, subtraction and multiplication alogarithms - Uses informal and standard division alogarithms	to multiply and divide	- Understanding of different ways of multiplication - Knowledge of terms used in multiplication and division (Multiplicand, multiplier and product; divisor, dividend and quotient) - Understanding of properties of multiplication and division - Solving word problems based on multiplication and division	- Multiply any two numbers in different ways by breaking method and column method. - Determine the division and multiplication facts of a given number - Problem sums related to daily life. - Collection of simple objects like pencils, eraser, sharpener etc and arranging them in different groups. - Do sums of division and check your result by multiplication. - Give a situation and ask students to frame a question related to the concept of division and multiplication - Mock shopping situations created. (for mental calculations and to know the operation involved) - Worksheets and Practice exercises for drill work	digit numerals by another 2 0r 3 digit numeral. - Solves problems involving multiplication - Knows properties of division. - Divides a numeral by one or two digit numeral - Solves word problems involving division. - Understands that multiplication is repeated addition and uses the symbol for multiplication. - Understands that division is a process of equal distribution of sharing. - Solves problems involving multiplication of a number (up to 4 digits) with a 2 or 3 digit number - Divides a number (up to 4 digit) by 1 or 2 digits numbers with or without remainder. - Checks division fact using	pencils, sharpener etc available in the classroom environment Worksheets	Gains deeper knowledge of multiplication and division related problems.		

					corresponding multiplication facts			
					• Solves word problems involving multiplication and division dealing with daily life activities charts/data.			
					• Solves puzzles involving for operations.			
February	**Measurement** • Relates commonly used larger and smaller units of length, weight and volume and converts one to another • Appreciates volume of a solid body: intuitively and also by informal measurement • Solving problems	How Big? How Heavy?	• Understand the concept of volume • Understanding the units of volume and mass • Ability to find volume of a cube and a cuboid • Solving problems related to volume and mass	• Comparing the volume of different things by putting them into jar filled with water. • Making a measuring bottle. • Finding volume by arranging the cubes and counting them. • Finding volume of a match box by measuring its length, width and height. • Making a paper cube • Match box play – arrange a particular no. of boxes to make plat form of different heights. • Take 4 cards of the same size make pipes (i) length wise pipe (ii) width wise pipe (iii)	• Understands the concept of volume as the measure of space an objects occupies. • Finds volume of cuboids and cubical containers by filling in with unit cubes • Derives formulae for finding the volume of a cube or cuboids • Recognizes the units of mass and volume • Calculates the volume of a cube or cuboids of given dimension and express in relevant unit. • Solves simple problems related	Cubes Cards of same size Jar of water Worksheets Internet resources	Gets and fairly good idea of -Area & Volume -Weight & volume Able to discuss the concept and solve the problem.	14+10

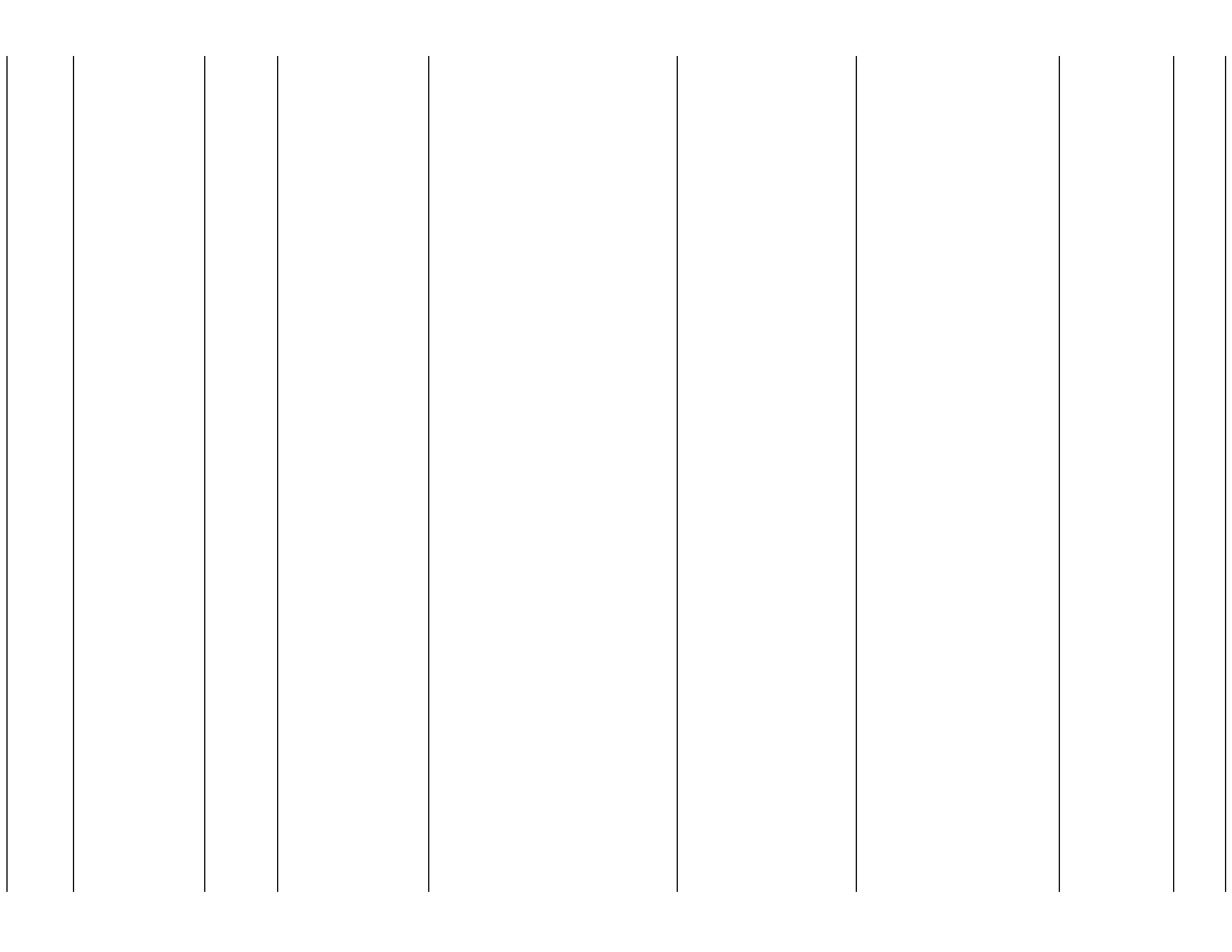|								
	involving length, weight and volume			triangle shaped pipe (iv) square shaped pipe. Fill one with sand and pour it into another – compare their volume. • Make a list of grocery items used at home in one month along with their quantity (weights)and also find the total weight • Worksheets and Practice Exercises for drill work	to volume of the cubes.			
March	Revision							

March