Espalier Heritage School

Annual Planner 2020-21

Grade V | **Subject: Maths** | **Created By: Ajit Kumar**

Sr No	Lesson Name	Point to Cover	Lesson Flow	Learning Objectives	Methodology	pedagogical methods	learning outcome	Teaching Aid	Teaching Place	Is the lesson worksheet ready	Reff.books with pg.no.	No.of lectures required
1	The Fish Tale	1. Introduction of number	1. Set induction to check the knowledge about number	1. Students will understand Indian and International place value system.	Inductive and deductive	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to	1. The learner works with large numbers – reads and writes numbers bigger than 1000 being used in her/his surroundings	Number chart and place value chart	classroom	yes	textbook and work book	10
		2. Comparison of Large Numbers	2. To explain the concept of Indian system and international system place value.	2. Students will able to read and write numbers in Indian and International system		discuss on contexts/situations in which a need arises to go beyond the number 1000 so that extension of number system occurs naturally. For example number of grams in 10 kg, number of metres in 20 km, etc.	– performs four basic arithmetic operations on numbers beyond 1000 by understanding of place value of numbers – divides a given number by another number using standard algorithms					
		3. Application of numbers	3. To explain the concept of writing the numbers into expanded form and short form	3. Students will able to compare numbers and also able to arrange in ascending or descending order		2. represents numbers beyond 1000 (up to 100000) using place value system, like extend learning of numbers beyond 9 thousand, how to write number one more than 9999						
			4. To explain the concept of writing numbers in ascending or descending order and also to compare the numbers.	4. Students will able to solve application based questions								
			5. To explain how to solve word problems based on number by using mathematics operations									
2	Shapes and Angles	1. Introduction of shapes	1. Set induction to check the previous knowledge about shapes	1. Students will understand about concept of closed shapes and polygons	Scientific Attitude	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to	1. The learner explores idea of angles and shapes – classifies angles into right angle, acute angle, obtuse angle and represents the same by drawing and tracing	Polygon shapes and Angle model	Classroom	yes	textbook and work book	10
		2. Angles	2. Introduce the concept of closed shape	2. Students will understand about angles and its various types		develop earlier understanding of angles and to describe it.						
		3. Pairs of Angles	3. To explain the concept of polygon.	3. Students will identify various types of angles		2. observe angles in their surroundings and compare their measures. For example, whether the angle is smaller, bigger or equal to the corner of a book which is a right angle; further, classify the angles						
		4. Use of Protractor	4. To explain the concept of angles and various types of angles.	4. Students will learn how to find the complementary and supplementary angle		3. introduce protractor as a tool for measuring angles and use it to measure and draw angles						
			5. To explain the concept of pairs of angle i.e. complementary and supplementary angles	5. Students will understand how to measure angles.								
			6. To explain the which tool we are using to construct and measure angle.									
3	How Many Squares?	1. Introduction	1. Set induction to check the previous knowledge about area and perimeter	1. Students will understand that sum of all sides of a closed shape is called perimeter	Problem Solving	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to	1. The learner applies the four fundamental arithmetic operations in solving problems involving money, length and area	Square grid sheet	Math lab and classroom	yes	textbook and work book	8
		2. Perimeter	2. Explain the concept of finding perimeter of any closed figure	2. Student will able to find perimeter of rectangle and square by using fomula		measure length of different objects using a tape/ metre scale.						
		3. Area	3. To explain the concept of finding area by using formula and square grids.	3. Students will learn how to find the area of any shapes by using square grid.		• appreciates the need of converting bigger units to smaller units						
4	Parts and Wholes	1. Fractions	1. Introduce the concept of fraction and how fraction used in our day to day life	1. Students will learn about numerator and denominator	Inductive and deductive	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to	1. The learner acquires understanding about fractions – finds the number corresponding to part of a collection	math lab fraction kit	Classroom	yes	textbook and work book	15
		2. Types of Fractions	2. To explain the various types of fractions	2. Students will understand a part of a whole is called fraction		compares fractions through various ways like paper folding, shading of diagram etc.	– identifies and forms equivalent fractions of a given fraction					
		3. Equivalent Fractions	3. To explain how to find equivalent fraction of any fractions	3. Students will able to identify the various types of fractions		• develop the idea of equivalence of fractions through various activities. For example, by paper folding and shading	– expresses a given fraction 1/2 , 1/4, 1/5 in decimal notation and vice-versa. For example, in using units of length and money– half of Rs. 10 is Rs.5					
		4. Comparison of Fractions	4. To explain how to compare fractions	4. Students will able to compare fractions								
		5. Addition and Subtraction of Fractions	5. To explain the concept of addition and subtraction of like and unlike fractions	5. Students will understand and able to solve fraction sums by using all mathematical operators								

		6. Multiplication and Division of Fractions d	6.To explain how to solve word problems sums based on addition and subtraction of fractions	6. Students will able to apply concept in daily life.								
			7. To explain the concept of multiplication and division of fractions									
			8.To explain how to solve word problems based on multiplication and division of fractions									
5	Does it Look the Same?	1. Mirror Halves	1. Set induction to check the previous knowlege of student about mirror image.	1. Student will understand the application and able to find mirror image of object.	Scientific Attitude	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to	The learner identifies 2D shapes from the immediate environment that have rotation and reflection symmetry like alphabet and shapes	Mirror	classroom	yes	textbook and work book	8
		2. Symmetry	2. To Explain the concept of mirror halves and application in our daily life.	2. Students will understand how to draw a symmetrical line of any object.		explore symmetry by using paper folding/ paper cutting						
		3. Rotational Symmetry	3. Solving excercise based on above concept.	3. Students will understand that we cannot draw symmetrical line of all object		• explore shapes so that they can find out that some shapes look the same only after one complete rotation/ part of a rotation						
			4. To explain the concept of symmetry	4. Student able to identify rotational symmetry								
			5. Solving exercise based on above concept									
			6. To explain the concept of Rotational symmetry and solving exercise based on above concept.									
6	Be My Multiple, I'll be Your Factor	1. Multiples	1. Set induction to check the previous knowlege about multiples and factors	1. Students will understand and able to find divisibility of number by using divisibility test	Inductive and deductive	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to	1. The learner estimates sum, difference, product and quotient of numbers and verifies the same using	Chart	Classroom	No	textbook and work book	18
		2. Factors	2. To explain the concept of factors	2. Studente abe to find prime numbers from 1 to 100		develop the concept of factors through	different strategies like using standard algorithms or breaking					
		3. Test of Divisibility	3. Solving excercise based on above concept	3. Students able to find HCF and LCM by using prime factorisation method.		division of numbers and multiples	a number and then using operation. For example, to divide 9450 by 25,					
		4. Prime and Composite Numbers	4. To explain the concept of divisibility test of 2,3,4,5,6,8,9,10	4. Students understand the propertiesof LCM and HCF. Also how it is applicable in our practical life			divide 9000 by 25, 400 by 25, and finally 50 by 25 and gets the answer by adding all these quotients.					
		5. Prime Factorisation	5. Solving exercise based on above concept									
		6. HCF or GDC	6. To explai the concept of Prime nummber and composite number									
		7. LCM	7. To explain the concept of HCF and LCM									
		8. Properties of HCF and LCM of given Numbers	8. Solving excercise based on above concept									
			9. To explain the application of LCM and HCF in daily life.									
			10. Solving exercise sums based on above concept									
7	Can You See The Patterns?	1. Patterns and their Rule	1. Set induction to check the previous knowledge about patterns	1. Students will able to find the rule of patterns by observing the patterns	Problem Solving	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to	1. The learner identifies the pattern in triangular number and square number	Pattern sheet	classroom	No	textbook and work book	6
		2. Magical Shapes	2. To Explain the concept of patterns and how to find and write the rules of patterns	2. Students will understand how to find and write rules of patterns		explore patterns in numbers while doing various operations and to generalise them as patterns in square numbers						
		3. Calendar Tricks	3. Solving exercise based on the above concept	3. Students will understand that numbers are present in patterns								
			4. To expalin the concept of magical shapes.									
			5. To conducted activity to explain calender tricks									
			6. Solving exercise based on above concepts									
8	Mapping Your Way	1. Finding your way	1. Set induction to check the previous knowledge about map and map reading	1. Students will understand that map can represent maximum information in small space.	Scientific attitude	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to	The learner able to read and observe map	Map	Classroom	No	textbook and work book	6

		2. Mapping	2. To expalin how to observe map and answer the following question.	2. Students will understand that mp help to understand the palce in better way		read and observe map for making proper decision						
		3. My country	3. Solving exercise based on above concept									
		4. Make it Bigger, Make it Smaller	4. To explain the concept of ploting map and shape in smaller and bigger size									
9	Boxes and Sketches	1. Nets of 3D figures	1. Set induction to check the previous knowledge about shapes	1. Students will understand the 3D shapes are used everywhere in our surrounding	Inductive and deductive	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to	1. The learner makes cube, cylinder and cone using nets designed for this purpose	cube blocks	math lab and classroom	No	textbook and work book	10
		2. Floor Maps	2. To expalin the concept of 3D shapes.	2. Students will able to draw differnt view of 3D shapes from top, left, right, front and back		measure volume by counting the number of unit cubes that can fill a given space						
		3. View of 3D shape	3. Solving exercise based on above concept	3. Students able to draw floor map on a sheet of paper								
			4. To explain the differnt view of 3D shapes									
			5. Solving exercise based on above concept									
10	Tenths and Hundredths	1. Decimal Fractions	1. Set induction to check the previous knowledge about place value	1. Students will able to read and write decimal numbers	Inductive and deductive	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to	1. The learner converts fractions into decimals and vice versa	Chart	Classroom	No	textbook and work book	12
		2. Reading and Writing Decimal Fractions	2. To expalin the Place value system of decimal numbers	2. Students will able to do all operation of decimal numbers		appreciates the need of converting bigger units to smaller units						
		3. Decimal Fractions in Place Value Chart	3. To explain the concept of Decimal numbers	3. Students will understand the application of decimal numbers								
		4. Like and unlike Decimals	4. Solving exercise based on above concept									
		5. Addition and subtraction of Decimals	5. To Explain the concept of like and unlike decimals									
		6. Multiplication and Division of Decimals	6. To explain the concept of multiplication and division of decimal numbers and also application of this concept in daily life									
		7. Use of decimals in daily life	7. Solving exercise based on above concept									
11	Area and its Boundary	1. Perimeter	1. To explain the concept of perimeter of square and rectangle	1. Students will understand boundary of closed shape is called perimeter	Problem Solving	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to	1. The learner able to find area and perimeter of closed polygon	shapes	classroom	No	textbook and work book	10
		2. Area	2. Solving exercise based on above concept	2. Students will understand surface occupied by any object is called area		measure length of different objects using a tape/ metre scale.						
			To expalin the concept of area of square and rectangle	3. Students will understand that perimeter and area is the most important part of life.								
			4. Solving exercise based on above concept									
12	Smart Charts	1. Tally Marks	1. To introduce the concept of data handling.	1. Students will understand that data arranged in tabular form by using tally marks	inductive and deductive	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to collect information and display it in a pictorial form. For example, heights of students from their class and represent it pictorially	1. The learner collects data related to various daily life situations, represents it in tabular form and as bar graphs and interprets it.	chart of representing data	classroom	No	textbook and work book	10
		2. Pictograph	2. To explain representing data in pictograph, pie chart and bar graph	2. Students will understand that presenting data in pictograph, bar graph and pie chart help to analyze data easily		• collect and discuss various diagrams/ bar charts from the newspapers/ magazines may be in the class.						
		3. Bar Graphs	3. To explain how to observe data and answer the following questions									
		4. Pie Chart	4. Solving exercise based on above concepts									
13	Way to Multiply and Divide	1. Multiplication	1. Set induction to check the previous knowledge of student about multiplication and division of number	1. Students will understand that how to multiply and divide the bigger number	Problem Solving	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to	1. The learner applies the four fundamental arithmetic operations in solving problems involving money, length, mass, capacity and time intervals	-	classroom	No	textbook and work book	16

		2. Rounding Numbers	2. To explain the concept of rounding off the number to the nearest ten hundred thousand	2. Students will understand that how multiplication division used in our day to day life		conducts role play of shopkeepers/ buyers in which students create bills						
		3. Division	3. Solving exercise based on above concept	3. Students will understand that how unitary method we are using in our practical life		• use a variety of ways to divide numbers like equal distribution and inverse process of multiplication						
		4. Application of Multiplication and Division	4. To explain the concept of division of large number			• appreciates the need of converting bigger units to smaller units						
		5. Unitary Method	5. To explain the application of multiplication and division in our day to day life									
			6. Solving exercise based on above concept									
			7. To explain the concept of unitary method and how it is applicable in a day to day life									
14	How Big? How Heavy?	1. Volume	1. To explain the concept of volume	1. Students will understand that volume can be find for three dimensional shape	Scientific attitude and Problem solving	1. The learner may be provided opportunities in pairs/groups/ individually and encouraged to discuss experiences on units of capacity printed on water bottle, soft drink pack, etc.	1. The learner applies the four fundamental arithmetic operations in solving problems involving money, length, mass, capacity and time intervals	3D objects	Math lab and classroom	No	textbook and work book	10
		2. Mass, Weight and Capacity	2. To explain how to find volume of cube and cuboid			• fill a given space by using different solid shapes, cubes, cuboids, prisms, spheres, etc. and encourage students to decide which solid shape is more appropriate	2. The learner estimates the volume of a solid body in known units like volume of a bucket is about 20 times that of a mug					
			3. Solving exercise based on above concept									