

Espalier Heritage School													
Annual Planner 2021-22													
Grade VII						Subject: Maths							
Sr No	Lesson Name	Point to cover	Lesson flow	learning objectives	Methodology	Pedagogical Process	Learning outcome	Teaching Aid	Teaching Place	Reff.book s with pg.no.	No.of lectures required	Class Activities /Diagrams / Map work	
1	Integers	1. Introduction of integers	1. Set induction to check the previous knowledge of student about numbers and integers.	1. Students will understand a bigger collection of numbers which is formed by whole numbers and their negatives.	Explanation	The learning may be provided opportunities in pairs/ groups / individually and encouraged to provide contexts for exploring the rules of multiplication and division of integers. This can be done through number line or number patterns	The learn multiplies/ divides two integers	Chart of number line	Online Classroom	Text book	10	To practice addition, subtraction and multiplication of integers	
		2. Properties of addition and subtraction of integers	2. Solving exercise based on basic concept of integers given in the textbook.	2. They will understand how integers will be multiply and find the product of a positive and a negative integers is a negative integer, whereas the product of two negative integers is a positive integers.	Inductive and deductive			Paper tiles				Material required: 50 flashcards, pen, notebook	
		3. Multiplication of integers	3. Introduce the operations of integers.	3. Students will understand properties of commutativity, associativity under addition and multiplication, and the distributive property hel us to make our calculations easier									

		4. Properties of multiplication of integers	4. Explain properties of addition and subtraction of integers									
		5. Division of integers	5. Solving exercise in notebook given in the textbook									
		6. Properties of division of integers	6. To teach multiplication and its property of integers									
			7. Solving exercise in notebook given in the textbook									
			8. To teach division and its property of integers									
			9. solving exercise in notebook given in the textbook									
2	Fractions and Decimals	1. Introduction of fraction and decimal	1. Set induction to check the previous knowledge about basic fraction and their types	1. Students will learn about fraction and decimal along with the operation of addition and subtraction on them.	1. Explanation	The learning may be provided opportunities in pairs/ groups / individually and encouraged to explore the multiplication and division of fractions and decimals through pictures or paper folding activities and daily life examples.	The interprets the division and multiplication of fractions and decimals	1. Fraction Circle	Online Classroom	Text book	14	Understanding multiplication of decimal numbers
		2. Multiplication of fractions by a whole numbers and a fraction	2. Solving exercise based on basic concept of addition or subtraction of fraction given in the exercise 2.1	2. They will understand operations of fractions and also reciprocal of a fraction is obtained by inverting it upside down.	2. Inductive and deductive							Aim: To represent the product of two decimal numbers on a sheet with squares

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3	Data Handling	1. Introduction of data handling and collection of data	1. Set induction to check the previous knowledge of students which they already studied in grade 6 about data handling	1. Students will understand the data is always collected for specific purpose	1. Explanation	The learning may be provided opportunities in pairs/ groups / individually and encouraged to find a representative value of data i.e. mean, mode or median of ungrouped data. Encourage them to arrange it in a tabular form and represent it by bar graph.	The learner interprets data using bar graph such as conjunction of electricity is more in winter than summer, runs scored by a team in first 10 overs, etc		Online Classroom	Textbook	12	Collection of data and arranging data in tabular form for analysis
		2. Concept of arithmetic mean, mode and median	2. Explain the concept of data, purposes for collection of data and how to organise data	2. Students will understand collection, recording and presentation of data in tabular and also with the help of various types bar graph	2. Inductive and deductive	2. To discuss the situations where the term 'chance' can be used, for example, what are the chances of winning today as chances of getting 6 while rolling a dice.	The learner find various representative values for simple data from his/her daily life contexts like mean, median and mode					Activity to find measure of Central tendency
		3. Uses of bar graphs with different purposes.	3. Solving textbook exercise based on above concept	3. Students will understand the measure of Central tendency in data handling			The learner recognises variability in real life situation such as, variations in the height of students in his/her class and uncertainty in happening of events like throwing a coin					
		4. Concept of probability	4. To explain the concept of mean, median and mode and its uses in practical life	4. Students will understand there are situations in our life, that are certain to happen, some that are impossible and some that may or may not happen. The situation that may or may not happen has a chance of happening								

			5. Solving textbook exercise based on above concept									
			6. To explain what are the purposes of graph and how to represent data on graph and also how to select scale to represent data									
			7. Solving textbook exercise based on above concept									
			8. To explain concept of probability and solving exercise based on it									
4	Simple Equation	1. Introduction of constant and variable	1. Set induction to check the previous knowledge about constant and variables	1. Students will understand and equation is a condition on a variable such that two expressions in the variable should have equal value.	Inductive and deductive	The learner may be provided opportunities in pairs/groups/individually and encourage to provide situations from daily life that lead to setting up of equations and choosing the appropriate value of the variable that equate both sides	The learner represents daily life situations in the form of a simple equation and solves it.	Mind reading game	Online Classroom	Textbook	14	Activity: To complete 3 x 3 magic square by using linear equations
		2. To explain concept of equation	2. Start with mind reading game to introduce the concept of variable and constant	2. Students will understand the value of variable for which the equation is satisfied is called the solution of equation.		It is also provide to conduct activity of adding/subtracting number of objects of same category from daily life. For example number of notebooks obtained when three notebooks are added to a group of 5 notebooks.						Pre-requisite: Knowledge of solving linear equations.

		3. Solving of an equation	3. Explain the concept of equation	3. Students will understand how to construct simple algebraic expressions corresponding to practical situations								Material required: Incomplete magic square, paper, pen and scale.
		4. Path of equation. a) Normal path. b) Reverse path	4. Solving exercise 4.1 based on above concept									
		5. Applications of simple equations to practical situations	5. To explain how to solve equation and then student will solve equation of exercise 4.2 and 4.3 in their notebook									
			6. To explain how the concept of equation is connected with our day to day life									
			7. To solve application based question from exercise 4.4 in notebook									
5	Lines and Angles	1. Introduction aap basic concept of basic geometry i.e. point, line, angles, etc	1. Set induction to check the previous knowledge about point, lines and angles.	1. Students will understand basic concept about angles and its properties.	Inductive and deductive	1. The learner may be provided opportunities in pairs/groups/individually and encouraged to explore different examples from daily life in which pair of angles are involved with a common vertex	1. The learner classify of angles based on thier properties as linear, supplementary, complementary, adjacent and vertically opposite and finds value of the one when the other is given.	Chart of lines and angles	Online Classroom	textbook	7	

		2. Concept of related angles: complementary angle, supplementary angles, adjacent angle, linear pair and vertically opposite angles.	2. To teach the concept of related angles and start solving exercise 5.1.	2. Students will understand properties of angles formed by parallel line and its transversal		2. Encourage to visualise the relationship between various pairs of angles when a transversal cuts two lines (parallel and non-parallel)	2. The learner verify the properties of various pairs of angles formed when a transversal cuts two lines.					
		3. Pairs of lines: intersecting lines, transversal, angles made by a transversal and transversal of parallel lines.	3. To teach the concept of line and transversal and property of angle intercept by parallel lines and transversals									
			4. To solved exercise 5.2 based on above concept									
6	The Triangle and its Properties	1. Introduction of triangle	1. Set induction to know the basic concept and properties of triangle.	1. Students will understand about triangle and its properties.	Inductive and deductive	1. The learning may be provided opportunities in pairs/groups/individually and encouraged to draw different types of triangles, ask them to measure angles of all triangles, and verify						

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			5. Solving exercise based on above concept									
			6. To teach the concept of area and circumference of circle									
			7. Solving application based questions on above concept									
12	Algebraic Expressions	1. Introduction of variable, constant and terms of an expression	1. Set induction to check the knowledge about algebra	1. Students will understand the concept of an algebraic expressions are formed from variables and constants and expressions are made up of terms.	Explanation	The learner may be provided opportunities in pairs/groups/individually and encourage to explore the possible combinations of variables and constants using different operations to form algebraic expressions in	The learner adds/subtracts algebraic expressions		Online Classroom	Textbook	10	-
		2. Classification of algebraic expressions : monomials, binomials, trinomials and polynomials	2. To explain the concept of variable and constant and also terms of an expression	2. Students will be able to classify an algebraic expressions	Inductive and deductive							
		3. Addition and subtraction of algebraic expressions	3. To explain classification of an algebraic expressions	3. Students will be able to add and subtract.								

