Espalier-The Heritage School

Annual Academic Planning (2022-23)

Grade: IV | **Subject : Math**

Sr	Name of	Points to cover	Lesson Plan	Methodology	Teaching Aid	Location	Activities/	Reff books	No. of	Learning Outcome
1	1. Place Value	**Lesson No/Name :** **1. Place Value** **Learning objective**- Pages 7 to 15 • To review the place value system with four-digit numbers • To expand five- and six- digit numbers • To compare and order 5 and 6-digit numbers Pages 16 and 17 • To build numerals using given digits Pages 18 and 19 • To learn how to round figures to the nearest 10 and 100. Pages 20 and 21 • To read and build Roman numerals up to 39	Recapitulation of previous knowledge about place value by questioning. Explanation of building and comparing 5 and 6 digit numbers followed by exercise questions. Explanation of international system of numbers using place value chart and video followed by exercise questions. Explanation of rules of rounding numbers with examples and follow up questions. Explain the concept of Roman numeral 1 to 39	Open classroom discussion, explanation, problem solving, reasoning, visualization	Videos, Charts	Classroom	Math Lab Activity - Number Pattern	Oxford New Enjoying Mathematics	12	Children will be able to - To review the place value concept and numbers up to six digits To build, understand, and compare 5-digit and 6-digit numbers To understand the international system of writing 6-digit numbers To round off numbers to the nearest 10& 100 To observe and continue number patterns To develop Roman numerals up to 39
2	2. Addition and Subtraction	**Lesson No/Name :** **2. Addition & Subtraction** **Learning objective**- Pages 23 to 25 • To review addition and subtraction • To add four- and five-digit numbers with and without regrouping • To check addition Page 26 to 28 • To subtract four- and five-digit numbers with regrouping • To check subtraction by addition Pages 29 – 30 • Mental addition and subtraction Pages 31 to 32 • To observe patterns using addition or subtraction Pages 33 to 35 • Adding and subtracting money Pages 36 to 40 • To follow certain steps while solving problems • To solve word problems that have extra information • To use the strategy of applying simpler numbers while solving word problems To use bar models for addition and	Induction of addition and subtraction of 4 and 5 digit numbers. Explanation of addition and subtraction using breaking up method followed by questions from the exercise. Expalin addition and subtraction of money term & its application. Expalin addition and subtraction application by solving word problems questions.	Open classroom discussion, explanation, problem solving, reasoning, visualization	Videos, Charts	Classroom	Mental Math sums	Oxford New Enjoying Mathematics	14	Children will be able to - To revise addition and subtraction of 4- and 5-digit numbers with and without regrouping To use the skill of compensation for addition and subtraction To understand the concept ofmoney term in addition and subtraction To follow the steps of problem solving

3	3. Multiplication	**Learning Objectives** Pages 47 to 51 • To review multiplication terms and skills • To explore different ways of multiplying using an understanding of our number system • To multiply using box multiplication • To multiply four-digit numbers by a single-digit number Pages 52 to 55 • To multiply by a two-digit number • To multiply by a three-digit number Pages 56 to 58 • Multiplying with money • To observe patterns in multiplication Pages 59 to 69 • To solve word problems with hidden numbers • To solve word problems by working backwards from the last fact given • Make use of bar models to solve word problems	Induction of multiplication to check the previous knowledge about this concept. Explain the different way of multiplication by solving exercise. Explain the concept of multiplying 4& 5 digit number by single digit and double digit number. Solved exercise based on this concept. Explain the concept of multiplication in money term and its application by solving word problems. Explain the use of multiplication in patterns.	Inductive & deductive	Videos, Charts	Classroom	Mental Math sums	Oxford New Enjoying Mathematics	14	Children will be able to - To understand different way of doing multiplication To understand multiplying 4& 5 digit number by single digit and double digit number To understand multiplication of money To understand application of multiplication
4	4. Division	**Learning Objectives** Pages 68 to 73 • To review the terms used in division and the process of long division. • To divide a four-digit dividend by a single-digit divisor giving a 4-digit quotient. • To divide a four-digit dividend by a single-digit divisor giving a 3-digit quotient Pages 74 to 82 • Dividing by ten and by tens • Dividing by a 2-digit divisor up to 20 • Dividing by greater 2-digit divisors Pages 83 • To observe patterns in division • To understand the meaning of the remainder in a word problem • Dividing with money, and understanding what the quotient and remainder mean. • Using bar models for division • To choose appropriate questions based on the facts given in a word problem	Induction of division to check the previous knowledge about this concept. Explain the different way of division by solving exercise. Explain the concept of dividing 4& 5 digit number by single digit and double digit number. Solved exercise based on this concept.	Inductive & Deductive	Videos, Charts	Classroom		Oxford New Enjoying Mathematics	14	Children will be able to - To divide a four-digit dividend by a single-digit divisor giving a 4-digit quotient & also to divide a four-digit dividend by a single-digit divisor giving a 3-digit quotient Dividing by ten and by tens, dividing by a 2-digit divisor up to 20 & dividing by greater 2-digit divisors

5	5. Factors	**Learning Objectives** Pages 95 to 99 • To understand the term factors • To use multiplication to find the factors of a given number • To use division to find the factors of a given number Pages 100 to 103 • To learn the rules of divisibility of 2, 3, 5, 9, 10 • To build factor trees to find factors of numbers • To understand the concept of common factors and find common factors of two or more given numbers	Explanation of the meaning of factors with examples and follow up questions. Explanation of divisibility rules by observing number patters, watching videos and solving sums Explanation of the meaning of common factors and concept to find common factors	Inductive & Deductive	Videos, Charts	Classroom		Oxford New Enjoying Mathematics	12	Children will be able to - To review the concept of factors To understand the rules of divisibility for 2, 3, 4, 5, 6, 9, and 10 To understand the concept of factor tree To find common factors To prime factorise a number To use factors in real life
6	6. Multiples	**Learning Objectives** • To understand the meaning of the term 'multiple' • To find the multiples of a given number • To connect factors and multiples • To find the common multiples of two or more numbers	Induction of multiples of a number. Finding common multiples of two or three numbers	Inductive & Deductive	Videos, Charts	Classroom	Worksheet	Oxford New Enjoying Mathematics	7	Children will be able to - Revise the concept of multiples and common multiples Understand the concept of common multiple of two or more numbers
7	7. Fractions	**Learning Objectives** Pages 114 to 119 • To review the concept of fractions and associated terms • To understand the terms like and unlike fractions • To develop the concept of equivalent fractions Pages 120 and 123 • To find the fraction of a number • To compare the fractions Pages 124 to 128 • To add and subtract like fractions Pages 129 to 133 • To develop the concept of proper and improper fractions • To understand the term 'mixed numbers' • Converting mixed numbers to improper fractions and vice versa	Induction of fraction and term related to it. Explain the various types of fractions i.e. like and unlike, proper and improper and mixed fraction Explanation of steps to identify and find the equivalent fractions Practice sums of comparing and ordering fractions. Explain the concept of converting mixed fration to improper fraction and vice versa	Inductive & Decuctive	Videos, Charts	Classroom	Lab activity - Multiplication of fractions.	Oxford New Enjoying Mathematics	12	Children will be able to - To review the concept of fractions and associated terms To identify and check equivalent fractions Comparing and ordering like & unlike fractions Covertion of improper to mixed fraction and vice versa.
8	8. Decimals	**Learning Objectives** Pages 138 to 144 • To understand the concept of decimals • To develop the concept of tenths and hundredths • To express fractions as decimals and vice versa	Explain the concept of decimal number that how to read and write decimal numbers. Explainn the concept of decimal palce vakue i.e. tenths and hundredths Explain the concept of converting decimal to fraction and solved exercsie	Inductive & Deductive	Videos, Charts	Classroom	Mental math sums	Oxford New Enjoying Mathematics	15	Children will be able to - To understand the concept of decimals and tenths and hundredths To understand the terms like and unlike decimals and convert one into another To compare and order the value of two or more decimals

9	9. Shapes, Space and Patterns	**Learning Objectives** Pages 147–148 • To review straight and curved lines, and open and closed shapes • To develop the concept of simple closed curves and polygons • To introduce names of three-sided and four-sided polygons Pages 149 to 152 • To learn about the parts of a circle • To draw a circle using a compass • To understand the relationship between the radius of a circle and its diameter Pages 153 to 155 • To learn about the concept of reflection • To identify symmetrical figures and draw the other half of incomplete symmetrical figures Pages 156 to 158 • Understanding tessellations • Building and using patterns	Induction of closed and open shapes. Explain the concept of 3 sided and 4 sided polygon. Explain the concept of circle and step of construction of circle. Explain the properties of circle and also relation between radius and diameter. Explanation of line of symmetry, creation of symmetrical images with the help of line of symmetry.	Inductive and deductive	Videos, Charts	Classroom	Worksheet .	Oxford New Enjoying Mathematics	14	Children will be able to - To understand open and closed shapes, polygon and circle. To create symmetrical shapes using the line of symmetry To identify and create shapes that have quarter and half rotation Creating patterns using rotation
10	10. Measurement	**Learning Objectives** Pages 163 to 169 • To revisit and reinforce concepts of basic units of length • To express length in centimetres, metres, and kilometers • To explore conversions from one unit of length to the other • To use a scale to measure line segments upto 1 2 cm correctness. • To draw a line segment of up to 1 2 cm correctness. • To express one unit in terms of another. Pages 172 to 174 • To express mass in terms of kilograms and grams • To measure capacity in litres and millilitres • Simple calculations involving the above units in everyday situations.	Recall the units of measurement studied in previous classes. Explanation of different units of length, mass nd capacity with examples using chart and video. Prctice of converting a given unit into other. Solving sums based on addition , subtraction and estimation of measurement.	Inductive and deductive	Videos, Charts	Classroom	Activity on estimating measures	Oxford New Enjoying Mathematics	12	Children will be able to - To review various units of measurement To learn about millimetre To measure objects to the nearest millimetre To relate mm, cm, m, and km to one another To convert from one unit into another To relate and convert units of mass—g and kg to one another To relate and convert units of capacity—ml and l to one another To add and subtract measures of length, mass, and capacity To estimate measures
11	11. Perimeter and Area	**Learning Objectives** Pages 176 to 180 • To develop the concept of perimeter • To measure the perimeter of simple polygons as well as irregular shapes Pages 181 to 185 • To develop the concept of area • To measure the area of simple polygons as well as irregular shapes	Explanation of concept of area and perimeter with examples and video. Measuring and calculating area and perimeter of square and rectangle.	Inductive and deductive	Videos, Charts	Classroom	Colouring and comparing the decimal blocks.	Oxford New Enjoying Mathematics	14	Children will be able to - To review the concept of area and perimeter To develop the formula to calculate perimeter of a rectangle and perimeter of a square To develop the formula to find the area of squares and rectangles To focus on the different units of area To measure the area of irregular figures To explore the relationship between area and perimeter

12	12. Time	**Learning Objectives** Pages 188 to 195 • To read time to the next hour • To read the time to the exact minute • To understand the use of a.m. and p.m. • To understand the 24-hour clock Pages 196 to 201 • To calculate the duration of time passed • To find the finishing time of an activity • To calculate elapsed days • Understanding a timeline using hours and using years	Recall the units of time and their conversion. Solve sums based on time, calander etc. Explain and solved exercsie of time concept in different methods.	Inductive and deductive	Videos, Charts	Classroom	Mental math sums	Oxford New Enjoying Mathematics	12	Children will be able to - To develop the relationship between hours and minutes, and seconds and minutes To add and subtract measures of time•To calculate the finishing or starting time of an event when the duration is known To calculate the finishing or starting date of an event when the duration in terms of days is known
13	13. Handling Data	**Learning Objectives** Pages 205 to 209 • To recall pictographs and bar graphs • To represent data both in vertical and horizontal bar graphs • To introduce circle graphs and their use	Recall the pictograph graphs and bar graphs with examples. Explain the concept of vertical and horizontal bar graphs. Explain the concept of circle graph and soved exercise based oon this concept.	Inductive and deductive	Videos, Charts	Classroom		Oxford New Enjoying Mathematics	10	Children will be able to - To review bar graphs and circle graphs To understand more about circle graphs