

## CONTENT DISTRIBUTION

### SUBJECT: MATHEMATICS

Class: Primary 4

Number of period per week: 8

Term 1

<b>UNIT 1: Mathematical operations on whole numbers up to 100 000 (48 periods)</b>		
<b>Key unit Competence:</b> To be able to read, write, compare and make calculations on whole numbers up to 100 000		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
1	Introductory activity	2
	Introduction to the Number Systems	1
	Reading and writing numbers up to 100,000 in words and in figures	2
	Using number cards to form and read numbers up to 100,000	2
	Introduction to Place Values of whole Numbers up to five digits	1
2	Place Values of whole Numbers up to five digits	2
	Comparing Numbers using $<$ , $>$ or $=$	2
	Addition of numbers by the use of local abacus	2
	Addition of 2 or more whole numbers whose sum does not exceed 100,000 without carrying	2
3	Addition of 2 or more whole numbers whose sum does not exceed 100,000 with carrying.	2
	Solve real life problems involving addition	2
	Subtraction of whole numbers between 0 and 100,000 without borrowing	2
	Subtraction of whole numbers between 0 and 100,000 with borrowing	2
4	Solve real life problems involving subtraction	2
	Use of multiplication table	2
	Multiplying whole numbers by a two digits number	2
	Product of a 2 digit number by 10 and quick multiplication by 10	1
	Product of a 2 digit number by 100 and quick multiplication by 100	1
5	Product of a 2 digit number by 1 000 and quick multiplication by 1000	2
	Product of a 2 digit number by 10 000 and quick multiplication by 10000.	2
	Multiply numbers using quick multiplication by 5	2
	Solve real life problems involving multiplication	2
6	Division by a single digit number without a Remainder	2
	Division by a single digit number with a Remainder	2
	Solve real life problems involving division by a single digit number	2
	End unit assessment	2
<b>UNIT 2: Positive and negative integers ( 16 periods)</b>		
<b>Key Unit Competence:</b> To be able to solve problems related to comparing, ordering, and finding the distance between negative and positive integers		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
7	Introductory activity	1

	The concept of negative and positive numbers	2
	Location of positive and negative numbers on a number line	2
	The inverse or opposite of an integer	1
	Comparing negative and positive numbers using a number line	2
8	Ordering negative and positive numbers using a number line	2
	Distance between integers on a number line	1
	Computing distance between integers	2
	Solve problems involving integers	2
	End unit assessment	1
<b>UNIT 3: Classifying numbers by their properties (24 periods)</b>		
<b>Key unit Competence:</b> To be able to classify numbers flexibly, seeing them as belonging to various families		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
<b>9</b>	Introductory activity	1
	Introduction to Natural numbers	1
	Even numbers	2
	Odd numbers	2
	Prime Numbers and Composite Numbers	2
	Exact square root of a number	2
<b>10</b>	Square numbers	2
	Square numbers (cont)	2
	Exact square root of a number	2
	Multiples of a number	2
<b>11</b>	Factors of a number	2
	Factors of a number (cont)	1
	Lowest Common Multiple (LCM) of two numbers	2
	Lowest Common Multiple (LCM) of two numbers (cont)	2
	End unit assessment	1
<b>UNIT 4: Fractions of same denominator (8/24 periods)</b>		
<b>Key unit Competence:</b> To be able to explain the meaning of fractions, add and subtract same-denominator fractions, multiply and divide fractions accurately.		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
<b>12</b>	Introductory activity	1
	Introduction to the meaning of fractions by the use of real materials.	1
	Reading and writing fractions	2
	Comparing fractions with the same denominator by the use of real materials such as circle set fractions	2
	Addition of fractions with the same denominator	2
<b>13</b>	<b>Exams of the 1<sup>st</sup> term</b>	

## TERM 2

<b>UNIT 4: Fractions of same denominator (16/24 periods)</b>		
<b>Key unit Competence:</b> To be able to explain the meaning of fractions, add and subtract same-denominator fractions, multiply and divide fractions accurately.		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
<b>1</b>	Subtraction of fractions with the same denominator.	2
	Problems involving addition and subtraction of fractions.	2
	Multiplication of fractions by whole numbers.	2
	Multiplication of fractions by fractions	2
<b>2</b>	Division of fractions by a whole number.	2
	Problems involving multiplication of fractions	2
	Problems involving division of fractions	2
	End unit assessment	2

<b>UNIT 5: Decimal numbers (16 periods)</b>		
<b>Key Unit Competence:</b> Add, subtract and compare decimal numbers using place values of decimals up to 2 decimal places		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
<b>3</b>	Introductory activity	2
	Decimals on a number line	2
	Place value of decimals numbers up to 2 decimal places	2
	Comparing decimal numbers.	2
<b>4</b>	Addition of decimal numbers	2
	Subtraction of decimal numbers	2
	Problems involving addition and subtraction of decimal numbers	2
	End unit assessment	2

<b>UNIT 6: Length measurements (24 periods)</b>		
<b>Key Unit Competence:</b> Convert between units of length and apply them in solving mathematical problems related to daily life situations, including perimeters		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
<b>5</b>	Introductory activity on	1

	The concept distance/length	1
	Instruments for Measuring Length	1
	Non-standard Units	1
	Standard Units of Measuring Length	2
	Estimation and measuring the length of different small distances	2
6	Measure the length and perimeter of various objects	2
	Measure different length using a meter ruler in centimeters	1
	Reading and writing measurements of length.	1
	Conversion of length measurements	2
	Addition of length measurements	2
7	Subtraction of length measurements of	2
	The Perimeter of a 2 D shape	2
	Solving real life problems involving perimeter and Length measurements	2
	End unit assessment	2

#### UNIT 7: Capacity measurements (8 periods)

**Key Unit Competence:** Convert between units of capacity and apply them in solving mathematical problems related to daily life situations

Week	Content	Number of Periods
8	Introductory activity	1
	The concept of capacity and units of capacity	1
	Estimation and measuring the capacities of different containers in litres	1
	Conversion of capacity measurements, with application problems in meaningful contexts	1
	Addition and subtraction of capacity measurements of whole and decimal numbers up to 2 decimal places in meaningful contexts	2
	Application: Compare capacities of containers and solving real life problems involving capacity measurement	1
	End unit assessment	1
	End unit assessment	1

#### UNIT 8: Mass measurements (8 Periods)

**Key Unit Competence:** Convert between units of mass and apply them in solving mathematical problems related to daily life situations

Week	Content	Number of Periods
9	Introductory activity	1
	The concept of mass and units of mass	1
	Estimating and measuring different masses in kg using a balance	1

	Measuring of Mass	1
	Conversion of mass measurements	1
	Addition and subtraction of mass measurements of whole and decimal numbers up to 2 decimal places in meaningful contexts	1
	Application: Solving real life problems involving mass measurement in a meaningful context	1
	End unit assessment	1
<b>UNIT 9: Area and land measurements (16)</b>		
Key Unit Competence: To be able to understand area as the 2D space enclosed by a boundary, and use square and land units in solving mathematics problems.		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
10	Introductory activity	1
	The concept of unit area, area and land measurements by the use of real objects or a geoboard	2
	Reading, writing, converting measurements of area/land	2
	Relationship between area and land measurements: Conversion of area and land measurements	2
	Relationship between area and land measurements: Conversion of area and land measurements (cont)	1
11	Area of a square and a rectangular Pieces of Land (2D shapes).	2
	Addition and subtraction of the Area of Land	2
	Application: solving real life problems involving area and land measurement	2
	End unit assessment	2
<b>UNIT 10: Time (8 periods)</b>		
Key Unit Competence: Be able to tell, write and convert time appropriately		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
12	Introductory activity on the timers	1
	Reading and telling the time accurately on digital and analogue watches	2
	Writing Time Using Ante Meridian to mean before noon (AM) and Post Meridian to mean after noon (PM)	1
	Conversion of units of time: seconds into minutes, minutes into hours and vice versa	1
	Reading the Calendar	1
	Solve problems involving time: minutes and hours, dates and hours	1
	End unit assessment	1
	13	<b>Exams of the 2<sup>nd</sup> term</b>
<b>UNIT 11: Money and its financial application (8 periods)</b>		
<b>Key Unit Competence: To be able to understand money and its financial applications</b>		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
1	Introductory activity to money	1
	Rwandan Currency denominations and changing them: coins and notes	1

	Role play the buying and selling	1
	Simple Budgeting: Sources of money, Uses of money	1
	Planning According to Needs and Wants	1
	Solving Problems involving Buying and Selling: Cost price, Selling price, Profit or loss	2
	End unit assessment	1
<b>UNIT 12: Number Patterns (8 periods)</b>		
<b>Key Unit Competence:</b> To be able to describe and generate number patterns following a rule		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
2	Introductory activity to number pattern	1
	Arrange whole numbers in increasing and decreasing order	1
	Arithmetic progressions	2
	Finding the missing number in an arithmetic progression	1
	Geometric progression	2
	End unit assessment	1
<b>UNIT 13: Filling in missing numbers (8 periods)</b>		
<b>Key Unit Competence:</b> To be able to solve missing number problems involving addition and subtraction		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
3	Introductory activity on an arithmagon	1
	Solve simple missing number problems involving addition	2
	Solve simple missing number problems involving subtraction	2
	Solve simple missing number problems involving addition and subtraction.	2
	End unit assessment	1
<b>UNIT 14: Types of lines and angles (8 periods)</b>		
<b>Key Unit Competence:</b> To be able to identify types of lines and angles and use a protractor to measure angles		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
4	Introductory activity.	1
	Types of lines.	1
	Line segment.	1
	The concept of angles.	1
	Types of angles.	1
	Measuring angles.	2
	End unit assessment.	1
<b>UNIT 15: 2D Shapes and properties (16 periods)</b>		
<b>Key Unit Competence:</b> To be able to use geometric properties including symmetry to sort shapes		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>

5	Introductory activity to 2D Shapes	2
	Naming triangles on the basis of edge lengths	2
	Naming triangles on the basis greatest angle.	2
	Exploring triangles and quadrilaterals	2
6	Quadrilaterals and their properties	2
	Distinguish special quadrilaterals given the special characteristics: sides (equal, parallel), angles, diagonals (equal, bisect, perpendicular)	2
	Distinguish special quadrilaterals given the special characteristics: lines of symmetry, order of rotational symmetry	2
	End unit assessment	2
<b>UNIT 16: Area of 2D shapes (16 Periods)</b>		
<b>Key Unit Competence:</b> To use rectangles to determine the area of triangles and special quadrilaterals		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
7	Introductory activity	1
	Area of a rectangle and the use of a geoboard	1
	Area of a Square and the use of a geoboard	2
	Area of Triangle	2
	Area of Parallelogram	2
8	Area of a Rhombus	2
	Area of a Trapezium	2
	Perimeter of shapes that can be related to rectangles	2
	End unit assessment	2
<b>UNIT 17: Elementary statistics (24 periods)</b>		
<b>Key Unit Competence:</b> To be able to collect, represent and interpret data		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
9	Introductory activity to Statistical data	2
	Statistics and data	2
	Qualitative and Quantitative data	2
	Ways of collecting data	2
10	Presentation of data using tables	2
	Presentation of data using bar graphs	2
	Presentation of data using bar graphs (cont)	1
	Interpreting and extracting information from tables	2
	Interpreting and extracting information from tables (cont)	1
11	Interpreting and extracting information from bar graphs	2
	Project activities in statistics	4
	End unit assessment	2
<b>UNIT 18: Introduction to probability (8 periods)</b>		
<b>Key Unit Competence:</b> Play games of chance and be able to decide whether or not they are fair		
<b>Week</b>	<b>Content</b>	<b>Number of Periods</b>
12	Introductory activity to Probability	1

	A game of tossing a coin	1
	A game of Tossing three coins at the same time	1
	A game of playing cards	2
	A game of throwing a die	2
	End unit assessment	1
13	<b>Exams of 3<sup>rd</sup> term</b>	