Unit 1

Sets

Scheme of Work

Estimated Number of Periods: II

Specific Learning Outcomes	Number of periods
• Use language and notation to represent different sets	3
• Use language and notation represent the following sets: • Finite and infinite sets • Empty sets • Singleton sets • Universal sets	4
• Use Venn diagram to represent sets	4

Prior Knowledge Assessment

Pupils should be able to:

- count accurately and understand the concept of quantity.
- identify natural numbers, whole numbers, prime, and composite numbers.
- categorise objects based on common characteristics (e.g., grouping all red objects, all animals, all numbers greater than 5).
- understand that a region within a diagram represents a specific group.

Written Assignments

Exercise	Class Assignment	Home Assignment
1.1	1 (a, d, e), 2(a, d, e), 3(a, c), 4(a, c)	1 (b, c), 2(b, c), 3(b), 4(b)
1.2	1 (a, b, d, e, f, h), 2(a, b, d, e, f), 3(a, c, d), 4(a, c, d), 5(a, c, e), 6(a, d), 7	1 (c, g), 2(c, g), 3(b), 4(b), 5(b), 6(b, c)

Evaluation

Ways to evaluate teaching and students learning.

- Oral assessment
- Written assessment.
- Teacher's assessment

Unit 2

Integers

Scheme of Work

Estimated Number of Periods: 18

Specific Learning Outcomes	Number of periods
• Recognise, identify, and represent integers (positive, negative, and neutral integers) and their absolute or numerical value • Arrange a given list of integers and their absolute values in ascending and descending order	4
• Add like and unlike integers	3
• Subtract like and unlike integers	3
• Multiply up to 2 digits like and unlike integers and divide like and unlike integers	4
• verify commutative, associative and distributive laws	4

Prior Knowledge Assessment

Pupils should be able to:

- order whole numbers.
- use comparison symbols.
- add and subtract whole numbers using the number line to visualize jumps.
- Multiply and divide whole numbers.

Written Assignments

Exercise	Class Assignment	Home Assignment
2.1	1, 2, 3, 5(a, b, e, f), 6(a, b, f)	4, 5(c, d), 6(c, d, e)
2.2	1 (a, b, e, f), 2(a, e, f)	1 (c, d), 2(b, c, d)
2.3	1 (a, b, e, f), 2(a, e, f)	1 (c, d), 2(b, c, d)
2.4	1 (a, b, e, f), 2(a, e, f)	1 (c, d), 2(b, c, d)
2.5	1, 2, 3(d, e, f), 4(b, c), 5(c, d)	3(a, b, c), 4(a), 5(a, b)

Evaluation

Ways to evaluate teaching and students learning.

- Oral assessment
- Written assessment
- Teacher's assessment

Unit 3

Order of Operations

Scheme of Work

Estimated Number of Periods: 4

Specific Learning Outcomes	Number of periods
• Recognise the order of operations and use it to solve mathematical expressions involving whole numbers, decimals, fractions, and integers	4

Prior Knowledge Assessment

Pupils should be able to:

- accurately add and subtract multi-digit integers especially with different signs.
- multiply and divide multi-digit integers especially with different signs.

Written Assignments

Exercise	Class Assignment	Home Assignment
3.1	1(a, f, i, j, m, n, o), 2, 5	1(b, c, d, e, g, h, k, l, p), 3, 4

Evaluation

Ways to evaluate teaching and students learning.

- Oral assessment
- Written assessment
- Teacher's assessment

Unit 4

Multiples and Factors

Scheme of Work

Estimated Number of Periods: 18

Specific Learning Outcomes	Number of periods
• Identify: multiples of numbers up to 2 digits	2
• Identify: factors of numbers up to 3 digits • prime factors of numbers up to 4 digits and express them index notation	4
• Identify base and exponent and express numbers given in expanded form in index notation and vice versa	4
• Find HCF and LCM of two or three numbers (up to 3 digits) using division Method: Prime factorisation • Solve real-life word problems involving HCF and LCM	5
• Recognise and calculate square numbers up to 2 digits	3

Prior Knowledge Assessment

Pupils should be able to:

- perform division to check for factors.
- continue a multiplication sequence.
- identify prime numbers and composite numbers.
- break down numbers into their factors.
- read and understand word problems, identify key information, and determine. which operation or concept is needed.

Written Assignments

Exercise	Class Assignment	Home Assignment
4.1	1, 3, 5, 6(c, d), 7(c, d), 8(c, d), 9(c, d, e)	2, 4, 6(a, b), 7(a, b), 8(a, b), 9(a, b)
4.2	1(a, c), 2(a, c), 3(a, c), 4(a, c), 5, 6, 9, 11, 12	1(b), 2(b), 3(b), 4(b), 7, 8, 10
4.3	1, 2(a, d, f, g, h, j, l)	2(b, c, e, i, k)

Evaluation

Ways to evaluate teaching and students learning.

- Oral assessment
- Written assessment
- Teacher's assessment

Unit 5

Rate and Ratio

Scheme of Work

Estimated Number of Periods: 12

Specific Learning Outcomes	Number of periods
• Explain rate as a comparison of two quantities where one quantity is 1 • Solve real-life word problems involving rate	4
• Calculate ratio of two numbers (up to 3 digits) and simplify ratios	4
• Explain and calculate continued ratio • Solve real-life word problems involving ratios	4

Prior Knowledge Assessment

Pupils should be able to:

- recognise and generate equivalent fractions.
- reduce fractions to their lowest terms.
- adjust the ratio terms to match the common connecting term.
- convert a word problem into a mathematical expression or ratio.
- analyse a problem, plan a solution, execute the plan to solve word problems.

Written Assignments

Exercise	Class Assignment	Home Assignment
5.1	1, 3, 4, 5	2
5.2	1(a, e, f), 2(b, e, f, h, i), 4, 5, 6	1(b, c, d), 2(a, c, d, g), 3
5.3	1(c, d, e, f), 4, 5, 6	1(a, b), 2, 3

Evaluation

Ways to evaluate teaching and students learning.

- Oral assessment
- Written assessment
- Teacher's assessment

Unit 6

Percentage

Scheme of Work

Estimated Number of Periods: 14

Specific Learning Outcomes	Number of periods
• Express one quantity as a percentage of another	4
• Compare two quantities by percentage	3
• Increase or decrease a quantity by a given percentage	3
• Solve real-life word problems involving percentages	4

Prior Knowledge Assessment

Pupils should be able to:

- perform the conversion (Part / Whole) to Decimal and vice versa.
- calculate the decimal value of the fraction.
- understand the problem scenario and pick out the relevant information.
- convert a word problem into the appropriate mathematical calculation.

Written Assignments

Exercise	Class Assignment	Home Assignment
6.1	1(b, c, e), 2(b, c, e), 3(a, e, f, h, i), 5, 7, 9, 10, 11, 12	1(a, d), 2(a, d), 3(b, c, d, g), 4, 6, 8
6.2	1(c, d, e, f), 2, 5, 6, 7, 8	1(a, b), 3, 4

Evaluation

Ways to evaluate teaching and students learning.

- Oral assessment
- Written assessment
- Teacher's assessment

Unit 7

Introduction to Algebra

Scheme of Work

Estimated Number of Periods: 15

Specific Learning Outcomes	Number of periods
• Recognise simple patterns from various number sequences • Continue a given number sequence and find: • Term to term rule • Position to term rule • Solve real-life word problems involving number sequences and patterns	5
• Explain the term algebra as an extension of arithmetic, where letters, numbers, and symbols are used to construct algebraic expressions • Manipulate simple algebraic expressions using addition and subtraction	5
• Evaluate algebraic expressions by substitution of variables with numerical values • Simplify algebraic expressions	5

Prior Knowledge Assessment

Pupils should be able to:

- look for differences, sums, products, or quotients between consecutive terms.
- find the consistent difference or ratio between consecutive terms.
- use boxes or question marks to represent unknown values.
- know which operation to perform first when a variable is substituted.

Written Assignments

Exercise	Class Assignment	Home Assignment
7.1	2, 3, 5, 6	1, 4
7.2	1(c, d, e, f), 2, 3(b, f, h, I, j), 4(c, d, e, f), 5(c, d, e)	1(a, b), 3(a, c, d, e), 4(a, b), 5(a, b)
7.3	1(c, d, e, f), 2(c, d, e, f), 3, 4	1(a, b), 2(a, b)

Evaluation

Ways to evaluate teaching and students learning.

- Oral assessment
- Written assessment
- Teacher's assessment

Unit 8

Linear Equations

Scheme of Work

Estimated Number of Periods: 10

Specific Learning Outcomes	Number of periods
• Recognise and construct linear equations in one variable • Solve linear equations involving integers, fractions, and decimal coefficients	5
• Solve real-life word problems involving linear equations	5

Prior Knowledge Assessment

Pupils should be able to:

- recognize, identify, and represent positive, negative, and neutral integers on a number line.
- identify equivalent fractions and simplify fractions to their lowest terms.
- add, subtract, multiply, and divide fractions and decimals.
- apply order of operations while solving expressions.
- manipulate and simplify simple algebraic expressions using addition and subtraction.
- read and understand mathematical word problems.
- picking out the relevant numbers, quantities, and relationships from a word problem.

Written Assignments

Exercise	Class Assignment	Home Assignment
8.1	1(c, d, h, j, k, l), 2, 4, 6, 7, 8	1(a, b, e, f, g), 3, 5

Evaluation

Ways to evaluate teaching and students learning.

- Oral assessment
- Written assessment
- Teacher's assessment

Unit 9

Geometry

Scheme of Work

Estimated Number of Periods: 22

Specific Learning Outcomes	Number of periods
• Identify and differentiate between parallel lines, perpendicular lines, and transversal • Identify adjacent angles and find unknown angles related to parallel lines and transversals. (corresponding, alternate, and vertically opposite angles)	5
• Construct a perpendicular (from a point on the line and outside the line) and a perpendicular bisector	4
• Construct angles of specific measures (30°, 45°, 60°, 75°, 90°, 105° and 120°) and bisect angles using a pair of compasses	5
• Reflect an object using grid paper and a pair of compasses and find the line of reflection by construction	4
• Recognise rotational symmetry, find the point of rotation and order of rotational symmetry	4

Prior Knowledge Assessment

Pupils should be able to:

- identify angles in various orientations.
- recognize and classify angles.
- use protractors to measure angles.
- use protractor to draw angles of given measurements.
- plot points on a grid.

Written Assignments

Exercise	Class Assignment	Home Assignment
9.1	1, 2(b, d, e, f), 3(b), 4, 5(c, d, f, g, h), 6(b)	2(a, c), 3(a), 5(a, b, e), 6(a)
9.2	1, 2(b, c), 3, 4(b, d, e, f)	2(a), 4(a, c)
9.3	1(a, c, e, f, g), 2(b, c, d)	1(b, d), 2(a)
9.4	1(a, b), 2(a, c, d)	1(c), 2(b)
9.5	2, 3	1

Evaluation

Ways to evaluate teaching and students learning.

- Oral assessment
- Written assessment
- Teacher's assessment

Unit 10

Measurement

Scheme of Work

Estimated Number of Periods: 12

Specific Learning Outcomes	Number of periods
• Calculate the area of a path (inside or outside) a rectangle or square, parallelogram, and trapezium • Solve real-life word problems involving perimeter and area	4
• Calculate the area of a path (inside or outside) triangle and trapezium • Solve real-life word problems involving perimeter and area	4
• Calculate the surface area and volume of cube and cuboids • Solve real-life word problems involving the surface area and volume of cubes and cuboids	4

Prior Knowledge Assessment

Pupils should be able to:

- apply four operations where required.
- substitute the values of known variables.
- apply formulae to calculate areas and perimeter of squares, rectangles, and triangles.
- understand the concept of square units for area.
- understand the concept of cubic units for volume

Written Assignments

Exercise	Class Assignment	Home Assignment
10.1	1, 2(b, c, d), 3, 6, 7, 8	2(a), 4, 5
10.2	1, 2(c, d), 3, 5, 6	2(a, b), 4
10.3	1(a, b, c), 2, 4, 5	1(d), 3
10.4	1(c, d), 2(c, d), 4, 5, 7, 8	1(a, b), 2(a, b), 3, 6

Evaluation

Ways to evaluate teaching and students learning.

- Oral assessment
- Written assessment
- Teacher's assessment

Unit 11

Data Handling

Scheme of Work

Estimated Number of Periods: 14

Specific Learning Outcomes	Number of periods
• Identify and organise different types of data (i.e., discrete, continuous, grouped and ungrouped) • Calculate the mean, median, and mode for ungrouped data and solve related real-life word problems	4
• Draw, read, and interpret horizontal and vertical multiple bar graphs and pie charts (including real life word problems)	5
• Explain experiments, outcomes, sample space, events, equally likely events and probability of a single event • Differentiate the outcomes that are equally likely and not equally likely to occur (including real-life word problems)	5

Prior Knowledge Assessment

Pupils should be able to:

- compare and order numbers (least to greatest, greatest to least).
- Perform four operations involving fractions and decimals.
- ability to count accurately and use tally marks to record data.
- express quantities as percentage.
- calculate simple probability.
- to extract numerical data from word problems and apply the correct calculation.

Written Assignments

Exercise	Class Assignment	Home Assignment
II.1	1, 2(c, d, e, f), 3, 5, 7, 8	2(a, b), 4, 6
II.2	2, 3, 4	1
II.3	2, 3, 4	1
II.4	3, 4, 5	1, 2

Evaluation

Ways to evaluate teaching and students learning.

- Oral assessment
- Written assessment
- Teacher's assessment