## CONTENT DISTRIBUTION

## SUBJECT: MATHEMATICS

Class: Primary 6
Number of period per week: 8 periods

## Term 1

UNIT 1: Reading, writing and comparing whole numbers beyond 1000000 ( 24 periods)
Key unit Competence: To be able read, write and compare whole numbers beyond 1000000

| Week | Content | Number of Periods |
| :---: | :---: | :---: |
| 1 | Introductory activity | 1 |
|  | Forming numbers beyond $1,000,000$ by using number cards or given digits, reading and writing the formed numbers. | 1 |
|  | Reading and writing numbers beyond 1,000,000 in figures | 1 |
|  | Place Values of whole Numbers up to 7 digits | 1 |
|  | Comparing Numbers using <, > or $=$ | 1 |
|  | Arranging numbers in ascending and descending order | 1 |
|  | Addition of whole numbers beyond 1,000,000 | 1 |
|  | Solving related real life problems involving addition of whole numbers beyond 1,000,000 | 1 |
| 2 | Addition and subtraction of whole numbers using wooden vertical abacus | 2 |
|  | Subtraction of numbers beyond 1,000,000 | 2 |
|  | Solve real life problems involving subtraction of numbers beyond 1,000,000 | 1 |
|  | Multiplying numbers beyond 1,000,000 | 2 |
|  | Solving problems using calculation strategies on multiplication | 1 |
| 3 | Dividing numbers beyond 1,000,000 | 2 |
|  | Solving problems using calculation strategies on division | 1 |
|  | Rounding off whole numbers to the nearest tens | 2 |
|  | Rounding off whole numbers to the nearest hundred and thousands | 1 |
|  | Rounding off whole numbers to the nearest ten thousands, hundred thousand and millions | 1 |
|  | End unit assessment | 1 |
| UNIT 2:Multiplication and division of integers (8 periods) |  |  |

Key Unit Competence: To be able to multiply and divide integers

| Week | Content | Number of <br> Periods |
| :--- | :--- | :--- |
| 4 | Introductory activity | 1 |
|  | Multiplying integers using counters | 1 |
|  | Multiplying integers using a number line | 1 |
|  | Multiplying integers without using a number line | 1 |
|  | Dividing integers using a number line | 1 |
|  | Dividing integers without using a number line | 1 |
|  | Solving problems involving multiplication and division of integers | 1 |
|  | End unit assessment | 1 |

## UNIT 3: Powers and indices, LCM and GCF ( 16 periods)

Key unit Competence: To be able to use powers and indices, and apply the Lowest Common Multiple (LCM) and the Greatest Common Factor (GCF) when solving problems

| Week | Content | Number of Periods |
| :---: | :---: | :---: |
| 5 | Introduction to Indices | 1 |
|  | Defining base and exponent | 1 |
|  | Multiplying and the law of multiplication of indices | 2 |
|  | Dividing and the law of division of indices | 1 |
|  | Multiplying and dividing indices | 1 |
|  | Finding unknown and the law of multiplying indices | 1 |
|  | Finding the unknown and the law of dividing indices | 1 |
| 6 | Finding the lowest common multiple (LCM) of numbers | 1 |
|  | Solving problems involving LCM | 2 |
|  | Factors of a whole number | 1 |
|  | Finding the greatest common factor (GCF) of numbers | 1 |
|  | Solving problems involving GCF | 1 |
|  | Finding the unknown number using LCM and GCF | 1 |
|  | End unit assessment | 1 |
| UNIT 4: Operations on fractions (16 periods) |  |  |

Key unit Competence: To be able to apply fractions in daily life situations and solve related problems

| Week | Content | Number of <br> Periods |
| :--- | :--- | :--- |
| 7 | Introductory activity | 1 |
|  | Multiplying a whole number by a fraction | 1 |
|  | Multiplying a fraction by a whole number | 2 |
|  | Multiplying a fraction by a fraction | 2 |
|  | Finding reciprocals | 1 |
|  | Dividing a whole number by a fraction | 2 |
|  | Dividing a fraction by a whole number | 1 |
|  | Dividing a fraction by a fraction | 2 |
|  | Multiplying and dividing fractions | 2 |
|  | Solve problems involving multiplication and division fractions | 2 |
|  | End unit assessment | 1 |

UNIT 5: Rounding and conversion of decimals fractions/numbers ( $\mathbf{1 6}$ periods)
Key Unit Competence: To be able to round off decimals, convert fractions to decimals and vice versa, matching fractions and decimals.

| Week | Content | Number of <br> Periods |
| :--- | :--- | :--- |
| 9 | Introductory activity | 1 |
|  | Rounding off decimal numbers to the nearest tenths | 1 |
|  | Rounding off decimal numbers to the nearest hundredths | 1 |
|  | Rounding off decimal numbers to the nearest thousandths | 2 |
|  | Rounding off decimal numbers to the nearest ten thousandths | 1 |
|  | Rounding off decimal numbers to the nearest hundred thousandth | 1 |


|  | Rounding off decimal numbers to the nearest millionths | 1 |
| :--- | :--- | :--- |
| 10 | Solving problems involving rounding off decimal numbers | 1 |
|  | Converting fractions into decimals | 2 |
|  | Converting decimals into fractions | 2 |
|  | Solving problems involving converting decimals into fractions and <br> fractions into decimals | 2 |
|  | End unit assessment and remediation | 1 |


| UNIT 6: Ratios, proportions, percentages and mixtures (8/40 periods) | 40 <br> periods |  |
| :--- | :--- | :--- |
| Key Unit Competence: To be able to work out ratios, proportions, percentages and <br> mixtures |  |  |
| Week | Content | New <br> number <br> of <br> periods |
|  |  | 1 |
|  | Introductory activity | 1 |
|  | Converting percentages into decimals | 1 |
|  | Converting decimals into percentages | 1 |
|  | Converting percentages into fractions | Converting fractions into percentages |
|  | Comparing quantities as percentages | 1 |
|  | Comparing percentages as quantities | 2 |

## TERM 2

UNIT 6: Ratios, proportions, percentages and mixtures (32/40 periods)
Key Unit Competence: To be able to work out ratios, proportions, percentages and mixtures

| Week | Content | Number of <br> Periods |
| :--- | :--- | :--- |
|  |  | 2 |
|  | Increasing a Number by a Percentage | 2 |
|  | Decreasing a number by a percentage | 2 |
|  | More about increasing and decreasing quantities by percentage | 2 |
|  | Finding percentage increase and decrease | 1 |
|  | Finding percentage profit and percentage loss | 2 |
|  | Solving problems involving percentages | 1 |
|  | Finding ratios | 2 |
|  | Sharing quantities in ratios | 2 |
|  | Increasing and decreasing quantities in ratios | 2 |
|  | Finding the ratio of increase and decrease | 2 |
|  | Solving problems involving ratios | 2 |


|  | Finding indirect proportions | 1 |
| :---: | :---: | :---: |
|  | Finding the average price of a mixture | 2 |
|  | Finding quantity of one type of the mixture | 1 |
| 5 | Finding the price of one type of ingredient in the mixture | 3 |
|  | Finding both quantities of a mixture | 2 |
|  | Solving problems involving ratios, percentages, mixtures and inverse proportions | 2 |
|  | End unit assessment | 1 |
| UNIT 7: Relationship between volume, capacity and mass (8 periods) |  |  |
| Key Unit Competence: To be able to convert between units of volume, capacity and mass of water |  |  |
| Week | Content | Number of Periods |
| 6 | Introductory activity and revision on capacity measurements | 1 |
|  | Revision on mass Measurements | 1 |
|  | Measurement of volume | 2 |
|  | Relationship between units of volume, capacity and mass | 2 |
|  | Real life problems involving the conversion between units of volume, capacity and mass | 1 |
|  | End unit assessment | 1 |
| UNIT 8: Speed, distance and time (24 Periods) |  |  |
| Key Unit Competence: To be able to calculate speed, distance and time, solve problems that relate to different time zones and convert speed from $\mathrm{km} / \mathrm{hr}$ to $\mathrm{m} / \mathrm{sec}$ and vice versa |  |  |
| Week | Content | Number of Periods |
| 7 | Introductory activity | 1 |
|  | Comparing the 12-hour format to the 24 -hour format | 1 |
|  | Converting 12-hr format to 24-hr format and vice versa | 1 |
|  | The Concept of time zones | 1 |
|  | Solving mathematical problems relating to time zones | 2 |
|  | Speed in the motion | 2 |
| 8 | Converting the speed from $\mathrm{km} / \mathrm{hr}$ to $\mathrm{m} / \mathrm{sec}$ | 2 |
|  | Converting the speed from $\mathrm{m} / \mathrm{sec}$ to $\mathrm{km} / \mathrm{hr}$. | 2 |
|  | Distance covered by a moving body | 2 |
|  | Speed and the time taken by a moving body to cover a certain distance | 2 |
| 9 | Moving bodies towards each other | 2 |
|  | Moving bodies towards each other | 1 |
|  | Moving bodies following each other | 2 |
|  | Calculating average speed | 2 |
|  | End unit assessment | 1 |
| UNIT 9: Simple interest and problems involving saving (24 periods) |  |  |
| Key Unit Competence: To be able to work out simple interest and solve problems involving saving |  |  |


| Week | Content | Number of Periods |
| :---: | :---: | :---: |
| 10 | Introductory activity | 1 |
|  | Calculating the simple interest | 1 |
|  | More about calculating simple interest | 2 |
|  | Solving problems involving simple interest | 2 |
|  | Calculating interest rate | 2 |
| 11 | Solving problems involving interest rate | 1 |
|  | Calculating principal | 2 |
|  | Solving problems involving principal | 1 |
|  | Calculating the time | 1 |
|  | Solving problems involving time | 1 |
|  | Calculating the amount of money | 2 |
| 12 | Solving problems involving amount of money | 2 |
|  | Different ways of saving and how saving can be done | 2 |
|  | Saving money in the bank or putting it in investments | 1 |
|  | Solving problems involving savings | 2 |
|  | End unit assessment | 1 |
| 13 | Exams |  |

## TERM 3

UNIT 10: Equivalent expressions and number sequences (16 Periods)
Key Unit Competence: To be able to write sequences of whole numbers, fractions and decimals

| Week | Content | Number of Periods |
| :---: | :---: | :---: |
| 1 | Introductory activity | 1 |
|  | Algebraic expressions | 1 |
|  | Equivalent expressions | 1 |
|  | Finding the missing consecutive numbers | 2 |
|  | Finding the missing consecutive fractions and decimals | 1 |
|  | Finding the general term/rule of a linear sequence | 2 |
| 2 | Finding the general term/rule of linear sequence for fractions and decimals | 2 |
|  | Finding the missing number or nth term in a linear sequence | 2 |
|  | Finding the missing fraction or nth term in a linear sequence | 1 |
|  | Finding the number sequence using the general term/rule | 2 |
|  | End unit assessment | 1 |
| UNIT 11: Solving simple algebraic equations and inequalities (16 Periods) |  |  |
| Key Unit Competence: To be able to form and solve simple algebraic equations and inequalities angles |  |  |
| Week | Content | Number of Periods |


| 3 | Introductory activity | 1 |
| :--- | :--- | :--- |
|  | Like terms of algebraic expressions | 1 |
|  | Unlike terms of algebraic expressions | 1 |
|  | Substituting algebraic expressions with addition and subtraction | 1 |
|  | Substituting algebraic expressions involving multiplication | 1 |
|  | Substituting algebraic expressions involving division | 1 |
|  | Simple algebraic equations with one unknown | 2 |
|  | Solving fractional algebraic equations | 2 |
|  | Solving problems involving equations | 2 |
|  | Solving algebraic inequalities with one unknown | 1 |
|  | Finding the solution set | 1 |
|  | Solving problems involving simple algebraic equations and inequalities | 1 |
|  | End unit assessment | 1 |
| UNIT 12: Regular polygons and bearings |  |  |

Key Unit Competence: To be able to use bearings and compass points and understand the relationship between them. To use the angle sum of a triangle to determine the interior angles of regular polygons

| Week | Content | Number of Periods |
| :---: | :---: | :---: |
| 5 | Introductory activity | 1 |
|  | Definition of Polygon and their Examples | 1 |
|  | Investigating the central angle, interior and exterior angles of a polygon | 1 |
|  | Investigating the sum of interior and exterior angles of a regular polygon | 1 |
|  | Finding the interior and exterior angles of a regular polygon | 1 |
|  | Finding the sum of interior angles of a regular polygon | 1 |
|  | Exterior angles of regular polygons and their sum | 1 |
|  | Finding sides and apothem | 1 |
| 6 | Finding perimeter of regular polygons | 1 |
|  | Finding area of regular polygons | 2 |
|  | Finding bearings and compass points | 2 |
|  | Finding the bearing | 1 |
|  | Exploring the concept of tiling/ construction | 1 |
|  | End unit assessment | 1 |

UNIT 13: Construction of polygons and nets for cuboids and prisms (24 periods).
Key Unit Competence: To be able to construct polygons using a protractor, a ruler and a pair of compasses. Design nets to make cuboids and prisms.

| Week | Content | Number of <br> Periods |
| :--- | :--- | :--- |
| 7 | Introductory activity | 1 |
|  | Drawing triangles using a protractor and ruler | 1 |
|  | Drawing a square using a protractor and ruler | 1 |
|  | Drawing a rectangle using a protractor and ruler | 1 |
|  | Drawing a regular pentagon using a protractor and ruler | 1 |


|  | Drawing a regular hexagon | 1 |
| :--- | :--- | :--- |
|  | Constructing triangles using a pair of compasses and a ruler | 1 |
|  | Constructing a rectangle using a pair of compasses and a ruler | 1 |
|  | Finding perimeter of regular polygons | 1 |
|  | Constructing a square using a pair of compasses and a ruler | 3 |
|  | Finding the central angle and interior angle of a regular polygon | 2 |
|  | Constructing a regular pentagon and regular hexagon | 3 |
|  | Constructing a regular septagon and a regular octagon | 2 |
|  | Constructing a regular nonagon and decagon | 2 |
|  | Designing nets of cuboids, cubes and prisms | 2 |
|  | End unit assessment | 1 |
| UNIT 14: <br> (16 periods) | bounded by a circle, surface area of cuboids and volume of a cylinder |  |

Key Unit Competence: To be able to calculate the area enclosed by a circle, the surface area of cuboids and the volume of a cylinder.

| Week | Content | Number of <br> Periods |
| :--- | :--- | :--- |
| 10 | Introductory activity | 1 |
|  | Estimating the area bounded by a circle using a squared paper | 1 |
|  | Exploring the area bounded by a circle using the concept of <br> circumference and radius | 1 |
|  | Calculating the area of a circle using radius | 1 |
|  | Calculating the area of a circle given diameter | 2 |
|  | Calculating area of a circle using circumference | 2 |
|  | Finding the radius using area | 1 |
|  | Using the net of a cuboid to determine its surface area | 1 |
|  | Calculating the surface area of a cuboid | 1 |
|  | Finding the length of a cuboid | 1 |
|  | Finding the width of a cuboid | 1 |
|  | Finding the height of a cuboid | 1 |
|  | Exploring the volume of a cylinder | 1 |
|  | Finding volume of a cylinder | 1 |
|  | End unit assessment | 1 |

## UNIT 15: Statistics (16 periods)

Key Unit Competence: To be able to extend methods for collecting data, representing and interpreting it in order to answer a question or explore a hypothesis.

| Week | Content | Number of <br> Periods |
| :--- | :--- | :--- |
| $12-13$ | Introductory activity | 1 |
|  | Collecting the data to investigate a question | 1 |
|  | Explore a question using a tally to complete a frequency table. | 1 |


|  | Interpreting the data in frequency tables | 2 |
| :---: | :---: | :---: |
|  | Representing the data in a bar chart | 2 |
|  | Interpreting the data in a bar chart | 2 |
|  | Representing Data in Pie Charts | 2 |
|  | Interpreting the data in pie charts to draw a conclusion | 2 |
|  | Collect the data, summarize it in a table and represent in a bar chart or a pie chart | 2 |
|  | End unit assessment | 1 |
| UNIT 16: Probability (8 periods) |  |  |
| Key Unit Competence: To be able to order events in terms of likelihood (impossible, equally likely, certain). |  |  |
| Week | Content | Number of Periods |
| 14 | Introductory activity | 1 |
|  | Vocabulary of chance: impossible, certain. | 1 |
|  | Vocabulary of chance: equally likely, events, chance, unlikely, likely | 1 |
|  | Using expected outcomes of experiment to decide how likely an event is to happen | 2 |
|  | Determining the likelihood of events | 2 |
|  | End unit assessment | 1 |
| 15 | Exams |  |

