

# Mathletics

## Australian Capital Territory - Australian Curriculum v9

### Activities (Courses) and Skill Quests



**Years 3-6**

January, 2026

Mathletics

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Australian Capital Territory - Australian Curriculum (v9)

Activities (Courses) & Skill Quests

January 2026

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# Year 3

## 1 Number

| <b>AC9M3N01</b><br>recognise, represent and order natural numbers using naming and writing conventions for numerals beyond 10 000 |                                            |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Course Topics                                                                                                                     | Activities                                 |
| Numbers beyond 10 000 with 5 digits                                                                                               | Place Value 3                              |
|                                                                                                                                   | Place Value to Thousands                   |
|                                                                                                                                   | Partition and Rename 2                     |
|                                                                                                                                   | Partition and Rename 3                     |
|                                                                                                                                   | Ascending Order                            |
|                                                                                                                                   | Descending Order                           |
|                                                                                                                                   | Smallest and largest numbers               |
|                                                                                                                                   | Numbers from Words to Digits 1             |
|                                                                                                                                   | Rounding Numbers                           |
| Topics                                                                                                                            | Skill Quests                               |
| Numbers to 10 000                                                                                                                 | Identifying & counting numbers to 4 digits |
|                                                                                                                                   | Reading & representing numbers to 4 digits |
|                                                                                                                                   | Comparing & ordering numbers to 4 digits   |
|                                                                                                                                   | Place value to 4 digits                    |
|                                                                                                                                   | Partitioning numbers to 4 digits           |
|                                                                                                                                   | Rounding numbers to 4 digits               |
| Numbers to 100 000                                                                                                                | Comparing & ordering numbers to 5 digits   |
|                                                                                                                                   | Place value to 5 digits                    |
|                                                                                                                                   | Partitioning numbers to 5 digits           |
|                                                                                                                                   | Rounding numbers to 5 digits               |

| <b>AC9M3N02</b><br>recognise and represent unit fractions including $\frac{1}{2}$ , $\frac{1}{3}$ , $\frac{1}{4}$ , $\frac{1}{5}$ , $\frac{1}{10}$ and their multiples in different ways; combine fractions with the same denominator to complete the whole |                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| Course Topics                                                                                                                                                                                                                                               | Activities                                   |
| Unit fractions                                                                                                                                                                                                                                              | Shade fractions                              |
|                                                                                                                                                                                                                                                             | Identifying Fractions on a Number Line       |
|                                                                                                                                                                                                                                                             | Fractions of a Collection 1                  |
|                                                                                                                                                                                                                                                             | Fraction Length Models 1                     |
|                                                                                                                                                                                                                                                             | Unit Fractions                               |
| Topics                                                                                                                                                                                                                                                      | Skill Quests                                 |
| Fraction symbols                                                                                                                                                                                                                                            | Exploring the meaning of fraction symbols    |
|                                                                                                                                                                                                                                                             | Introducing terms numerator & denominator    |
| Find & count in halves & quarters                                                                                                                                                                                                                           | Finding half of a set or quantity (symbols)  |
|                                                                                                                                                                                                                                                             | Finding quarters of sets or shapes (symbols) |
|                                                                                                                                                                                                                                                             | Finding halves & quarters (symbols)          |
|                                                                                                                                                                                                                                                             | Counting in halves & quarters to 1           |
| Introduce eighths                                                                                                                                                                                                                                           | Introducing eighths                          |
|                                                                                                                                                                                                                                                             | Using fractions: halves, quarters & eighths  |
| Introduce thirds                                                                                                                                                                                                                                            | Introducing thirds                           |
|                                                                                                                                                                                                                                                             | Using fractions: halves, thirds & quarters   |

|                  |                    |
|------------------|--------------------|
| Introduce sixths | Introducing sixths |
| Introduce fifths | Introducing fifths |
| Introduce tenths | Introducing tenths |

| <b>AC9M3N03</b><br>add and subtract two- and three-digit numbers using place value to partition, rearrange and regroup numbers to assist in calculations without a calculator |                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>Course Topics</b>                                                                                                                                                          | <b>Activities</b>                                |
| Up to 3 digit add & subtract                                                                                                                                                  | Add 3 Numbers: Bonds to 100                      |
|                                                                                                                                                                               | Partition Puzzles 2                              |
|                                                                                                                                                                               | Repartition to Subtract                          |
| <b>Topics</b>                                                                                                                                                                 | <b>Skill Quests</b>                              |
| Addition & subtraction using place value                                                                                                                                      | Add & subtract using number facts within 1000    |
|                                                                                                                                                                               | Add & subtract 2- & 3-digit using jump strategy  |
|                                                                                                                                                                               | Add & subtract 2- & 3-digit using place value    |
|                                                                                                                                                                               | Add & subtract 2- & 3-digit using bridging to 10 |
|                                                                                                                                                                               | Adding & subtracting - bridging with unknowns    |
|                                                                                                                                                                               | Adding & subtracting 3-digits using partitioning |
|                                                                                                                                                                               | Adding & subtracting 3-digits using place value  |
|                                                                                                                                                                               | Add & subtract 2- & 3-digit using split strategy |
|                                                                                                                                                                               | Add & subtract 2-digit rounding & compensation   |
|                                                                                                                                                                               | Add & subtract 3-digit rounding & compensation   |
|                                                                                                                                                                               | Adding & subtracting to make 100                 |
|                                                                                                                                                                               | Add & subtract multiples of 100, 1000 & 10 000   |
|                                                                                                                                                                               | Add & subtract using non-standard partitioning   |
|                                                                                                                                                                               | Add & subtract: choosing efficient strategies    |

| <b>AC9M3N04</b><br>multiply and divide one- and two-digit numbers, representing problems using number sentences, diagrams and arrays, and using a variety of calculation strategies |                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Course Topics</b>                                                                                                                                                                | <b>Activities</b>                               |
| Multiply & Divide                                                                                                                                                                   | Related Facts 2                                 |
|                                                                                                                                                                                     | Frog Jump Multiplication                        |
|                                                                                                                                                                                     | Frog Jump Division                              |
|                                                                                                                                                                                     | Equivalent Facts: Multiply                      |
|                                                                                                                                                                                     | Divide Into Equal Groups                        |
| <b>Topics</b>                                                                                                                                                                       | <b>Skill Quests</b>                             |
| Multiplication & division                                                                                                                                                           | Using repeated addition to multiply             |
|                                                                                                                                                                                     | Using repeated subtraction to divide            |
|                                                                                                                                                                                     | Relating multiplication & division              |
|                                                                                                                                                                                     | Interpreting & solving mult/div word problems   |
|                                                                                                                                                                                     | Multiplication strategies: 1-digit numbers      |
|                                                                                                                                                                                     | Multiplying 2-digit numbers by a 1-digit number |

| <b>AC9M3N05</b><br>estimate the quantity of objects in collections and make estimates when solving problems to determine the reasonableness of calculations |                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>Course Topics</b>                                                                                                                                        | <b>Activities</b>    |
| Up to 3 digit add & subtract                                                                                                                                | Estimate Differences |
|                                                                                                                                                             | Estimate Sums        |
|                                                                                                                                                             | Bar Model Problems 1 |

|                       | Bar Model Problems 2                  |
|-----------------------|---------------------------------------|
| Topics                | Skill Quests                          |
| Estimation strategies | Estimating additions                  |
|                       | Estimating subtractions               |
|                       | Judging the reasonableness of answers |

| AC9M3N06                                                                                                                                                                                                                                                                                                                |                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| use mathematical modelling to solve practical problems involving additive and multiplicative situations including financial contexts; formulate problems using number sentences and choose calculation strategies, using digital tools where appropriate; interpret and communicate solutions in terms of the situation |                                                    |
| Course Topics                                                                                                                                                                                                                                                                                                           | Activities                                         |
| Teacher directed                                                                                                                                                                                                                                                                                                        |                                                    |
| Topics                                                                                                                                                                                                                                                                                                                  | Skill Quests                                       |
| Solve practical problems                                                                                                                                                                                                                                                                                                | Solving addition & subtraction practical problems  |
|                                                                                                                                                                                                                                                                                                                         | Solve multiplication & division practical problems |
|                                                                                                                                                                                                                                                                                                                         | Missing number problems using all four operations  |

| AC9M3N07                                                                                                                        |                                        |
|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| follow and create algorithms involving a sequence of steps and decisions to investigate numbers; describe any emerging patterns |                                        |
| Course Topics                                                                                                                   | Activities                             |
| Teacher directed                                                                                                                |                                        |
| Topics                                                                                                                          | Skill Quests                           |
| Create algorithms to investigate numbers                                                                                        | Identifying & creating number patterns |
|                                                                                                                                 | Working with code to create algorithms |

## 2 Algebra

| AC9M3A01                                                                                                                                                            |                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| recognise and explain the connection between addition and subtraction as inverse operations, apply to partition numbers and find unknown values in number sentences |                                               |
| Course Topics                                                                                                                                                       | Activities                                    |
| Patterns & missing numbers                                                                                                                                          | Odd and Even Numbers 1                        |
|                                                                                                                                                                     | Pick the Next Number                          |
|                                                                                                                                                                     | Describing Patterns                           |
|                                                                                                                                                                     | Find the Missing Number 1                     |
|                                                                                                                                                                     | Missing Values                                |
|                                                                                                                                                                     | Counting by Twos                              |
|                                                                                                                                                                     | Counting by Fives                             |
|                                                                                                                                                                     | Counting by Tens                              |
|                                                                                                                                                                     | Count by 2s, 5s and 10s                       |
| Topics                                                                                                                                                              | Skill Quests                                  |
| Addition & subtraction relationship                                                                                                                                 | Relationship between addition & subtraction   |
|                                                                                                                                                                     | Equivalent number sentences                   |
|                                                                                                                                                                     | Word problems for finding unknown quantities  |
|                                                                                                                                                                     | Representing add & subtract using a bar model |

| <b>AC9M3A02</b>                                                                                                                                                    |                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| extend and apply knowledge of addition and subtraction facts to 20 to develop efficient mental strategies for computation with larger numbers without a calculator |                                        |
| Course Topics                                                                                                                                                      | Activities                             |
| Teacher directed                                                                                                                                                   |                                        |
| Topics                                                                                                                                                             | Skill Quests                           |
| Apply knowledge of facts to 20                                                                                                                                     | Finding fact families                  |
|                                                                                                                                                                    | Numbers bonds to 20                    |
|                                                                                                                                                                    | Applying facts to 20 to larger numbers |

| <b>AC9M3A03</b>                                                                                                                               |                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| recall and demonstrate proficiency with multiplication facts for 3, 4, 5 and 10; extend and apply facts to develop the related division facts |                                                  |
| Course Topics                                                                                                                                 | Activities                                       |
| Patterns & missing numbers                                                                                                                    | Dividing Twos                                    |
|                                                                                                                                               | Dividing Fives                                   |
|                                                                                                                                               | Dividing Tens                                    |
|                                                                                                                                               | Grouping in Fours                                |
|                                                                                                                                               | Dividing Fours                                   |
|                                                                                                                                               | Grouping in Threes                               |
|                                                                                                                                               | Dividing Threes                                  |
| Topics                                                                                                                                        | Skill Quests                                     |
| Multiplication & division facts for 2                                                                                                         | Recalling multiplication & division facts for 2  |
| Multiplication & division facts for 10                                                                                                        | Exploring multiplication by 10                   |
|                                                                                                                                               | Recalling multiplication & division facts for 10 |
| Multiplication & division facts for 5                                                                                                         | Exploring multiplication by 5                    |
|                                                                                                                                               | Recalling multiplication & division facts for 5  |
| Mult/div facts for 2, 5 & 10                                                                                                                  | Multiplication & division facts for 2, 5, 10     |
| Multiplication & division facts for 3                                                                                                         | Exploring multiplication by 3                    |
|                                                                                                                                               | Recalling multiplication & division facts for 3  |
| Multiplication & division facts for 4                                                                                                         | Exploring multiplication by 4                    |
|                                                                                                                                               | Recalling multiplication & division facts for 4  |

### 3 Measurement

| <b>AC9M3M01</b>                                                                                                                      |                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| identify which metric units are used to measure everyday items; use measurements of familiar items and known units to make estimates |                                                 |
| Course Topics                                                                                                                        | Activities                                      |
| Measurements                                                                                                                         | Which Unit of Measurement?                      |
|                                                                                                                                      | Which Measuring Tool?                           |
|                                                                                                                                      | Using a Litre                                   |
| Topics                                                                                                                               | Skill Quests                                    |
| Identify metric units of measure                                                                                                     | Introducing centimetres                         |
|                                                                                                                                      | Introducing millimetres                         |
|                                                                                                                                      | Selecting appropriate units to measure length   |
|                                                                                                                                      | Introducing litres                              |
|                                                                                                                                      | Introducing millilitres                         |
|                                                                                                                                      | Selecting appropriate units to measure capacity |



|  |                                             |
|--|---------------------------------------------|
|  | Introducing kilograms                       |
|  | Introducing grams                           |
|  | Selecting appropriate units to measure mass |
|  | Identifying correct units of measurement    |

| <b>AC9M3M02</b><br>measure and compare objects using familiar metric units of length, mass and capacity, and instruments with labelled markings |                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Course Topics                                                                                                                                   | Activities                               |
| Measurements                                                                                                                                    | How Long is That?                        |
|                                                                                                                                                 | Measure to the Nearest Half Centimetre   |
|                                                                                                                                                 | How Heavy?                               |
|                                                                                                                                                 | Ordering Mass (g)                        |
| Topics                                                                                                                                          | Skill Quests                             |
| Length, mass & capacity                                                                                                                         | Comparing, ordering & measuring length   |
|                                                                                                                                                 | Comparing, ordering & measuring capacity |
|                                                                                                                                                 | Comparing, ordering & measuring mass     |

| <b>AC9M3M03</b><br>recognise and use the relationship between formal units of time including days, hours, minutes and seconds to estimate and compare the duration of events |                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Course Topics                                                                                                                                                                | Activities                                       |
| Teacher directed                                                                                                                                                             |                                                  |
| Topics                                                                                                                                                                       | Skill Quests                                     |
| Introduce units of time                                                                                                                                                      | Introducing hours                                |
|                                                                                                                                                                              | Introducing minutes                              |
|                                                                                                                                                                              | Introducing seconds                              |
| Duration & units of time                                                                                                                                                     | Understanding relationship between units of time |
|                                                                                                                                                                              | Understanding duration                           |

| <b>AC9M3M04</b><br>describe the relationship between the hours and minutes on analog and digital clocks, and read the time to the nearest minute |                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Course Topics                                                                                                                                    | Activities                   |
| Measurements                                                                                                                                     | Five Minute Times            |
|                                                                                                                                                  | What is the Time?            |
| Topics                                                                                                                                           | Skill Quests                 |
| Tell time                                                                                                                                        | Telling time to five minutes |
|                                                                                                                                                  | Telling time to the minute   |

| <b>AC9M3M05</b><br>identify angles as measures of turn and compare angles with right angles in everyday situations |                          |
|--------------------------------------------------------------------------------------------------------------------|--------------------------|
| Course Topics                                                                                                      | Activities               |
| Shape & space                                                                                                      | Comparing Angles         |
|                                                                                                                    | Equal Angles             |
| Topics                                                                                                             | Skill Quests             |
| Identify & compare angles                                                                                          | Introducing angles       |
|                                                                                                                    | Introducing right angles |



| <b>AC9M3M06</b>                                                                                    |                                      |
|----------------------------------------------------------------------------------------------------|--------------------------------------|
| recognise the relationships between dollars and cents and represent money values in different ways |                                      |
| <b>Course Topics</b>                                                                               | <b>Activities</b>                    |
| Money, Dollars & Cents                                                                             | Money                                |
|                                                                                                    | Who's got the Money?                 |
|                                                                                                    | How much Change?                     |
| <b>Topics</b>                                                                                      | <b>Skill Quests</b>                  |
| Money                                                                                              | Recognising Australian notes & coins |
|                                                                                                    | Counting Australian dollars & cents  |
|                                                                                                    | Using money to make purchases        |

## 4 Space

| <b>AC9M3SP01</b>                                                                                                              |                                    |
|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| make, compare and classify objects, identifying key features and explaining why these features make them suited to their uses |                                    |
| <b>Course Topics</b>                                                                                                          | <b>Activities</b>                  |
| Shape & space                                                                                                                 | How Many Faces?                    |
|                                                                                                                               | How many Edges?                    |
|                                                                                                                               | Count the Corners                  |
|                                                                                                                               | Relate Shapes and Solids           |
|                                                                                                                               | Collect the Objects                |
|                                                                                                                               | Symmetry                           |
| <b>Topics</b>                                                                                                                 | <b>Skill Quests</b>                |
| 3D objects                                                                                                                    | Exploring prisms & pyramids        |
|                                                                                                                               | Introducing nets                   |
|                                                                                                                               | Recognising & comparing 3D objects |
|                                                                                                                               | Describing & sorting 3D objects    |
|                                                                                                                               | Comparing 2D shapes & 3D objects   |

| <b>AC9M3SP02</b>                                                                                                                         |                          |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| interpret and create two-dimensional representations of familiar environments, locating key landmarks and objects relative to each other |                          |
| <b>Course Topics</b>                                                                                                                     | <b>Activities</b>        |
| Shape & space                                                                                                                            | Following Directions     |
|                                                                                                                                          | Coordinate Meeting Place |
|                                                                                                                                          | Map Coordinates          |
|                                                                                                                                          | Where is it?             |
| <b>Topics</b>                                                                                                                            | <b>Skill Quests</b>      |
| Interpret & create maps                                                                                                                  | Interpreting simple maps |

## 5 Statistics

| <b>AC9M3ST01</b>                                                                                                                                                                                                                                   |                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| acquire data for categorical and discrete numerical variables to address a question of interest or purpose by observing, collecting and accessing data sets; record the data using appropriate methods including frequency tables and spreadsheets |                                      |
| Course Topics                                                                                                                                                                                                                                      | Activities                           |
| Record sort read & interpret data                                                                                                                                                                                                                  | Tallies                              |
|                                                                                                                                                                                                                                                    | Sorting Data                         |
| Topics                                                                                                                                                                                                                                             | Skill Quests                         |
| Collect & record data                                                                                                                                                                                                                              | Collecting & recording category data |
|                                                                                                                                                                                                                                                    | Using tables                         |

| <b>AC9M3ST02</b>                                                                                                                                           |                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| create and compare different graphical representations of data sets including using software where appropriate; interpret the data in terms of the context |                                           |
| Course Topics                                                                                                                                              | Activities                                |
| Record sort read & interpret data                                                                                                                          | Pictographs                               |
|                                                                                                                                                            | Interpreting Tables                       |
|                                                                                                                                                            | Reading from a Column Graph               |
|                                                                                                                                                            | Column Graphs                             |
| Topics                                                                                                                                                     | Skill Quests                              |
| Create & compare data representations                                                                                                                      | Representing & interpreting data displays |
|                                                                                                                                                            | Comparing data displays                   |

| <b>AC9M3ST03</b>                                                                                                                                                                                     |                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| conduct guided statistical investigations involving the collection, representation and interpretation of data for categorical and discrete numerical variables with respect to questions of interest |                                                   |
| Course Topics                                                                                                                                                                                        | Activities                                        |
| Teacher directed                                                                                                                                                                                     |                                                   |
| Topics                                                                                                                                                                                               | Skill Quests                                      |
| Understand statistical investigations                                                                                                                                                                | Introducing the statistical investigation process |
|                                                                                                                                                                                                      | Conducting a statistical investigation            |

## 6 Probability

| <b>AC9M3P01</b>                                                                                                                                                                                                   |                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| identify practical activities and everyday events that involve chance; describe possible outcomes and events as 'likely' or 'unlikely' and identify some events as 'certain' or 'impossible' explaining reasoning |                                  |
| Course Topics                                                                                                                                                                                                     | Activities                       |
| Probability and chance                                                                                                                                                                                            | Will it Happen?                  |
|                                                                                                                                                                                                                   | Most Likely and Least Likely     |
|                                                                                                                                                                                                                   | Introductory probability         |
|                                                                                                                                                                                                                   | What are the Chances?            |
|                                                                                                                                                                                                                   | How many Combinations?           |
| Topics                                                                                                                                                                                                            | Skill Quests                     |
| Language of chance                                                                                                                                                                                                | Using basic probability language |

|                                                                                                                                                             |                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <b>AC9M3P02</b><br>conduct repeated chance experiments; identify and describe possible outcomes, record the results,<br>recognise and discuss the variation |                               |
| <b>Course Topics</b>                                                                                                                                        | <b>Activities</b>             |
| Teacher directed                                                                                                                                            |                               |
| <b>Topics</b>                                                                                                                                               | <b>Skill Quests</b>           |
| Chance experiments                                                                                                                                          | Conducting chance experiments |

# Year 4

## 1 Number

| <b>AC9M4N01</b>                                                                                                                                         |                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| recognise and extend the application of place value to tenths and hundredths and use the conventions of decimal notation to name and represent decimals |                                            |
| Course Topics                                                                                                                                           | Activities                                 |
| Introducing Decimals                                                                                                                                    | Decimals from Words to Digits 1            |
|                                                                                                                                                         | Decimals on the Number Line                |
|                                                                                                                                                         | Decimal Place Value                        |
|                                                                                                                                                         | Who's got the Money?                       |
|                                                                                                                                                         | Money                                      |
|                                                                                                                                                         | Grams and Kilograms                        |
|                                                                                                                                                         | Millilitres and Litres                     |
|                                                                                                                                                         | Centimetres and Metres                     |
| Topics                                                                                                                                                  | Skill Quests                               |
| Numbers to 1 000 000                                                                                                                                    | Reading & representing numbers to 6 digits |
|                                                                                                                                                         | Comparing & ordering numbers to 6 digits   |
|                                                                                                                                                         | Place value to 6 digits                    |
|                                                                                                                                                         | Partitioning numbers to 6 digits           |
|                                                                                                                                                         | Counting by ones, tens & hundreds          |
| Numbers of any size                                                                                                                                     | Reading & representing numbers of any size |
|                                                                                                                                                         | Comparing & ordering numbers of any size   |
|                                                                                                                                                         | Place value of numbers of any size         |
|                                                                                                                                                         | Partitioning numbers of any size           |
| Place value to hundredths                                                                                                                               | Introducing decimal notation               |
|                                                                                                                                                         | Understanding decimal tenths               |
|                                                                                                                                                         | Understanding decimal hundredths           |
|                                                                                                                                                         | Partitioning decimal hundredths            |
| Connect decimals & fraction                                                                                                                             | Connecting fractions & decimal notation    |
| Round decimal tenths & hundredths                                                                                                                       | Rounding decimal tenths & hundredths       |
| Decimals used in money                                                                                                                                  | Understanding decimals used in money       |

| <b>AC9M4N02</b>                                        |                                           |
|--------------------------------------------------------|-------------------------------------------|
| explain and use the properties of odd and even numbers |                                           |
| Course Topics                                          | Activities                                |
| Patterns & missing numbers                             | Odd and Even Numbers 1                    |
| Topics                                                 | Skill Quests                              |
| Odd & even numbers                                     | Odd & even number patterns (up to 20)     |
|                                                        | Identifying odd & even numbers & patterns |
|                                                        | Properties of odd & even numbers          |

| <b>AC9M4N03</b>                                                                                                                     |                   |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| find equivalent representations of fractions using related denominators and make connections between fractions and decimal notation |                   |
| Course Topics                                                                                                                       | Activities        |
| Fractions & equivalents                                                                                                             | Thirds and Sixths |

|                      |                                                   |
|----------------------|---------------------------------------------------|
|                      | What Fraction is Shaded?                          |
|                      | What fraction is Shaded 1                         |
|                      | What Mixed Number Is Shaded?                      |
|                      | Equivalent Fraction Wall 1                        |
|                      | Equivalent Fraction Wall 2                        |
| <b>Topics</b>        | <b>Skill Quests</b>                               |
| Equivalent fractions | Investigating equivalent fractions less than 1    |
|                      | Investigating equivalent fractions greater than 1 |
|                      | Patterns in equivalent fractions                  |
|                      | Using multiplication to find equivalent fractions |

| <b>AC9M4N04</b><br>count by fractions including mixed numerals; locate and represent these fractions as numbers on number lines |                                                 |
|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Course Topics</b>                                                                                                            | <b>Activities</b>                               |
| Fractions & equivalents                                                                                                         | Identifying Fractions on a Number Line          |
|                                                                                                                                 | Identifying Fractions Beyond 1                  |
|                                                                                                                                 | Counting with Fractions on a Number Line        |
|                                                                                                                                 | Mixed and Improper Fractions on a Number Line   |
| <b>Topics</b>                                                                                                                   | <b>Skill Quests</b>                             |
| Count by fractions & mixed numerals                                                                                             | Counting in halves & quarters                   |
|                                                                                                                                 | Counting in halves, quarters & eighths          |
|                                                                                                                                 | Counting in thirds                              |
|                                                                                                                                 | Counting in tenths                              |
|                                                                                                                                 | Counting in simple fractions on a number line   |
| Convert fraction types using models                                                                                             | Converting mixed numerals to improper fractions |

| <b>AC9M4N05</b><br>solve problems involving multiplying or dividing natural numbers by multiples and powers of 10 without a calculator, using the multiplicative relationship between the place value of digits |                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>Course Topics</b>                                                                                                                                                                                            | <b>Activities</b>                   |
| Multiplication & division                                                                                                                                                                                       | Multiplying by 10, 100, 1000        |
|                                                                                                                                                                                                                 | Dividing by 10, 100, 1000           |
| <b>Topics</b>                                                                                                                                                                                                   | <b>Skill Quests</b>                 |
| Mult/div by multiples of 10, 100 & 1000                                                                                                                                                                         | Using place value to multiply by 10 |
|                                                                                                                                                                                                                 | Multiplying by multiples of 100     |
|                                                                                                                                                                                                                 | Multiplying by 1000                 |
|                                                                                                                                                                                                                 | Dividing by multiples of 10         |
|                                                                                                                                                                                                                 | Dividing by multiples of 100        |
|                                                                                                                                                                                                                 | Dividing by 1000                    |

| <b>AC9M4N06</b><br>develop efficient strategies and use appropriate digital tools for solving problems involving addition and subtraction, and multiplication and division where there is no remainder |                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| <b>Course Topics</b>                                                                                                                                                                                   | <b>Activities</b>         |
| Efficient strategies with operations                                                                                                                                                                   | Bump Add and Subtract     |
|                                                                                                                                                                                                        | Jump Add and Subtract     |
|                                                                                                                                                                                                        | Complements to 10, 20, 50 |
|                                                                                                                                                                                                        | Split Add and Subtract    |
|                                                                                                                                                                                                        | Compensation – Add        |

|                                         | Column Addition 1                                  |
|-----------------------------------------|----------------------------------------------------|
|                                         | Columns that Subtract                              |
|                                         | Subtract Numbers                                   |
|                                         | Magic Symbols 1                                    |
|                                         | Double and Halve to Multiply                       |
|                                         | Fact Families: Multiply and Divide                 |
|                                         | Multiplication Arrays                              |
|                                         | Arrays 1                                           |
|                                         | Arrays 2                                           |
|                                         | Related Facts 2                                    |
|                                         | Model multiplication to $5 \times 5$               |
|                                         | Grid Methods 1                                     |
|                                         | Problems: Times and Divide                         |
| Topics                                  | Skill Quests                                       |
| Addition & subtraction using algorithms | Addition algorithms (without regrouping)           |
|                                         | Addition algorithms (with regrouping)              |
|                                         | Addition algorithms (with & without regrouping)    |
|                                         | Subtraction algorithms (without decomposing)       |
|                                         | Subtraction algorithms (with decomposing)          |
| Addition & subtraction strategies       | Add & subtract using efficient strategies          |
|                                         | Add & subtract using a bar model                   |
|                                         | Add & subtract using place value portioning        |
|                                         | Add & subtract using jump strategies               |
|                                         | Add & subtract using split strategies              |
|                                         | Add & subtract using round & compensate strategies |
| Mult & div strategies, no remainder     | Multiplication strategies: 1-digit numbers         |
|                                         | Using the conventions of multiplication            |
|                                         | Inverse facts: multiplication & division           |
|                                         | Practising multiplication strategies               |
|                                         | Multiplying 2-digit numbers by a 1-digit number    |
|                                         | Multiplying 2-digit numbers using doubling         |
|                                         | Multiplying 2-digit numbers using factorising      |
|                                         | Selecting effective multiplication strategies      |
|                                         | Selecting effective division strategies            |
|                                         | Comparisons using the language of multiplication   |
|                                         | Dividing a 2-digit number by a 1-digit number      |

| AC9M4N07                                                                                                                                       |                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| choose and use estimation and rounding to check and explain the reasonableness of calculations including the results of financial transactions |                                             |
| Course Topics                                                                                                                                  | Activities                                  |
| Efficient strategies with operations                                                                                                           | Estimate Sums                               |
|                                                                                                                                                | Estimate Differences                        |
| Topics                                                                                                                                         | Skill Quests                                |
| Use estimation & rounding                                                                                                                      | Rounding & estimating with addition         |
|                                                                                                                                                | Rounding & estimating with subtraction      |
|                                                                                                                                                | Checking accuracy of addition & subtraction |
|                                                                                                                                                | Estimating with multiplication & division   |
|                                                                                                                                                | Using estimating with money                 |

| <b>AC9M4N08</b>                                                                                                                                                                                                                                                                                                                          |                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| use mathematical modelling to solve practical problems that involve additive and multiplicative situations including financial contexts; formulate the problems using number sentences and choose efficient calculation strategies, using digital tools where appropriate; interpret and communicate solutions in terms of the situation |                                                  |
| Course Topics                                                                                                                                                                                                                                                                                                                            | Activities                                       |
| Problem solving with models                                                                                                                                                                                                                                                                                                              | Bar Model Problems 1                             |
|                                                                                                                                                                                                                                                                                                                                          | Bar Model Problems 2                             |
|                                                                                                                                                                                                                                                                                                                                          | Fractions of a Collection 1                      |
|                                                                                                                                                                                                                                                                                                                                          | Fractions of a Collection 2                      |
| Topics                                                                                                                                                                                                                                                                                                                                   | Skill Quests                                     |
| Addition & subtraction word problems                                                                                                                                                                                                                                                                                                     | Addition & subtraction word problems             |
|                                                                                                                                                                                                                                                                                                                                          | Posing addition & subtraction problems           |
|                                                                                                                                                                                                                                                                                                                                          | Expressing word problems as equations            |
| Multiplication & division word problems                                                                                                                                                                                                                                                                                                  | Expressing equations as word problems            |
|                                                                                                                                                                                                                                                                                                                                          | Solving multiplication & division word problems. |
| Addition & subtraction money problems                                                                                                                                                                                                                                                                                                    | Solving addition & subtraction money problems    |

| <b>AC9M4N09</b>                                                                                                                                                                       |                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| follow and create algorithms involving a sequence of steps and decisions that use addition or multiplication to generate sets of numbers; identify and describe any emerging patterns |                                                    |
| Course Topics                                                                                                                                                                         | Activities                                         |
| Teacher directed                                                                                                                                                                      |                                                    |
| Topics                                                                                                                                                                                | Skill Quests                                       |
| Sequences & patterns                                                                                                                                                                  | Investigating sequences with multiples             |
|                                                                                                                                                                                       | Exploring number patterns                          |
|                                                                                                                                                                                       | Finding & generating shape patterns from a rule    |
|                                                                                                                                                                                       | Generating add/sub patterns from a rule            |
|                                                                                                                                                                                       | Generating multiplication patterns from a rule     |
|                                                                                                                                                                                       | Using a function machine to apply rules to numbers |
|                                                                                                                                                                                       | Working with code to create algorithms             |

## 2 Algebra

| <b>AC9M4A01</b>                                                                                                               |                                                |
|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| find unknown values in numerical equations involving addition and subtraction, using the properties of numbers and operations |                                                |
| Course Topics                                                                                                                 | Activities                                     |
| Patterns & missing numbers                                                                                                    | Describing Patterns                            |
|                                                                                                                               | Missing Values                                 |
|                                                                                                                               | I am Thinking of a Number!                     |
|                                                                                                                               | Balance Numbers to 20                          |
| Topics                                                                                                                        | Skill Quests                                   |
| Addition & subtraction number sentences                                                                                       | Using inverse operations for add/sub equations |
|                                                                                                                               | Relationship between addition & subtraction    |
|                                                                                                                               | Equivalent number sentences                    |
|                                                                                                                               | Word problems for finding unknown quantities   |



| AC9M4A02                                                                                                                                                                                                                      |                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| recall and demonstrate proficiency with multiplication facts up to 10 x 10 and related division facts; extend and apply facts to develop efficient mental strategies for computation with larger numbers without a calculator |                                            |
| Course Topics                                                                                                                                                                                                                 | Activities                                 |
| Multiplication & division                                                                                                                                                                                                     | Grouping in Threes                         |
|                                                                                                                                                                                                                               | Grouping in Fours                          |
|                                                                                                                                                                                                                               | Grouping in Sixes                          |
|                                                                                                                                                                                                                               | Grouping in Sevens                         |
|                                                                                                                                                                                                                               | Grouping in Eights                         |
|                                                                                                                                                                                                                               | Grouping in Nines                          |
|                                                                                                                                                                                                                               | Dividing Threes                            |
|                                                                                                                                                                                                                               | Dividing Fours                             |
|                                                                                                                                                                                                                               | Dividing Sixes                             |
|                                                                                                                                                                                                                               | Dividing Sevens                            |
|                                                                                                                                                                                                                               | Dividing Eights                            |
|                                                                                                                                                                                                                               | Dividing Nines                             |
|                                                                                                                                                                                                                               | Multiplication Turnarounds                 |
|                                                                                                                                                                                                                               | Missing Numbers: $\times$ and $\div$ facts |
|                                                                                                                                                                                                                               | Times Tables                               |
|                                                                                                                                                                                                                               | Multiply 3 single-digit numbers            |
| Topics                                                                                                                                                                                                                        | Skill Quests                               |
| Multiplication & division facts                                                                                                                                                                                               | Multiplication & division facts up to 5    |
|                                                                                                                                                                                                                               | Multiplying & dividing by 6 up to 60       |
|                                                                                                                                                                                                                               | Multiplying & dividing by 7 up to 70       |
|                                                                                                                                                                                                                               | Multiplying & dividing by 8 up to 80       |
|                                                                                                                                                                                                                               | Multiplying & dividing by 9 up to 90       |
|                                                                                                                                                                                                                               | Multiplying & dividing to 10 x 10          |

### 3 Measurement

| AC9M4M01                                                                                                                                                                                     |                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| interpret unmarked and partial units when measuring and comparing attributes of length, mass, capacity, duration and temperature, using scaled and digital instruments and appropriate units |                                                     |
| Course Topics                                                                                                                                                                                | Activities                                          |
| Measuring converting & comparing                                                                                                                                                             | How Heavy?                                          |
|                                                                                                                                                                                              | How Long is That?                                   |
|                                                                                                                                                                                              | Measuring Length                                    |
|                                                                                                                                                                                              | Measure to the Nearest Half Centimetre              |
|                                                                                                                                                                                              | How many Blocks?                                    |
|                                                                                                                                                                                              | Comparing Volume                                    |
|                                                                                                                                                                                              | Volume of Solids and Prisms - $1\text{cm}^3$ blocks |
|                                                                                                                                                                                              | What's the Temperature (Celsius)?                   |
| Topics                                                                                                                                                                                       | Skill Quests                                        |
| Length, mass, capacity & temperature                                                                                                                                                         | Metric units of length                              |
|                                                                                                                                                                                              | Length & 3D objects                                 |
|                                                                                                                                                                                              | Measuring temperature                               |
|                                                                                                                                                                                              | Measuring capacity in millilitres                   |
|                                                                                                                                                                                              | Measuring mass in grams & kilograms                 |
|                                                                                                                                                                                              | Reading scales with metric units                    |

| <b>AC9M4M02</b><br>recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces, using appropriate formal and informal units |                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>Course Topics</b>                                                                                                                                               | <b>Activities</b>                                |
| Measuring converting & comparing                                                                                                                                   | Biggest Shape                                    |
|                                                                                                                                                                    | Equal Areas                                      |
|                                                                                                                                                                    | Area of Shapes                                   |
|                                                                                                                                                                    | Perimeter of Shapes                              |
| <b>Topics</b>                                                                                                                                                      | <b>Skill Quests</b>                              |
| Measure perimeter                                                                                                                                                  | Introducing perimeter                            |
|                                                                                                                                                                    | Measuring perimeter                              |
| Measure area                                                                                                                                                       | Measuring & estimating area using square units   |
|                                                                                                                                                                    | Introducing area using formal units              |
|                                                                                                                                                                    | Measuring & comparing regular & irregular shapes |
|                                                                                                                                                                    | Measuring area using formal units                |

| <b>AC9M4M03</b><br>solve problems involving the duration of time including situations involving “am” and “pm” and conversions between units of time |                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>Course Topics</b>                                                                                                                                | <b>Activities</b>                                   |
| Measuring converting & comparing                                                                                                                    | What is the Time?                                   |
|                                                                                                                                                     | Time Conversions: Whole Numbers 1                   |
|                                                                                                                                                     | Time Conversions: Whole Numbers 2                   |
|                                                                                                                                                     | Time Conversions: Simple Fractions                  |
|                                                                                                                                                     | Time Conversions: Simple Decimals (0.25, 0.5, 0.75) |
| <b>Topics</b>                                                                                                                                       | <b>Skill Quests</b>                                 |
| Convert units of time                                                                                                                               | Converting units of time                            |
| Solve duration of time problems                                                                                                                     | Understanding am & pm notation                      |
|                                                                                                                                                     | Solving duration of time problems                   |

| <b>AC9M4M04</b><br>estimate and compare angles using angle names including acute, obtuse, straight angle, reflex and revolution, and recognise their relationship to a right angle |                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| <b>Course Topics</b>                                                                                                                                                               | <b>Activities</b>        |
| Space shape & angle                                                                                                                                                                | Equal Angles             |
|                                                                                                                                                                                    | Comparing Angles         |
|                                                                                                                                                                                    | Right Angle Relation     |
|                                                                                                                                                                                    | What Type of Angle?      |
|                                                                                                                                                                                    | Relate Shapes and Solids |
|                                                                                                                                                                                    | Collect the Objects 2    |
| <b>Topics</b>                                                                                                                                                                      | <b>Skill Quests</b>      |
| Classify angles                                                                                                                                                                    | Classifying angles       |

## 4 Space

| AC9M4SP01                                                                                                                    |                                   |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| represent and approximate composite shapes and objects in the environment, using combinations of familiar shapes and objects |                                   |
| Course Topics                                                                                                                | Activities                        |
| Teacher directed                                                                                                             |                                   |
| Topics                                                                                                                       | Skill Quests                      |
| Identify composite shapes & objects                                                                                          | Composing & decomposing 2D shapes |

| AC9M4SP02                                                                                                                      |                                     |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| create and interpret grid reference systems using grid references and directions to locate and describe positions and pathways |                                     |
| Course Topics                                                                                                                  | Activities                          |
| Space shape & angle                                                                                                            | Coordinate Meeting Place            |
|                                                                                                                                | Map Coordinates                     |
|                                                                                                                                | Using a key                         |
|                                                                                                                                | What Direction was That?            |
|                                                                                                                                | More Directions!                    |
| Topics                                                                                                                         | Skill Quests                        |
| Create & interpret grid references                                                                                             | Working with grid reference systems |

| AC9M4SP03                                                                                                                                         |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| recognise line and rotational symmetry of shapes and create symmetrical patterns and pictures, using dynamic geometric software where appropriate |                                        |
| Course Topics                                                                                                                                     | Activities                             |
| Space shape & angle                                                                                                                               | Symmetry                               |
|                                                                                                                                                   | Symmetry or Not?                       |
|                                                                                                                                                   | Rotational Symmetry                    |
| Topics                                                                                                                                            | Skill Quests                           |
| Line & rotational symmetry                                                                                                                        | Recognising & drawing line symmetry    |
|                                                                                                                                                   | Rotational symmetry                    |
| Symmetrical patterns, pictures & shapes                                                                                                           | Creating & drawing symmetrical designs |
|                                                                                                                                                   | Recognising tessellations              |

## 5 Statistics

| AC9M4ST01                                                                                                                                                                                                                                                                                     |                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| acquire data for categorical and discrete numerical variables to address a question of interest or purpose using digital tools; represent data using many-to-one pictographs, column graphs and other displays or visualisations; interpret and discuss the information that has been created |                                           |
| Course Topics                                                                                                                                                                                                                                                                                 | Activities                                |
| Graphs with scales &/or axis                                                                                                                                                                                                                                                                  | Picture Graphs: with scale & half symbols |
|                                                                                                                                                                                                                                                                                               | Making Picture Graphs: With Scale         |
|                                                                                                                                                                                                                                                                                               | Column Graphs                             |
|                                                                                                                                                                                                                                                                                               | Reading from a Column Graph               |

| Topics                                 | Skill Quests                                   |
|----------------------------------------|------------------------------------------------|
| Represent data with many-to-one graphs | Column graphs using many-to-one correspondence |
|                                        | Picture graphs with many-to-one correspondence |

| AC9M4ST02                                                                                                                                                                                 |                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| analyse the effectiveness of different displays or visualisations in illustrating and comparing data distributions, then discuss the shape of distributions and the variation in the data |                                      |
| Course Topics                                                                                                                                                                             | Activities                           |
| Teacher directed                                                                                                                                                                          |                                      |
| Topics                                                                                                                                                                                    | Skill Quests                         |
| Evaluate & compare data displays                                                                                                                                                          | Evaluating & comparing data displays |
|                                                                                                                                                                                           | Evaluating the shape of data sets    |

| AC9M4ST03                                                                                                                                                                                   |                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| conduct statistical investigations, collecting data through survey responses and other methods; record and display data using digital tools; interpret the data and communicate the results |                        |
| Course Topics                                                                                                                                                                               | Activities             |
| Teacher directed                                                                                                                                                                            |                        |
| Topics                                                                                                                                                                                      | Skill Quests           |
| Methods of data collection                                                                                                                                                                  | Surveys & sorting data |

## 6 Probability

| AC9M4P01                                                                                                                                                                                        |                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| describe possible everyday events and the possible outcomes of chance experiments and order outcomes or events based on their likelihood of occurring; identify independent or dependent events |                                            |
| Course Topics                                                                                                                                                                                   | Activities                                 |
| Chance                                                                                                                                                                                          | Chance Gauge                               |
|                                                                                                                                                                                                 | What are the Chances?                      |
|                                                                                                                                                                                                 | Counting Techniques 1                      |
| Topics                                                                                                                                                                                          | Skill Quests                               |
| Chance events                                                                                                                                                                                   | Describing the chance of events occurring  |
| Non-simultaneous everyday events                                                                                                                                                                | Exploring non-simultaneous everyday events |
| Independent & dependent events                                                                                                                                                                  | Independent & dependent events             |

| AC9M4P02                                                                                                                      |                                                 |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| conduct repeated chance experiments to observe relationships between outcomes; identify and describe the variation in results |                                                 |
| Course Topics                                                                                                                 | Activities                                      |
| Teacher directed                                                                                                              |                                                 |
| Topics                                                                                                                        | Skill Quests                                    |
| Conduct chance experiments                                                                                                    | Conducting chance experiments                   |
|                                                                                                                               | Investigating equally likely outcomes of chance |

# Year 5

## 1 Number

| <b>AC9M5N01</b>                                                                                                                                                             |                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| interpret, compare and order numbers with more than 2 decimal places, including numbers greater than one, using place value understanding; represent these on a number line |                                          |
| Course Topics                                                                                                                                                               | Activities                               |
| REVIEW Whole Numbers & Place Value                                                                                                                                          | Place Value to Millions                  |
|                                                                                                                                                                             | Numbers from Words to Digits 1           |
|                                                                                                                                                                             | Numbers from Words to Digits 2           |
|                                                                                                                                                                             | Greater Than or Less Than?               |
|                                                                                                                                                                             | Partition and Rename 3                   |
|                                                                                                                                                                             | Expanded Notation                        |
|                                                                                                                                                                             | Rounding Numbers                         |
|                                                                                                                                                                             | Decimals from Words to Digits 1          |
|                                                                                                                                                                             | Decimals on the Number Line              |
|                                                                                                                                                                             | Decimal Place Value                      |
|                                                                                                                                                                             | Nearest Whole Number                     |
| Fractions decimals & percentages                                                                                                                                            | Decimal Order                            |
|                                                                                                                                                                             | Comparing Decimals                       |
|                                                                                                                                                                             | Centimetres and Metres                   |
| Topics                                                                                                                                                                      | Skill Quests                             |
| Understand decimals to thousandths                                                                                                                                          | Introducing decimal thousandths          |
|                                                                                                                                                                             | Partitioning decimals of any size        |
|                                                                                                                                                                             | Comparing & ordering decimals            |
|                                                                                                                                                                             | Interpreting zeros at end of decimals    |
|                                                                                                                                                                             | Decimal & fraction equivalences          |
|                                                                                                                                                                             | Connecting decimals to the metric system |

| <b>AC9M5N02</b>                                                                                                               |                                            |
|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| express natural numbers as products of their factors, recognise multiples and determine if one number is divisible by another |                                            |
| Course Topics                                                                                                                 | Activities                                 |
| Factors & Multiples                                                                                                           | Multiples                                  |
|                                                                                                                               | Lowest Common Multiple                     |
|                                                                                                                               | Factors                                    |
|                                                                                                                               | Highest Common Factor                      |
|                                                                                                                               | Find the Factor                            |
|                                                                                                                               | Divisibility Tests (2, 5, 10)              |
|                                                                                                                               | Divisibility Tests (3, 4, 9)               |
|                                                                                                                               | Tests of Divisibility 1                    |
| Topics                                                                                                                        | Skill Quests                               |
| Multiples & factors                                                                                                           | Finding multiples                          |
|                                                                                                                               | Finding factors                            |
|                                                                                                                               | Solving problems using factors & multiples |
| Divisibility tests                                                                                                            | Divisibility tests for 2, 5 & 10           |
|                                                                                                                               | Divisibility tests for 3, 4, 6, 8 & 9      |

| <b>AC9M5N03</b><br>compare and order fractions with the same and related denominators including mixed numerals, applying knowledge of factors and multiples; represent these fractions on a number line |                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <b>Course Topics</b>                                                                                                                                                                                    | <b>Activities</b>                                 |
| Compare & order fractions                                                                                                                                                                               | Shading Equivalent Fractions                      |
|                                                                                                                                                                                                         | Equivalent Fraction Wall 1                        |
|                                                                                                                                                                                                         | Equivalent Fractions on a Number Line 1           |
|                                                                                                                                                                                                         | Equivalent Fractions                              |
|                                                                                                                                                                                                         | Compare Fractions 1a                              |
|                                                                                                                                                                                                         | Compare Fractions 1b                              |
|                                                                                                                                                                                                         | Improper to Mixed                                 |
|                                                                                                                                                                                                         | Mixed to Improper                                 |
|                                                                                                                                                                                                         | Converting Mixed and Improper                     |
|                                                                                                                                                                                                         | Identifying Fractions on a Number Line            |
|                                                                                                                                                                                                         | Mixed and Improper Fractions on a Number Line     |
| <b>Topics</b>                                                                                                                                                                                           | <b>Skill Quests</b>                               |
| Compare & order fractions                                                                                                                                                                               | Comparing & ordering fractions                    |
|                                                                                                                                                                                                         | Comparing & ordering fractions & mixed numbers    |
|                                                                                                                                                                                                         | Using common factors to simplify proper fractions |

| <b>AC9M5N04</b><br>recognise that 100% represents the complete whole and use percentages to describe, represent and compare relative size; connect familiar percentages to their decimal and fraction equivalents |                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>Course Topics</b>                                                                                                                                                                                              | <b>Activities</b>                                |
| Fractions decimals & percentages                                                                                                                                                                                  | Modelling Percentages                            |
|                                                                                                                                                                                                                   | Fractions to Decimals                            |
|                                                                                                                                                                                                                   | Percents and Decimals                            |
|                                                                                                                                                                                                                   | Common Fractions as Percentages (AU)             |
| <b>Topics</b>                                                                                                                                                                                                     | <b>Skill Quests</b>                              |
| Fractions, decimals & percentages                                                                                                                                                                                 | Introducing percentages                          |
|                                                                                                                                                                                                                   | Connecting percentages & decimals                |
|                                                                                                                                                                                                                   | Connecting percentages & fractions               |
|                                                                                                                                                                                                                   | Relationship - percentages, decimals & fractions |

| <b>AC9M5N05</b><br>solve problems involving addition and subtraction of fractions with the same or related denominators, using different strategies |                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| <b>Course Topics</b>                                                                                                                                | <b>Activities</b>                                  |
| Add & Subtract related fractions                                                                                                                    | Add: Common Denominator                            |
|                                                                                                                                                     | Subtract: Common Denominator                       |
|                                                                                                                                                     | Common Denominator                                 |
|                                                                                                                                                     | Add Like Mixed Numbers                             |
|                                                                                                                                                     | Subtract Like Mixed Numbers                        |
| <b>Topics</b>                                                                                                                                       | <b>Skill Quests</b>                                |
| Add & subtract fractions                                                                                                                            | Add & subtract proper fractions - same denominator |
|                                                                                                                                                     | Add & subtract mixed numerals - same denominator   |
|                                                                                                                                                     | Add & subtract fractions - related denominators    |
|                                                                                                                                                     | Add & subtract mixed num - related denominators    |

| <b>AC9M5N06</b>                                                                                                                                                                                                  |                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| solve problems involving multiplication of larger numbers by one- or two-digit numbers, choosing efficient calculation strategies and using digital tools where appropriate; check the reasonableness of answers |                                                    |
| <b>Course Topics</b>                                                                                                                                                                                             | <b>Activities</b>                                  |
| More Multiplication & division                                                                                                                                                                                   | Multiply Multiples of 10                           |
|                                                                                                                                                                                                                  | Multiply More Multiples of 10                      |
|                                                                                                                                                                                                                  | Multiply 2 Digits Area Model                       |
|                                                                                                                                                                                                                  | Grid Methods 1                                     |
|                                                                                                                                                                                                                  | Double and Halve to Multiply                       |
|                                                                                                                                                                                                                  | Mental Methods Multiplication 1                    |
| <b>Topics</b>                                                                                                                                                                                                    | <b>Skill Quests</b>                                |
| Strategies to multiply by 1- or 2-digits                                                                                                                                                                         | Multiplication using multiples of 10               |
|                                                                                                                                                                                                                  | Multiplying: rounding, compensating & partitioning |
|                                                                                                                                                                                                                  | Multiplying: doubling, halving & thirding          |
|                                                                                                                                                                                                                  | Multiplying using the split method                 |
|                                                                                                                                                                                                                  | Multiplying using an area model                    |
|                                                                                                                                                                                                                  | Multiplying by factorising                         |
|                                                                                                                                                                                                                  | Multiplying using expanded algorithm               |
|                                                                                                                                                                                                                  | Multiplying using contracted algorithm             |
|                                                                                                                                                                                                                  | Multiplying using extended form of algorithm       |

| <b>AC9M5N07</b>                                                                                                                                                                                                         |                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| solve problems involving division, choosing efficient strategies and using digital tools where appropriate; interpret any remainder according to the context and express results as a whole number, decimal or fraction |                                                 |
| <b>Course Topics</b>                                                                                                                                                                                                    | <b>Activities</b>                               |
| More Multiplication & division                                                                                                                                                                                          | Dividing by 10, 100, 1000                       |
|                                                                                                                                                                                                                         | Division Facts 1                                |
|                                                                                                                                                                                                                         | Remainders by Arrays                            |
|                                                                                                                                                                                                                         | Mental Methods Division 1                       |
|                                                                                                                                                                                                                         | Mental Methods Division                         |
| <b>Topics</b>                                                                                                                                                                                                           | <b>Skill Quests</b>                             |
| Division strategies incl. remainders                                                                                                                                                                                    | Dividing by a 1-digit number using partitioning |
|                                                                                                                                                                                                                         | Dividing by a 2-digit number using partitioning |
|                                                                                                                                                                                                                         | Dividing by a 1-digit number using factorising  |
|                                                                                                                                                                                                                         | Dividing by a 2-digit number using factorising  |
|                                                                                                                                                                                                                         | Extended division - no remainders or zeros      |
|                                                                                                                                                                                                                         | Extended division with remainders               |
|                                                                                                                                                                                                                         | Extended division with & without remainders     |
|                                                                                                                                                                                                                         | Contracted division - no remainders or zeros    |
|                                                                                                                                                                                                                         | Contracted division - no remainders             |
|                                                                                                                                                                                                                         | Contracted division - with & without remainders |
|                                                                                                                                                                                                                         | Dividing by 2-digit numbers - formal algorithms |

| <b>AC9M5N08</b>                                                                                                                                   |                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| check and explain the reasonableness of solutions to problems including financial contexts using estimation strategies appropriate to the context |                      |
| <b>Course Topics</b>                                                                                                                              | <b>Activities</b>    |
| Rounding & estimating                                                                                                                             | Rounding off Numbers |
|                                                                                                                                                   | Estimate Sums        |
|                                                                                                                                                   | Estimate Differences |
|                                                                                                                                                   | Estimate Products    |

|                       | Estimate Quotients                             |
|-----------------------|------------------------------------------------|
|                       | Estimation: Multiply and Divide                |
|                       | Estimate Decimal Sums 2                        |
|                       | Estimate Decimal Operations                    |
| Topics                | Skill Quests                                   |
| Estimation & rounding | Rounding to estimate addition & subtraction    |
|                       | Rounding to estimate multiplication & division |
|                       | Estimating with money                          |

| AC9M5N09                                                                                                                                                                                                                                                                                                                     |                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| use mathematical modelling to solve practical problems involving additive and multiplicative situations including financial contexts; formulate the problems, choosing operations and efficient calculation strategies, using digital tools where appropriate; interpret and communicate solutions in terms of the situation |                                                   |
| Course Topics                                                                                                                                                                                                                                                                                                                | Activities                                        |
| Solve problems                                                                                                                                                                                                                                                                                                               | Columns that Add                                  |
|                                                                                                                                                                                                                                                                                                                              | Add Two 2-Digit Numbers                           |
|                                                                                                                                                                                                                                                                                                                              | Add 3-Digit Numbers                               |
|                                                                                                                                                                                                                                                                                                                              | Columns that Subtract                             |
|                                                                                                                                                                                                                                                                                                                              | Subtract Numbers                                  |
|                                                                                                                                                                                                                                                                                                                              | Multiply: 1-Digit Number                          |
|                                                                                                                                                                                                                                                                                                                              | Multiply: 2-Digit by 1-Digit                      |
|                                                                                                                                                                                                                                                                                                                              | Divide: 1-Digit Divisor 1                         |
|                                                                                                                                                                                                                                                                                                                              | Bar model $\times \div$                           |
|                                                                                                                                                                                                                                                                                                                              | Problems: Times and Divide                        |
| Topics                                                                                                                                                                                                                                                                                                                       | Skill Quests                                      |
| Add & subtract practical problems                                                                                                                                                                                                                                                                                            | Addition & subtraction word problems              |
|                                                                                                                                                                                                                                                                                                                              | Expressing word problems as equations add/sub     |
|                                                                                                                                                                                                                                                                                                                              | Solving add & subtract money problems             |
| Multiply & divide practical problems                                                                                                                                                                                                                                                                                         | Multiplication & division word problems           |
|                                                                                                                                                                                                                                                                                                                              | Expressing word problems as equations mult/div    |
|                                                                                                                                                                                                                                                                                                                              | Solving multi-step mult/div word problems         |
|                                                                                                                                                                                                                                                                                                                              | Solving mult & div money problems                 |
| All operations practical problems                                                                                                                                                                                                                                                                                            | Express equations as word problems all operations |

| AC9M5N10                                                                                                                                                                                           |                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| create and use algorithms involving a sequence of steps and decisions and digital tools to experiment with factors, multiples and divisibility; identify, interpret and describe emerging patterns |                                                    |
| Course Topics                                                                                                                                                                                      | Activities                                         |
| Teacher directed                                                                                                                                                                                   |                                                    |
| Topics                                                                                                                                                                                             | Skill Quests                                       |
| Create & use algorithms                                                                                                                                                                            | Manipulating numbers using a given rule            |
|                                                                                                                                                                                                    | Designing flowcharts to solve add/sub of fractions |
|                                                                                                                                                                                                    | Factors & multiples                                |



## 2 Algebra

| AC9M5A01                                                                                                                                        |                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| recognise and explain the connection between multiplication and division as inverse operations and use this to develop families of number facts |                                                  |
| Course Topics                                                                                                                                   | Activities                                       |
| Fact families Mult/Div                                                                                                                          | Fact Families: Multiply and Divide               |
|                                                                                                                                                 | Multiplication Turnarounds                       |
|                                                                                                                                                 | Missing Numbers: $\times$ and $\div$ facts       |
|                                                                                                                                                 | Times Tables                                     |
|                                                                                                                                                 | Multiply 3 single-digit numbers                  |
| Topics                                                                                                                                          | Skill Quests                                     |
| Connect multiplication & division                                                                                                               | Inverse relationship - multiplication & division |

| AC9M5A02                                                                                                                        |                                                    |
|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| find unknown values in numerical equations involving multiplication and division using the properties of numbers and operations |                                                    |
| Course Topics                                                                                                                   | Activities                                         |
| Missing Values                                                                                                                  | Equivalent Facts: Multiply                         |
|                                                                                                                                 | Missing Values                                     |
|                                                                                                                                 | Missing Numbers: Variables                         |
|                                                                                                                                 | Solve Equations: Multiply, Divide 1                |
|                                                                                                                                 | I am Thinking of a Number!                         |
|                                                                                                                                 | Fit the Conditions 1                               |
| Topics                                                                                                                          | Skill Quests                                       |
| Find unknown values in mult & div                                                                                               | Finding unknown values - multiplication & division |

## 3 Number

| AC9M5M01                                                                                                                                                               |                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| choose appropriate metric units when measuring the length, mass and capacity of objects; use smaller units or a combination of units to obtain a more accurate measure |                                         |
| Course Topics                                                                                                                                                          | Activities                              |
| Measurement                                                                                                                                                            | Kilometre Conversions                   |
|                                                                                                                                                                        | Metres and Kilometres                   |
|                                                                                                                                                                        | Millilitres and Litres                  |
|                                                                                                                                                                        | Litre Conversions                       |
|                                                                                                                                                                        | Kilogram Conversions                    |
|                                                                                                                                                                        | Grams and Kilograms                     |
| Topics                                                                                                                                                                 | Skill Quests                            |
| Choose appropriate metric units                                                                                                                                        | Introducing kilometres                  |
|                                                                                                                                                                        | Comparing & ordering units of length    |
|                                                                                                                                                                        | Selecting appropriate units – length    |
|                                                                                                                                                                        | Comparing & ordering units of mass      |
|                                                                                                                                                                        | Selecting appropriate units – mass      |
|                                                                                                                                                                        | Selecting appropriate units – capacity  |
|                                                                                                                                                                        | Recognising suitable metric units - all |

| <b>AC9M5M02</b><br>solve practical problems involving the perimeter and area of regular and irregular shapes using appropriate metric units |                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| <b>Course Topics</b>                                                                                                                        | <b>Activities</b>                        |
| Measurement                                                                                                                                 | Perimeter: Squares and Rectangles        |
|                                                                                                                                             | Area of Shapes                           |
|                                                                                                                                             | Biggest Shape                            |
|                                                                                                                                             | Equal Areas                              |
|                                                                                                                                             | Area: Squares and Rectangles             |
| <b>Topics</b>                                                                                                                               | <b>Skill Quests</b>                      |
| Perimeter & area - practical problems                                                                                                       | Calculating perimeter practical problems |
|                                                                                                                                             | Calculating area practical problems      |

| <b>AC9M5M03</b><br>compare 12- and 24-hour time systems and solve practical problems involving the conversion between them |                                  |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| <b>Course Topics</b>                                                                                                       | <b>Activities</b>                |
| Time conversions & problems                                                                                                | Time Conversions: Whole Number 1 |
|                                                                                                                            | Time Conversions: Whole Number 2 |
|                                                                                                                            | Elapsed Time                     |
|                                                                                                                            | 24 Hour Time                     |
|                                                                                                                            | Using Timetables                 |
| <b>Topics</b>                                                                                                              | <b>Skill Quests</b>              |
| Use 24-hour time                                                                                                           | Using 24-hour notation           |
|                                                                                                                            | Using 24-hour time in timetables |

| <b>AC9M5M04</b><br>estimate, construct and measure angles in degrees, using appropriate tools including a protractor, and relate these measures to angle names |                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| <b>Course Topics</b>                                                                                                                                           | <b>Activities</b>                          |
| Measurement                                                                                                                                                    | Classifying Angles                         |
|                                                                                                                                                                | Measuring Angles                           |
|                                                                                                                                                                | Estimating Angles                          |
| <b>Topics</b>                                                                                                                                                  | <b>Skill Quests</b>                        |
| Estimate, construct & measure angles                                                                                                                           | Identifying, estimating & measuring angles |
|                                                                                                                                                                | Classifying & constructing angles          |

## 4 Space

| <b>AC9M5SP01</b><br>connect objects to their nets and build objects from their nets using spatial and geometric reasoning |                                              |
|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| <b>Course Topics</b>                                                                                                      | <b>Activities</b>                            |
| Space & shape                                                                                                             | What Pyramid am I?                           |
|                                                                                                                           | What Prism am I?                             |
|                                                                                                                           | Prisms and Pyramids                          |
| <b>Topics</b>                                                                                                             | <b>Skill Quests</b>                          |
| Connect objects to nets                                                                                                   | Connecting prisms & pyramids with their nets |
|                                                                                                                           | Connecting 3D objects with their nets        |

| <b>AC9M5SP02</b>                                                                                                                                                        |                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| construct a grid coordinate system that uses coordinates to locate positions within a space; use coordinates and directional language to describe position and movement |                                                    |
| Course Topics                                                                                                                                                           | Activities                                         |
| Space & shape                                                                                                                                                           | Map Coordinates                                    |
|                                                                                                                                                                         | Coordinate Graphs: 1st Quadrant                    |
|                                                                                                                                                                         | More Directions!                                   |
| Topics                                                                                                                                                                  | Skill Quests                                       |
| Use coordinates in a grid system                                                                                                                                        | Working with grid referenced maps                  |
|                                                                                                                                                                         | Using Cartesian coordinate system - first quadrant |
|                                                                                                                                                                         | Using landmarks & directional language             |

| <b>AC9M5SP03</b>                                                                                                                                                                                          |                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| describe and perform translations, reflections and rotations of shapes, using dynamic geometric software where appropriate; recognise what changes and what remains the same, and identify any symmetries |                                          |
| Course Topics                                                                                                                                                                                             | Activities                               |
| Space & shape                                                                                                                                                                                             | Flip, Slide, Turn                        |
|                                                                                                                                                                                                           | Transformations                          |
|                                                                                                                                                                                                           | Rotational Symmetry                      |
| Topics                                                                                                                                                                                                    | Skill Quests                             |
| Identify & describe transformations                                                                                                                                                                       | Identifying & describing transformations |

## 5 Statistics

| <b>AC9M5ST01</b>                                                                                                                                                                                                                                                                                                  |                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| acquire, validate and represent data for nominal and ordinal categorical and discrete numerical variables to address a question of interest or purpose using software including spreadsheets; discuss and report on data distributions in terms of highest frequency (mode) and shape, in the context of the data |                                                  |
| Course Topics                                                                                                                                                                                                                                                                                                     | Activities                                       |
| Statistics                                                                                                                                                                                                                                                                                                        | Tally Charts                                     |
|                                                                                                                                                                                                                                                                                                                   | Mode                                             |
|                                                                                                                                                                                                                                                                                                                   | Mode from Stem and Leaf Plot                     |
|                                                                                                                                                                                                                                                                                                                   | Mode from Frequency Table                        |
|                                                                                                                                                                                                                                                                                                                   | Grouping data and modal class                    |
| Topics                                                                                                                                                                                                                                                                                                            | Skill Quests                                     |
| Acquire, validate & represent data                                                                                                                                                                                                                                                                                | Conducting surveys or statistical investigations |
| Understand data distributions                                                                                                                                                                                                                                                                                     | Understanding & calculating the mode             |
|                                                                                                                                                                                                                                                                                                                   | Introducing the shape of data distribution       |

| <b>AC9M5ST02</b>                                                                                                                     |                             |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| interpret line graphs representing change over time; discuss the relationships that are represented and conclusions that can be made |                             |
| Course Topics                                                                                                                        | Activities                  |
| Statistics                                                                                                                           | Line Graphs: Interpretation |
|                                                                                                                                      | Travel Graphs               |

| Topics                | Skill Quests             |
|-----------------------|--------------------------|
| Interpret line graphs | Interpreting line graphs |

| AC9M5ST03                                                                                                                                                                                                                               |                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| plan and conduct statistical investigations by posing questions or identifying a problem and collecting relevant data; choose appropriate displays and interpret the data; communicate findings within the context of the investigation |                              |
| Course Topics                                                                                                                                                                                                                           | Activities                   |
| Statistics                                                                                                                                                                                                                              | Stem and Leaf Plots: Concept |
|                                                                                                                                                                                                                                         | Dot Plots                    |
|                                                                                                                                                                                                                                         | Divided Bar Graphs           |
|                                                                                                                                                                                                                                         | Sector Graphs                |
| Topics                                                                                                                                                                                                                                  | Skill Quests                 |
| Teacher directed                                                                                                                                                                                                                        |                              |

## 6 Probability

| AC9M5P01                                                                                                                             |                                            |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| list the possible outcomes of chance experiments involving equally likely outcomes and compare to those which are not equally likely |                                            |
| Course Topics                                                                                                                        | Activities                                 |
| Chance & Probability                                                                                                                 | What are the Chances?                      |
|                                                                                                                                      | Chance Gauge                               |
|                                                                                                                                      | Introductory probability                   |
|                                                                                                                                      | Fair Games                                 |
| Topics                                                                                                                               | Skill Quests                               |
| Outcomes of chance experiments                                                                                                       | Investigating equally likely outcomes      |
|                                                                                                                                      | Exploring fair & unfair chance experiments |

| AC9M5P02                                                                                                                                                                                       |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| conduct repeated chance experiments including those with and without equally likely outcomes, observe and record the results; use frequency to compare outcomes and estimate their likelihoods |              |
| Course Topics                                                                                                                                                                                  | Activities   |
| Teacher directed                                                                                                                                                                               |              |
| Topics                                                                                                                                                                                         | Skill Quests |
| Teacher directed                                                                                                                                                                               |              |

# Year 6

## 1 Number

| AC9M6N01                                                                                                                                                        |                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| recognise situations, including financial contexts, that use integers; locate and represent integers on a number line and as coordinates on the Cartesian plane |                                                   |
| Course Topics                                                                                                                                                   | Activities                                        |
| Introducing Integers                                                                                                                                            | Integers on a Number Line                         |
|                                                                                                                                                                 | Ordering Integers (Number Line)                   |
|                                                                                                                                                                 | Comparing Integers ( $<$ , $=$ , $>$ )            |
|                                                                                                                                                                 | What's the Temperature (Celsius)?                 |
| Topics                                                                                                                                                          | Skill Quests                                      |
| Understand integers                                                                                                                                             | Recognising situations that use integers          |
|                                                                                                                                                                 | Locating & representing integers on a number line |
|                                                                                                                                                                 | Introducing the Cartesian plane                   |

| AC9M6N02                                                                                                                                         |                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| identify and describe the properties of prime, composite and square numbers and use these properties to solve problems and simplify calculations |                                       |
| Course Topics                                                                                                                                    | Activities                            |
| Multiples, factors, primes & composites                                                                                                          | Multiples                             |
|                                                                                                                                                  | Multiples of                          |
|                                                                                                                                                  | Highest Common Factor                 |
|                                                                                                                                                  | Lowest Common Multiple                |
|                                                                                                                                                  | Prime or Composite?                   |
| Topics                                                                                                                                           | Skill Quests                          |
| Prime, composite & square numbers                                                                                                                | Introducing prime & composite numbers |
|                                                                                                                                                  | Introducing square numbers            |

| AC9M6N03                                                                                                                                                              |                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| apply knowledge of equivalence to compare, order and represent common fractions including halves, thirds and quarters on the same number line and justify their order |                                                 |
| Course Topics                                                                                                                                                         | Activities                                      |
| Equivalent fractions                                                                                                                                                  | Shading Equivalent Fractions                    |
|                                                                                                                                                                       | Identifying Fractions on a Number Line          |
|                                                                                                                                                                       | Mixed and Improper Fractions on a Number Line   |
|                                                                                                                                                                       | Equivalent Fractions                            |
|                                                                                                                                                                       | Comparing Fractions 1                           |
|                                                                                                                                                                       | Compare Fractions 1a                            |
|                                                                                                                                                                       | Compare Fractions 1b                            |
| Topics                                                                                                                                                                | Skill Quests                                    |
| Compare & order common fractions                                                                                                                                      | Recognise, compare & represent common fractions |
|                                                                                                                                                                       | Comparing common fractions on a number line     |

| <b>AC9M6N04</b>                                                                                                                                                        |                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| apply knowledge of place value to add and subtract decimals, using digital tools where appropriate; use estimation and rounding to check the reasonableness of answers |                                                 |
| Course Topics                                                                                                                                                          | Activities                                      |
| Add/subtract decimal and fractions                                                                                                                                     | Decimal Complements                             |
|                                                                                                                                                                        | Adding Decimals                                 |
|                                                                                                                                                                        | Subtract Decimals 1                             |
| Topics                                                                                                                                                                 | Skill Quests                                    |
| Add/sub decimals - mental strategies                                                                                                                                   | Adding decimals using mental strategies         |
|                                                                                                                                                                        | Subtracting decimals using mental strategies    |
| Add/sub decimals - digital technologies                                                                                                                                | Adding decimals using digital technologies      |
|                                                                                                                                                                        | Subtracting decimals using digital technologies |
| Add/sub decimals - written method                                                                                                                                      | Adding decimals using written method            |
|                                                                                                                                                                        | Subtracting decimals using written method       |
| Add/sub decimals – estimating                                                                                                                                          | Estimating sums & differences of decimals       |

| <b>AC9M6N05</b>                                                                                        |                                                 |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| solve problems involving addition and subtraction of fractions using knowledge of equivalent fractions |                                                 |
| Course Topics                                                                                          | Activities                                      |
| Add/subtract decimal and fractions                                                                     | Add Subtract Fractions 1                        |
|                                                                                                        | Common Denominator                              |
|                                                                                                        | Add: Common Denominator                         |
|                                                                                                        | Subtract: Common Denominator                    |
|                                                                                                        | One Take Fraction                               |
|                                                                                                        | Add Like Mixed Numbers                          |
|                                                                                                        | Subtract Like Mixed Numbers                     |
| Topics                                                                                                 | Skill Quests                                    |
| Add & subtract proper fractions                                                                        | Adding fractions with related denominators      |
|                                                                                                        | Subtracting fractions with related denominators |
|                                                                                                        | Add & subtract fractions - related denominators |
| Add & subtract mixed numerals                                                                          | Adding fractions & mixed numerals               |
|                                                                                                        | Subtracting fractions & mixed numerals          |

| <b>AC9M6N06</b>                                                                                                                                                                                                                   |                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| multiply and divide decimals by multiples of powers of 10 without a calculator, applying knowledge of place value and proficiency with multiplication facts, using estimation and rounding to check the reasonableness of answers |                                      |
| Course Topics                                                                                                                                                                                                                     | Activities                           |
| Fractions, decimals & percentages                                                                                                                                                                                                 | Multiply Decimals: 10, 100, 1000     |
|                                                                                                                                                                                                                                   | Divide Decimals: 10, 100, 1000       |
| Topics                                                                                                                                                                                                                            | Skill Quests                         |
| Multiply/divide decimals by powers of 10                                                                                                                                                                                          | Multiplying decimals by powers of 10 |
|                                                                                                                                                                                                                                   | Dividing decimals by powers of 10    |
|                                                                                                                                                                                                                                   | Using estimation                     |

| <b>AC9M6N07</b>                                                                                                                                                                                                   |                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| solve problems that require finding a familiar fraction, decimal or percentage of a quantity, including percentage discounts, choosing efficient calculation strategies and using digital tools where appropriate |                       |
| Course Topics                                                                                                                                                                                                     | Activities            |
|                                                                                                                                                                                                                   | Fractions to Decimals |

|                                   |                                                     |
|-----------------------------------|-----------------------------------------------------|
| Fractions, decimals & percentages | Decimals to Fractions 1                             |
|                                   | Percentage to Fraction                              |
|                                   | Decimals to percentages                             |
|                                   | Common Fractions as Percentages (AU)                |
|                                   | Fractions to Percentages (Non-Calculator)           |
|                                   | Percents and Decimals                               |
|                                   | Match Decimals and Percentages                      |
|                                   | Calculating Percentages (Mental)                    |
|                                   | Money Problems: Four Operations                     |
|                                   | Time Conversions: Simple Fractions                  |
|                                   | Time Conversions: Simple Decimals (0.25, 0.5, 0.75) |
| <b>Topics</b>                     | <b>Skill Quests</b>                                 |
| Find a fraction of a quantity     | Finding a fraction of a quantity                    |
| Calculate percentages             | Calculating percentages                             |

| <b>AC9M6N08</b>                                                                                                                                               |                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| approximate numerical solutions to problems involving rational numbers and percentages, including financial contexts, using appropriate estimation strategies |                                  |
| <b>Course Topics</b>                                                                                                                                          | <b>Activities</b>                |
| Add/subtract decimal and fractions                                                                                                                            | Estimate Decimal Sums 1          |
|                                                                                                                                                               | Estimate Decimal Differences 1   |
|                                                                                                                                                               | Estimate Decimal Sums 2          |
|                                                                                                                                                               | Estimate Decimal Differences 2   |
| Fractions, decimals & percentages                                                                                                                             | Estimate Decimal Operations      |
|                                                                                                                                                               | Estimate Products with Fractions |
| <b>Topics</b>                                                                                                                                                 | <b>Skill Quests</b>              |
| Rational numbers & percentages                                                                                                                                | Estimating solutions             |

| <b>AC9M6N09</b>                                                                                                                                                                                                                                                                                                                                              |                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| use mathematical modelling to solve practical problems, involving rational numbers and percentages, including in financial contexts; formulate the problems, choosing operations and efficient calculation strategies, and using digital tools where appropriate; interpret and communicate solutions in terms of the situation, justifying the choices made |                                       |
| <b>Course Topics</b>                                                                                                                                                                                                                                                                                                                                         | <b>Activities</b>                     |
| Fractions, decimals & percentages                                                                                                                                                                                                                                                                                                                            | Fraction Wall Labelling 2             |
|                                                                                                                                                                                                                                                                                                                                                              | Fraction Word Problems                |
|                                                                                                                                                                                                                                                                                                                                                              | Percentage Word Problems              |
|                                                                                                                                                                                                                                                                                                                                                              | Model Fractions to Multiply           |
| <b>Topics</b>                                                                                                                                                                                                                                                                                                                                                | <b>Skill Quests</b>                   |
| Solve practical percentage problems                                                                                                                                                                                                                                                                                                                          | Solving practical percentage problems |

## 2 Algebra

| AC9M6A01                                                                                                       |                                        |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------|
| recognise and use rules that generate visually growing patterns and number patterns involving rational numbers |                                        |
| Course Topics                                                                                                  | Activities                             |
| Algebra patterns equations & rules                                                                             | Increasing Patterns                    |
|                                                                                                                | Describing Patterns                    |
|                                                                                                                | Find the Pattern Rule                  |
|                                                                                                                | Table of Values                        |
|                                                                                                                | Pattern Rules and Tables               |
| Topics                                                                                                         | Skill Quests                           |
| Recognise & use rules for patterns                                                                             | Continuing & creating number sequences |

| AC9M6A02                                                                                                                                                |                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| find unknown values in numerical equations involving brackets and combinations of arithmetic operations, using the properties of numbers and operations |                                              |
| Course Topics                                                                                                                                           | Activities                                   |
| Algebra patterns equations & rules                                                                                                                      | Number Sequences Up to 1 Million             |
|                                                                                                                                                         | Order of Operations 1 (BIDMAS)               |
|                                                                                                                                                         | Writing Algebraic Expressions                |
|                                                                                                                                                         | Missing Numbers: Variables                   |
|                                                                                                                                                         | Simple Substitution                          |
|                                                                                                                                                         | Solve Equations: Add, Subtract 1             |
|                                                                                                                                                         | Solve Equations: Multiply, Divide 1          |
| Topics                                                                                                                                                  | Skill Quests                                 |
| Understand order of operations                                                                                                                          | Order of operations with no grouping symbols |
|                                                                                                                                                         | Order of operations using grouping symbols   |
|                                                                                                                                                         | Order of operations practical situations     |

| AC9M6A03                                                                                                                                                            |                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| create and use algorithms involving a sequence of steps and decisions that use rules to generate sets of numbers; identify, interpret and explain emerging patterns |                                         |
| Course Topics                                                                                                                                                       | Activities                              |
| Teacher directed                                                                                                                                                    |                                         |
| Topics                                                                                                                                                              | Skill Quests                            |
| Design flowcharts to solve problems                                                                                                                                 | Designing flowcharts to solve problems  |
| Use rules & algorithms                                                                                                                                              | Manipulating numbers using a given rule |
|                                                                                                                                                                     | Creating algorithms for sets            |



### 3 Measurement

| AC9M6M01                                                                                                                                                             |                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| convert between common metric units of length, mass and capacity; choose and use decimal representations of metric measurements relevant to the context of a problem |                                      |
| Course Topics                                                                                                                                                        | Activities                           |
| Converting metric units                                                                                                                                              | Grams and Kilograms Conversion       |
|                                                                                                                                                                      | Grams and Kilograms                  |
|                                                                                                                                                                      | Grams and Milligrams                 |
|                                                                                                                                                                      | Converting Units of Mass             |
|                                                                                                                                                                      | Centimetres and Metres               |
|                                                                                                                                                                      | Metres and Kilometres                |
|                                                                                                                                                                      | Millilitres and Litres               |
|                                                                                                                                                                      | Converting Volume                    |
| Topics                                                                                                                                                               | Skill Quests                         |
| Connect decimals to the metric system                                                                                                                                | Decimal notation & the metric system |
|                                                                                                                                                                      | Decimal representation in capacity   |
|                                                                                                                                                                      | Decimal representation in mass       |
| Convert metric units of measurement                                                                                                                                  | Converting metric units of length    |
|                                                                                                                                                                      | Converting metric units of capacity  |
|                                                                                                                                                                      | Converting metric units of mass      |

| AC9M6M02                                                                                 |                                                  |
|------------------------------------------------------------------------------------------|--------------------------------------------------|
| establish the formula for the area of a rectangle and use it to solve practical problems |                                                  |
| Course Topics                                                                            | Activities                                       |
| Area and angle                                                                           | Area of Shapes                                   |
|                                                                                          | Area: Squares and Rectangles                     |
| Topics                                                                                   | Skill Quests                                     |
| Use formula for area of a rectangle                                                      | Using a formula to calculate area of a rectangle |

| AC9M6M03                                                                                                          |                                    |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------|
| interpret and use timetables and itineraries to plan activities and determine the duration of events and journeys |                                    |
| Course Topics                                                                                                     | Activities                         |
| Time conversions & problems                                                                                       | Time Conversions: Simple Fractions |
|                                                                                                                   | Time Conversions: Simple Decimals  |
|                                                                                                                   | Time Mentals                       |
|                                                                                                                   | Elapsed Time                       |
|                                                                                                                   | 24 Hour Time                       |
|                                                                                                                   | Using Timetables                   |
| Topics                                                                                                            | Skill Quests                       |
| Interpret & use timetables                                                                                        | Interpreting & using timetables    |

| AC9M6M04                                                                                                                                                                       |                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| identify the relationships between angles on a straight line, angles at a point and vertically opposite angles; use these to determine unknown angles, communicating reasoning |                  |
| Course Topics                                                                                                                                                                  | Activities       |
| Area and angle                                                                                                                                                                 | Measuring Angles |

|                             |                                                    |
|-----------------------------|----------------------------------------------------|
|                             | Estimating Angles                                  |
|                             | Angle Sum of a Triangle                            |
|                             | Quadrilaterals: Angle Sum with Equations           |
|                             | Exterior Angles of a Triangle                      |
|                             | Angles of revolution: Unknown Values               |
|                             | Vertically Opposite Angles: Unknown Values         |
| <b>Topics</b>               | <b>Skill Quests</b>                                |
| Understand angle properties | Understanding adjacent angles                      |
|                             | Exploring vertically opposite angles               |
|                             | Calculating angles that total $360^\circ$          |
|                             | Investigating supplementary & complementary angles |

## 4 Space

| <b>AC9M6SP01</b>                                                                                 |                              |
|--------------------------------------------------------------------------------------------------|------------------------------|
| compare the parallel cross-sections of objects and recognise their relationships to right prisms |                              |
| Course Topics                                                                                    | Activities                   |
| Teacher directed                                                                                 |                              |
| Topics                                                                                           | Skill Quests                 |
| Investigate cross-sections                                                                       | Investigating cross-sections |

| <b>AC9M6SP02</b>                                                                                                                                      |                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| locate points in the 4 quadrants of a Cartesian plane; describe changes to the coordinates when a point is moved to a different position in the plane |                                        |
| Course Topics                                                                                                                                         | Activities                             |
| Shape and space                                                                                                                                       | Ordered Pairs                          |
|                                                                                                                                                       | Number Plane                           |
|                                                                                                                                                       | Graphing from a Table of Values        |
|                                                                                                                                                       | Reading Values from a Line             |
| Topics                                                                                                                                                | Skill Quests                           |
| Points on the Cartesian plane                                                                                                                         | Locating points on the Cartesian plane |

| <b>AC9M6SP03</b>                                                                                                                                           |                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| recognise and use combinations of transformations to create tessellations and other geometric patterns, using dynamic geometric software where appropriate |                                             |
| Course Topics                                                                                                                                              | Activities                                  |
| Shape and space                                                                                                                                            | Transformations: Coordinate Plane           |
|                                                                                                                                                            | Rotations: Coordinate Plane                 |
| Topics                                                                                                                                                     | Skill Quests                                |
| Use combinations of transformations                                                                                                                        | Recognising tessellations                   |
|                                                                                                                                                            | Identifying a sequence of 2 transformations |

## 5 Statistics

| AC9M6ST01                                                                                                                                                                                                                                |                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| interpret and compare data sets for ordinal and nominal categorical, discrete and continuous numerical variables using comparative displays or visualisations and digital tools; compare distributions in terms of mode, range and shape |                                                    |
| Course Topics                                                                                                                                                                                                                            | Activities                                         |
| Mode & range                                                                                                                                                                                                                             | Mode                                               |
|                                                                                                                                                                                                                                          | Mode from Stem and Leaf Plot                       |
|                                                                                                                                                                                                                                          | Mode from Frequency Table                          |
|                                                                                                                                                                                                                                          | Data Extremes and Range                            |
|                                                                                                                                                                                                                                          | Stem and Leaf Plots with Range                     |
|                                                                                                                                                                                                                                          | Double Stem and Leaf Plots                         |
|                                                                                                                                                                                                                                          | Line Graphs: Interpretation                        |
| Topics                                                                                                                                                                                                                                   | Skill Quests                                       |
| Interpret, compare & describe data sets                                                                                                                                                                                                  | Two-way tables                                     |
|                                                                                                                                                                                                                                          | Side-by-side column graphs                         |
|                                                                                                                                                                                                                                          | Comparing & selecting bivariate data displays      |
|                                                                                                                                                                                                                                          | Describing & interpreting data sets                |
| Compare mode, range & shape                                                                                                                                                                                                              | Understanding mode, range & shape of distributions |
|                                                                                                                                                                                                                                          | Comparing modes in sets of data                    |

| AC9M6ST02                                                                                                                                                |                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| identify statistically informed arguments presented in traditional and digital media; discuss and critique methods, data representations and conclusions |                                          |
| Course Topics                                                                                                                                            | Activities                               |
| Teacher directed                                                                                                                                         |                                          |
| Topics                                                                                                                                                   | Skill Quests                             |
| Interpret & evaluate secondary data                                                                                                                      | Interpreting & evaluating secondary data |

| AC9M6ST03                                                                                                                                                                                                                           |              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| plan and conduct statistical investigations by posing and refining questions or identifying a problem and collecting relevant data; analyse and interpret the data and communicate findings within the context of the investigation |              |
| Course Topics                                                                                                                                                                                                                       | Activities   |
| Teacher directed                                                                                                                                                                                                                    |              |
| Topics                                                                                                                                                                                                                              | Skill Quests |
| Teacher directed                                                                                                                                                                                                                    |              |

## 6 Probability

| <b>AC9M6P01</b>                                                                                                                                                                                              |                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| recognise that probabilities lie on numerical scales of 0 – 1 or 0% – 100% and use estimation to assign probabilities that events occur in a given context, using common fractions, percentages and decimals |                                               |
| Course Topics                                                                                                                                                                                                | Activities                                    |
| Probability                                                                                                                                                                                                  | Simple Probability                            |
|                                                                                                                                                                                                              | Probability Scale                             |
|                                                                                                                                                                                                              | Complementary Events                          |
|                                                                                                                                                                                                              | Dice and Coins                                |
| Topics                                                                                                                                                                                                       | Skill Quests                                  |
| Assign probabilities                                                                                                                                                                                         | Probability as a fraction, decimal or percent |
|                                                                                                                                                                                                              | Probabilities from 0 to 1                     |

| <b>AC9M6P02</b>                                                                                                                                                                                                                    |                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| conduct repeated chance experiments and run simulations with an increasing number of trials using digital tools; compare observations with expected results and discuss the effect on variation of increasing the number of trials |                               |
| Course Topics                                                                                                                                                                                                                      | Activities                    |
| Teacher directed                                                                                                                                                                                                                   |                               |
| Topics                                                                                                                                                                                                                             | Skill Quests                  |
| Conduct chance experiments                                                                                                                                                                                                         | Conducting chance experiments |



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