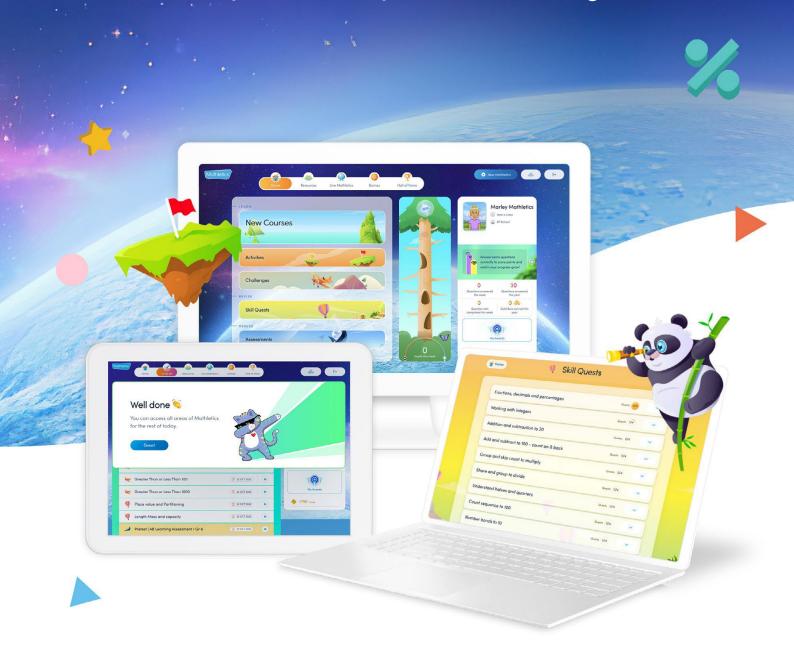
# Mathletics Victorian Mathematics V2.0

Activities (Courses) and Skill Quests



**Years 3 - 6** 

January, 2025



# **Mathletics**

Victorian Mathematics V2.0 Activities (Courses) & Skill Quests January, 2025

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# Year 3

# 1 Number

VC2M3N01	
identify, explain and use the properties of odd and even numbers	
Course Topics	Activities
Read & write numbers to at	Odd and Even Numbers 1
least 10 000	
Topics	Skill Quests
Odd & even numbers	Exploring odd & even numbers

VC2M3N02	
recognise, represent and order natural numbers using naming and writing conventions for numerals beyond 10 000	
Course Topics	Activities
Read & write numbers to at	Place Value 3
least 10 000	Place Value to Thousands
	Numbers from Words to Digits 1
	Partition and Rename 2
	Partition and Rename 3
	Ascending Order
	Descending Order
	Smallest and largest numbers
	Rounding Numbers
Topics	Skill Quests
Numbers up 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 up to 100 000	Comparing & ordering numbers to 5 digits
	Place value to 5 digits
	Partitioning numbers to 5 digits
	Rounding numbers to 5 digits

VC2M3N03 recognise and represent unit fractions including 1/2, 1/3, 1/4, 1/5 and 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 &	Finding half of a set or quantity (symbols)
quarters	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

VC2M3N04	
add and subtract two- and three-digit numbers using place value to partition, rearrange and	
regroup numbers to assist in calculations without a calculator	
Course Topics	Activities
Add & subtract to 3 digits	Add 3 Numbers: Bonds to 100
	Partition Puzzles 2
	Repartition to Subtract
	Nearest 1000?
	Estimation: Add and Subtract
	Estimate Differences
	Estimate Sums
	Bar Model Problems 1
	Bar Model Problems 2
Topics	Skill Quests
Addition & subtraction	Add & subtract using number facts within 1000
using place value	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 partitioning Adding & subtracting 3-digits using place value
	Adding & subtracting 3-digits using partitioning Adding & subtracting 3-digits using place value Add & subtract 2- & 3-digit using split strategy
	Adding & subtracting 3-digits using partitioning Adding & subtracting 3-digits using place value
	Adding & subtracting 3-digits using partitioning Adding & subtracting 3-digits using place value Add & subtract 2- & 3-digit using split strategy
	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
	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
	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

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VC2M3N05	
multiply and divide one- and two-digit numbers, representing problems using number	
sentences, diagrams and arrays, and using a variety of calculation strategies	
Course Topics	Activities
Multiply and divide	Related Facts 2
	Frog Jump Multiplication
	Frog Jump Division
	Equivalent Facts: Multiply
	Divide Into Equal Groups

Topics	Skill Quests
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

VC2M3N06	
estimate the quantity of objects in collections and make estimates when solving problems to	
determine the reasonableness of calculations	
Course Topics	Activities
Add & subtract to 3 digits	Estimation: Add and Subtract
	Estimate Differences
	Estimate Sums
Topics	Skill Quests
Estimation strategies	Estimating additions
	Estimating subtractions
	Judging the reasonableness of answers

VC2M3N07 recognise the relationships between dollars and cents and represent money values in different ways	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Money	Recognising Australian notes & coins
	Counting Australian dollars & cents
	Using money to make purchases

VC2M3N08	
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
Multiply and divide	Frog Jump Multiplication
	Frog Jump Division
	Divide Into Equal Groups
Topics	Skill Quests
Solve practical problems	Solving addition & subtraction practical problems
	Solve multiplication & division practical problems
	Missing number problems using all four operations

VC2M3N09	
follow and create algorithms involving a sequence of steps and decisions to investigate	
numbers; describe any emerging patterns	
Course Topics	Activities
Read & write numbers to at	Odd and Even Numbers 1
least 10 000	
Topics	Skill Quests
Create algorithms to	Identifying & creating number patterns
investigate numbers	Working with code to create algorithms

# 2 Algebra

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VC2M3A01	
recognise and explain the connection between addition and subtraction as inverse operations,	
apply to partition n	umbers and find unknown values in number sentences
Course Topics	Activities
Patterns with numbers	Related Facts 1
	Adding In Any Order
Topics	Skill Quests
Addition & subtraction	Relationship between addition & subtraction
relationship	Equivalent number sentences
	Word problems for finding unknown quantities
	Representing add & subtract using a bar model

VC2M3A02 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
Patterns with numbers	Complements to 10, 20, 50
	Complements to 50 and 100
Topics	Skill Quests
Apply knowledge of facts to	Finding fact families
20	Numbers bonds to 20
	Applying facts to 20 to larger numbers

VC2M3A03 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 with numbers	Counting by Fives
	Count by Fives
	Counting by Tens
	Count by Tens
	Count by 2s, 5s and 10s
	Counting up in 4s
	Dividing Fives
	Grouping in Fives
	Dividing Tens

	Grouping in Tens
	Dividing Fours
	Grouping in Fours
	Dividing Threes
	Grouping in Threes
	Skip Counting with Coins
Topics	Skill Quests
Multiplication & division	Recalling multiplication & division facts for 2
facts for 2	
Multiplication & division	Exploring multiplication by 10
facts for 10	Recalling multiplication & division facts for 10
Multiplication & division	Exploring multiplication by 5
facts for 5	Recalling multiplication & division facts for 5
Mult/div facts for 2, 5 & 10	Multiplication & division facts for 2, 5, 10
Multiplication & division	Exploring multiplication by 3
facts for 3	Recalling multiplication & division facts for 3
Multiplication & division	Exploring multiplication by 4
facts for 4	Recalling multiplication & division facts for 4

# 3 Measurement

VC2M3M01  identify which metric units are used to measure everyday items; use measurements of familiar items and known units to make estimates		
Course Topics	Activities	
Length, capacity & mass	Which Unit of Measurement?	
	Which Measuring Tool?	
	Using a Litre	
Topics	Skill Quests	
Identify metric units of	Introducing centimetres	
measure	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	

VC2M3M02  measure and compare objects using familiar metric units of length, mass and capacity, and instruments with labelled markings	
Course Topics	Activities
Length, capacity & mass	Using a Litre
	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

VC2M3M03	
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
Time: Five minute times &	Five Minute Times
conversions	What is the Time?
	Time Conversions: Whole Numbers 1
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

VC2M3M04  describe the relationship between the hours and minutes on analog and digital clocks, and read the time to the nearest minute	
Course Topics	Activities
Time: Five minute times &	Five Minute Times
conversions	What is the Time?
Topics	Skill Quests
Tell time	Telling time to five minutes
	Telling time to the minute

VC2M3M05 identify angles as measures of turn and use right angles as a reference to compare angles in everyday situations	
Course Topics	Activities
Introduction to angles	Equal Angles
	Comparing Angles
	Right Angle Relation
Topics	Skill Quests
Identify & compare angles	Introducing angles
	Introducing right angles

## 4 Space

+ Space	
VC2M3SP01	
make, compare and classify objects, identifying key features and explaining why these	
fe	atures make them suited to their uses
Course Topics	Activities
Classify shapes	How Many Faces?
	How many Edges?
	Count the Corners
	Count Sides and Corners
	Relate Shapes and Solids
	Collect the Objects
Topics	Skill Quests
3D objects	Exploring prisms & pyramids
	Introducing nets
	Recognising & comparing 3D objects
	Describing & sorting 3D objects
	Comparing 2D shapes & 3D objects

VC2M3SP02 interpret and create two-dimensional representations of familiar environments, locating key landmarks and objects relative to each other	
Course Topics	Activities
Position	Following Directions
	Coordinate Meeting Place
	Map Coordinates
	Where is it?
Topics	Skill Quests
Interpret & create maps	Interpreting simple maps

# **5 Statistics**

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
Sort, represent & interpret	Tallies
data	Sorting Data
	Pictographs
	Column Graphs
Topics	Skill Quests
Collect & record data	Collecting & recording category data
	Using tables

VC2M3ST02 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
Sort, represent & interpret	Interpreting Tables
data	Reading from a Column Graph
	Add and Subtract Using Graphs
Topics	Skill Quests
Create & compare data	Representing & interpreting data displays
representations	Comparing data displays

VC2M3ST03  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	Introducing the statistical investigation process
investigations	Conducting a statistical investigation

# **6 Probability**

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VC2M3P01		
identify practical activities of	and everyday events that involve chance, and describe possible	
outcomes and events as 'likely' or 'unlikely' and identify some events as 'certain' or		
'impossible', explaining reasoning		
Course Topics	Activities	
Probability	Will it Happen?	
	Most Likely and Least Likely	
	Introductory Probability	
	What are the Chances?	
Topics	Skill Quests	
Language of chance	Using basic probability language	

VC2M3P02	
conduct repeated chance experiments; identify and describe possible outcomes, record the	
results, and recognise and discuss the variation	
Course Topics	Activities
Probability	How many Combinations?
Topics	Skill Quests
Chance experiments	Conducting chance experiments

# Year 4

# 1 Number

VC2M4N01	
recognise and extend the application of place value to tenths and hundredths and use the	
	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
Topics	Skill Quests
Numbers up 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 &	Rounding decimal tenths & hundredths
hundredths	
Decimals used in money	Understanding decimals used in money

VC2M4N02	
investigate numb	per sequences involving multiples of 3, 4, 6, 7, 8 and 9
Course Topics	Activities
Patterns in multiplication &	Grouping in Threes
division	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
Topics	Skill Quests
Investigating sequences with multiples	Investigating sequences with multiples

	VC2M4N03
•	ons of fractions using related denominators and make connections
b	etween fractions and decimal notation
Course Topics	Activities
Fractions & equivalents	What Fraction is Shaded?
	What Fraction Is Shaded 1
	What Mixed Number Is Shaded?
	Equivalent Fraction Wall 1
	Equivalent Fraction Wall 2
	Simplifying Fractions
	Thirds and Sixths
Topics	Skill Quests
Equivalent fractions	Investigating equivalent fractions less than 1
	Investigating equivalent fractions greater than 1
	Patterns in equivalent fractions
	Using multiplication to find equivalent fractions

VC2M4N04 count by multiples of quarters, halves and thirds, including mixed numerals; locate and represent these fractions as numbers on number lines	
Course Topics	Activities
Fractions & equivalents	Partition into Equal Parts
	Counting with Fractions on a Number Line
Topics	Skill Quests
Count by fractions & mixed	Counting in halves & quarters
numerals	Counting in halves, quarters & eighths
	Counting in thirds
	Counting in tenths
	Counting in simple fractions on a number line
Convert fraction types using	Converting mixed numerals to improper fractions
models	

VC2M4N05 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	
Course Topics	Activities
Patterns in multiplication &	Multiplying by 10, 100, 1000
division	Dividing by 10, 100, 1000
Topics	Skill Quests
Mult/div by multiples of 10,	Using place value to multiply by 10
100 & 1000	Multiplying by multiples of 100
	Multiplying by 1000
	Dividing by multiples of 10
	Dividing by multiples of 100
	Dividing by 1000

### VC2M4N06

develop efficient mental and written strategies and use appropriate digital tools for solving problems involving addition and subtraction, and multiplication and division where there is no remainder

Course Tenies	remainder		
Course Topics	Activities		
Strategies to add & subtract	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		
	Estimate Sums		
	Estimate Differences		
	Magic Symbols 1		
Strategies to multiply &	Double and Halve to Multiply		
divide	Fact Families: Multiply and Divide		
	Multiplication Arrays		
	Arrays 1		
	Arrays 2		
	Related Facts 2		
	Model Multiplication to 5 × 5		
	Grid Methods 1		
	Problems: Times and Divide		
Topics	Skill Quests		
Addition & subtraction	Addition algorithms (without regrouping)		
using algorithms	Addition algorithms (with regrouping)		
	Addition algorithms (with & without regrouping)		
	Subtraction algorithms (without decomposing)		
	Subtraction algorithms (with decomposing)		
Addition & subtraction	Add & subtract using efficient strategies		
strategies	Add & subtract using a bar model		
	Add & subtract using place value partitioning		
	Add & subtract using jump strategies		
	Add & subtract using split strategies		
	Add & subtract using round & compensate strategies		
Mult & div strategies, no	Multiplication strategies: 1-digit numbers		
remainder	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		
	Selecting effective division strategies  Comparisons using the language of multiplication		
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### VC2M4N07

choose and use estimation and rounding to check and explain the reasonableness of calculations, including the results of financial transactions

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Course Topics	Activities
Strategies to add & subtract	Estimate Sums
	Estimate Differences
Strategies to multiply &	Estimation: Multiply and Divide
divide	
Topics	Skill Quests
Use estimation & rounding	Rounding & estimating with addition
	Rounding & estimating with subtraction
	Checking accuracy of addition & subtraction
	Estimating with multiplication & division

### **VC2M4N08**

solve problems involving purchases and the calculation of change to the nearest 5 cents with and without digital tools

Course Topics	Activities
Problem solving with models	How much Change?
Topics	Skill Quests
Solving money problems	Addition & subtraction money problems
	Using estimating with money

### **VC2M4N09**

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

interpret and communicate solutions in terms of the situation	
Course Topics	Activities
Problem solving with	Bar Model Problems 1
models	Bar Model Problems 2
	Fractions of a Collection 1
	Fractions of a Collection 2
	Multiply and Divide Problems 1
	How much Change?
Topics	Skill Quests
Addition & subtraction word	Addition & subtraction word problems
problems	Posing addition & subtraction problems
	Expressing word problems as equations
Multiplication & division	Expressing equations as word problems
word problems	Solving multiplication & division word problems.

### **VC2M4N10**

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	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

VC2M4A01 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
	Odd and Even Numbers 1
Topics	Skill Quests
Addition & subtraction	Using inverse operations for add/sub equations
number sentences	Relationship between addition & subtraction
	Equivalent number sentences
	Word problems for finding unknown quantities

### VC2M4A02

recall and demonstrate proficiency with multiplication facts up to  $10 \times 10$  and related division facts, and explain the patterns in these; extend and apply facts to develop efficient mental and written strategies for computation with larger numbers without a calculator

Course Topics	Activities
Patterns in multiplication &	Grouping in Threes
division	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: x and ÷ facts
	Times Tables
	Multiply 3 single-digit numbers
	Multiplying by 10, 100, 1000
	Dividing by 10, 100, 1000

Topics	Skill Quests
Multiplication & division	Multiplication & division facts up to 5
facts	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

VC2M4M01  use scaled and digital instruments to interpret unmarked and partial units to measure and compare lengths, masses, capacities, durations and temperatures, using appropriate units	
Course Topics	Activities
Using scaled instruments	How Heavy?
_	How Long is That?
	Measuring Length
	Measure to the Nearest Half Centimetre
	What's the Temperature (Celsius)?
Perimeter & area	Perimeter of Shapes
	Area of Shapes
	Equal Areas
	Biggest Shape
Time conversions	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)
Angles	Equal Angles
	Comparing Angles
	Right Angle Relation
	What Type of Angle?
Topics	Skill Quests
Length, mass, capacity &	Metric units of length
temperature	Length & 3D objects
	Measuring temperature
	Measuring capacity in millilitres
	Measuring mass in grams & kilograms
	Reading scales with metric units

VC2M4M02 recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces, using appropriate formal and informal units	
Course Topics	Activities
Perimeter & area	Perimeter of Shapes
	Area of Shapes
	Equal Areas

Topics	Skill Quests
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

VC2M4M03 solve problems involving the duration of time including situations involving 'am' and 'pm' and conversions between units of time	
Course Topics	Activities
Time conversions	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)
Topics	Skill Quests
Convert units of time	Converting units of time
Solve duration of time	Understanding am & pm notation
problems	Solving duration of time problems

VC2M4M04		
estimate and compare angles using angle names including acute, obtuse, straight angle, reflex		
and revolution	and revolution, and recognise their relationship to a right angle	
Course Topics	Activities	
Angles	Equal Angles	
	Comparing Angles	
	Right Angle Relation	
	What Type of Angle?	
Topics	Skill Quests	
Classify angles	Classifying angles	

## 4 Space

+ Space	
VC2M4SP01	
explain and compare the geometric properties of two-dimensional shapes and three-	
dimensional objects	
Course Topics	Activities
Shapes & solids	Relate Shapes and Solids
	Collect the Objects 2
Topics	Skill Quests
Composing & decomposing	Composing & decomposing 2D shapes
2D shapes	

# 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

VC2M4SP03 create and interpret grid reference systems using grid references and directions to locate and describe positions and pathways	
Course Topics	Activities
Describing position	Coordinate Meeting Place
	Map Coordinates
	Using a Key
	What Direction was That?
	More Directions!
Topics	Skill Quests
Create & interpret grid	Working with grid reference systems
references	

VC2M4SP04		
recognise line and rotational symmetry of shapes and create symmetrical patterns and		
pictures, using	pictures, using dynamic geometry software where appropriate	
Course Topics	Activities	
Symmetry	Symmetry	
	Symmetry or Not?	
	Rotational Symmetry	
Topics	Skill Quests	
Line & rotational symmetry	Recognising & drawing line symmetry	
	Rotational symmetry	
Symmetrical patterns,	Creating & drawing symmetrical designs	
pictures & shapes	Recognising tessellations	

### **5 Statistics**

objects

5 Statistics		
VC2M4ST01		
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	
Collect, display & interpret	Picture Graphs: with scale & half symbols	
data	Making Picture Graphs: With Scale	
	Column Graphs	
	Reading from a Column Graph	
	Histograms	

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

VC2M4ST02  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
Collect, display & interpret data	Histograms
Topics	Skill Quests
Evaluate & compare data	Evaluating & comparing data displays
displays	Evaluating the shape of data sets

VC2M4ST03	
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	
Tonics	Skill Quests

Surveys & sorting data

# **6** Probability

Methods of data collection

### VC2M4P01

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
Probability	Chance Gauge
	What are the Chances?
	Counting Techniques 1
Topics	Skill Quests
CL	
Chance events	Describing the chance of events occurring
Chance events	Describing the chance of events occurring  Exploring non-simultaneous everyday events

VC2M4P02	
conduct repeated chance experiments to observe relationships between outcomes in games and other chance situations, and identify and describe the variation in results	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Chance experiments	Conducting chance experiments
	Investigating equally likely outcomes of chance

# Year 5

### 1 Number

1 Number		
VC2M5N01		
interpret, compare and order numbers with more than 2 decimal places, including numbers		
greater than one, using (	greater than one, using place value understanding; represent these on a number line	
Course Topics	Activities	
Decimals	Decimals from Words to Digits 1	
	Decimals on the Number Line	
	Decimal Place Value	
	Nearest Whole Number	
Topics	Skill Quests	
Understand decimals to	Introducing decimal thousandths	
thousandths	Partitioning decimals of any size	
	Comparing & ordering decimals	
	Interpreting zeros at end of decimals	
	Decimal & fraction equivalences	
	Connecting decimals to the metric system	

VC2M5N02 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

VC2M5N03  compare and order common unit fractions with the same and related denominators, including mixed numerals, applying knowledge of factors and multiples; represent these fractions on a number line	
Course Topics	Activities
Compare & order fractions	Shading Equivalent Fractions
	Equivalent Fraction Wall 2
	Equivalent Fractions on a Number Line 1
	Equivalent Fractions
	Compare Fractions 1a

	Compare Fractions 1b
	Identifying Fractions Beyond 1
	Improper to Mixed
	Mixed to Improper
	Converting Mixed and Improper
	Identifying Fractions on a Number Line
	Mixed and Improper Fractions on a Number Line
Topics	Skill Quests
Compare & order fractions	Comparing & ordering fractions
	Comparing & ordering fractions & mixed numbers
	Using common factors to simplify proper fractions

### VC2M5N04

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

Course Topics	Activities
Course Topics	Activities
Fractions, decimals &	Modelling Percentages
percentages	Fractions to Decimals
	Percents and Decimals
	Common Fractions as Percentages (AU)
	Decimal Order
	Comparing Decimals
Topics	Skill Quests
Fractions, decimals &	Introducing percentages
percentages	Connecting percentages & decimals
	Connecting percentages & fractions
	Relationship - percentages, decimals & fractions

VC2M5N05 solve problems involving addition and subtraction of fractions with the same or related denominators, using different strategies	
Course Topics	Activities
Add & subtract fractions	Add: Common Denominator
	One Take Fraction
	Subtract: Common Denominator
	Add Subtract Fractions 1
	Common Denominator
	Add Like Mixed Numbers
	Subtract Like Mixed Numbers
Topics	Skill Quests
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

### **VC2M5N06**

solve problems involving multiplication of larger numbers by one- or two-digit numbers, choosing efficient mental and written calculation strategies and using digital tools where appropriate; check the reasonableness of answers

Course Topics	Activities
Multiply & divide by 2 digits	Multiply Multiples of 10
	Multiply More Multiples of 10
	Multiply 2 Digits Area Model
	Grid Methods 1
	Double and Halve to Multiply
Rounding & estimating	Estimate Products
	Estimation: Multiply and Divide
Topics	Skill Quests
Strategies to multiply by 1-	Multiplication using multiples of 10
or 2-digits	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

### **VC2M5N07**

solve problems involving division, choosing efficient mental and written strategies and using digital tools where appropriate; interpret any remainder according to the context and express results as a whole number, decimal or fraction

Course Topics	Activities
Multiply & divide by 2 digits	Mental Methods Multiplication 1
	Dividing by 10, 100, 1000
	Division Facts 1
	Remainders by Arrays
	Mental Methods Division 1
	Mental Methods Division
Rounding & estimating	Estimate Quotients
	Estimation: Multiply and Divide
Topics	Skill Quests
Division strategies incl.	Dividing by a 1-digit number using partitioning
remainders	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

VC2M5N08	
check and explain the reasonableness of solutions to problems, including financial contexts	
using est	imation strategies appropriate to the context
Course Topics	Activities
Rounding & estimating	Rounding Numbers
	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

### **VC2M5N09**

Estimating with money

Rounding to estimate multiplication & division

use mathematical modelling to solve practical problems involving additive and multiplicative situations, including simple financial planning contexts; formulate the problems, choosing operations and efficient mental and written calculation strategies, and using digital tools where appropriate; interpret and communicate solutions in terms of the situation

where appropriate, interpret and communicate solutions in terms of the situation	
Course Topics	Activities
Solving practical 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 ×÷
	Problems: Times and Divide
Topics	Skill Quests
Add & subtract practical	Addition & subtraction word problems
problems	Expressing word problems as equations add/sub
	Solving add & subtract money problems
Multiply & divide practical	Multiplication & division word problems
problems	Expressing word problems as equations mult/div
	Solving mult-step mult/div word problems
	Solving mult & div money problems
All operations practical problems	Express equations as word problems all operations

VC2M5N10  follow a mathematical algorithm involving branching and repetition (iteration); 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
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

Manipulating numbers using a given rule

Factors & multiples

Designing flowcharts to solve add/sub of fractions

# 2 Algebra

Create & use algorithms

<u> </u>		
VC2M5A01		
recognise and explain th	recognise and explain the connection between multiplication and division as inverse	
operations o	and use this to develop families of number facts	
Course Topics	Activities	
Family of facts	Fact Families: Multiply and Divide	
	Multiplication Turnarounds	
Topics	Skill Quests	
Connect multiplication &	Inverse relationship - multiplication & division	
division		

VC2M5A02 find unknown values in numerical equations involving multiplication and division using the properties of numbers and operations	
Course Topics	Activities
Family of facts	Missing Numbers: x and ÷ facts
	Times Tables
	Multiply 3 single-digit numbers
Topics	Skill Quests
Find unknown values in mult & div	Finding unknown values - multiplication & division

### 3 Measurement

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VC2M5M01	
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
Metric conversions	Kilometre Conversions
	Metres and Kilometres

	Millilitres and Litres
	Litre Conversions
	Kilogram Conversions
	Grams and Kilograms
Topics	Skill Quests
Choose appropriate metric	Introducing kilometres
units	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

VC2M5M02 solve practical problems involving the perimeter and area of regular and irregular shapes using appropriate metric units	
Course Topics	Activities
Perimeter & area	Perimeter: Squares and Rectangles
	Area of Shapes
	Biggest Shape
	Equal Areas
	Area: Squares and Rectangles
Topics	Skill Quests
Perimeter & area - practical	Calculating perimeter practical problems
problems	Calculating area practical problems

VC2M5M03  compare 12- and 24-hour time systems and solve practical problems involving the conversion between them	
Course Topics	Activities
Time problems	Time Conversions: Simple Fractions
	Time Conversions: Simple Decimals (0.25, 0.5, 0.75)
	What Time Will it Be?
	Time Mentals
	Elapsed Time
	24 Hour Time
	Using Timetables
Topics	Skill Quests
Use 24-hour time	Using 24-hour notation
	Using 24-hour time in timetables

VC2M5M04		
estimate, construct and measure angles in degrees, using appropriate tools, including a		
protractor, and relate these measures to angle names		
Course Topics	Activities	
Angles	Classifying Angles	
	Measuring Angles	
	Estimating Angles	

Topics	Skill Quests
Estimate, construct &	Identifying, estimating & measuring angles
measure angles	Classifying & constructing angles

# 4 Space

VC2M5SP01  connect objects to their nets and build objects from their nets using spatial and geometric reasoning	
Course Topics	Activities
Shapes & solids	What Pyramid am I?
	What Prism am I?
	Prisms and Pyramids
Topics	Skill Quests
Connect objects to nets	Connecting prisms & pyramids with their nets
	Connecting 3D objects with their nets

VC2M5SP02	
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
Position	Map Coordinates
	Coordinate Graphs: 1st Quadrant
	More Directions!
Topics	Skill Quests
Use coordinates in a grid	Working with grid referenced maps
system	Using Cartesian coordinate system - first quadrant
	Using landmarks & directional language

VC2M5SP03  describe and perform translations, reflections and rotations of shapes, using dynamic geometry software where appropriate; recognise what changes and what remains the same, and identify any symmetries	
Course Topics	Activities
Transformations	Flip, Slide, Turn
	Transformations
	Rotational Symmetry
Topics	Skill Quests
Identify & describe	Identifying & describing transformations
transformations	

### **5 Statistics**

### VC2M5ST01

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
Collect, display & interpret	Stem and Leaf Plots: Concept
data	Dot Plots
	Divided Bar Graphs
	Tally Charts
	Sector Graphs
	Mode
	Mode from Stem and Leaf Plot
	Mode from Frequency Table
	Grouping data and modal class
Topics	Skill Quests
Acquire, validate &	Conducting surveys or statistical investigations
represent data	
Understand data	Understanding & calculating the mode
distributions	Introducing the shape of data distribution

VC2M5ST02	
interpret line graphs representing change over time; discuss the relationships that are	
represented and conclusions that can be made	
Course Topics	Activities
Collect, display & interpret	Line Graphs: Interpretation
data	Travel Graphs
Topics	Skill Quests
Interpret line graphs	Interpreting line graphs

### VC2M5ST03

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
Teacher directed	
Topics	Skill Quests
Teacher directed	

### **6 Probability**

o i robability	
VC2M5P01	
list the possible outcomes of chance experiments involving equally likely outcomes and compare to those that are not equally likely	
Course Topics	Activities
Probability	What are the Chances?
	Chance Gauge
	Introductory Probability
	Fair Games
Topics	Skill Quests
Outcomes of chance	Investigating equally likely outcomes
experiments	Exploring fair & unfair chance experiments

### VC2M5P02

conduct repeated chance experiments, including those with and without equally likely outcomes, and 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

VC2M6N01 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	
Fair Games	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	

VC2M6N02 identify and describe the properties of prime, composite, square and triangular numbers and use these properties to solve problems and simplify calculations	
Course Topics	Activities
Multiples, factors, primes &	Multiples
composites	Multiples of
	Highest Common Factor
	Lowest Common Multiple
	Prime or Composite?
Topics	Skill Quests
Prime & composite numbers	Introducing prime & composite numbers
Square & triangular	Introducing square numbers
numbers	Describing triangular numbers

VC2M6N03		
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	Equivalent Fraction Wall 1	
	Equivalent Fraction Wall 2	
	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	Recognise, compare & represent common fractions	
fractions	Comparing common fractions on a number line	

### VC2M6N04

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 decimals	Decimal Complements	
	Adding Decimals	
	Subtract Decimals 1	
	Estimate Decimal Sums 1	
	Estimate Decimal Differences 1	
	Estimate Decimal Differences 2	
Topics	Skill Quests	
Add/sub decimals - mental	Adding decimals using mental strategies	
strategies	Subtracting decimals using mental strategies	
Add/sub decimals - digital	Adding decimals using digital technologies	
technologies	Subtracting decimals using digital technologies	
Add/sub decimals - written	Adding decimals using written method	
method	Subtracting decimals using written method	
Add/sub decimals –	Estimating sums & differences of decimals	
estimating		

### **VC2M6N05**

solve problems involving addition and subtraction of fractions using knowledge of equivalent fractions

fractions			
Course Topics	Activities		
Add & subtract fractions	Add: Common Denominator		
	One Take Fraction		
	Subtract: Common Denominator		
	Add Subtract Fractions 1		
	Common Denominator		
	Add Like Mixed Numbers		
	Subtract Like Mixed Numbers		
Topics	Skill Quests		
Add & subtract proper	Adding fractions with related denominators		
£			
fractions	Subtracting fractions with related denominators		
tractions	Add & subtract fractions - related denominators		
Add & subtract mixed			

### **VC2M6N06**

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 &	Multiply Decimals: 10, 100, 1000	
percentages	Divide Decimals: 10, 100, 1000	
Topics	Skill Quests	
Multiply/divide decimals by	Multiplying decimals by powers of 10	
powers of 10	Dividing decimals by powers of 10	
	Using estimation	

### **VC2M6N07**

solve problems that require finding a familiar fraction, decimal or percentage of a quantity, including percentage discounts, choosing efficient calculation strategies with and without digital tools

Course Topics	Activities		
Fractions, decimals &	Fractions to 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)		
	Fraction Word Problems		
	Percentage Word Problems		
	Model Fractions to Multiply		
Topics	Skill Quests		
Find a fraction of a quantity	Finding a fraction of a quantity		
Calculate percentages	Calculating percentages		

<b>VC2M6N08</b>	V	C'	2	М	6	N	0	8
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approximate numerical solutions to problems involving rational numbers and percentages, using appropriate estimation strategies

Course Topics	Activities	
Estimating	Estimation: Multiply and Divide	
	Estimate Decimal Sums 2	
	Estimate Decimal Operations	
	Estimate Products with Fractions	
Topics	Skill Quests	
Rational numbers &	Estimating solutions	
percentages		

### **VC2M6N09**

use mathematical modelling to solve practical problems involving rational numbers and percentages, including in financial contexts; formulate the problems, choosing operations and using efficient mental and written calculation strategies, and using digital tools where appropriate; interpret and communicate solutions in terms of the situation, justifying the choices made

Course Topics	Activities	
Solve problems with	Money Problems: Four Operations	
rational numbers	Time Conversions: Simple Fractions	
	Time Conversions: Simple Decimals (0.25, 0.5, 0.75)	
Topics	Skill Quests	
Solve practical percentage	Solving practical percentage problems	
problems		

# 2 Algebra

z Algebia		
VC2M6A01		
recognise and use rules that generate visually growing patterns and number patter involving rational numbers		
Course Topics	Activities	
Patterns, equations & rules	Increasing Patterns	
	Describing Patterns	
	Find the Pattern Rule	
	Table of Values	
	Pattern Rules and Tables	
	Number Sequences Up to 1 Million	
Topics	Skill Quests	
Recognise & use rules for	Continuing & creating number sequences	
patterns		

VC2M6A02 find unknown values in numerical equations involving brackets and combinations of arithmetic		
operations, using the properties of numbers and operations		
Course Topics	Activities	
Patterns, equations & rules	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	Order of operations with no grouping symbols	
operations	Order of operations using grouping symbols	
	Order of operations practical situations	

VC2M6A03  design 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	
VC2M6M01	
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	
Activities	
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	
Skill Quests	
Decimal notation & the metric system	
Decimal representation in capacity	
Decimal representation in mass	
I e e e e e e e e e e e e e e e e e e e	
Converting metric units of length Converting metric units of capacity	

VC2M6M02	
establish the formula for the area of a rectangle and use it to solve practical problems	
Course Topics	Activities
Area	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

Converting metric units of mass

VC2M6M03  measure, calculate and compare elapsed time; interpret and use timetables and itineraries to plan activities and determine the duration of events and journeys	
Course Topics	Activities
Time problems	Time Mentals
	Elapsed Time
	Using Timetables
	Australian Time Zones
	What Time Will it Be?
Topics	Skill Quests
Interpret & use timetables	Interpreting & using timetables

VC2M6M04	
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
Angle relationships	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
Topics	Skill Quests
Topics Understand angle	Skill Quests Understanding adjacent angles
	·
Understand angle	Understanding adjacent angles

# 4 Space

VC2M6SP01	
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

VC2M6SP02  locate points in the 4 quadrants of the Cartesian plane; describe changes to the coordinates when a point is moved to a different position in the plane	
Course Topics	Activities
The Cartesian plane	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

VC2M6SP03	
recognise and use combinations of transformations to create tessellations and other	
geometric patterns, using dynamic geometry software where appropriate	
Course Topics	Activities
The Cartesian plane	Transformations: Coordinate Plane
	Rotations: Coordinate Plane
Topics	Skill Quests
Use combinations of	Recognising tessellations
transformations	Identifying a sequence of 2 transformations

### **5 Statistics**

### VC2M6ST01

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
Analyse & interpret data	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 &	Two-way tables
describe data sets	Side-by-side column graphs
	Comparing & selecting bivariate data displays
	Describing & interpreting data sets
Compare mode, range &	Understanding mode, range & shape of distributions
shape	Comparing modes in sets of data

VC2M6ST02  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

### VC2M6ST03

plan and conduct statistical investigations by posing and refining questions to collect categorical or numerical data by observation or survey, 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**

### VC2M6P01

describe probabilities using fractions, decimals and percentages; recognise that probabilities lie on numerical scales of 0–1 or 0%–100%; use estimation to assign probabilities that events occur in a given context, using common fractions, percentages and decimals

occur in a given context, asing common fractions, percentages and accimals		
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

### VC2M6P02

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	Conducting chance experiments
experiments	



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