

Mathletics

Victorian Mathematics V2.0

Activities (Courses) and Skill Quests



Years 3 – 6

January, 2026

Mathletics

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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 least 10 000	Odd and Even Numbers 1
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 least 10 000	Place Value 3 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 & 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

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 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

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 least 10 000	Odd and Even Numbers 1
Topics	Skill Quests

Create algorithms to investigate numbers	Identifying & creating number patterns
	Working with code to create algorithms

2 Algebra

VC2M3A01	
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 with numbers	Related Facts 1
	Adding In Any Order
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

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 20	Finding fact families
	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 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

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 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

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 & conversions	Five Minute Times 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 & conversions	Five Minute Times 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**VC2M3SP01**

make, compare and classify objects, identifying key features and explaining why these features 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

VC2M3ST01	
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 data	Tallies 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 data	Interpreting Tables Reading from a Column Graph Add and Subtract Using Graphs
Topics	Skill Quests
Create & compare data representations	Representing & interpreting data displays 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 investigations	Introducing the statistical investigation process
	Conducting a statistical investigation

6 Probability

VC2M3P01	
identify practical activities 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 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
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 & hundredths	Rounding decimal tenths & hundredths
Decimals used in money	Understanding decimals used in money

VC2M4N02	
investigate number sequences involving multiples of 3, 4, 6, 7, 8 and 9	
Course Topics	Activities
Patterns in 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
Topics	Skill Quests
Investigating sequences with multiples	Investigating sequences with multiples

VC2M4N03

find equivalent representations of fractions using related denominators and make connections between 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 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

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 & division	Multiplying by 10, 100, 1000 Dividing by 10, 100, 1000
Topics	Skill Quests
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

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 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 & divide	Double and Halve to Multiply 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 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 partitioning 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

VC2M4N07

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

Course Topics	Activities
Strategies to add & subtract	Estimate Sums

	Estimate Differences
Strategies to multiply & divide	Estimation: Multiply and 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	
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
	Multiply and Divide Problems 1
	How much Change?
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.

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 number sentences	Using inverse operations for add/sub equations Relationship between addition & subtraction Equivalent number sentences Word problems for finding unknown quantities

VC2M4A02	
recall and demonstrate proficiency with multiplication facts up to 10×10 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 & 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 Multiplying by 10, 100, 1000 Dividing by 10, 100, 1000
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 10×10

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 & temperature	Metric units of length
	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 problems	Understanding am & pm notation Solving duration of time problems

VC2M4M04

estimate and compare angles using angle names including acute, obtuse, straight angle, reflex 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**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 2D shapes	Composing & decomposing 2D shapes

VC2M4SP02

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	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 references	Working with grid reference systems

VC2M4SP04	
recognise line and rotational symmetry of shapes and create symmetrical patterns and 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, pictures & shapes	Creating & drawing symmetrical designs Recognising tessellations

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 data	Picture Graphs: with scale & half symbols Making Picture Graphs: With Scale Column Graphs Reading from a Column Graph Histograms
Topics	Skill Quests
Represent data with many-to-one graphs	Column graphs using many-to-one correspondence 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
	Evaluating & comparing data displays

Evaluate & compare data displays	Evaluating the shape of data sets
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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	
Topics	Skill Quests
Methods of data collection	Surveys & sorting data

6 Probability

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
Chance events	Describing the chance of events occurring Exploring non-simultaneous everyday events Independent & dependent 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

VC2M5N01	
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
Decimals	Decimals from Words to Digits 1 Decimals on the Number Line Decimal Place Value Nearest Whole Number
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

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

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. 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

VC2M5N08	
check and explain the reasonableness of solutions to problems, including financial contexts using estimation 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
	Rounding to estimate multiplication & division
	Estimating with money

VC2M5N09	
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	
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 $\times\div$ 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 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 Solve Equations: Multiply, Divide 1 I am Thinking of a Number! Fit the Conditions 1
Topics	Skill Quests
Create & use algorithms	Manipulating numbers using a given rule Designing flowcharts to solve add/sub of fractions Factors & multiples

2 Algebra

VC2M5A01	
recognise and explain the connection between multiplication and division as inverse operations 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 & division	Inverse relationship - multiplication & 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 \div facts Times Tables Multiply 3 single-digit numbers
Topics	Skill Quests
Find unknown values in mult & div	Finding unknown values - multiplication & division

3 Measurement

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 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

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 problems	Calculating perimeter practical 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: Whole Number 1 Time Conversions: Whole Number 2 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 & measure angles	Identifying, estimating & measuring 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
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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 system	Working with grid referenced maps 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 transformations	Identifying & describing 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 data	Stem and Leaf Plots: Concept 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 & represent data	Conducting surveys or statistical investigations
Understand data distributions	Understanding & calculating the mode 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 data	Line Graphs: Interpretation 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

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 experiments	Investigating equally likely outcomes 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 & composites	Multiples Multiples of Highest Common Factor Lowest Common Multiple Prime or Composite?
Topics	Skill Quests
Prime & composite numbers	Introducing prime & composite numbers
Square & triangular numbers	Introducing square 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 fractions	Recognise, compare & represent common 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 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

VC2M6N05

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

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 & 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

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 & percentages	Fractions to Decimals 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

VC2M6N08

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 & percentages	Estimating solutions

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

2 Algebra

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

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) Find the Missing Number 2
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

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	
Course Topics	Activities
Metric conversions	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

	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

	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 Mental
	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
Understand angle properties	Understanding adjacent angles
	Exploring vertically opposite angles
	Calculating angles that total 360°
	Investigating supplementary & complementary 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 transformations	Recognising tessellations 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 & 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

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	
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 experiments	Conducting chance experiments

Mathletics

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