

# Mathletics

## Victorian Mathematics V2.0

### Scope & Sequence



Level 6

Mathletics

	Term one	Term two	Term three	Term four
Unit 1	<b>Number Space</b> <b>Integers and number properties</b> <ul style="list-style-type: none"> <li>Integers on a number line</li> <li>Integers on the cartesian plane</li> </ul>	<b>Number Algebra</b> <b>Patterns and algebra</b> <ul style="list-style-type: none"> <li>Generate number patterns</li> <li>Find unknown values</li> <li>Create and use algorithms</li> </ul>	<b>Number</b> <b>Operations, including money</b> <ul style="list-style-type: none"> <li>Order of operations</li> <li>Mixed operations</li> <li>Add &amp; subtract decimals: Problem solving</li> <li>Multiply &amp; divide decimals: Problem solving</li> <li>Budgeting</li> </ul>	<b>Number Algebra</b> <b>Number and operations review</b> <ul style="list-style-type: none"> <li>Review earlier content</li> </ul>
	<b>Number</b> <b>Addition and subtraction</b> <ul style="list-style-type: none"> <li>Add and subtract decimals</li> <li>Mental, written and digital strategies</li> <li>Problem solving</li> </ul>	<b>Number</b> <b>Fractions, decimals and percentages</b> <ul style="list-style-type: none"> <li>Find a fraction, decimal or percentage of a quantity</li> <li>Percentage discounts</li> <li>Round and estimate</li> <li>Problem solving</li> </ul>	<b>Measurement</b> <b>Angles</b> <ul style="list-style-type: none"> <li>Angles within shapes</li> <li>Angles on a straight line</li> <li>Angles at a point</li> <li>Vertically opposite angles</li> <li>Determine unknown angles</li> </ul>	<b>Space</b> <b>3D objects</b> <ul style="list-style-type: none"> <li>Observe and draw shapes</li> <li>Compare cross-sections</li> <li>Right prisms</li> <li>Connect objects to their nets</li> </ul>
Unit 2	<b>Number</b> <b>Multiplication and division: Whole numbers</b> <ul style="list-style-type: none"> <li>Prime, composite &amp; square numbers</li> <li>Multiply &amp; divide whole numbers</li> <li>Mental &amp; written strategies</li> </ul>	<b>Number Algebra</b> <b>Multiplication and division: Decimals</b> <ul style="list-style-type: none"> <li>Multiply &amp; divide decimals</li> <li>Powers of 10</li> <li>Estimating</li> </ul>	<b>Measurement</b> <b>Capacity and mass</b> <ul style="list-style-type: none"> <li>Convert measurements</li> <li>Decimal representations</li> <li>Problem solving</li> </ul>	<b>Number Space</b> <b>Cartesian plane and 2D shapes</b> <ul style="list-style-type: none"> <li>Locate points on Cartesian plane</li> <li>Identify scales</li> <li>Draw lines and polygons</li> <li>Positional data</li> </ul>
	<b>Number</b> <b>Fractions</b> <ul style="list-style-type: none"> <li>Compare, order &amp; represent common fractions</li> <li>Equivalent fractions</li> <li>Add and subtract fractions</li> </ul>	<b>Space</b> <b>2D shapes</b> <ul style="list-style-type: none"> <li>Properties of 2D shapes</li> <li>Classification</li> <li>Symmetry</li> <li>Transformations</li> <li>Tessellations</li> </ul>	<b>Measurement</b> <b>Time</b> <ul style="list-style-type: none"> <li>Interpret and use timetables and itineraries</li> <li>Duration of events</li> </ul>	<b>Statistics</b> <b>Data: Interpretation</b> <ul style="list-style-type: none"> <li>Statistically informed arguments</li> <li>Plan and conduct statistical investigations</li> <li>Compare distributions</li> </ul>
Unit 3	<b>Statistics</b> <b>Data: Representation</b> <ul style="list-style-type: none"> <li>Collect data</li> <li>Validate data</li> <li>Represent data</li> <li>Compare data sets</li> <li>Data visualisations</li> </ul>	<b>Measurement</b> <b>Length, perimeter and area</b> <ul style="list-style-type: none"> <li>Convert units of length</li> <li>Decimal representations of length</li> <li>Area formula</li> <li>Perimeter and area connections</li> <li>Problem solving</li> </ul>	<b>Probability Statistics</b> <b>Chance and data</b> <ul style="list-style-type: none"> <li>Represent probabilities numerically</li> <li>Estimate and assign probabilities</li> <li>List outcomes</li> <li>Conduct chance experiments</li> <li>Run simulations</li> <li>Record results</li> <li>Compare observations with expected results</li> </ul>	<b>Measurement</b> <b>Measurement review and applications</b> <ul style="list-style-type: none"> <li>Choose appropriate units</li> <li>Use measurement in everyday situations</li> </ul>
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Unit 5	<b>Statistics</b> <b>Data: Representation</b> <ul style="list-style-type: none"> <li>Collect data</li> <li>Validate data</li> <li>Represent data</li> <li>Compare data sets</li> <li>Data visualisations</li> </ul>	<b>Measurement</b> <b>Length, perimeter and area</b> <ul style="list-style-type: none"> <li>Convert units of length</li> <li>Decimal representations of length</li> <li>Area formula</li> <li>Perimeter and area connections</li> <li>Problem solving</li> </ul>	<b>Probability Statistics</b> <b>Chance and data</b> <ul style="list-style-type: none"> <li>Represent probabilities numerically</li> <li>Estimate and assign probabilities</li> <li>List outcomes</li> <li>Conduct chance experiments</li> <li>Run simulations</li> <li>Record results</li> <li>Compare observations with expected results</li> </ul>	<b>Measurement</b> <b>Measurement review and applications</b> <ul style="list-style-type: none"> <li>Choose appropriate units</li> <li>Use measurement in everyday situations</li> </ul>
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Strand	Outcomes and content descriptions	Located
<b>Number</b>	<b>VC2M6N01</b> recognise situations, including financial contexts, that use integers; locate and represent integers on a number line and as coordinates on the Cartesian plane	T1 U1 T2 U1 T4 U3
	<b>VC2M6N02</b> identify and describe the properties of prime, composite, square and triangular numbers and use these properties to solve problems and simplify calculations	T1 U3 T2 U1
	<b>VC2M6N03</b> 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	T1 U4 T2 U2
	<b>VC2M6N04</b> apply knowledge of place value to add and subtract decimals, using digital tools where appropriate; use estimation and rounding to check the reasonableness of answers	T1 U2 T2 U2 T4 U1
	<b>VC2M6N05</b> solve problems involving addition and subtraction of fractions using knowledge of equivalent fractions	T1 U4 T2 U2 T4 U1
	<b>VC2M6N06</b> multiply and divide decimals by multiples of powers of 10 without a calculator, applying knowledge of place value and proficiency with multiplication facts, using estimation and rounding to check the reasonableness of answers	T2 U3 T4 U1
	<b>VC2M6N07</b> 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	T1 U4 T2 U2
	<b>VC2M6N08</b> approximate numerical solutions to problems involving rational numbers and percentages, using appropriate estimation strategies	T2 U2, U3
	<b>VC2M6N09</b> 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	T1 U2, U3, U4 T2 U1, U2, U3 T3 U1 T4 U1
<b>Algebra</b>	<b>VC2M6A01</b> recognise and use rules that generate visually growing patterns and number patterns involving rational numbers	T2 U1
	<b>VC2M6A02</b> find unknown values in numerical equations involving brackets and combinations of arithmetic operations, using the properties of numbers and operations	T2 U1 T3 U1
	<b>VC2M6A03</b> 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	T2 U1

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<b>Measurement</b>	<b>VC2M6M01</b> 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	T2 U5 T3 U3 T4 U5
	<b>VC2M6M02</b> establish the formula for the area of a rectangle and use it to solve practical problems	T2 U5 T4 U5
	<b>VC2M6M03</b> measure, calculate and compare elapsed time; interpret and use timetables and itineraries to plan activities and determine the duration of events and journeys	T3 U4 T4 U5
	<b>VC2M6M04</b> 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	T3 U2
<b>Space</b>	<b>VC2M6SP01</b> compare the parallel cross-sections of objects and recognise their relationships to right prisms	T4 U2
	<b>VC2M6SP02</b> 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	T1 U1 T2 U4 T4 U3
	<b>VC2M6SP03</b> recognise and use combinations of transformations to create tessellations and other geometric patterns, using dynamic geometry software where appropriate	T2 U4
<b>Statistics</b>	<b>VC2M6ST01</b> 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	T1 U5 T3 U5 T4 U4
	<b>VC2M6ST02</b> identify statistically informed arguments presented in traditional and digital media; discuss and critique methods, data representations and conclusions	T1 U5 T4 U4
	<b>VC2M6ST03</b> 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	T3 U5
<b>Probability</b>	<b>VC2M6P01</b> 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	T3 U5
	<b>VC2M6P02</b> conduct repeated chance experiments and run simulations with an increasing number of trials using digital tools; compare observations with expected results and discuss the effect on variation of increasing the number of trials	T3 U5

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<b>Unit 1</b> Number Space Place value review <hr/> <b>Integers and number properties</b> <hr/> Integers on a number line Integers on the cartesian plane	<b>VC2M6N01</b> recognise situations, including financial contexts, that use integers ... <b>VC2M6SP02</b> locate points in the 4 quadrants of the Cartesian plane ...	<b>Y6 Operations</b> • Place value and rounding review <b>Y6 Integers</b> • Integers on the number Line • Integers on the cartesian Plane • Compare and order integers • Integers in context	<b>Introducing Integers</b> • Integers on a Number Line • Ordering Integers (Number Line) • Comparing Integers (<, =, >) • What's the Temperature (Celsius)?	<b>Understand integers</b> • Recognising situations that use integers • Locating & representing integers on a number line • Introducing the Cartesian plane <b>Points on the Cartesian plane</b> • Locating points on the Cartesian plane		<b>(Y7-H) Directed Numbers</b> • Plotting on number lines (p 1) • Opposite directions- negative numbers (p 2) • Extending the number line (p 3) <b>(Y7-H) Directed Numbers (AC Ready)</b> • How does it work? (pp 1-13)
<b>Unit 2</b> Number <hr/> <b>Addition and subtraction</b> <hr/> Add and subtract decimals Mental, written and digital strategies Problem solving	<b>VC2M6N04</b> apply knowledge of place value to add and subtract decimals ... <b>VC2M6N09</b> use mathematical modelling to solve practical problems involving rational numbers and percentages ...	<b>Y6 Operations</b> • Addition and subtraction <b>Y6 Decimals</b> • Decimals and place value • Rounding decimals • Decimals and the number Line • Compare and order decimals • Add decimals • Subtract decimals • Addition strategies with decimals • Subtraction strategies with decimals	<b>Add &amp; subtract decimals</b> • Decimal Complements • Adding Decimals • Subtract Decimals 1 • Estimate Decimal Sums 1 • Estimate Decimal Differences 1 • Estimate Decimal Sums 2 • Estimate Decimal Differences 2	<b>Add/sub decimals - mental strategies</b> • Adding decimals using mental strategies • Subtracting decimals using mental strategies <b>Add/sub decimals - estimating</b> • Estimating sums & differences of decimals <b>Add/sub decimals - written method</b> • Adding decimals using written method • Subtracting decimals using written method <b>Add/sub decimals - digital technologies</b> • Adding decimals using digital technologies • Subtracting decimals using digital technologies	<b>Number &amp; Algebra: Addition &amp; Subtraction</b> LEVEL 5-7 • Club money jar (DOK 3) • Square number puzzle (DOK 3) • Ropes and mazes (DOK 4)	<b>(Y6-G) Addition and Subtraction</b> • Written methods (pp 20-28)
<b>Unit 3</b> Number <hr/> <b>Multiplication and division: Whole numbers</b> <hr/> Prime, composite & square numbers Multiply & divide whole numbers Mental & written strategies	<b>VC2M6N02</b> identify and describe the properties of prime, composite, square and triangular numbers ... <b>VC2M6N09</b> use mathematical modelling to solve practical problems involving rational numbers and percentages ...	<b>Y6 Operations</b> • Multiplication • Division • Estimation • Using the four operations	<b>Multiples, factors, primes &amp; composites</b> • Prime or Composite? • Multiples • Multiples of • Highest Common Factor • Lowest Common Multiple	<b>Prime &amp; composite numbers</b> • Introducing prime & composite numbers <b>Square &amp; triangular numbers</b> • Introducing square numbers -Describing triangular numbers <b>Estimating</b> • Estimation: Multiply and Divide	<b>Number &amp; Algebra: Multiplication &amp; Division</b> LEVEL 5-7 • True or false? (DOK 2) LEVEL 6-8 • Many ants make light work (DOK 2) • Orbiting lowest common multiples (DOK 2)	<b>(Y7-H) Special Numbers, Factors and Multiples</b> • Odd, even, prime and composite numbers (p 1) • Square numbers (p 3) <b>(Y6-G) Multiplication and Division</b> • Mental multiplication strategies (pp 1-6) • Mental division strategies (pp 7-12) • Written methods (pp 13-18) • Puzzles and investigations (pp 19-24)






Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<p><b>Unit 4</b> Number</p> <hr/> <p><b>Fractions</b></p> <p>Compare, order &amp; represent common fractions</p> <p>Equivalent fractions</p> <p>Add and subtract fractions</p>	<p><b>VC2M6N03</b> apply knowledge of equivalence to compare, order and represent common fractions ...</p> <p><b>VC2M6N05</b> solve problems involving addition and subtraction of fractions ...</p> <p><b>VC2M6N07</b> solve problems that require finding a familiar fraction, decimal or percentage of a quantity ...</p> <p><b>VC2M6N09</b> use mathematical modelling to solve practical problems ...</p>	<p><b>Y6 Fractions</b></p> <ul style="list-style-type: none"> <li>• Represent fractions</li> <li>• Types of fractions</li> <li>• Compare and order fractions with like denominators</li> <li>• Equivalent fractions</li> <li>• Simplifying fractions</li> <li>• Compare and order fractions</li> <li>• Add and subtract fractions</li> <li>• Add related fractions</li> <li>• Subtract related fractions</li> <li>• Problem-solving with fractions</li> </ul>	<p><b>Equivalent fractions</b></p> <ul style="list-style-type: none"> <li>• Equivalent Fraction Wall 1</li> <li>• Equivalent Fraction Wall 2</li> <li>• Shading Equivalent Fractions</li> <li>• Identifying Fractions on a Number Line</li> <li>• Mixed and Improper Fractions on a Number Line</li> <li>• Equivalent Fractions</li> <li>• Comparing Fractions 1</li> <li>• Compare Fractions 1a</li> <li>• Compare Fractions 1b</li> </ul> <p><b>Add &amp; subtract fractions</b></p> <ul style="list-style-type: none"> <li>• Add Subtract Fractions 1</li> <li>• Common Denominator</li> <li>• Add: Common Denominator</li> <li>• Subtract: Common Denominator</li> <li>• One Take Fraction</li> <li>• Add Like Mixed Numbers</li> <li>• Subtract Like Mixed Numbers</li> </ul>	<p><b>Compare &amp; order common fractions</b></p> <ul style="list-style-type: none"> <li>• Recognise, compare &amp; represent common fractions</li> <li>• Comparing common fractions on a number line</li> </ul> <p><b>Add &amp; subtract proper fractions</b></p> <ul style="list-style-type: none"> <li>• Adding fractions with related denominators</li> <li>• Subtracting fractions with related denominators</li> <li>• Add &amp; subtract fractions - related denominators</li> </ul> <p><b>Add &amp; subtract mixed numerals</b></p> <ul style="list-style-type: none"> <li>• Adding fractions &amp; mixed numerals</li> <li>• Subtracting fractions &amp; mixed numerals</li> </ul>	<p><b>Number &amp; Algebra: Fractions</b> LEVEL 3–5</p> <ul style="list-style-type: none"> <li>• Running a fraction of the race (DOK 2)</li> </ul> <p>LEVEL 4–6</p> <ul style="list-style-type: none"> <li>• It's a piece of pie! (DOK 2)</li> <li>• A yarn about simple fractions (DOK 2)</li> </ul>	<p><b>(Y6-G) Fractions, Decimals and Percentages</b></p> <ul style="list-style-type: none"> <li>• Fractions (pp 1–11)</li> <li>• Calculating (pp 28–30)</li> </ul>
<p><b>Unit 5</b> Statistics</p> <hr/> <p><b>Data: Representation</b></p> <p>Collect data</p> <p>Validate data</p> <p>Represent data</p> <p>Compare data sets</p> <p>Data visualisations</p>	<p><b>VC2M6ST01</b> interpret and compare data sets for ordinal and nominal categorical, discrete and continuous numerical variables using comparative displays or visualisations and digital tools ...</p> <p><b>VC2M6ST02</b> identify statistically informed arguments presented in traditional and digital media ...</p>			<p><b>Interpret, compare &amp; describe data sets</b></p> <ul style="list-style-type: none"> <li>• Two-way tables</li> <li>• Side-by-side column graphs</li> <li>• Comparing &amp; selecting bivariate data displays</li> </ul>	<p><b>Statistics &amp; Data:</b> LEVEL 5–7</p> <ul style="list-style-type: none"> <li>• World rankings (DOK 4)</li> <li>• Lake Scaley fish (DOK 3)</li> </ul>	<p><b>(Y6-G) Data Representation</b></p> <ul style="list-style-type: none"> <li>• Types of graphs 1 (pp 1–6)</li> <li>• Types of graphs 2 (pp 10–11)</li> <li>• Collecting and analysing data (pp 20–21)</li> </ul>




Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<b>Unit 1</b> Number Algebra  <b>Patterns and algebra</b>  Generate number patterns Find unknown values Create and use algorithms	<b>VC2M6N01</b> recognise situations, including financial contexts, that use integers ...  <b>VC2M6N02</b> identify and describe the properties of prime, composite, square and triangular numbers ...  <b>VC2M6N09</b> use mathematical modelling to solve practical problems ...  <b>VC2M6A01</b> recognise and use rules that generate visually growing patterns ...  <b>VC2M6A02</b> find unknown values in numerical equations involving brackets ...  <b>VC2M6A03</b> design and use algorithms involving a sequence of steps and decisions ...	Coming soon	<b>Patterns, equations &amp; rules</b> <ul style="list-style-type: none"> <li>Increasing Patterns</li> <li>Describing Patterns</li> <li>Find the Pattern Rule</li> <li>Table of Values</li> <li>Pattern Rules and Tables</li> <li>Number Sequences Up to 1 Million</li> <li>Writing Algebraic Expressions</li> <li>Missing Numbers: Variables</li> <li>Simple Substitution</li> </ul>	<b>Recognise &amp; use rules for patterns</b> <ul style="list-style-type: none"> <li>Continuing &amp; creating number sequences</li> </ul> <b>Design flowcharts to solve problems</b> <ul style="list-style-type: none"> <li>Designing flowcharts to solve problems</li> </ul> <b>Use rules &amp; algorithms</b> <ul style="list-style-type: none"> <li>Manipulating numbers using a given rule</li> <li>Creating algorithms for sets</li> </ul>	<b>Number &amp; Algebra: Equations &amp; Expressions</b> LEVEL 4–6 <ul style="list-style-type: none"> <li>Writing &amp; interpreting (DOK 3)</li> <li>Solving unknowns (DOK 3)</li> <li>Pattern rules (DOK 3)</li> <li>Fraction and decimal addition patterns (DOK 2)</li> <li>Island hopper (DOK 4)</li> </ul> LEVEL 5–7 <ul style="list-style-type: none"> <li>Keep it balanced (DOK 3)</li> </ul>	<b>(Y6-G) Patterns and Algebra</b> <ul style="list-style-type: none"> <li>Patterns and functions (pp 1–17)</li> <li>Algebraic thinking (pp 18–25)</li> <li>Solving equations (pp 26–33)</li> <li>Properties of arithmetic (pp 36–41)</li> </ul>
<b>Unit 2</b> Number  <b>Fractions, decimals and percentages</b>  Find a fraction, decimal or percentage of a quantity Percentage discounts Round and estimate Problem solving	<b>VC2M6N03</b> apply knowledge of equivalence to compare, order and represent common fractions ...  <b>VC2M6N04</b> apply knowledge of place value to add and subtract decimals ...  <b>VC2M6N05</b> solve problems involving addition and subtraction of fractions ...  <b>VC2M6N07</b> solve problems that require finding a familiar fraction ...  <b>VC2M6N08</b> approximate numerical solutions to problems involving rational numbers ...  <b>VC2M6N09</b> use mathematical modelling to solve practical problems ...	<b>Y6 Fractions</b> <ul style="list-style-type: none"> <li>Find a fraction of an amount</li> <li>Problem-solving fractions of amounts</li> </ul> <b>Y6 Percentages</b> <ul style="list-style-type: none"> <li>Percentages</li> <li>Fractions, decimals, percentages</li> <li>Percentages to fractions</li> <li>Fractions to percentages</li> <li>Percentages to decimals</li> <li>Decimals to percentages</li> <li>Decimals to fractions</li> <li>Fractions to decimals</li> <li>Expressing as a percentage</li> <li>Percentages of an amount</li> <li>Discounts</li> <li>Sale price</li> </ul>	<b>Fractions, decimals &amp; percentages</b> <ul style="list-style-type: none"> <li>Fractions to Decimals</li> <li>Decimals to Fractions 1</li> <li>Percentage to Fraction</li> <li>Decimals to percentages</li> <li>Common Fractions as Percentages (AU)</li> <li>Fractions to Percentages (Non-Calculator)</li> <li>Percents and Decimals</li> <li>Match Decimals and Percentages</li> <li>Fraction Word Problems</li> <li>Percentage Word Problems</li> <li>Model Fractions to Multiply</li> <li>Calculating Percentages (Mental)</li> </ul> <b>Solve problems with rational numbers</b> <ul style="list-style-type: none"> <li>Money Problems: Four Operations</li> <li>Time Conversions: Simple Fractions</li> <li>Time Conversions: Simple Decimals</li> </ul> <b>Estimating</b> <ul style="list-style-type: none"> <li>Estimate Products with Fractions</li> </ul>	<b>Find a fraction of a quantity</b> <ul style="list-style-type: none"> <li>Finding a fraction of a quantity</li> </ul> <b>Calculate percentages</b> <ul style="list-style-type: none"> <li>Calculating percentages</li> </ul> <b>Rational numbers &amp; percentages</b> <ul style="list-style-type: none"> <li>Estimating solutions</li> </ul> <b>Solve practical percentage problems</b> <ul style="list-style-type: none"> <li>Solving practical percentage problems</li> </ul>	<b>Number &amp; Algebra: Fractions</b> LEVEL 4–6 <ul style="list-style-type: none"> <li>The case of the missing superhero capes (DOK 2)</li> <li>Thunder Radio competition winners (DOK 2)</li> </ul> <b>Number &amp; Algebra: Percentages</b> LEVEL 5–7 <ul style="list-style-type: none"> <li>Simply equal (DOK 2)</li> </ul> <b>Number &amp; Algebra: Money</b> LEVEL 5–7 <ul style="list-style-type: none"> <li>Discount that car (DOK 4)</li> </ul>	<b>(Y6-G) Fractions, Decimals and Percentages</b> <ul style="list-style-type: none"> <li>Topic 2 – Decimal fractions (pp 12–20)</li> <li>Fractions of an amount (pp 21–27)</li> </ul>

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<p><b>Unit 3</b> Number</p> <p><b>Multiplication and division: Decimals</b></p> <p>Multiply &amp; divide decimals Powers of 10 Estimate</p>	<p><b>VC2M6N06</b> multiply and divide decimals by multiples of powers of 10 without a calculator ...</p> <p><b>VC2M6N08</b> approximate numerical solutions to problems involving rational numbers and percentages ...</p> <p><b>VC2M6N09</b> use mathematical modelling to solve practical problems ...</p>	<p><b>Y6 Decimals</b></p> <ul style="list-style-type: none"> <li>• Multiply decimals by powers of 10</li> <li>• Multiply decimals by whole numbers</li> <li>• Divide decimals by powers of 10</li> <li>• Divide decimals by whole numbers</li> </ul>	<p><b>Fractions, decimals &amp; percentages</b></p> <ul style="list-style-type: none"> <li>• Multiply Decimals: 10, 100, 1000</li> <li>• Divide Decimals: 10, 100, 1000</li> </ul> <p><b>Estimating</b></p> <ul style="list-style-type: none"> <li>• Estimate Decimal Operations</li> <li>• Estimate Decimal Sums 2</li> </ul>	<p><b>Multiply/divide decimals by powers of 10</b></p> <ul style="list-style-type: none"> <li>• Multiplying decimals by powers of 10</li> <li>• Dividing decimals by powers of 10</li> <li>• Using estimation</li> </ul>		<p><b>Y6-G Fractions, Decimals and Percentages</b></p> <ul style="list-style-type: none"> <li>• Calculating (pp 37–38)</li> </ul>
<p><b>Unit 4</b> Space</p> <p><b>2D shapes</b></p> <p>Properties of 2D shapes Classification Symmetry Transformations Tessellations</p>	<p><b>VC2M6SP02</b> locate points in the 4 quadrants of the Cartesian plane ...</p> <p><b>VC2M6SP03</b> recognise and use combinations of transformations to create tessellations and other geometric patterns ...</p>			<p><b>Use combinations of transformations</b></p> <ul style="list-style-type: none"> <li>• Recognising tessellations</li> <li>• Identifying a sequence of 2 transformations</li> </ul>	<p><b>Geometry: 2D Shapes</b> LEVEL 4–6</p> <ul style="list-style-type: none"> <li>• Tricky triangles</li> <li>• Relating 2D shapes</li> </ul>	<p><b>Y6-G Geometry</b></p> <ul style="list-style-type: none"> <li>• 2D shapes (pp 7–15)</li> <li>• Transformation, tessellation and symmetry (pp 16–24)</li> </ul>
<p><b>Unit 5</b> Measurement</p> <p><b>Length, perimeter and area</b></p> <p>Convert units of length Decimal representations of length Area formula Perimeter and area connections Problem solving</p>	<p><b>VC2M6M01</b> convert between common metric units of length, mass and capacity ...</p> <p><b>VC2M6M02</b> establish the formula for the area of a rectangle and use it to solve practical problems</p>		<p><b>Metric conversions</b></p> <ul style="list-style-type: none"> <li>• Centimetres and Metres</li> <li>• Metres and Kilometres</li> </ul> <p><b>Area</b></p> <ul style="list-style-type: none"> <li>• Area of Shapes</li> <li>• Area: Squares and Rectangles</li> </ul>	<p><b>Convert metric units of measurement</b></p> <ul style="list-style-type: none"> <li>• Converting metric units of length</li> </ul> <p><b>Use formula for area of a rectangle</b></p> <ul style="list-style-type: none"> <li>• Using a formula to calculate area of a rectangle</li> </ul>	<p><b>Measurement: Length</b> LEVEL 3–5</p> <ul style="list-style-type: none"> <li>• Area and perimeter challenge (DOK 3)</li> <li>• Perimeter problems (DOK 3)</li> </ul> <p>LEVEL 4–6</p> <ul style="list-style-type: none"> <li>• Card crafting calculation (DOK 2)</li> </ul> <p><b>Measurement: Area</b> LEVEL 4–6</p> <ul style="list-style-type: none"> <li>• Finding formulas (DOK 3)</li> <li>• Ryan's rectangle (DOK 3)</li> </ul>	<p><b>Y6-G Length, Perimeter and Area</b></p> <ul style="list-style-type: none"> <li>• Units of length (pp 1–7)</li> <li>• Perimeter (pp 8–15)</li> <li>• Area (pp 16–25)</li> </ul>

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<b>Unit 1</b> Number Algebra <hr/> <b>Operations, including money</b> <hr/> Order of operations Mixed operations Add & subtract decimals: Problem solving Multiply & divide decimals: Problem solving Budgeting	<b>VC2M6N09</b> use mathematical modelling to solve practical problems involving rational numbers and percentages ...  <b>VC2M6A02</b> find unknown values in numerical equations involving brackets and combinations of arithmetic operations ...	<b>Y6 Operations</b> <ul style="list-style-type: none"> <li>Order of operations</li> </ul>	<b>Patterns equations &amp; rules</b> <ul style="list-style-type: none"> <li>Order of Operations 1 (BIDMAS)</li> <li>Solve Equations: Add, Subtract 1</li> <li>Solve Equations: Multiply, Divide 1</li> </ul>	<b>Understand order of operations</b> <ul style="list-style-type: none"> <li>Order of operations with no grouping symbols</li> <li>Order of operations using grouping symbols</li> <li>Order of operations practical situations</li> </ul>		<b>(Y6-G) Patterns and Algebra</b> <ul style="list-style-type: none"> <li>Properties of arithmetic (pp 34–35)</li> </ul>
<b>Unit 2</b> Measurement <hr/> <b>Angles</b> <hr/> Angles within shapes Angles on a straight line Angles at a point Vertically opposite angles Determine unknown angles	<b>VC2M6M04</b> 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		<b>Angle relationships</b> <ul style="list-style-type: none"> <li>Measuring Angles</li> <li>Estimating Angles</li> <li>Angle Sum of a Triangle</li> <li>Quadrilaterals: Angle Sum with Equations</li> <li>Exterior Angles of a Triangle</li> <li>Angles of revolution: Unknown Values</li> <li>Vertically Opposite Angles: Unknown Values</li> </ul>	<b>Understand angle properties</b> <ul style="list-style-type: none"> <li>Understanding adjacent angles</li> <li>Exploring vertically opposite angles</li> <li>Calculating angles that total 360</li> <li>Investigating supplementary &amp; complementary angles</li> </ul>	<b>Geometry: Angles</b> LEVEL 4–6 <ul style="list-style-type: none"> <li>Angles and quadrilaterals (DOK 3)</li> </ul> LEVEL 5–7 <ul style="list-style-type: none"> <li>What's your angle? (DOK 3)</li> <li>Comparing vertical and adjacent (DOK 3)</li> <li>Adjacent angles (DOK 4)</li> </ul> <b>Geometry: 2D Shapes</b> LEVEL 4–6 <ul style="list-style-type: none"> <li>Trying triangles (DOK 2)</li> <li>Square split (DOK 3)</li> </ul>	<b>(Y6-G) Geometry</b> <ul style="list-style-type: none"> <li>Lines and angles (pp 1–6)</li> </ul>
<b>Unit 3</b> Measurement <hr/> <b>Capacity and mass</b> <hr/> Convert measurements Decimal representations Problem solving	<b>VC2M6M01</b> 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		<b>Metric conversions</b> <ul style="list-style-type: none"> <li>Grams and Kilograms Conversion</li> <li>Grams and Kilograms</li> <li>Grams and Milligrams</li> <li>Converting Units of Mass</li> <li>Millilitres and Litres</li> <li>Converting Volume</li> </ul>	<b>Connect decimals to the metric system</b> <ul style="list-style-type: none"> <li>Decimal notation &amp; the metric system</li> <li>Decimal representation in capacity</li> <li>Decimal representation in mass</li> </ul> <b>Convert metric units of measurement</b> <ul style="list-style-type: none"> <li>Converting metric units of capacity</li> <li>Converting metric units of mass</li> </ul>	<b>Measurement: Volume &amp; Capacity</b> LEVEL 4–6 <ul style="list-style-type: none"> <li>By the bucket (DOK 3)</li> </ul> <b>Measurement: Mass</b> LEVEL 5–7 <ul style="list-style-type: none"> <li>Planets in balance (DOK 3)</li> </ul>	<b>(Y6-G) Volume, Capacity and Mass</b> <ul style="list-style-type: none"> <li>Volume and capacity (pp 1–2, 8)</li> <li>Mass (pp 9–16)</li> </ul>

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<b>Unit 4</b> Measurement  <b>Time</b>  Interpret and use timetables and itineraries Duration of events	<b>VC2M6M03</b> measure, calculate and compare elapsed time; interpret and use timetables and itineraries to plan activities and determine the duration of events and journeys		<b>Time problems</b> <ul style="list-style-type: none"> <li>Time Mentals</li> <li>Elapsed Time</li> <li>Using Timetables</li> <li>Australian Time Zones</li> <li>What Time Will it Be?</li> </ul>	<b>Interpret &amp; use timetables</b> <ul style="list-style-type: none"> <li>Interpreting &amp; using timetables</li> </ul>	<b>Measurement: Time</b> LEVEL 4–6 <ul style="list-style-type: none"> <li>Muesli bar time jumble (DOK2)</li> <li>Time for a break? (DOK2)</li> <li>Mrs Baker's cookie conundrum (DOK2)</li> </ul> LEVEL 5–7 <ul style="list-style-type: none"> <li>Find the fastest ferry (DOK2)</li> <li>24-hour travel times (DOK2)</li> <li>Circus timetable (DOK3)</li> </ul>	(Y5-F) <b>Geometry</b> <ul style="list-style-type: none"> <li>Lines and angles (pp 1–6)</li> <li>2D shapes (pp 7–15)</li> <li>Transformation, tessellation and symmetry (pp 16–24)</li> </ul>
<b>Unit 5</b> Probability Statistics  <b>Chance and data</b>  Represent probabilities numerically Estimate and assign probabilities List outcomes Conduct chance experiments Run simulations Record results Compare observations with expected results	<b>VC2M6P01</b> describe probabilities using fractions, decimals and percentages ...  <b>VC2M6P02</b> conduct repeated chance experiments and run simulations with an increasing number of trials using digital tools ...  <b>VC2M6ST01</b> interpret and compare data sets for ordinal and nominal categorical, discrete and continuous numerical variables ...  <b>VC2M6ST03</b> plan and conduct statistical investigations by posing and refining questions ...		<b>Probability</b> <ul style="list-style-type: none"> <li>Simple Probability</li> <li>Probability Scale</li> <li>Complementary Events</li> <li>Dice and Coins</li> </ul>	<b>Assign probabilities</b> <ul style="list-style-type: none"> <li>Probability as a fraction, decimal or percent</li> <li>Probabilities from 0 to 1</li> </ul> <b>Conduct chance experiments</b> <ul style="list-style-type: none"> <li>Conducting chance experiments</li> </ul>	<b>Chance &amp; Probability</b> LEVEL 4–6 <ul style="list-style-type: none"> <li>What are the chances? (DOK3)</li> </ul>	(Y6-G) <b>Chance and Probability</b> <ul style="list-style-type: none"> <li>Chance and probability (pp 1–10)</li> </ul>

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<b>Unit 1</b> Number Algebra <hr/> <b>Number and operations review</b>	<b>VC2M6N04</b> apply knowledge of place value to add and subtract decimals ... <b>VC2M6N05</b> solve problems involving addition and subtraction of fractions ... <b>VC2M6N06</b> multiply and divide decimals by multiples of powers of 10 ... <b>VC2M6N09</b> use mathematical modelling to solve practical problems ...	 <b>Review earlier content</b>	 <b>Review earlier content</b>	 <b>Review earlier content</b>	 <b>Review earlier content</b>	 <b>Review earlier content</b>
<b>Unit 2</b> Space <hr/> <b>3D objects</b> Observe and draw shapes Compare cross-sections Right prisms Connecting objects to their nets	<b>VC2M6SP01</b> compare the parallel cross-sections of objects and recognise their relationships to right prisms			<b>Investigate cross-sections</b> <ul style="list-style-type: none"> <li>Investigating cross-sections</li> </ul>	<b>Geometry: 3D Shapes</b> LEVEL 4–6 <ul style="list-style-type: none"> <li>Pyramids and prisms (DOK 3)</li> </ul> LEVEL 5–7 <ul style="list-style-type: none"> <li>Prisms made of straw (DOK 3)</li> </ul>	<b>(Y6-G) Geometry</b> <ul style="list-style-type: none"> <li>3D shapes (pp 25–32)</li> </ul>
<b>Unit 3</b> Space Number <hr/> <b>Cartesian plane and 2D shape</b> Locate points on Cartesian plane Identify scales Draw lines and polygons Positional data	<b>VC2M6SP02</b> locate points in the 4 quadrants of the Cartesian plane ... <b>VC2M6N01</b> recognise situations, including financial contexts, that use integers ...		<b>The Cartesian plane</b> <ul style="list-style-type: none"> <li>Ordered Pairs</li> <li>Number Plane</li> <li>Graphing from a Table of Values</li> <li>Reading Values from a Line</li> <li>Transformations: Coordinate Plane</li> <li>Rotations: Coordinate Plane</li> </ul>		<b>Geometry: Symmetry, Transformation &amp; Location</b> LEVEL 5–7 <ul style="list-style-type: none"> <li>Calculating coordinates (DOK 2)</li> </ul>	<b>(Y6-G) Position</b> <ul style="list-style-type: none"> <li>Spatial orientation (pp 1–5)</li> <li>Coordinates (pp 6–12)</li> <li>Maps and scale (pp 13–16)</li> </ul> <b>(Y7-H) The Number Plane</b> <ul style="list-style-type: none"> <li>How does it work? (pp 1–8)</li> <li>What else can you do? (pp 19–29)</li> </ul>

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<b>Unit 4</b> Statistics  <b>Data: Interpretation</b>  Statistically informed arguments Plan and conduct statistical investigations Compare distributions	<b>VC2M6ST01</b> interpret and compare data sets for ordinal and nominal categorical, discrete and continuous numerical variables ...  <b>VC2M6ST02</b> identify statistically informed arguments presented in traditional and digital media ...		<b>Analyse &amp; interpret data</b> <ul style="list-style-type: none"> <li>Mode</li> <li>Mode from Stem and Leaf Plot</li> <li>Mode from Frequency Table</li> <li>Data Extremes and Range</li> <li>Stem and Leaf Plots with Range</li> <li>Double Stem and Leaf Plots</li> <li>Line Graphs: Interpretation</li> </ul>	<b>Interpret, compare &amp; describe data sets</b> <ul style="list-style-type: none"> <li>Describing &amp; interpreting data sets</li> </ul> <b>Compare mode, range &amp; shape</b> <ul style="list-style-type: none"> <li>Understanding mode, range &amp; shape of distributions</li> <li>Comparing modes in sets of data</li> </ul> <b>Interpret &amp; evaluate secondary data</b> <ul style="list-style-type: none"> <li>Interpreting &amp; evaluating secondary data</li> </ul>	<b>Statistics &amp; Data:</b> LEVEL 4–6 <ul style="list-style-type: none"> <li>Family ages (DOK 2)</li> <li>Dartboard scores (DOK 2)</li> <li>Messing with the median (DOK 2)</li> <li>Arrange the range (DOK 2)</li> </ul> LEVEL 5–7 <ul style="list-style-type: none"> <li>Spot the mistake! (DOK 3)</li> <li>Missing dot plots (DOK 2)</li> <li>Box plot detective (DOK 2)</li> <li>Show your cards (DOK 3)</li> <li>A slice of the pie (DOK 3)</li> <li>Icy stalactite pie (DOK 3)</li> <li>Lake Scaley fish (DOK 3)</li> </ul>	<b>(Y6-G) Data Representation</b> <ul style="list-style-type: none"> <li>Types of graphs 2 (pp 7–9)</li> <li>Types of graphs 3 (pp 12–19)</li> <li>Collecting and analysing data (pp 22–34)</li> <li>Data investigations (pp 35–39)</li> </ul>
<b>Unit 5</b> Measurement  <b>Measurement review and applications</b>  Choose appropriate units Use measurement in everyday situations	<b>VC2M6M01</b> convert between common metric units of length, mass and capacity ...  <b>VC2M6M02</b> establish the formula for the area of a rectangle and use it to solve practical problems  <b>VC2M6M03</b> measure, calculate and compare elapsed time ...		 <b>Review earlier content</b>	 <b>Review earlier content</b>	<b>Measurement: Length</b> LEVEL 5–7 <ul style="list-style-type: none"> <li>Jumpy and Bouncy (DOK 4)</li> <li>Platinum wire earrings (DOK 3)</li> </ul>	 <b>Review earlier content</b>

# Mathletics

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