

Mathletics Victorian Mathematics V2.0

Scope & Sequence



Level 4

Mathletics

	Term one	Term two	Term three	Term four
Unit 1	Number Whole number and decimals <ul style="list-style-type: none"> Place value of numbers of any size Compare and order numbers of any size Tenths Hundredths 	Number Decimals <ul style="list-style-type: none"> Decimal place value Compare and order decimals Work with money 	Number Algebra Addition and subtraction <ul style="list-style-type: none"> Addition and subtraction using algorithms Inverse operations Round and estimate to solve problems Problem solving 	Number Algebra Patterns and algebra <ul style="list-style-type: none"> Work with related number sentences Explore and generate patterns Find missing values Equivalent number sentences
	Number Algebra Addition and subtraction <ul style="list-style-type: none"> Efficient mental strategies for addition and subtraction 	Number Algebra Patterns and algebra <ul style="list-style-type: none"> Investigate number sequences involving multiples of 3, 4, 6, 7, 8 and 9 Number facts Find unknown numbers 	Number Multiplication and division <ul style="list-style-type: none"> Multiplication and division number sentences Choose efficient strategies to multiply and divide 	Number Operations review <p>Review earlier content</p>
Unit 3	Number Fractions and decimals <ul style="list-style-type: none"> Fractions of a collection Equivalent fractions representations Connect fractions and decimals Count by fractions 	Number Algebra Multiplication and division <ul style="list-style-type: none"> Efficient mental strategies for multiplication and division Multiply by powers of 10 	Number Fractions: Mixed number and improper fractions <ul style="list-style-type: none"> Equivalent fractions and decimals Mixed numerals Improper fractions Simplify fractions 	Measurement Space Angles and 2D shapes <ul style="list-style-type: none"> Classify and compare angles Identify line properties Symmetry
	Measurement Number Length, perimeter and area <ul style="list-style-type: none"> Measure and convert length using mm, cm & m Use decimals to represent measurements Measure perimeter using formal and informal units Measure area using formal and informal units 	Measurement Number Mass, capacity and temperature <ul style="list-style-type: none"> Use measuring equipment and interpret units of measurement, including decimal notation Measure mass using g and kg Measure capacity using mL & L Measure temperature using C 	Measurement Time <ul style="list-style-type: none"> Read time Duration of events Convert units of time 	Probability Statistics Chance and data <ul style="list-style-type: none"> Language of chance Predict outcomes Conduct statistical investigations Data distributions Analyse data displays and visualisations
Unit 5	Statistics Data <ul style="list-style-type: none"> Collect data Use data displays to represent data Interpret and discuss data 	Space 2D shapes and 3D objects <ul style="list-style-type: none"> Shape and object properties Composite shapes Create models of 3D objects 	Space Position <ul style="list-style-type: none"> Use grid reference maps and systems Enlarge and reduce Use directional language 	Measurement Measurement review and applications <ul style="list-style-type: none"> Choose appropriate units Use measurement in everyday situations

Strand	Outcomes and content descriptions	Located
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	T1 U1, U3 T2 U1 T3 U3
	VC2M4N02 investigate number sequences involving multiples of 3, 4, 6, 7, 8 and 9	T2 U2
	VC2M4N03 find equivalent representations of fractions using related denominators and make connections between fractions and decimal notation	T1 U3, U4 T2 U1, U4 T3 U3
	VC2M4N04 count by multiples of quarters, halves and thirds, including mixed numerals; locate and represent these fractions as numbers on number lines	T1 U3 T3 U3
	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	T2 U3 T3 U2 T4 U2
	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	T1 U2 T2 U3 T3 U1, U2 T4 U1, U2
	VC2M4N07 choose and use estimation and rounding to check and explain the reasonableness of calculations, including the results of financial transactions	T1 U2 T3 U1, U2 T4 U2
	VC2M4N08 solve problems involving purchases and the calculation of change to the nearest 5 cents with and without digital tools	T2 U1 T4 U2
	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	T1 U2 T2 U1, U3, U4 T3 U1, U2, U3 T4 U2
	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	T2 U2
Algebra	VC2M4A01 find unknown values in numerical equations involving addition and subtraction, using the properties of numbers and operations	T1 U2 T2 U2 T3 U1 T4 U1 T2 U2, U3
	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	T2 U2, U3

Strand	Outcomes and content descriptions	Located
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	T1 U4 T2 U4 T3 U4 T4 U5
	VC2M4M02 recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces, using appropriate formal and informal units	T1 U4 T4 U5
	VC2M4M03 solve problems involving the duration of time including situations involving 'am' and 'pm' and conversions between units of time	T3 U4 T4 U5
	VC2M4M04 estimate and compare angles using angle names including acute, obtuse, straight angle, reflex and revolution, and recognise their relationship to a right angle	T4 U3
Space	VC2M4SP01 explain and compare the geometric properties of two-dimensional shapes and three-dimensional objects	T2 U5
	VC2M4SP03 represent and approximate composite shapes and objects in the environment, using combinations of familiar shapes and objects	T2 U5
	AC9M4SP03 create and interpret grid reference systems using grid references and directions to locate and describe positions and pathways	T3 U5
	AC9M4SP04 recognise line and rotational symmetry of shapes and create symmetrical patterns and pictures, using dynamic geometry software where appropriate	T4 U3
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	T1 U5 T4 U4
	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	T1 U5 T4 U4
	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	T4 U4
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	T1 U5 T4 U4
	VC2M4P02 conduct repeated chance experiments to observe relationships between outcomes in games and other chance situations, and identify and describe the variation in results	T1 U5 T4 U4

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
Unit 1 Number Whole number and decimals Place value of numbers of any size Compare and order numbers of any size Tenths Hundredths	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	Y4 Whole number and Place Value <ul style="list-style-type: none"> Numbers to at least 100 000s Place value Partitioning Using number lines Rounding Compare numbers Order numbers Y4 Decimals <ul style="list-style-type: none"> Decimal tenths Decimal hundredths Place value to hundredths 	REVIEW Whole Numbers & Place Value <ul style="list-style-type: none"> Place Value - Thousands Place value to millions Numbers from Words to Digits 1 Numbers from Words to Digits 2 Partitioning Partition and Rename 2 Partition and Rename 3 Smallest and largest numbers Introducing Decimals <ul style="list-style-type: none"> Decimals from Words to Digits 1 Decimals on the Number Line Decimal Place Value 	Numbers to 1 000 000 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Introducing decimal notation Understanding decimal tenths Understanding decimal hundredths Partitioning decimal hundredths 	Number & Algebra: Whole Number LEVEL 4–6 <ul style="list-style-type: none"> Number & Algebra: Whole Number (DOK 3) Clued in (DOK 2) Mysterious numbers (DOK 2) 	(Y6-G) Reading and Understanding Whole Numbers <ul style="list-style-type: none"> Read and understand numbers (pp 1–8) Round and estimate (pp 19–20) (Y4-E) Fractions <ul style="list-style-type: none"> Fractions, decimals and percentages (pp 24–28)
Unit 2 Number Algebra Addition and subtraction Efficient mental strategies for addition and subtraction	VC2M4N06 develop efficient mental and written strategies and use appropriate digital tools for solving ... VC2M4N07 choose and use estimation and rounding ... VC2M4N09 use mathematical modelling to solve practical problems that involve additive and multiplicative situations ... VC2M4A01 find unknown values in numerical equations involving addition and subtraction ...	Y4 Addition <ul style="list-style-type: none"> Make 10, 100 or 1000 Split strategy + Partitioning strategy + Y4 Subtraction <ul style="list-style-type: none"> Using addition to subtract Split strategy – Partitioning strategy – 	Strategies to add & subtract <ul style="list-style-type: none"> Bump Add and Subtract Jump Add and Subtract Complements to 10, 20, 50 Split Add and Subtract Compensation - Add 	Addition & subtraction strategies <ul style="list-style-type: none"> 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 	Number & Algebra: Addition & Subtraction LEVEL 2–4 <ul style="list-style-type: none"> Calculate through this maze (DOK 3) LEVEL 3–5 <ul style="list-style-type: none"> Adding up, arithmagons! (DOK 3) All boxed up (DOK 2) 	(Y5-F) Addition and Subtraction <ul style="list-style-type: none"> Addition mental strategies (pp 1–8) Subtraction mental strategies (pp 9–16)
Unit 3 Number Fractions and decimals Fractions of a collection Equivalent fractions representations Connect fractions and decimals Count by fractions	VC2M4N03 find equivalent representations of fractions ... VC2M4N04 count by multiples of quarters, halves and thirds ... VC2M4N01 recognise and extend the application of place value to tenths and hundredths ...	Y4 Fractions <ul style="list-style-type: none"> Unit fractions Proper fractions Equivalence Counting by fractions Y4 Decimals <ul style="list-style-type: none"> Fractions and decimals 	Fractions & equivalents <ul style="list-style-type: none"> What Fraction is Shaded? What fraction is Shaded 1 Equivalence Counting by fractions Equivalent Fraction Wall 2 Counting with fractions on a Number Line Fractions on a Number Line Thirds and Sixths Partition into Equal Parts Problem solving with models <ul style="list-style-type: none"> Fractions of a Collection 1 Fractions of a Collection 2 	Count by fractions & mixed numerals <ul style="list-style-type: none"> Counting in halves & quarters Counting in halves, quarters & eighths Counting in thirds Counting in tenths Counting in simple fractions on a number line Equivalent fractions <ul style="list-style-type: none"> Investigating equivalent fractions less than 1 Patterns in equivalent fractions Using multiplication to find equivalent fractions Connect decimals & fraction <ul style="list-style-type: none"> Connecting fractions & decimal notation 	Number & Algebra: Fractions LEVEL 2–4 <ul style="list-style-type: none"> The grasshoppers who jumped a fraction (DOK 2) 	(Y4-E) Fractions <ul style="list-style-type: none"> Working with fractions (pp 1–11) Fractions, decimals and percentages (pp 24–28) (Y5-F) Fractions, Decimals and Percentages <ul style="list-style-type: none"> Fractions (pp 1–8)





Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<p>Unit 4 Measurement Number</p> <p>Length, perimeter and area</p> <p>Measure and convert length using mm, cm & m</p> <p>Use decimals to represent measurements</p> <p>Measure perimeter using formal and informal units</p> <p>Measure area using formal and informal units</p>	<p>VC2M4M01 use scaled and digital instruments to interpret unmarked and partial units to measure and compare ...</p> <p>VC2M4M02 recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces ...</p> <p>VC2M4N03 find equivalent representations of fractions using related denominators ...</p>		<p>Using scaled instruments</p> <ul style="list-style-type: none"> • How Long is That? • Measuring Length • Measure to the Nearest Half Centimetre <p>Perimeter & area</p> <ul style="list-style-type: none"> • Biggest Shape • Equal Areas • Area of Shapes • Perimeter of Shapes 	<p>Length, mass, capacity & temperature</p> <ul style="list-style-type: none"> • Metric units of length • Length & 3D objects <p>Measure perimeter</p> <ul style="list-style-type: none"> • Introducing perimeter • Measuring perimeter <p>Measure area</p> <ul style="list-style-type: none"> • Measuring & estimating area using square units • Introducing area using formal units • Measuring & comparing regular & irregular shapes • Measuring area using formal units 	<p>Measurement: Length LEVEL 3–5</p> <ul style="list-style-type: none"> • Different shape, same perimeter (DOK 2) <p>LEVEL 2–4</p> <ul style="list-style-type: none"> • Rectangles of equal area (DOK 3) 	<p>(Y4-E) Length, Area and Perimeter</p> <ul style="list-style-type: none"> • Units of length (pp 1–7) • Perimeter (pp 8–14) • Area (pp 15–22)
<p>Unit 5 Statistics</p> <p>Data</p> <p>Collect data</p> <p>Use data displays to represent data</p> <p>Interpret and discuss data</p>	<p>VC2M4ST01 acquire data for categorical and discrete numerical variables to address a question of interest or purpose using digital tools ...</p> <p>VC2M4ST02 analyse the effectiveness of different displays or visualisations in illustrating and comparing data distributions ...</p> <p>VC2M4P01 describe possible everyday events and the possible outcomes of chance experiments ...</p> <p>VC2M4P02 conduct repeated chance experiments to observe relationships between outcomes in games and other chance situations ...</p>		<p>Collect, display & interpret data</p> <ul style="list-style-type: none"> • Picture Graphs: with scale & half symbols • Making Picture Graphs: With Scale • Column Graphs • Reading from a Column Graph • Histograms 	<p>Represent data with many-to-one graphs</p> <ul style="list-style-type: none"> • Column graphs using many-to-one correspondence • Picture graphs with many-to-one correspondence <p>Evaluate & compare data displays</p> <ul style="list-style-type: none"> • Evaluating & comparing data displays • Evaluating the shape of data sets <p>Methods of data collection</p> <ul style="list-style-type: none"> • Surveys & sorting data 	<p>Statistics & Data LEVEL 3–5</p> <ul style="list-style-type: none"> • Watch out! (DOK 2) • Create a line graph (DOK 3) • Leah's sibling survey (DOK 4) • Create a picture graph (DOK 3) 	<p>(Y4-E) Chance and Data</p> <ul style="list-style-type: none"> • Data (pp 12–25)




Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
Unit 1 Number Decimals and money Decimal place value Compare and order decimals Work with money	VC2M4N01 recognise and extend the application of place value ... VC2M4N03 find equivalent representations of fractions ... VC2M4N08 solve problems involving purchases and the calculation of change ... VC2M4N09 use mathematical modelling to solve practical problems ...	Y4 Decimals <ul style="list-style-type: none"> • 10 or 100 times larger or smaller • Partitioning decimals • Tenths on the number line • Hundredths on the number line • The nearest whole number 	Introducing Decimals <ul style="list-style-type: none"> • Who's got the Money? • Money 	Decimals used in money <ul style="list-style-type: none"> • Understanding decimals used in money Solving money problems <ul style="list-style-type: none"> • Using estimating with money • Addition & subtraction money problems Round decimal tenths & hundredths <ul style="list-style-type: none"> • Rounding decimal tenths & hundredths 	Number & Algebra: Money LEVEL 3–5 <ul style="list-style-type: none"> • How much money? (DOK 3) 	(Y4-E) Addition and Subtraction <ul style="list-style-type: none"> • Money (pp 36–41)
Unit 2 Number Algebra Patterns and algebra Investigate number sequences involving multiples of 3, 4, 6, 7, 8 and 9 Number facts Find unknown numbers	VC2M4N02 investigate number sequences involving multiples of 3, 4, 6, 7, 8 and 9 VC2M4N10 follow and create algorithms involving a sequence of steps ... VC2M4A01 find unknown values in numerical equations ... VC2M4A02 recall and demonstrate proficiency with multiplication facts ...	Coming soon	Patterns & missing numbers <ul style="list-style-type: none"> • Odd and Even Numbers 1 Patterns in multiplication & division <ul style="list-style-type: none"> • 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 	Multiplication & division facts <ul style="list-style-type: none"> • 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 Investigating sequences with multiples <ul style="list-style-type: none"> • Investigating sequences with multiples 	Number & Algebra: Multiplication & Division LEVEL 3–5 <ul style="list-style-type: none"> • Pair numbers to reach the product (DOK 2) • Multiply or divide to make true number sentences (DOK 2) • Like family! Relating multiplication and division (DOK 2) 	(Y4-E) Multiplication and Division <ul style="list-style-type: none"> • Multiplication facts (pp 1–7) • Using known facts (pp 8–12)
Unit 3 Number Algebra Multiplication and division Efficient mental strategies for multiplication and division Multiply by powers of 10	VC2M4N06 develop efficient mental and written strategies and use appropriate digital tools for solving ... VC2M4N05 solve problems involving multiplying or dividing natural numbers ... VC2M4N09 use mathematical modelling to solve practical problems ... VC2M4A02 recall and demonstrate proficiency with multiplication facts ...	Y4 Multiplication <ul style="list-style-type: none"> • Multiplication facts • Doubling and tripling • Multiples of 10 and 100 Y4 Division <ul style="list-style-type: none"> • Arrays and division • Division facts 6, 7, 8 and 9 • Division facts to 10×10 • Multiples of 10 and 100 	Patterns in multiplication & division <ul style="list-style-type: none"> • Multiplying by 10, 100, 1000 • Dividing by 10, 100, 1000 Strategies to multiply & divide <ul style="list-style-type: none"> • Double and Halve to Multiply • Fact Families: Multiply and Divide • Multiplication Arrays • Arrays 1 • Arrays 2 • Related Facts 2 • Model multiplication to 5×5 	Mult/div by multiples of 10, 100 & 1000 <ul style="list-style-type: none"> • 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 Mult & div strategies, no remainder <ul style="list-style-type: none"> • Multiplication strategies: 1-digit numbers • Using the conventions of multiplication • Inverse facts: multiplication & division • Practising multiplication strategies Use estimation & rounding <ul style="list-style-type: none"> • Estimating with multiplication & division Multiplication & division word problems <ul style="list-style-type: none"> • Expressing equations as word problems • Solving multiplication & division word problems 	Number & Algebra: Multiplication & Division LEVEL 3–5 <ul style="list-style-type: none"> • Pick your numbers (DOK 2) • Can you predict the remainder? (DOK 2) • Exploring a number trail (DOK 3) • Magic multiplication grid (DOK 2) 	(Y4-E) Multiplication and Division <ul style="list-style-type: none"> • Mental multiplication strategies (pp 13–21) • Division (pp 22–28) • Mental division strategies (pp 29–33)

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<p>Unit 4 Measurement Number</p> <hr/> <p>Mass, capacity and temperature</p> <p>Use measuring equipment and interpret units of measurement, including decimal notation</p> <p>Measure mass using g and kg</p> <p>Measure capacity using mL & L</p> <p>Measure temperature using C</p>	<p>VC2M4M01 use scaled and digital instruments to interpret unmarked and partial units to measure and compare ...</p> <p>VC2M4N03 find equivalent representations of fractions ...</p> <p>VC2M4N09 use mathematical modelling to solve practical problems that involve additive and multiplicative situations ...</p>		<p>Using scaled instruments</p> <ul style="list-style-type: none"> • How Heavy? • What's the Temperature (Celsius)? 	<p>Length, mass, capacity & temperature</p> <ul style="list-style-type: none"> • Measuring temperature • Measuring capacity in millilitres • Measuring mass in grams & kilograms • Reading scales with metric units 		<p>(Y4-E) Volume, Capacity and Mass</p> <ul style="list-style-type: none"> • Volume and capacity (pp 1–4) • Mass (pp 9–13)
<p>Unit 5 Space</p> <hr/> <p>2D shapes and 3D objects</p> <p>Shape and object properties</p> <p>Composite shapes</p> <p>Create models of 3D objects</p>	<p>VC2M4SP01 represent and approximate composite shapes and objects in the environment, using combinations of familiar shapes and objects</p> <p>VC2M4SP02 represent and approximate composite shapes and objects in the environment, using combinations of familiar shapes and objects</p>		<p>Shapes & solids</p> <ul style="list-style-type: none"> • Relate Shapes and Solids • Collect the Objects 2 	<p>Composing & decomposing 2D shapes</p> <ul style="list-style-type: none"> • Composing & decomposing 2D shapes <p>Identify composite shapes & objects</p> <ul style="list-style-type: none"> • Identify composite shapes & objects 	<p>Geometry: 2D Shapes LEVEL 2–4</p> <ul style="list-style-type: none"> • Transformer shapes (DOK 3) • Shape cutter (DOK 2) • Triangle tiles (DOK 3) <p>LEVEL 3–5</p> <ul style="list-style-type: none"> • Big shapes made smaller (DOK 2) <p>Geometry: 3D Shapes LEVEL 3–5</p> <ul style="list-style-type: none"> • Net animals (DOK 2) • Straw building (DOK 3) • Nets and prisms (DOK 3) 	<p>(Y4-E) Space, Shape and Position</p> <ul style="list-style-type: none"> • Investigating 3D shapes (pp 10–17)

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<p>Unit 1 Number Algebra</p> <hr/> <p>Addition and subtraction</p> <p>Addition and subtraction using algorithms Inverse operations Round and estimate to solve problems Problem solving</p>	<p>VC2M4N06 develop efficient mental and written strategies and use appropriate digital tools ...</p> <p>VC2M4N07 choose and use estimation and rounding ...</p> <p>VC2M4N09 use mathematical modelling to solve practical problems that involve additive and multiplicative situations ...</p> <p>VC2M4A01 find unknown values in numerical equations involving addition and subtraction ...</p>	<p>Y4 Addition</p> <ul style="list-style-type: none"> • Bridging strategy + • Rounding strategy + • Written methods + <p>Y4 Subtraction</p> <ul style="list-style-type: none"> • Bridging strategy – • Rounding strategy – • Written methods – 	<p>Strategies to add & subtract</p> <ul style="list-style-type: none"> • Column Addition 1 • Columns that Subtract • Subtract Numbers • Estimate Sums • Estimate Differences • Magic Symbols 1 <p>Problem solving with models</p> <ul style="list-style-type: none"> • Bar Model Problems 1 • Bar Model Problems 2 	<p>Addition & subtraction using algorithms</p> <ul style="list-style-type: none"> • Addition algorithms (without regrouping) • Addition algorithms (with regrouping) • Addition algorithms (with & without regrouping) • Subtraction algorithms (without decomposing) • Subtraction algorithms (with decomposing) <p>Use estimation & rounding</p> <ul style="list-style-type: none"> • Rounding & estimating with addition • Rounding & estimating with subtraction • Checking accuracy of addition & subtraction <p>Addition & subtraction word problems</p> <ul style="list-style-type: none"> • Addition & subtraction word problems • Posing addition & subtraction problems • Expressing word problems as equations <p>Addition & subtraction number sentences</p> <ul style="list-style-type: none"> • Using inverse operations for add/sub equations • Relationship between addition & subtraction • Equivalent number sentences • Word problems for finding unknown quantities 	<p>Number & Algebra: Addition & Subtraction LEVEL 3–5</p> <ul style="list-style-type: none"> • Missing numbers! (DOK 2) • Shuffle those numbers! (DOK 3) • Mystery number (DOK 3) • Explore an addition game (DOK 3) • Exchanging the ones (DOK 3) 	<p>(Y4-E) Addition and Subtraction</p> <ul style="list-style-type: none"> • Written methods (pp 28–35)
<p>Unit 2 Number</p> <hr/> <p>Multiplication and division</p> <p>Multiplication and division number sentences Choose efficient strategies to multiply and divide</p>	<p>VC2M4N06 develop efficient mental and written strategies and use appropriate digital tools ...</p> <p>VC2M4N07 choose and use estimation and rounding ...</p> <p>VC2M4N05 solve problems involving multiplying or dividing natural numbers ...</p> <p>VC2M4N09 use mathematical modelling to solve practical problems that involve additive and multiplicative situations ...</p>	<p>Y4 Multiplication</p> <ul style="list-style-type: none"> • Partitioning strategy \times • Area model <p>Y4 Division</p> <ul style="list-style-type: none"> • Partitioning strategy \div • Area model 	<p>Strategies to multiply & divide</p> <ul style="list-style-type: none"> • Grid Methods 1 • Problems: Times and Divide • Estimation: Multiply and Divide <p>Problem solving with models</p> <ul style="list-style-type: none"> • Multiply and Divide Problems 1 	<p>Mult & div strategies, no remainder</p> <ul style="list-style-type: none"> • 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 		<p>(Y4-E) Multiplication and Division</p> <ul style="list-style-type: none"> • Mental multiplication strategies (pp 13–21) • Division (pp 22–28) • Mental division strategies (pp 29–33)

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
Unit 3 Number Fractions: Mixed number and improper fractions Equivalent fractions and decimals Mixed numerals Improper fractions Simplify fractions	VC2M4N01 recognise and extend the application of place value to tenths and hundredths ... VC2M4N03 find equivalent representations of fractions ... VC2M4N04 count by multiples of quarters, halves and thirds ... VC2M4N09 use mathematical modelling to solve practical problems that involve additive and multiplicative situations ...	Y4 Fractions <ul style="list-style-type: none"> Mixed numbers and improper fractions Mixed numbers to improper fractions Improper fractions to mixed numbers 	Fractions & equivalents <ul style="list-style-type: none"> What Mixed Number Is Shaded? Simplifying Fractions 	Equivalent fractions <ul style="list-style-type: none"> Investigating equivalent fractions greater than 1 Convert fraction types using models <ul style="list-style-type: none"> Converting mixed numerals to improper fractions 		(Y4-E) Fractions <ul style="list-style-type: none"> Types of fractions (pp 12–23)
Unit 4 Measurement Time Read time Duration of events Convert units of time	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 VC2M4M03 solve problems involving the duration of time including situations involving 'am' and 'pm' and conversions between units of time		Time conversions <ul style="list-style-type: none"> What is the Time? Time Conversions: Whole Numbers 1 Time Conversions: Whole Numbers 2 Time Conversions: Simple Fractions Time Conversions: Simple Decimals 	Convert units of time <ul style="list-style-type: none"> Converting units of time Solve duration of time problems <ul style="list-style-type: none"> Understanding am & pm notation Solving duration of time problems 	Measurement: Time LEVEL 3–5 <ul style="list-style-type: none"> Comparing different measures of time (DOK 2) A lesson in time (DOK 2) 	(Y4-E) Time <ul style="list-style-type: none"> Telling time (pp 1–6) Measuring time (pp 7–14)
Unit 5 Space Position Use grid reference maps and systems Enlarge and reduce Use directional language	VC2M4SP03 create and interpret grid reference systems using grid references and directions to locate and describe positions and pathways		Describing position <ul style="list-style-type: none"> Coordinate Meeting Place Map Coordinates Using a key What Direction was That? More Directions! 	Create & interpret grid references <ul style="list-style-type: none"> Working with grid reference systems 	Geometry: Symmetry, Transformation & Location LEVEL 2–4 <ul style="list-style-type: none"> Mighty maze (DOK 4) LEVEL 3–5 <ul style="list-style-type: none"> Map the way (DOK 2) Program the robot (DOK 3) Drawing with grids (DOK 3) 	(Y4-E) Space, Shape and Position <ul style="list-style-type: none"> Position (pp 18–24)

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
Unit 1 Number Algebra Patterns and algebra Work with related number sentences Explore and generating patterns Find missing values Equivalent number sentences	VC2M4N06 develop efficient mental and written strategies and use appropriate digital tools for solving ... VC2M4A01 find unknown values in numerical equations involving addition and subtraction, using the properties of numbers and operations	Coming soon	Patterns & missing numbers <ul style="list-style-type: none"> Describing Patterns Missing Values I am Thinking of a Number! Balance Numbers to 20 	Sequences & patterns <ul style="list-style-type: none"> 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 	Number & Algebra: Money LEVEL 3–5 <ul style="list-style-type: none"> Stick squares (DOK 3) Trains and number patterns (DOK 3) Decorating with tiles (DOK 4) 	Y4-E Patterns and Algebra <ul style="list-style-type: none"> Patterns and functions (pp 1–12) Equations and equivalence (pp 13–21)
Unit 2 Number Operations review	VC2M4N05 solve problems involving multiplying or dividing natural numbers ... VC2M4N06 develop efficient mental and written strategies ... VC2M4N07 choose and use estimation and rounding ... VC2M4N08 solve problems involving purchases and the calculation of change ... VC2M4N09 use mathematical modelling to solve practical problems ...	Y4 Addition <ul style="list-style-type: none"> Problem-solving with + Y4 Subtraction <ul style="list-style-type: none"> Problem-solving with +− Y4 Multiplication <ul style="list-style-type: none"> Problem-solving with × Y4 Division <ul style="list-style-type: none"> Problem-solving with ×÷ 	 Review earlier content	 Review earlier content	 Review earlier content	 Review earlier content
Unit 3 Measurement Space Angles and 2D shapes Classify and compare angles Identify line properties Symmetry	VC2M4M04 estimate and compare angles using angle names including acute, obtuse, straight angle, reflex and revolution, and recognise their relationship to a right angle VC2M4SP04 recognise line and rotational symmetry of shapes and create symmetrical patterns and pictures, using dynamic geometry software where appropriate		Angles <ul style="list-style-type: none"> Equal Angles Comparing Angles Right Angle Relation What Type of Angle? Symmetry <ul style="list-style-type: none"> Symmetry Symmetry or Not? Rotational Symmetry 	Classify angles <ul style="list-style-type: none"> Classifying angles Line & rotational symmetry <ul style="list-style-type: none"> Recognising & drawing line symmetry Rotational symmetry Symmetrical patterns, pictures & shapes <ul style="list-style-type: none"> Creating & drawing symmetrical designs Recognising tessellations 	Geometry: Angles LEVEL 3–5 <ul style="list-style-type: none"> Angles and answers (DOK 3) Geometry: Symmetry, Transformation & Location LEVEL 2–4 <ul style="list-style-type: none"> Flutter bye (DOK 2) Reflections of 'R' (DOK 3) 	Y4-E Space, Shape and Position <ul style="list-style-type: none"> Lines, angles and shapes (pp 1–3, 8–9) Y6-G Geometry <ul style="list-style-type: none"> Transformation, tessellation and symmetry (p 17)

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<p>Unit 4 Probability Statistics</p> <hr/> <p>Chance and data</p> <p>Language of chance</p> <p>Predict outcomes</p> <p>Conduct statistical investigations</p> <p>Data distributions</p> <p>Analyse data displays and visualisations</p>	<p>VC2M4P01 describe possible everyday events and the possible outcomes of chance experiments ...</p> <p>VC2M4P02 conduct repeated chance experiments ...</p> <p>VC2M4ST01 acquire data for categorical and discrete numerical variables ...</p> <p>VC2M4ST02 analyse the effectiveness of different displays or visualisations ...</p> <p>VC2M4ST03 conduct statistical investigations ...</p>		<p>Probability</p> <ul style="list-style-type: none"> Chance Gauge What are the Chances? Counting Techniques 1 	<p>Chance events</p> <ul style="list-style-type: none"> Describing the chance of events occurring Exploring non-simultaneous everyday events Independent & dependent events <p>Conduct chance experiments</p> <ul style="list-style-type: none"> Conducting chance experiments Investigating equally likely outcomes of chance 	<p>Chance & Probability LEVEL 3–5</p> <ul style="list-style-type: none"> Pulling marbles (DOK 3) Independent vs. not independent (DOK 3) <p>LEVEL 4–6</p> <ul style="list-style-type: none"> Healthy lunch (DOK 2) Double dice (DOK 4) 	<p>(Y4-E) Chance and Data</p> <ul style="list-style-type: none"> Chance (pp 1–11)
<p>Unit 5 Measurement</p> <hr/> <p>Measurement review and application</p> <p>Choose appropriate units</p> <p>Use measurement in everyday situations</p>	<p>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</p> <p>VC2M4M02 recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces, using appropriate formal and informal units</p> <p>VC2M4M03 solve problems involving the duration of time including situations involving 'am' and 'pm' and conversions between units of time</p>		 Classroom directed	 Classroom directed	<p>Measurement: Length LEVEL 3–5</p> <ul style="list-style-type: none"> Area and perimeter challenge (DOK 3) <p>LEVEL 2–4</p> <ul style="list-style-type: none"> Perimeter problems (DOK 3) Planning that pool (DOK 3) 	 Classroom directed

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