Mathletics

Queensland (Australian Curriculum v9)

Scope & Sequence

Year 4

Mathletics

Scope & Sequence
Australian Curriculum v9 Yr 04

Yearly overview
Queensland | Year 4

Mathletics

	Term one	Term two	Term three	Term four
Unit 1	**Number** **Whole number and decimals** • Place value of numbers of any size • Compare and order numbers of any size • Tenths • Hundredths	**Number** **Decimals** • Decimal place value • Compare and order decimals • Work with money	**Number** **Algebra** **Addition and subtraction** • Addition and subtraction using algorithms • Inverse operations • Round and estimate to solve problems • Problem solving	**Number** **Algebra** **Patterns and algebra** • Work with related number sentences • Explore and generate patterns • Find missing values • Equivalent number sentences
Unit 2	**Number** **Algebra** **Addition and subtraction** • Efficient mental strategies for addition and subtraction	**Number** **Algebra** **Patterns and algebra** • Number facts • Properties of odd and even numbers • Find unknown numbers	**Number** **Multiplication and division** • Multiplication and division number sentences • Choose efficient strategies to multiply and divide	**Number** **Operations review** Review earlier content
Unit 3	**Number** **Fractions and decimals** • Fractions of a collection • Equivalent fractions representations • Connect fractions and decimals • Count by fractions	**Number** **Algebra** **Multiplication and division** • Efficient mental strategies for multiplication and division • Multiply by powers of 10	**Number** **Fractions: Mixed number and improper fractions** • Equivalent fractions and decimals • Mixed numerals • Improper fractions • Simplify fractions	**Measurement** **Space** **Angles and 2D shapes** • Classify and compare angles • Identify line properties • Symmetry
Unit 4	**Measurement** **Number** **Length, perimeter and area** • 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** • 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** • Read time • Duration of events • Convert units of time	**Probability** **Statistics** **Chance and data** • Language of chance • Predict outcomes • Conduct statistical investigations • Data distributions • Analyse data displays and visualisations
Unit 5	**Statistics** **Data** • Collect data • Use data displays to represent data • Interpret and discuss data	**Space** **2D shapes and 3D objects** • Composite shapes • Create models of 3D objects	**Space** **Position** • Use grid reference maps and systems • Enlarge and reduce • Use directional language	**Measurement** **Measurement review and applications** • Choose appropriate units • Use measurement in everyday situations

Scope & Sequence
Australian Curriculum v9 Yr 04

Outcome map
Queensland | Year 4

Mathletics

Strand	Outcomes and content descriptions	Located
Number	**AC9M4N01** 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
	AC9M4N02 explain and use the properties of odd and even numbers	T2 U2
	AC9M4N03 find equivalent representations of fractions using related denominators and make connections between fractions and decimal notation	T1 U3, U4 T2 U1, U4 T3 U3
	AC9M4N04 count by fractions including mixed numerals; locate and represent these fractions as numbers on number lines	T1 U3 T3 U3
	AC9M4N05 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
	AC9M4N06 develop efficient 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
	AC9M4N07 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
	AC9M4N08 use mathematical modelling to solve practical problems involving 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
	AC9M4N09 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	**AC9M4A01** 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
	AC9M4A02 recall and demonstrate proficiency with multiplication facts up to 10 × 10 and related division facts; extend and apply facts to develop efficient mental strategies for computation with larger numbers without a calculator	T2 U2, U3
Measurement	**AC9M4M01** interpret unmarked and partial units when measuring and comparing attributes of length, mass, capacity, duration and temperature, using scaled and digital instruments and appropriate units	T1 U4 T2 U4 T3 U4 T4 U5
	AC9M4M02 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
	AC9M4M03 solve problems involving the duration of time including situations involving “am” and “pm” and conversions between units of time	T3 U4 T4 U5
	AC9M4M04 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	**AC9M4SP01** represent and approximate composite shapes and objects in the environment, using combinations of familiar shapes and objects	T2 U5
	AC9M4SP02 create and interpret grid reference systems using grid references and directions to locate and describe positions and pathways	T3 U5
	AC9M4SP03 recognise line and rotational symmetry of shapes and create symmetrical patterns and pictures, using dynamic geometric software where appropriate	T4 U3
Statistics	**AC9M4ST01** acquire data for categorical and discrete numerical variables to address a question of interest or purpose using digital tools; represent data using many to-one pictographs, column graphs and other displays or visualisations; interpret and discuss the information that has been created	T1 U5 T4 U4
	AC9M4ST02 analyse the effectiveness of different displays or visualisations in illustrating and comparing data distributions, then discuss the shape of distributions and the variation in the data	T1 U5 T4 U4
	AC9M4ST03 conduct statistical investigations, collecting data through survey responses and other methods; record and display data using digital tools; interpret the data and communicate the results	T4 U4
Probability	**AC9M4P01** describe possible everyday events and the possible outcomes of chance experiments and order outcomes or events based on their likelihood of occurring; identify independent or dependent events	T4 U4
	AC9M4P02 conduct repeated chance experiments to observe relationships between outcomes; identify and describe the variation in results	T4 U4

Scope & Sequence
Australian Curriculum v9 Yr 04

Term 1
Queensland | Year 4

Mathletics

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	**AC9M4N01** 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** • Numbers to at least 100 000s • Place value • Partitioning • Using number lines • Rounding • Compare numbers • Order numbers **Y4 Decimals** • Decimal tenths • Decimal hundredths • Place value to hundredths	**Introducing Decimals** • Decimals from Words to Digits 1 • Decimals on the Number Line • Decimal Place Value **REVIEW whole numbers & place value** • Place Value to Thousands • Place Value to Millions • Numbers from Words to Digits 1 • Numbers from Words to Digits 2 • Partition and Rename 2 • Partition and Rename 3 • Smallest and largest numbers	**Numbers to 1 000 000** • Reading & representing numbers to 6 digits • Comparing & ordering numbers to 6 digits • Place value to 6 digits • Partitioning numbers to 6 digits • Counting by ones, tens & hundreds **Numbers of any size** • Reading & representing numbers of any size • Comparing & ordering numbers of any size • Place value of numbers of any size • Partitioning numbers of any size **Place value to hundredths** • Introducing decimal notation • Understanding decimal tenths • Understanding decimal hundredths	**Number & Algebra: Whole Number** LEVEL 4–6 • Number & Algebra: Whole Number (DOK 3) • Clued in (DOK 2) • Mysterious numbers (DOK 2)	(Y6-G) **Reading and Understanding Whole Numbers** • Read and understand numbers (pp 1–8) • Round and estimate (pp 19–20) (Y4-E) **Fractions** • Fractions, decimals and percentages (pp 24–28)
Unit 2 Number Algebra **Addition and subtraction** Efficient mental strategies for addition and subtraction	**AC9M4N06** develop efficient strategies and use appropriate digital tools for solving problems ... **AC9M4N07** choose and use estimation and rounding ... **AC9M4N08** use mathematical modelling to solve practical problems involving additive and multiplicative situations ... **AC9M4A01** find unknown values in numerical equations involving addition and subtraction ...	**Y4 Addition** • Make 10, 100 or 1000 • Split strategy + • Partitioning strategy + **Y4 Subtraction** • Using addition to subtract • Split strategy – • Partitioning strategy –	**Efficient strategies with operations** • Bump Add and Subtract • Jump Add and Subtract • Complements to 10, 20, 50 • Split Add and Subtract • Compensation - Add	**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	**Number & Algebra: Addition & Subtraction** LEVEL 2–4 • Calculate through this maze (DOK 3) LEVEL 3–5 • Adding up, arithmagons! (DOK 3) • All boxed up (DOK 2)	(Y5-F) **Addition and Subtraction** • 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	**AC9M4N03** find equivalent representations of fractions ... **AC9M4N04** count by fractions including mixed numerals ... **AC9M4N01** recognise and extend the application of place value to tenths and hundredths ...	**Y4 Fractions** • Unit fractions • Proper fractions • Equivalence • Counting by fractions **Y4 Decimals** • Fractions and decimals	**Fractions & equivalents** • What Fraction is Shaded? • What fraction is Shaded 1 • Equivalent Fraction Wall 1 • Equivalent Fraction Wall 2 • Fractions on a Number Line • Thirds and Sixths • Identifying Fractions on a Number Line **Problem solving with models** • Fractions of a Collection 1 • Fractions of a Collection 2	**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 **Equivalent fractions** • Investigating equivalent fractions less than 1 • Patterns in equivalent fractions • Using multiplication to find equivalent fractions **Connect decimals & fraction** • Connecting fractions & decimal notation	**Number & Algebra: Fractions** LEVEL 2–4 • The grasshoppers who jumped a fraction (DOK 2)	(Y4-E) **Fractions** • Working with fractions (pp 1–11) • Fractions, decimals and percentages (pp 24–28) (Y5-F) **Fractions, Decimals and Percentages** • Fractions (pp 1–8)

Scope & Sequence
Australian Curriculum v9 Yr 04

Term 1
Queensland | Year 4

Mathletics

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
Unit 4 Measurement Number **Length, perimeter and area** 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	**AC9M4M01** interpret unmarked and partial units when measuring and comparing attributes of length, mass, capacity, duration and temperature ... **AC9M4M02** recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces ... **AC9M4N03** find equivalent representations of fractions using related denominators ...		**Measuring converting & comparing** • How Long is That? • Measuring Length • Measure to the Nearest Half Centimetre • Biggest Shape • Equal Areas • Area of Shapes • Perimeter of Shapes **Introducing Decimals** • Centimetres and Metres	**Length, mass, capacity & temperature** • Metric units of length • Length & 3D objects **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	**Measurement: Length** LEVEL 3–5 • Different shape, same perimeter DOK 2 LEVEL 2–4 • Rectangles of equal area DOK 3	Y4-E **Length, Area and Perimeter** • Units of length (pp 1–7) • Perimeter (pp 8–14) • Area (pp 15–22)
Unit 5 Statistics **Data** Collect data Use data displays to represent data Interpret and discuss data	**AC9M4ST01** acquire data for categorical and discrete numerical variables to address a question of interest or purpose using digital tools; represent data using many to-one pictographs, column graphs and other displays or visualisations; interpret and discuss the information that has been created **AC9M4ST02** analyse the effectiveness of different displays or visualisations in illustrating and comparing data distributions, then discuss the shape of distributions and the variation in the data		**Graphs with scales &/or axis** • Picture Graphs: with scale & half symbols • Making Picture Graphs: With Scale • Column Graphs • Reading from a Column Graph	**Represent data with many-to-one graphs** • Column graphs using many-to-one correspondence • Picture graphs with many-to-one correspondence **Evaluate & compare data displays** • Evaluating & comparing data displays • Evaluating the shape of data sets **Methods of data collection** • Surveys & sorting data	**Statistics & Data** LEVEL 3–5 • Watch out! DOK 2 • Create a line graph DOK 3 • Leah's sibling survey DOK 4 • Create a picture graph DOK 3	Y4-E **Chance and Data** • Data (pp 12–25)

Scope & Sequence
Australian Curriculum v9 Yr 04

Term 2
Queensland | Year 4

Mathletics

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	**AC9M4N01** recognise and extend the application of place value to tenths and hundredths ... **AC9M4N03** find equivalent representations of fractions ... **AC9M4N08** use mathematical modelling to solve practical problems ...	**Y4 Decimals** • 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** • Who's got the Money? • Money	**Decimals used in money** • Understanding decimals used in money **Use estimation & rounding** • Using estimating with money **Addition & subtraction money problems** • Solving addition & subtraction money problems **Round decimal tenths & hundredths** • Rounding decimal tenths & hundredths	**Number & Algebra: Money** LEVEL 3–5 • How much money? DOK 3	Y4-E **Addition and Subtraction** • Money (pp 36–41)
Unit 2 Number Algebra **Patterns and algebra** Number facts Properties of odd and even numbers Find unknown numbers	**AC9M4N02** explain and use the properties of odd and even numbers **AC9M4N09** follow and create algorithms involving a sequence of steps ... **AC9M4A01** find unknown values in numerical equations involving addition and subtraction ... **AC9M4A02** recall and demonstrate proficiency with multiplication facts up to 10 × 10 ...	**Y4 Patterns and equivalence** ***– coming soon*** • Even and odd numbers • Add and subtract even and odd • Multiply even and odd • Unknown values +-	**Patterns & missing numbers** • Odd and Even **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: × and ÷ facts • Times Tables • Multiply 3 single-digit numbers	**Multiplication & division facts** • Multiplication & division facts up to 5 • Multiplying & dividing by 6 up to 60 • Multiplying & dividing by 7 up to 70 • Multiplying & dividing by 8 up to 80 • Multiplying & dividing by 9 up to 90 • Multiplying & dividing to 10 x 10 **Odd & even numbers** • Odd & even number patterns (up to 20) • Identifying odd & even numbers & patterns • Properties of odd & even numbers	**Number & Algebra: Multiplication & Division** LEVEL 3–5 • 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** • 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	**AC9M4N06** develop efficient strategies and use appropriate digital tools for solving problems ... **AC9M4N05** solve problems involving multiplying or dividing natural numbers ... **AC9M4N08** use mathematical modelling to solve practical problems ... **AC9M4A02** recall and demonstrate proficiency with multiplication facts ...	**Y4 Multiplication** • Multiplication facts • Doubling and tripling • Multiples of 10 and 100 **Y4 Division** • Arrays and division • Division facts 6, 7, 8 and 9 • Division facts to 10 × 10 • Multiples of 10 and 100	**Multiplication & division** • Multiplying by 10, 100, 1000 • Dividing by 10, 100, 1000 **Efficient strategies with operations** • 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** • 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** • Multiplication strategies: 1-digit numbers • Using the conventions of multiplication • Inverse facts: multiplication & division • Practising multiplication strategiess **Use estimation & rounding** • Estimating with multiplication & division **Multiplication & division word problems** • Expressing equations as word problems • Solving multiplication & division word problems	**Number & Algebra: Multiplication & Division** LEVEL 3–5 • 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** • Mental multiplication strategies (pp 13–21) • Division (pp 22–28) • Mental division strategies (pp 29–33)

Scope & Sequence
Australian Curriculum v9 Yr 04

Term 2
Queensland | Year 4

Mathletics

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
Unit 4 Measurement Number **Mass, capacity and temperature** 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	**AC9M4M01** interpret unmarked and partial units when measuring ... **AC9M4N03** find equivalent representations of fractions ... **AC9M4N08** use mathematical modelling to solve practical problems involving additive and multiplicative situations ...		**Measuring converting & comparing** • How Heavy? • What's the Temperature (Celsius)? **Introducing Decimals** • Grams and Kilograms • Millilitres and Litres	**Length, mass, capacity & temperature** • Measuring temperature • Measuring capacity in millilitres • Measuring mass in grams & kilograms • Reading scales with metric units		Y4-E **Volume, Capacity and Mass** • Volume and capacity (pp 1–4) • Mass (pp 9–13)
Unit 5 Space **2D shapes and 3D objects** Composite shapes Create models of 3D objects	**AC9M4SP01** represent and approximate composite shapes and objects in the environment, using combinations of familiar shapes and objects		**Space shape & angle** • Relate Shapes and Solids • Collect the Objects 2	**Identify composite shapes & objects** • Composing & decomposing 2D shapes	**Geometry: 2D Shapes** LEVEL 2–4 • Transformer shapes DOK 3 • Shape cutter DOK 2 • Triangle tiles DOK 3 LEVEL 3–5 • Big shapes made smaller DOK 2 **Geometry: 3D Shapes** LEVEL 3–5 • Net animals DOK 2 • Straw building DOK 3 • Nets and prisms DOK 3	Y4-E **Space, Shape and Position** • Investigating 3D shapes (pp 10–17)

Scope & Sequence
Australian Curriculum v9 Yr 04

Term 3
Queensland | Year 4

Mathletics

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
Unit 1 Number Algebra **Addition and subtraction** Addition and subtraction using algorithms Inverse operations Round and estimate to solve problems Problem solving	**AC9M4N06** develop efficient strategies and use appropriate digital tools for solving problems ... **AC9M4N07** choose and use estimation and rounding ... **AC9M4N08** use mathematical modelling to solve practical problems involving additive and multiplicative situations ... **AC9M4A01** find unknown values in numerical equations involving addition and subtraction ...	**Y4 Addition** • Bridging strategy + • Rounding strategy + • Written methods + **Y4 Subtraction** • Bridging strategy − • Rounding strategy − • Written methods −	**Efficient strategies with operations** • Column Addition 1 • Columns that Subtract • Subtract Numbers • Estimate Sums • Estimate Differences • Magic Symbols 1 **Problem solving with models** • Bar Model Problems 1 • Bar Model Problems 2	**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) **Use estimation & rounding** • Rounding & estimating with addition • Rounding & estimating with subtraction • Checking accuracy of addition & subtraction **Addition & subtraction word problems** • Addition & subtraction word problems • Posing addition & subtraction problems • Expressing word problems as equations **Addition & subtraction number sentences** • Using inverse operations for add/sub equations • Relationship between addition & subtraction • Equivalent number sentences • Word problems for finding unknown quanitities	**Number & Algebra: Addition & Subtraction** LEVEL 3–5 • Missing numbers! DOK 2 • Shuffle those numbers! DOK 3 • Mystery number DOK 3 • Explore an addition game DOK 3 • Exchanging the ones DOK 3	Y4-E **Addition and Subtraction** • Written methods (pp 28–35)
Unit 2 Number **Multiplication and division** Multiplication and division number sentences Choose efficient strategies to multiply and divide	**AC9M4N06** develop efficient strategies and use appropriate digital tools for solving problems ... **AC9M4N07** choose and use estimation and rounding ... **AC9M4N05** solve problems involving multiplying or dividing natural numbers ... **AC9M4N08** use mathematical modelling to solve practical problems involving additive and multiplicative situations ...	**Y4 Multiplication** • Partitioning strategy × • Area model **Y4 Division** • Partitioning strategy ÷ • Area model	**Efficient strategies with operations** • Grid Methods 1 • Problems: Times and Divide	**Mult & div strategies, no remainder** • 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		Y4-E **Multiplication and Division** • Mental multiplication strategies (pp 13–21) • Division (pp 22–28) • Mental division strategies (pp 29–33)

Scope & Sequence
Australian Curriculum v9 Yr 04

Term 3
Queensland | Year 4

Mathletics

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	**AC9M4N01** recognise and extend the application of place value to tenths and hundredths ... **AC9M4N03** find equivalent representations of fractions ... **AC9M4N04** count by fractions including mixed numerals ... **AC9M4N08** use mathematical modelling to solve practical problems involving additive and multiplicative situations ...	**Y4 Fractions** • Mixed numbers and improper fractions • Mixed numbers to improper fractions • Improper fractions to mixed numbers	**Fractions & equivalents** • What Mixed Number Is Shaded? • Simplifying Fractions • Improper to Mixed • Mixed to Improper • Converting Mixed and Improper • Identifying Fractions Beyond 1 • Mixed and Improper	**Equivalent fractions** • Investigating equivalent fractions greater than 1 **Convert fraction types using models** • Converting mixed numerals to improper fractions		Y4-E **Fractions** • Types of fractions (pp 12–23)
Unit 4 Measurement **Time** Read time Duration of events Convert units of time	**AC9M4M01** interpret unmarked and partial units when measuring and comparing attributes of length, mass, capacity, duration and temperature, using scaled and digital instruments and appropriate units **AC9M4M03** solve problems involving the duration of time including situations involving “am” and “pm” and conversions between units of time		**Measuring converting & comparing** • What is the Time? • Time Conversions: Whole Numbers 1 • Time Conversions: Whole Numbers 2 • Time Conversions: Simple Fractions • Time Conversions: Simple Decimals	**Convert units of time** • Converting units of time **Solve duration of time problems** • Understanding am & pm notation • Solving duration of time problems	**Measurement: Time** LEVEL 3–5 • Comparing different measures of time DOK 2 • A lesson in time DOK 2	Y4-E **Time** • 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	**AC9M4SP02** create and interpret grid reference systems using grid references and directions to locate and describe positions and pathways		**Space shape & angle** • Coordinate Meeting Place • Map Coordinates • Using a key • What Direction was That? • More Directions!	**Create & interpret grid references** • Working with grid reference systems	**Geometry: Symmetry, Transformation & Location** LEVEL 2–4 • Mighty maze DOK 4 LEVEL 3–5 • Map the way DOK 2 • Program the robot DOK 3 • Drawing with grids DOK 3	Y4-E **Space, Shape and Position** • Position (pp 18–24)

Scope & Sequence
Australian Curriculum v9 Yr 04

Term 4
Queensland | Year 4

Mathletics

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	**AC9M4N06** develop efficient strategies and use appropriate digital tools for solving problems involving addition and subtraction ... **AC9M4A01** find unknown values in numerical equations involving addition and subtraction, using the properties of numbers and operations	**Y4 Patterns and equivalence** ***- coming soon*** • Addition patterns • Subtraction patterns • Multiplication patterns • Are these equivalent? +-	**Patterns & missing numbers** • Describing Patterns • Missing Values • I am Thinking of a Number! • Balance Numbers to 20 • Numbers 1	**Sequences & patterns** • Investigating sequences with multiples • Exploring number patterns • Finding & generating shape patterns from a rule • Generating add/sub patterns from a rule • Generating multiplication patterns from a rule • Using a function machine to apply rules to numbers • Working with code to create algorithms	**Number & Algebra: Money** LEVEL 3–5 • Stick squares DOK 3 • Trains and number patterns DOK 3 • Decorating with tiles DOK 4	Y4-E **Patterns and Algebra** • Patterns and functions (pp 1–12) • Equations and equivalence (pp 13–21)
Unit 2 Number **Operations review**	**AC9M4N06** develop efficient strategies and use appropriate digital tools ... **AC9M4N07** choose and use estimation and rounding ... **AC9M4N05** solve problems involving multiplying or dividing ... **AC9M4N08** use mathematical modelling to solve practical problems ...	**Y4 Addition** • Problem-solving with + **Y4 Subtraction** • Problem-solving with +– **Y4 Multiplication** • Problem-solving with × **Y4 Division** • 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	**AC9M4M04** estimate and compare angles using angle names including acute, obtuse, straight angle, reflex and revolution, and recognise their relationship to a right angle **AC9M4SP03** recognise line and rotational symmetry of shapes and create symmetrical patterns and pictures, using dynamic geometric software where appropriate		**Space shape & angle** • Equal Angles • Comparing Angles • Right Angle Relation • What Type of Angle? • Symmetry • Symmetry or Not? • Rotational Symmetry	**Classify angles** • Classifying angles **Line & rotational symmetry** • Recognising & drawing line symmetry • Rotational symmetry **Symmetrical patterns, pictures & shapes** • Creating & drawing symmetrical designs • Recognising tessellations	**Geometry: Angles** LEVEL 3–5 • Angles and answers DOK 3 **Geometry: Symmetry, Transformation & Location** LEVEL 2–4 • Flutter bye DOK 2 • Reflections of 'R' DOK 3	Y4-E **Space, Shape and Position** • Lines, angles and shapes (pp 1–3, 8–9) Y6-G **Geometry** • Transformation, tessellation and symmetry (p 17)

Scope & Sequence
Australian Curriculum v9 Yr 04

Term 4
Queensland | Year 4

Mathletics

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
Unit 4 Probability Statistics **Chance and data** Language of chance Predict outcomes Conduct statistical investigations Data distributions Analyse data displays and visualisations	**AC9M4P01** describe possible everyday events and the possible outcomes of chance experiments ... **AC9M4P02** conduct repeated chance experiments ... **AC9M4ST01** acquire data for categorical and discrete numerical variables ... **AC9M4ST02** analyse the effectiveness of different displays or visualisations ... **AC9M4ST03** conduct statistical investigations ...		**Chance** • Chance Gauge • What are the Chances? • Counting Techniques 1	**Chance events** • Describing the chance of events occurring **Non-simultaneous everyday events** • Exploring non-simultaneous everyday events **Independent & dependent events** • Independent & dependent events **Conduct chance experiments** • Conducting chance experiments • Investigating equally likely outcomes of chance	**Chance & Probability** LEVEL 3–5 • Pulling marbles DOK 3 • Independent vs. not independent DOK 3 LEVEL 4–6 • Healthy lunch DOK 2 • Double dice DOK 4	Y4-E **Chance and Data** • Chance (pp 1–11)
Unit 5 Measurement **Measurement review and application** Choose appropriate units Use measurement in everyday situations	**AC9M4M01** interpret unmarked and partial units when measuring and comparing attributes of length, mass, capacity, duration and temperature, using scaled and digital instruments and appropriate units **AC9M4M02** recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces, using appropriate formal and informal units **AC9M4M03** solve problems involving the duration of time including situations involving “am” and “pm” and conversions between units of time		**Classroom directed**	**Classroom directed**	**Measurement: Length** LEVEL 3–5 • Area and perimeter challenge DOK 3 LEVEL 2–4 • Perimeter problems DOK 3 • Planning that pool DOK 3	**Classroom directed**

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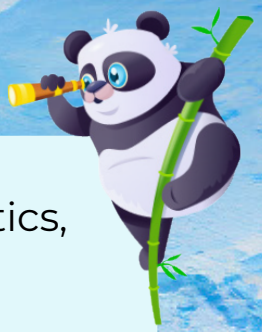

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