Mathletics
NSW Syllabus

Scope & Sequence

Stage 3, Year 5

Mathletics

Scope & Sequence Yearly overview

NSW Stage 3 Year 5

Mathletics

Learning sequence	Term one	Term two	Term three	Term four
LS 1	**Number and Algebra** **Big idea:** The number system extends infinitely to very large and very small numbers **Numbers to 1 billion** • Apply place value to hundred millions • Read, represent and order numbers • Partition numbers to 1 billion • Round to specified place value	**Number and Algebra** **Big idea:** The number system extends infinitely to very large and very small numbers **Decimals** • Express decimals as thousandths • Use place value to partition decimals • Compare and order decimals to 3 places • Place decimals on a number line	**Number and Algebra** **Big idea:** The number system extends infinitely to very large and very small numbers **Patterns** • Determine products and factors for given whole numbers • Determine prime and composite numbers • Patterns • Algebra	**Number and Algebra** **Big idea:** The number system extends infinitely to very large and very small numbers **Number review** Review: • Term 1, Learning Sequence 1 • Term 2, Learning Sequence 1 • Term 3, Learning Sequence 1
LS 2	**Number and Algebra** **Big idea:** Addition and subtraction problems can be solved by using a variety of strategies **Addition and subtraction** • Apply efficient mental and written strategies • Solve multistep problems • Use a calculator • Round and estimate to check for reasonableness	**Number and Algebra** **Big idea:** Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations **Mental multiplication and division** • Multiply by 10, 100, 1000 • Use mental strategies to multiply and divide: area model, partitioning and factorisation • Use the distributive property • Model division involving remainders • Round and estimate to check for reasonableness	**Measurement and Space** **Big idea:** Understanding relationships between the properties of 2D shapes helps visualise and organise spaces in the world **Classifying 2D shapes** • Identify and classify triangles: equilateral, isosceles & scalene • Classify triangles and quadrilaterals • Identify regular and irregular polygons	**Number and Algebra** **Measurement and Space** **Big idea:** Fractions represent multiple ideas and can be represented in different ways **Fractions, decimals, percentages** • Add and subtract fractions with the same denominator • Solve word problems that involve fractions with the same denominator
LS 3	**Measurement and Space** **Big idea:** What needs to be measured determines the unit of measurement **12- and 24-hour time** • Read time using 24-hour time notation • Convert between 24- and 12-hour time • Use am and pm notation • Read, interpret and use timetables	**Measurement and Space** **Statistics and Probability** **Big idea:** Visual representations help to understand aspects of the world (chance and position) **Position** • Identify point of intersection on cartesian plane • Plot and label points in the first quadrant • Identify and record coordinates • Link cartesian plane to line graphs	**Number and Algebra** **Big idea:** Multiplicative thinking involves flexible use of multiplication and division concepts, strategies, and representations **Linking multiplication with area** • Record area in square kilometres and hectares • Find area of triangles • Investigate and compare relationships between area and perimeter of rectangles with different dimensions	**Statistics and Probability** **Big idea:** Questions can be asked and answered by collecting and interpreting data **Chance** • Use the term probability • Recognise outcomes that are equally likely • Record outcomes in chance experiments • Represent probabilities using fractions
LS 4	**Number and Algebra** **Big idea:** Fractions represent multiple ideas and can be represented in different ways **Fractions** • Compare halves and quarters of different sized wholes • Compare and order unit fractions	**Measurement and Space** **Big idea:** What needs to be measured determines the unit of measurement **3D Objects and capacity** • Identify properties of prisms and pyramids • Visualise and sketch 3D objects • Visualise and sketch nets for 3D objects • Use appropriate units to measure capacity • Use displacement to investigate volume • Interpret decimal notation for capacities	**Number and Algebra** **Measurement and Space** **Big idea:** What needs to be measured determines the unit of measurement **Length and mass** • Measure lengths using km • Estimate and measure lengths • Calculate perimeters • Use appropriate units to measure mass • Interpret decimal notation for mass	**Number and Algebra** **Measurement and Space** **Big idea:** Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations **Written multiplication and division** • Revise mental strategies for multiplication and division • Use algorithms to multiply by a one-digit number • Solve word problems involving multiplication and division
LS 5	**Statistics and Probability** **Number and Algebra** **Big idea:** Questions can be asked and answered by collecting and interpreting data **Data** • Collect categorical and discrete numerical data • Construct graphs using many-to-one scale • Create timelines • Interpret data displays: tables, column graphs and line graphs	**Measurement and Space** **Big idea:** Angles are the primary structural component of many shapes **Angles** • Estimate and describe the size of angles • Measure and record angles using degrees • Create angles using a protractor • Classify angles: right, straight, acute, obtuse, reflex and revolution	**Number and Algebra** **Big idea:** Addition and subtraction problems can be solved by using a variety of strategies **Addition and subtraction problems** • Use flexible strategies to solve problems involving addition and subtraction • Use addition and subtraction to solve problems involving money and budgeting	**Measurement and Space** **Big idea:** Shapes encountered in daily life can be classified by their attributes **2D shape angle properties** • Review 2D shape properties • Compare side and angle properties of triangles and quadrilaterals • Investigate symmetry properties of quadrilaterals

Scope & Sequence Outcome map

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Outcomes	Focus	Content	Located
MA3-RN-01 applies an understanding of place value and the role of zero to represent the properties of numbers	**Represent numbers A**	Whole numbers: Recognise, represent and order numbers in the millions	Term 1 LS 1, 2, 5 Term 2 LS 1 Term 3 LS 1, 5 Term 4 LS 1
		Whole numbers: Apply place value to partition, regroup and rename numbers to 1 billion	Term 1 LS 1, 2 Term 2 LS 1, 2 Term 3 LS 1, 5 Term 4 LS 1, 4
MA3-RN-02 compares and orders decimals up to 3 decimal places		Decimals and percentages: Recognise that the place value system can be extended beyond hundredths	Term 1 LS 1, 5 Term 2 LS 1, 4 Term 3 LS 4, 5 Term 4 LS 1, 2
		Decimals and percentages: Compare, order and represent decimals	Term 1 LS 1, 5 Term 2 LS 1, 4 Term 3 LS 4, 5 Term 4 LS 1, 2
MA3-AR-01 selects and applies appropriate strategies to solve addition and subtraction problems	**Additive relations A**	Apply efficient mental and written strategies to solve addition and subtraction problems	Term 1 LS 2, 4 Term 3 LS 5 Term 4 LS 1, 2
		Use estimation and place value understanding to determine the reasonableness of solutions	Term 1 LS 2 Term 3 LS 5 Term 4 LS 1
MA3-MR-01 selects and applies appropriate strategies to solve multiplication and division problems	**Multiplicative relations A**	Determine products and factors	Term 1 LS 1 Term 2 LS 2 Term 3 LS 1, 3 Term 4 LS 4, 5
		Use partitioning and place value to multiply 2-, 3- and 4-digit numbers by one-digit numbers	Term 1 LS 1 Term 2 LS 2 Term 3 LS 3 Term 4 LS 4, 5
		Select and apply mental and written strategies to multiply 2- and 3-digit numbers by 2-digit numbers	Term 2 LS 2 Term 4 LS 4
		Represent and solve division problems with whole number remainders	Term 2 LS 2 Term 4 LS 4
		Select and apply strategies to divide a number with 3 or more digits by a one-digit divisor	Term 2 LS 2 Term 4 LS 4
		Use estimation and rounding to check the reasonableness of answers to calculations	Term 2 LS 2 Term 3 LS 3 Term 4 LS 4, 5
MA3-RQF-01 compares and orders fractions with denominators of 2, 3, 4, 5, 6, 8 and 10	**Representing quantity fractions A**	Recognise the role of the number 1 as representing the whole	Term 1 LS 4 Term 4 LS 2
		Compare and order common unit fractions	Term 1 LS 4 Term 4 LS 2
		Solve problems involving addition and subtraction of fractions with the same denominator	Term 1 LS 4 Term 2 LS 5 Term 4 LS 2
MA3-GM-01 locates and describes points on a coordinate plane	**Geometric measure A**	Position: Explore the Cartesian coordinate system	Term 2 LS 3

Outcomes	Focus	Content	Located
MA3-GM-02 selects and uses the appropriate unit and device to measure lengths and distances including perimeters	**Geometric measure A**	Length: Use metres and kilometres for length and distances	Term 3 LS 4
		Length: Measure lengths to find perimeters	Term 3 LS 3, 4
MA3-GM-03 measures and constructs angles, and identifies the relationships between angles on a straight line and angles at a point		Angles: Estimate, measure and compare angles using degrees	Term 2 LS 5 Term 4 LS 5
		Angles: Use a protractor to measure and identify types of angles	Term 2 LS 5 Term 4 LS 5
MA3-2DS-01 investigates and classifies two-dimensional shapes, including triangles and quadrilaterals based on their properties	**Two-dimensional spatial structure A**	2D shapes: Classify two-dimensional shapes and describe their properties	Term 3 LS 2 Term 4 LS 5
MA3-2DS-02 selects and uses the appropriate unit to calculate areas, including areas of rectangles		Area: Use hectares and square kilometres as units of measurement for area	Term 4 LS 5
		Area: Calculate the areas of rectangles using familiar metric units	Term 4 LS 5
MA3-3DS-01 visualises, sketches and constructs three-dimensional objects, including prisms and pyramids, making connections to two-dimensional representations	**Three-dimensional spatial structure A**	3D objects: Compare, describe and name prisms and pyramids	Term 2 LS 4
		3D objects: Connect three-dimensional objects with two-dimensional representations	Term 2 LS 4
MA3-3DS-02 selects and uses the appropriate unit to estimate, measure and calculate volumes and capacities		Volume: Choose appropriate units of measurement for capacity	Term 2 LS 4
		Volume: Use displacement to investigate volumes of irregular solids	Term 2 LS 4
		Volume: Connect decimal representations to the metric system	Term 2 LS 4
MA3-NSM-01 selects and uses the appropriate unit and device to measure the masses of objects	**Non-spatial measure A**	Mass: Choose appropriate units of measurement for mass	Term 3 LS 4
		Mass: Connect decimal representations to the metric system	Term 3 LS 4
MA3-NSM-02 measures and compares duration, using 12- and 24-hour time and am and pm notation		Time: Compare 12- and 24-hour time systems and convert between them	Term 1 LS 3
MA3-DATA-01 constructs graphs using many-to-one scales	**Data A**	Collect categorical and discrete numerical data by observation or survey	Term 1 LS 5 Term 2 LS 3 Term 4 LS 3
		Choose and use appropriate tables and graphs	Term 1 LS 5 Term 2 LS 3 Term 4 LS 3
MA3-DATA-02 interprets data displays, including timelines and line graphs		Describe and interpret different datasets in context	Term 1 LS 5 Term 2 LS 3 Term 4 LS 3
MA3-CHAN-01 conducts chance experiments and quantifies the probability	**Chance A**	List outcomes of chance experiments involving equally likely outcomes and represent probabilities	Term 4 LS 3

Scope & Sequence Term 1

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NSW New Syllabus (2023) S3 Year 5

LS & Topic	Outcomes	Focus	Content	New Courses	Activities (courses)	Skill Quests	Challenges	Ebooks
LS 1 **Big idea** The number system extends infinitely to very large and very small numbers **Topic** Numbers to 1 billion	**MA3-RN-01** applies an understanding of place value and the role of zero to represent the properties of numbers **MA3-RN-02** compares and orders decimals up to 3 decimal places **MA3-MR-01** selects and applies appropriate strategies to solve multiplication and division problems	**Represent numbers A** **Multiplicative relations A**	• Whole numbers: Recognise, represent and order numbers in the millions • Whole numbers: Apply place value to partition, regroup and rename numbers to 1 billion • Decimals and percentages: Recognise that the place value system can be extended beyond hundredths • Decimals and percentages: Compare, order and represent decimals • Determine products and factors • Use partitioning and place value to multiply 2-, 3- and 4-digit numbers by one-digit numbers	**Y5 Represents numbers** • Place Value • Comparing and ordering whole numbers • Rounding • Estimation	**Represents numbers: whole number (A)** • Numbers from Words to Digits 2 • Numbers from Words to Digits 3 • Place Value – Millions • Place Value to Millions • Place Value to Billions • Equal, Less or Greater than? • Comparing Numbers	**Represent numbers of any size** • Representing & ordering numbers of any size • Rounding numbers to a specified place • Partitioning numbers of any size	**Number & Algebra, Whole Number 4-6** • Unknown values in uneven partitioned shapes (DOK 2)	(Y6-F) **Reading and Understanding Whole Numbers** • Read and understand numbers pp 2–5 • Round and estimate pp 19–24
LS 2 **Big idea** Addition and subtraction problems can be solved by using a variety of strategies **Topic** Addition and subtraction	**MA3-AR-01** selects and applies appropriate strategies to solve addition and subtraction problems **MA3-RN-01** applies an understanding of place value and the role of zero to represent the properties of numbers	**Additive relations A** **Represent numbers A**	• Apply efficient mental and written strategies to solve addition and subtraction problems • Use estimation and place value understanding to determine the reasonableness of solutions • Whole numbers: Recognise, represent and order numbers in the millions • Whole numbers: Apply place value to partition, regroup and rename numbers to 1 billion	**Y5 Addition & subtraction** • Additive relations • Addition strategies • Addition • Subtracton strategies • Subtraction	**Additive relations: add sub strategies (A)** • Magic Mental Addition • Magic Mental Subtraction • Split Add and Subtract • Partition Puzzles 1 • Partition Puzzles 2 • Addition Properties • Complements to 10, 20, 50 • Jump Add and Subtract • Compensation- Add	**Add & subtract numbers of any size** • Adding strategies with numbers of any size • Subtracting strategies with numbers of any size **Add & subtract to 1 decimal place** • Adding decimals to 1 decimal place (models) • Adding decimals to 1 decimal place (no models) • Subtracting decimals to 1 decimal place (models) • Subtracting to 1 decimal place (no models) • Adding & subtracting decimals to 1 decimal place **Add & subtract to 2 decimal places** • Adding decimals to 2 decimal places • Subtracting decimals to 2 decimal places		(Y5-E) **Addition and Subtraction** • Addition mental strategies pp 1–8 • Subtraction mental strategies pp 9–16 • Written methods pp 17–22

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NSW New Syllabus (2023) S3 Year 5

LS & Topic	Outcomes	Focus	Content	New Courses	Activities (courses)	Skill Quests	Challenges	Ebooks
LS 3 **Big idea** What needs to be measured determines the unit of measurement **Topic** 12- and 24-hour time	**MA3-NSM-02** measures and compares duration, using 12- and 24-hour time and am and pm notation	**Non-spatial measure A**	• Time: Compare 12- and 24-hour time systems and convert between them		**Non-spatial measure: time (A)** • 24 Hour Time • Using Timetables • Time Conversions: Whole Numbers 1 • Time Conversions: Whole Numbers 2 • Time Conversions: Simple Fractions	**Use 12 & 24 hour time** • Converting between 12 & 24 hour time • Using timetables	**Measurement, Time 3-5** • A lesson in time DOK 2 • Puppy-sitting DOK 3 **Measurement, Time 4-6** • 24-hour train time DOK 2 • Ordering times DOK 2 • Time to explore 4 DOK 3	Y5-E **Time** • Measuring time pp 1–8 • Calculating time pp 9–14 • Timetables pp 15–20
LS 4 **Big idea** Fractions represent multiple ideas and can be represented in different ways **Topic** Fractions	**MA3-RQF-01** compares and orders fractions with denominators of 2, 3, 4, 5, 6, 8 and 10 **MA3-AR-01** selects and applies appropriate strategies to solve addition and subtraction problems	**Representing quantity fractions A** **Additive relations A**	• Recognise the role of the number 1 as representing the whole • Compare and order common unit fractions • Solve problems involving addition and subtraction of fractions with the same denominator • Apply efficient mental and written strategies to solve addition and subtraction problems	**Y5 Representing quantity fractions** • Fractions • Equivalence • Compare and order fractions • Improper fractions and mixed numbers	**Represents quantity fractions (A)** • Compare Fractions 1a • Unit Fractions • One Take Fraction • Common Denominator	**Compare fractions** • Identifying fractions equivalent to 1 whole • Comparing & ordering common unit fractions	**Number & Algebra, Fractions 3-5** • Which is closer to 1? DOK 2 • What fraction is that? DOK 2 • Drinking equivalent fractions DOK 3	Y5-E **Fractions, Decimals and Percentages** • Fractions pp 1–8 • Types of fractions pp 9–16
LS 5 **Big idea** Questions can be asked and answered by collecting and interpreting data **Topic** Data	**MA3-DATA-01** constructs graphs using many-to-one scales **MA3-DATA-02** interprets data displays, including timelines and line graphs **MA3-RN-01** applies an understanding of place value and the role of zero to represent the properties of numbers **MA3-RN-02** compares and orders decimals up to 3 decimal places	**Data A** **Represent numbers A**	• Collect categorical and discrete numerical data by observation or survey • Choose and use appropriate tables and graphs • Describe and interpret different datasets in context • Whole numbers: Recognise, represent and order numbers in the millions • Decimals and percentages: Recognise that the place value system can be extended beyond hundredths • Decimals and percentages: Compare, order and represent decimals		**Data: displaying numerical data (A)** • Sorting Data • Column Graphs • Tallies **Data: interpretation (A)** • Interpreting Tables • Reading from a Column Graph • Line Graphs: Interpretation	**Collect & display discrete data** • Collecting discrete data • Choosing & using appropriate tables/graphs **Interpret discrete data** • Interpreting discrete data using various displays • Interpreting line graphs	**Statistics & data 3-5** • Create a line graph DOK 3	Y5-E **Data Representation** • Types of graphs 1 pp 1–6 • Types of graphs 2 pp 7–11 • Types of graphs 3 pp 12–17 • Collecting and analysing data pp 18–23 • Data investigations pp 24–28

Scope & Sequence Term 2

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NSW New Syllabus (2023) S3 Year 5

LS & Topic	Outcomes	Focus	Content	New Courses	Activities (courses)	Skill Quests	Challenges	Ebooks
LS 1 **Big idea** The number system extends infinitely to very large and very small numbers **Topic** Decimals	**MA3-RN-02** compares and orders decimals up to 3 decimal places **MA3-RN-01** applies an understanding of place value and the role of zero to represent the properties of numbers	**Represent numbers A**	• Decimals and percentages: Recognise that the place value system can be extended beyond hundredths • Decimals and percentages: Compare, order and represent decimals • Whole numbers: Recognise, represent and order numbers in the millions • Whole numbers: Apply place value to partition, regroup and rename numbers to 1 billion	**Y5 Decimals** • Tenths • Hundredths • Thousandths • Decimals on the number line	**Represents numbers: decimals (A)** • Comparing Decimals 2 • Decimal Order • Decimal Order 2 • Decimals on a Number Line • Rounding Decimals 1	**Compare & order decimals** • Recognising decimals up to thousandths • Partitioning decimals up to thousandths • Comparing & ordering decimals up to thousandths **Convert fraction, decimal & percentage** • Converting between decimals & fractions • Converting between fractions & percentages • Converting between decimals & percentages • Converting fractions, decimals & percentages **Calculate percentage of an amount** • Calculating a percentage of an amount using 10% • Calculating percentage discounts	**Number & Algebra, Patterns 4-6** • Egyptian patterns DOK 3	Y5-E **Fractions, decimals and percentages** • Fractions, decimals and percentages pp 20–21 Y6-F **Fractions, decimals and percentages** • Decimal fractions pp 12–16
LS 2 **Big idea** Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations **Topic** Mental multiplication and division	**MA3-MR-01** selects and applies appropriate strategies to solve multiplication and division problems **MA3-RN-01** applies an understanding of place value and the role of zero to represent the properties of numbers	**Multiplicative relations A** **Represent numbers A**	• Determine products and factors • Use partitioning and place value to multiply 2-, 3- and 4-digit numbers by one-digit numbers • Select and apply mental and written strategies to multiply 2- and 3-digit numbers by 2-digit numbers • Represent and solve division problems with whole number remainders • Select and apply strategies to divide a number with 3 or more digits by a one-digit divisor • Use estimation and rounding to check the reasonableness of answers to calculations • Whole numbers: Apply place value to partition, regroup and rename numbers to 1 billion	**Y5 Multiplication & division** • Multiplicative relations • Multiplication strategies • Multiples and powers of 10 × • Multiply by one digit • Multiply by two digits • Division strategies • Multiples and powers of 10 ÷ • Division • Exploring remainders • Division with remainders	**Multiplicative relations (A)** • Fact Families: Multiply and Divide • Multiplication Turnarounds • Missing Numbers: × and ÷ facts • Times Tables • Solve Equations: Multiply, Divide 1 • Bar model × ÷ • Multiply 3 single-digit numbers • Multiply Multiples of 10 • Multiply More Multiples of 10 • Multiplying Whole Numbers by 10, 100, and 1000 • Double and Halve to Multiply • Mental Methods Multiplication 1 • Multiply 2 Digits Area Model **Multiplicative relations: more strategies (A)** • Mental Methods: Division 1 • Mental Methods Division 2 • Mental Methods Division 3	**Multiply by multiples of 10** • Multiplying up to 4 digits by 100 & 1000 **Multiply using double & halve strategy** • Using doubling & related facts to multiply by 2 • Using doubling & related facts to multiply by 4 • Using doubling & related facts to multiply by 8 • Partitioning & compensating to double & halve • Using double & halve to multiply • Using double/halve or triple/third **Multiply up to 4 digits by 1 digit** • Multiplying using place value • Multiplying using factorising • Multiplying using the round & compensate strategy • Multiplying using the area model **Multiply up to 4 digits by 2 digits** • Strategies to multiply by a 2-digit number **Division with remainders** • Introducing division with remainders **Divide up to 4 digits by 1-digit numbers** • Using known facts to divide by a 1-digit divisor • Partitioning to divide by a 1-digit divisor • Solving division problems with 1-digit divisors • Using estimation/rounding to check answers • Using area models to divide by a 1-digit divisor **Multiplicative number sentences** • Finding unknown quantities - multiply/divide • Introducing order of operations	**Number & Algebra, Multiplication & Division 4-6** • Number shuffle DOK 2 • The two sides of the pyramid DOK 2	Y5-E **Multiplication and Division** • Mental multiplication strategies pp 1–10 • Mental division strategies pp 11–19

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LS & Topic	Outcomes	Focus	Content	New Courses	Activities (courses)	Skill Quests	Challenges	Ebooks
LS 3 **Big idea** Visual representations help to understand aspects of the world **Topic** Position	**MA3-GM-01** locates and describes points on a coordinate plane **MA3-DATA-01** constructs graphs using many-to-one scales **MA3-DATA-02** interprets data displays, including timelines and line graphs	**Geometric measure A** **Data A**	• Position: Explore the Cartesian coordinate system • Collect categorical and discrete numerical data by observation or survey • Choose and use appropriate tables and graphs • Describe and interpret different datasets in context		**Geometric measure: coordinate plane (A)** • Coordinate Graphs: 1st Quadrant • Ordered Pairs • Horizontal and Vertical Change • Transformations: Coordinate Plane **Data: interpretation (A)** • Line Graphs: Interpretation	**Locate position in the first quadrant** • Using the first quadrant to locate position • Plotting coordinates in the first quadrant		Y5-E **Position** • Spatial orientation pp 1–6 • Coordinates pp 7–12 • Directions pp 13–16
LS 4 **Big idea** What needs to be measured determines the unit of measurement **Topic** 3D objects and capacity	**MA3-3DS-01** visualises, sketches and constructs three-dimensional objects, including prisms and pyramids, making connections to two-dimensional representations **MA3-3DS-02** selects and uses the appropriate unit to estimate, measure and calculate volumes and capacities **MA3-RN-02** compares and orders decimals up to 3 decimal places	**Three-dimensional spatial structure A** **Represent numbers A**	• 3D objects: Compare, describe and name prisms and pyramids • 3D objects: Connect three-dimensional objects with two-dimensional representations • Volume: Choose appropriate units of measurement for capacity • Volume: Use displacement to investigate volumes of irregular solids • Volume: Connect decimal representations to the metric system • Decimals and percentages: Recognise that the place value system can be extended beyond hundredths • Decimals and percentages: Compare, order and represent decimals		**3D spatial structure: prisms & pyramids (A)** • What Prism Am I? • What Pyramid Am I? • Prisms and Pyramids **3D spatial structure: volume (A)** • Millilitres and Litres • Volume of Solids and Prisms - 1cm³ blocks • Volume: Rectangular Prisms 1	**Connect 3D with 2D representations** • Naming prisms & pyramids • Connecting prisms with their nets • Connecting 3D objects with their nets **Use appropriate units for capacity** • Using appropriate units for capacity (L & mL) **Investigate volume using blocks** • Investigating volume using blocks	**Geometry, 3D Shape 3-5** • Nets and prisms DOK 3 **Geometry, 3D Shape 4-6** • Creating cubes DOK 2 • Notty nets DOK 2 • Looking at faces, edges and vertices DOK 3 • Pyramids and prisms DOK 3	Y5-E **Volume, Capacity and Mass** • Volume and capacity pp 1–8 Y6-F **Volume, Capacity and Mass** • Volume and capacity pp 1–2, 5–8 Y5-E **Geometry** • 3D shapes pp 25–34
LS 5 **Big idea** Angles are the primary structural component of many shapes **Topic** Angles	**MA3-GM-03** measures and constructs angles, and identifies the relationships between angles on a straight line and angles at a point **MA3-RQF-01** compares and orders fractions with denominators of 2, 3, 4, 5, 6, 8 and 10	**Geometric measure A** **Representing quantity fractions A**	• Angles: Estimate, measure and compare angles using degrees • Angles: Use a protractor to measure and identify types of angles • Solve problems involving addition and subtraction of fractions with the same denominator		**Geometric measure: angle (A)** • Estimating Angles • Measuring Angles • What Type of Angle? • Classifying Angles	**Measure & identify angles** • Estimating, measuring & comparing angles • Constructing & classifying angles	**Measurement, Angles 4-6** • Angle estimation DOK 3	Y5-E **Geometry** • Lines and angles pp 2–6

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NSW New Syllabus (2023) S3 Year 5

LS & Topic	Outcomes	Focus	Content	New Courses	Activities (courses)	Skill Quests	Challenges	Ebooks
LS 1 **Big idea** The number system extends infinitely to very large and very small numbers **Topic** Patterns	**MA3-MR-01** selects and applies appropriate strategies to solve multiplication and division problems **MA3-RN-01** applies an understanding of place value and the role of zero to represent the properties of numbers	**Multiplicative relations A** **Represent numbers A**	• Determine products and factors • Whole numbers: Recognise, represent and order numbers in the millions • Whole numbers: Apply place value to partition, regroup and rename numbers to 1 billion	Coming soon	**Multiplicative relations (A)** • Lowest Common Multiple • Find the Factor • Factors • Highest Common Factor • Prime or Composite?	**Use products, factors & primes** • Determining products & factors • Primes & composite numbers	**Number & Algebra, Multiplication & Division 4-6** • Who let the critters out? DOK 2 • Always reasoning about numbers DOK 3 • Peculiar patterns with multiples DOK 3 • Multiple muffins DOK 3 • Supermarket stock dilemma DOK 3 • Factor in our clues DOK 3 • Fear fact-ors DOK 3 • Factor finding DOK 3 • Tricky factors DOK 3 • Clue me in DOK 3 • Peculiar patterns with multiples DOK 3	Y5-E **Multiplication and Division** • Mental multiplication strategies pp 9–10 Y6-F **Reading and Understanding Whole Numbers** • Types of numbers pp 11–12 Y5 **Rich Learning Task** • Factors and Multiples Y5-E **Patterns and Algebra** • Patterns and functions pp 1–17 • Algebraic thinking pp 18–25 • Solving equations pp 26–33
LS 2 **Big idea** Understanding relationships between the properties of 2D shapes helps visualise and organise spaces in the world **Topic** Classifying 2D shapes	**MA3-2DS-01** investigates and classifies two-dimensional shapes, including triangles and quadrilaterals based on their properties	**Two-dimensional spatial structure A**	• 2D shapes: Classify two-dimensional shapes and describe their properties		**2D spatial structure: classify shapes (A)** • Triangle Tasters • Sides, Angles and Diagonals • Plane Figure Terms • Collect the Polygons	**Describe properties of 2D shapes** • Classifying 2D shapes & describe properties	**Geometry, 2D Shape 3-5** • Big shapes made smaller DOK 2 • Shape shifter DOK 2 • Hidden shapes DOK 3 • Comparing shapes DOK 3 **Geometry, 2D Shape 4-6** • Trying triangles DOK 2 • Square split DOK 3	Y5-E **Geometry** • 2D shapes pp 7–15 Y5 **Rich Learning Task** • What Triangle?

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NSW New Syllabus (2023) S3 Year 5

LS & Topic	Outcomes	Focus	Content	New Courses	Activities (courses)	Skill Quests	Challenges	Ebooks
LS 3 **Big idea** Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations **Topic** Linking multiplication with area	**MA3-2DS-02** selects and uses the appropriate unit to calculate areas ... **MA3-GM-02** selects and uses the appropriate unit and device to measure lengths ... **MA3-MR-01** selects and applies appropriate strategies to solve multiplication ...	**Two-dimensional spatial structure A** **Geometric measure A** **Multiplicative relations A**	• Area: Calculate the areas of rectangles using familiar metric units • Length: Measure lengths to find perimeters • Determine products and factors • Use partitioning and place value to multiply 2-, 3- and 4-digit numbers by one-digit numbers • Use estimation and rounding to check the reasonableness of answers to calculations		**Multiplicative relations (A)** • Multiply 2 Digits Area Model **2D spatial structure: area (A)** • Area: Squares and Rectangles • Calculate Areas of Squares and Rectangles • Converting Units of Area • Area: Parallelograms (Metric)	**Multiply up to 4 digits by 1 digit** • Multiplying using the area model **Divide up to 4 digits by 1-digit numbers** • Using area models to divide by a 1-digit divisor **Calculate area of rectangles** • Calculating area of rectangles	**Measurement, Area 3–5** • Make a puppy play area DOK 2 • Farmer's fences DOK 3 **Measurement, Area 4–6** • Shade a shape DOK 3 • Five and ten, squares and units DOK 3 • Finding formulas DOK 3 • Ryan's rectangle DOK 3	Y5-E **Length, Area and Perimeter** • Area pp 25–32
LS 4 **Big idea** What needs to be measured determines the unit of measurement **Topic** Length and mass	**MA3-GM-02** selects and uses the appropriate unit and device to measure lengths and distances ... **MA3-NSM-01** selects and uses the appropriate unit and device to measure the masses of objects **MA3-RN-02** compares and orders decimals up to 3 decimal places	**Geometric measure A** **Non-spatial measure A** **Represent numbers A**	• Length: Use metres and kilometres for length and distances • Length: Measure lengths to find perimeters • Mass: Choose appropriate units of measurement for mass • Mass: Connect decimal representations to the metric system • Decimals and percentages: Recognise that the place value system can be extended beyond hundredths • Decimals and percentages: Compare, order and represent decimals		**Geometric measure: length and perimeter (A)** • Kilometre Conversions • Perimeter: Squares and Rectangles • Perimeter: Triangles 2 • Perimeter Detectives 1 **Non-spatial measure: mass (A)** • Kilogram Conversions • Grams and Kilograms • Converting Units of Mass • Mass Word Problems	**Use appropriate measures for length** • Selecting & using appropriate measures for length • Comparing & ordering lengths **Use appropriate units for mass** • Choosing appropriate units for mass • Decimal representations to metric system **Calculate perimeter** • Calculating the perimeter of rectangles	**Measurement, Mass 3–5** • Fruit bowl combo DOK 3 **Measurement, Mass 4–6** • Maze of masses DOK 3 **Measurement, Length 3–5** • Different shape, same perimeter DOK 1 • Divide and measure with rods DOK 1 • Area and perimeter challenge DOK 3 • Perimeter problems DOK 3	Y5-E **Length, Area and Perimeter** • Units of length pp 1–8 • Travelling far pp 9–16 • Perimeter pp 17–24 Y5-E **Volume, Capacity and Mass** • Mass pp 9–16
LS 5 **Big idea** Addition and subtraction problems can be solved using a variety of strategies **Topic** Addition and subtraction problems	**MA3-AR-01** selects and applies appropriate strategies to solve addition and subtraction problems **MA3-RN-01** applies an understanding of place value and the role of zero ... **MA3-RN-02** compares and orders decimals up to 3 decimal places	**Additive relations A** **Represent numbers A**	• Apply efficient mental and written strategies to solve addition and subtraction problems • Use estimation and place value understanding to determine the reasonableness of solutions • Whole numbers: Recognise, represent and order numbers in the millions • Whole numbers: Apply place value to partition, regroup and rename numbers to 1 billion • Decimals and percentages: Recognise that the place value system can be extended beyond hundredths • Decimals and percentages: Compare, order and represent decimals	**Y5 Addition & subtraction** • Additive relations • Money calculations + – • Problem solving + –	**Additive relations: add sub strategies (A)** • Pyramid Puzzles 1 • Pyramid Puzzles 2 • Estimation: Add and Subtract • Estimate Sums • Estimate Differences	**Add & subtract numbers of any size** • Selecting efficient strategies to add & subtract • Using rounding to estimate • Checking the accuracy of answers	**Number & Algebra, Addition & Subtraction 4–6** • Totally magic grid DOK 2	Y5-E **Addition and Subtraction** • Written methods pp 23–25

Scope & Sequence Term 4

NSW Stage 3 Year 5

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NSW New Syllabus (2023) S3 Year 5

LS & Topic	Outcomes	Focus	Content	New Courses	Activities (courses)	Skill Quests	Challenges	Ebooks
LS 1 **Big idea** The number system extends infinitely to very large and very small numbers **Topic** Number review	**MA3-RN-01** applies an understanding of place value and the role of zero to represent the properties of numbers **MA3-RN-02** compares and orders decimals up to 3 decimal places **MA3-AR-01** selects and applies appropriate strategies to solve addition and subtraction problems	**Represent numbers A** **Additive relations A**	• Whole numbers: Recognise, represent and order numbers in the millions • Whole numbers: Apply place value to partition, regroup and rename numbers to 1 billion • Decimals and percentages: Recognise that the place value system can be extended beyond hundredths • Decimals and percentages: Compare, order and represent decimals • Apply efficient mental and written strategies to solve addition and subtraction problems • Use estimation and place value understanding to determine the reasonableness of solutions		**Refer to:** • Term 1, Learning Sequence 1 • Term 2, Learning Sequence 1 • Term 3, Learning Sequence 1		**Number & Algebra, Equations & Expressions 4–6** • Shape equations DOK 2	
LS 2 **Big idea** Fractions represent multiple ideas and can be represented in different ways **Topic** Fractions, decimals, percentages	**MA3-RQF-01** compares and orders fractions with denominators of 2, 3, 4, 5, 6, 8 and 10 **MA3-AR-01** selects and applies appropriate strategies to solve addition and subtraction problems **MA3-RN-02** compares and orders decimals up to 3 decimal places	**Representing quantity fractions A** **Additive relations A** **Represent Numbers A**	• Compare and order common unit fractions • Solve problems involving addition and subtraction of fractions with the same denominator • Apply efficient mental and written strategies to solve addition and subtraction problems • Recognise the role of the number 1 as representing the whole • Decimals and percentages: Recognise that the place value system can be extended beyond hundredths • Decimals and percentages: Compare, order and represent decimals	**Y5 Representing quantity fractions** • Add fractions • Subtract fractions • Problem solving with fractions **Y5 Decimals** • Order and compare decimals **Y5 Percentages** • Percentages • Compare percentages • Fractions and percentages • Decimals, fractions and percentages	**Represents quantity fractions (A)** • Add: Common Denominator • Subtract: Common Denominator • Add Subtract Fractions 1	**Add/subtract fractions: same denominator** • Adding/subtracting a fraction to a whole number • Adding/subtracting fractions: same denominator • Adding/subtracting mixed numbers: same denominator	**Number & Algebra, Fractions 4–6** • Fractional relay races DOK 2 • Fractions in uneven partitioned shapes DOK 2 • Fraction and decimal addition patterns DOK 2	Y5-E **Fractions, Decimals and Percentages** • Calculating pp 26–29 Y5 **Rich Learning Task** • The Age of Aunt Lil • Pattern Blocks 1
LS 3 **Big idea** Questions can be asked and answered by collecting and interpreting data **Topic** Chance	**MA3-CHAN-01** conducts chance experiments and quantifies the probability **MA3-DATA-01** constructs graphs using many-to-one scales **MA3-DATA-02** interprets data displays, including timelines and line ...	**Chance A** **Data A**	• List outcomes of chance experiments involving equally likely outcomes and represent probabilities • Collect categorical and discrete numerical data by observation or survey • Choose and use appropriate tables and graphs • Describe and interpret different datasets in context		**Chance (A)** • How many Combinations? • Counting Techniques 1 • What are the Chances? • Introductory probability	**List outcomes of probability experiments** Listing outcomes of equally likely experiments	**Chance & Probability 3–5** • Pulling marbles DOK 3 **Chance & Probability 4–6** • Ordering probabilities DOK 3	Y5-E **Chance and Probability** • Chance and Probability pp 1–10

Scope & Sequence Term 4

NSW Stage 3 Year 5

Mathletics

NSW New Syllabus (2023) S3 Year 5

LS & Topic	Outcomes	Focus	Content	New Courses	Activities (courses)	Skill Quests	Challenges	Ebooks
LS 4 **Big idea** Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations **Topic** Written multiplication and division	**MA3-MR-01** selects and applies appropriate strategies to solve multiplication and division problems **MA3-RN-01** applies an understanding of place value and the role of zero to represent the properties of numbers	**Multiplicative relations A** **Represent numbers A**	• Determine products and factors • Use partitioning and place value to multiply 2-, 3- and 4-digit numbers by one-digit numbers • Select and apply mental and written strategies to multiply 2- and 3-digit numbers by 2-digit numbers • Represent and solve division problems with whole number remainders • Select and apply strategies to divide a number with 3 or more digits by a one-digit divisor • Use estimation and rounding to check the reasonableness of answers to calculations • Whole numbers: Apply place value to partition, regroup and rename numbers to 1 billion	**Y5 Multiplication & division** • Multiplication strategies • Multiples and powers of 10 × • Multiply by one digit • Multiply by two digits • Multiples and powers of 10 ÷ • Division strategies • Division • Exploring remainders • Division with remainders • Money calculations × ÷ • Problem solving with × ÷	**Multiplicative relations: more strategies (A)** • Multiply: 1-Digit Number • Multiply: 2-Digit Number, Regroup • Long Multiplication • Estimation: Multiply and Divide • Estimate Products • Remainders by Arrays • Remainders by Tables • Dividing by 10, 100, 1000 • Problems: Times and Divide	**Multiply up to 4 digits by 1 digit** • Multiplying using an expanded algorithm • Multiplying using a contracted algorithm **Divide up to 4 digits by 1-digit numbers** • Extended algorithm to divide 2 digits by 1 digit • Extended algorithm to divide 3 digits by 1 digit • Extended algorithm to divide 4 digits by 1 digit • Contracted algorithm to divide 2 digits by 1 digit • Contracted algorithm to divide 3 digits by 1 digit • Contracted algorithm to divide 4 digits by 1 digit	**Number & Algebra Multiplication & Division 4-6** • The two sides of the pyramid (DOK 2)	(Y5-E) **Multiplication and Division** • Written methods pp 20–28 • Puzzles and investigations pp 29–32
LS 5 **Big idea** Shapes encountered in daily life can be classified by their attributes **Topic** 2D shape angle properties	**MA3-GM-03** measures and constructs angles, and identifies the relationships between angles on a straight line and angles at a point **MA3-2DS-01** investigates and classifies two-dimensional shapes, including triangles and quadrilaterals based on their properties **MA3-2DS-02** selects and uses the appropriate unit to calculate areas, including areas of rectangles **MA3-MR-01** selects and applies appropriate strategies to solve multiplication and division problems	**Geometric measure A** **Two-dimensional spatial structure A** **Multiplicative relations A**	• Angles: Estimate, measure and compare angles using degrees • Angles: Use a protractor to measure and identify types of angles • 2D shapes: Classify two-dimensional shapes and describe their properties • Area: Use hectares and square kilometres as units of measurement for area • Area: Calculate the areas of rectangles using familiar metric units • Determine products and factors • Use partitioning and place value to multiply 2-, 3- and 4-digit numbers by one-digit numbers • Use estimation and rounding to check the reasonableness of answers to calculations		**Refer to:** • Term 2, Learning Sequence 5 • Term 3, Learning Sequence 2		**Geometry, 2D Shape 5-7** • Property of: the quadrilateral (DOK 2) • Matching diagonals to quadrilaterals (DOK 2)	(Y5-E) **Geometry** • Transformation, tessellation and symmetry pp 16–24

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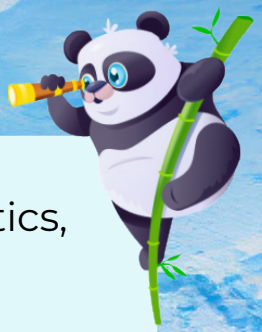

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