

Mathletics NSW Syllabus

Scope & Sequence



Stage 2, Year 3

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 10 000 <ul style="list-style-type: none"> Apply place value to thousands Read, represent and order numbers to 10 000 Partition numbers 	Number and Algebra Big idea: The number system extends infinitely to very large and very small numbers Numbers to 100 000 <ul style="list-style-type: none"> Apply place value to tens-of-thousands Read, represent and order numbers to 10 000 Partition numbers 	Number and Algebra Big idea: The number system extends infinitely to very large and very small numbers Patterns <ul style="list-style-type: none"> Model, describe and record patterns of multiples Identify and continue increasing and decreasing patterns Explain properties of odd and even numbers Multiply by one and zero 	Number and Algebra Big idea: The number system extends infinitely to very large and very small numbers Number review Review: <ul style="list-style-type: none"> Term 1, Learning Sequence 1 Term 2, Learning Sequence 1 Term 3, Learning Sequence 1
	Number and Algebra Big idea: Addition and subtraction problems can be solved by using a variety of strategies Addition and subtraction: mental strategies <ul style="list-style-type: none"> Apply associative property of addition Solve inverse operations Use flexible strategies to add and subtract: bridging, compensation, levelling and constant difference 	Number and Algebra Big idea: Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations Multiplication facts for 2, 4, 5 and 10 <ul style="list-style-type: none"> Model, describe and record patterns of multiples Identify fact families Use commutative property of multiplication 	Measurement and Space Big idea: Understanding relationships between the properties of 2D shapes helps visualise and organise spaces in the world 2D shape properties <ul style="list-style-type: none"> Describe and compare 2D shapes Identify parallel sides Explain properties of quadrilaterals Identify right angles in shapes 	Number and Algebra Big idea: Fractions represent multiple ideas and can be represented in different ways Fractions review <ul style="list-style-type: none"> Recreate the whole unit from a fractional part
	Measurement and Space Big idea: What needs to be measured determines the unit of measurement Time <ul style="list-style-type: none"> Calculate duration of events Identify half- and quarter-hour time Read time as past and towards the hour Read analog clocks to the minute 	Measurement and Space Big idea: Visual representations help to understand aspects of the world Position <ul style="list-style-type: none"> Describe and follow routes using landmarks and directional language Locate positions on grid maps 	Measurement and Space Number and Algebra Big idea: Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations. Linking multiplication to area and volume <ul style="list-style-type: none"> Area: Use square centimetres and metres to measure and estimate area of rectangles Measure capacity and volume 	Statistics and Probability Big idea: Data is collected to solve problems Chance (and data review) <ul style="list-style-type: none"> Use the language of chance Record possible outcomes and combinations Conduct chance experiments Collect and display data
LS 4	Number and Algebra Big idea: Fractions represent multiple ideas and can be represented in different ways Simple fractions <ul style="list-style-type: none"> Model fractions Identify fraction families Make thirds and fifths of a length 	Measurement and Space Number and Algebra Big idea: What needs to be measured determines the unit of measurement 3D objects and capacity <ul style="list-style-type: none"> Identify prisms, pyramids and cylinders Construct 3D models Create nets Measure and record capacity using L Estimate the capacity of containers 	Measurement and Space Number and Algebra Big idea: What needs to be measured determines the unit of measurement Length and mass <ul style="list-style-type: none"> Measure length using mm, cm and m Estimate lengths and distances Compare and order lengths and distances Record and compare mass using kg 	Number and Algebra Big idea: Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations Multiplication and division problems <ul style="list-style-type: none"> Use flexible strategies to solve word problems involving multiplication and division
	Statistics and Probability Number and Algebra Big idea: Questions can be asked and answered by collecting and interpreting data Data <ul style="list-style-type: none"> Collect discrete data Organise and display data 	Measurement and Space Number and Algebra Big idea: Angles are the primary structural component of many shapes Angles <ul style="list-style-type: none"> Interpret simple maps Following directions 	Number and Algebra Big idea: Addition and subtraction problems can be solved by using a variety of strategies Addition and subtraction problems <ul style="list-style-type: none"> Doubling and halving Model halves, quarters and eighths 	Measurement and Space Big idea: Shapes encountered in daily life can be classified by their attributes 2D shape transformations <ul style="list-style-type: none"> Identify and draw lines of symmetry Create tessellating triangle designs: by reflecting, translating and rotating Apply and describe amounts of rotation: half-, quarter- & three-quarter-turns

Outcomes	Focus	Content	Located
MA2-RN-01 applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands	Representing numbers using place value A	Whole numbers: Read, represent and order numbers to thousands	Term 1 LS 1, 2, 5 Term 2 LS 1, 4 Term 3 LS 1, 5 Term 4 LS 1
		Whole numbers: Apply place value to partition and regroup numbers up to 4 digits	Term 1 LS 1, 2 Term 2 LS 1, 2 Term 3 LS 1, 5 Term 4 LS 1, 4
MA2-AR-01 selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers	Additive relations A	Use the principle of equality	Term 1 LS 2 Term 2 LS 1 Term 3 LS 5 Term 4 LS 1
		Recognise and explain the connection between addition and subtraction	Term 1 LS 2 Term 3 LS 5
		Select strategies flexibly to solve addition and subtraction problems of up to 3 digits	Term 1 LS 2 Term 2 LS 1 Term 3 LS 5 Term 4 LS 1
		Represent money values in multiple ways	Term 3 LS 5
MA2-MR-01 represents and uses the structure of multiplicative relations to 10×10 to solve problems	Multiplicative relations A	Generate and describe patterns	Term 1 LS 1, 4 Term 2 LS 2 Term 3 LS 1, 2, 3 Term 4 LS 2, 4, 5
		Use arrays to establish multiplication facts from multiples of 2 and 4, 5 and 10	Term 2 LS 2 Term 3 LS 1, 2, 3 Term 4 LS 4
		Recall multiplication facts of 2 and 4, 5 and 10 and related division facts	Term 1 LS 4 Term 2 LS 2 Term 3 LS 1, 2, 3 Term 4 LS 4
		Represent and solve problems involving multiplication fact families	Term 2 LS 2 Term 3 LS 1 Term 4 LS 4
MA2-PF-01 represents and compares halves, quarters, thirds and fifths as lengths on a number line and their related fractions formed by halving (eighths, sixths and tenths)	Partitioned fractions A	Create fractional parts of a length using techniques other than repeated halving	Term 1 LS 4 Term 2 LS 5 Term 4 LS 2
		Model and represent unit fractions, and their multiples, to a complete whole on a number line	
MA2-GM-01 uses grid maps and directional language to locate positions and follow routes	Geometric measure A	Position: Interpret movement on a map	Term 2 LS 3
MA2-GM-02 measures and estimates lengths in metres, centimetres and millimetres		Position: Locate positions on grid maps	
		Length: Measure and compare objects using metres, centimetres and millimetres	Term 1 LS 4 Term 3 LS 4 Term 4 LS 2

Outcomes	Focus	Content	Located
MA2-GM-03 identifies angles and classifies them by comparing to a right angle	Geometric measure A	Angles: Identify angles as measures of turn	Term 2 LS 5 Term 4 LS 5
MA2-2DS-01 compares two-dimensional shapes and describes their features	Two-dimensional spatial structure A	2D shapes: Compare and describe features of two-dimensional shapes	Term 1 LS 3 Term 3 LS 2, 3 Term 4 LS 5
MA2-2DS-02 performs transformations by combining and splitting two-dimensional shapes		2D shapes: Transform shapes by reflecting, translating and rotating	Term 2 LS 3 Term 3 LS 2 Term 4 LS 5
MA2-2DS-03 estimates, measures and compares areas using square centimetres and square metres		Area: Use square centimetres to measure and estimate the areas of rectangles	Term 3 LS 3
	Area: Use square metres to measure and estimate the areas of rectangles		
MA2-3DS-01 measures, records, compares and estimates the masses of objects using uniform informal units	Three-dimensional spatial structure A	3D objects: Make models of three-dimensional objects to compare and describe key features	Term 2 LS 4 Term 3 LS 3
MA2-3DS-02 estimates, measures and compares capacities (internal volumes) using litres, millilitres and volumes using cubic centimetres		Volume: Measure and order containers using litres	Term 2 LS 4 Term 3 LS 3
		Volume: Compare objects using familiar metric units of volume	Term 2 LS 4 Term 3 LS 3
MA2-NSM-01 estimates, measures and compares the masses of objects using kilograms and grams	Non-spatial measure A	Mass: Compare objects using the kilogram	Term 3 LS 4
MA2-NSM-02 represents and interprets analog and digital time in hours, minutes and seconds		Time: Represent and read analog time	Term 1 LS 3 Term 2 LS 5
MA2-DATA-01 collects discrete data and constructs graphs using a given scale	Data A	Collect discrete data	Term 1 LS 5 Term 4 LS 3
		Organise and display data using tables and graphs	Term 1 LS 5 Term 4 LS 3
MA2-DATA-02 interprets data in tables, dot plots and column graphs		Interpret and compare data	Term 4 LS 3
MA2-CHAN-01 records and compares the results of chance experiments	Chance A	Identify possible outcomes from chance experiments	Term 4 LS 3

LS & Topic	Outcomes	Focus	Content	New Courses	Activities (courses)	Skill Quests	Challenges	Ebooks
<p>LS 1</p> <p>Big idea The number system extends infinitely to very large and very small numbers</p> <p>Topic Numbers to 10 000</p>	<p>MA2-RN-01 applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands</p> <p>MA2-MR-01 represents and uses the structure of multiplicative relations to 10×10 to solve problems</p>	<p>Representing numbers using place value A</p> <p>Multiplicative relations A</p>	<ul style="list-style-type: none"> Whole numbers: Read, represent and order numbers to thousands Whole numbers: Apply place value to partition and regroup numbers up to 4 digits Generate and describe patterns 	<p>Y3 Representing numbers using place value</p> <ul style="list-style-type: none"> Numbers to at least 10 000 Place value 	<p>Represent numbers using place value (A)</p> <ul style="list-style-type: none"> Which is Bigger? Which is Smaller? Place Value - Thousands Expanding Numbers Put in Order 1 Ascending Order Descending Order Which is Bigger? Which is Smaller? Greater Than or Less Than 1 Place Value 3 Partition and Rename 2 Nearest 1000? Missing Numbers 1 <p>Non-spatial measure: mass & time (A)</p> <ul style="list-style-type: none"> What's the Temperature (Celsius)? 	<p>Numbers to 10 000</p> <ul style="list-style-type: none"> Reading, representing & ordering 4-digit numbers Counting by tens & hundreds to 1000 Comparing & ordering numbers up to 10 000 Partitioning numbers to 4 digits 	<p>Number & Algebra, Whole Number 2-4</p> <ul style="list-style-type: none"> Top score (DOK 2) Partitioning 4-digit numbers (DOK 3) Bank mistake (DOK 3) Alex's number (DOK 3) Find the 4 digits (DOK 3) Football friends (DOK 3) 33 beads (DOK 3) <p>Number & Algebra, Addition & Subtraction 2-4</p> <ul style="list-style-type: none"> Magic 9 (DOK 3) <p>Number & Algebra, Whole Number 3-5</p> <ul style="list-style-type: none"> Build the number (DOK 3) 	<p>(Y3-C) Reading and Understanding Whole Numbers</p> <ul style="list-style-type: none"> Looking at whole numbers pp 1-6 Place value of whole numbers pp 1-3 <p>(Y4-D) Reading and Understanding Whole Numbers</p> <ul style="list-style-type: none"> Looking at whole numbers pp 1-8 Place value of whole numbers pp 1-8
<p>LS 2</p> <p>Big idea Addition and subtraction problems can be solved by using a variety of strategies</p> <p>Topic Addition and subtraction: mental strategies</p>	<p>MA2-AR-01 selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers</p> <p>MA2-RN-01 applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands</p>	<p>Additive relations A</p> <p>Representing numbers using place value A</p>	<ul style="list-style-type: none"> Use the principle of equality Recognise and explain the connection between addition and subtraction Select strategies flexibly to solve addition and subtraction problems of up to 3 digits Whole numbers: Read, represent and order numbers to thousands Whole numbers: Apply place value to partition and regroup numbers up to 4 digits 	<p>Y3 Addition</p> <ul style="list-style-type: none"> Make easier additions Split strategy + Partition strategy + Written methods + <p>Y3 Subtraction</p> <ul style="list-style-type: none"> Using addition to subtract Split strategy - Partition strategy - Written methods - 	<p>Additive relations: up to 3 digits (A)</p> <ul style="list-style-type: none"> Add Two 2-Digit Numbers Adding to 2-digit numbers Magic Mental Addition Complements to 50 and 100 Add 3 Numbers: Bonds to 100 Compensation - Add Estimate Sums Subtract Tens Magic Mental Subtraction Column Subtraction 2-Digit Differences: Regroup Repartition to Subtract Compensation - Subtract Estimate Differences Bump Add and Subtract Related Facts 1 Bar Model Problems 1 Bar Model Problems 2 Missing Values 	<p>Mental strategies to add or subtract</p> <ul style="list-style-type: none"> Adding using jump strategy to 3 digits Subtracting using jump strategy to 3 digits Add/subtract using jump strategy to 3 digits Adding using bridging to 10 up to 3 digits Subtracting using bridging to 10 up to 3 digits Add/subtract using bridging to 10 up to 3 digits Adding using split strategy to 3 digits Subtracting using split strategy to 3 digits Add/subtract using split strategy to 3 digits Adding using round & compensate to 3 digits Subtracting using round & compensate to 3 digits Add/subtract using round & compensate to 3 digits <p>Select strategies to add or subtract</p> <ul style="list-style-type: none"> Add/subtract using bar model to 3 digits Selecting strategies to add/subtract to 3 digits <p>Addition & subtraction to 3 digits</p> <ul style="list-style-type: none"> Adding & subtracting multiple single-digit numbers Bonds to 100 Connecting addition & subtraction Estimating with addition & subtraction Add/subtract multiples of 10 to 3-digit numbers 	<p>Number & Algebra, Addition & Subtraction 2-4</p> <ul style="list-style-type: none"> Calculate through this maze (DOK 3) Make 200 (DOK 3) Magic 9 (DOK 3) 	<p>(Y3-C) Addition and Subtraction</p> <ul style="list-style-type: none"> Addition mental strategies pp 1-4 Subtraction mental strategies pp 15-16 <p>(Y4-D) Addition and Subtraction</p> <ul style="list-style-type: none"> Addition mental strategies pp 1-4 Subtraction mental strategies pp 16-19

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 Time	MA2-NSM-02 represents and interprets analog and digital time in hours, minutes and seconds MA2-2DS-01 compares two-dimensional shapes and describes their features	Non-spatial measure A Two-dimensional spatial structure A	<ul style="list-style-type: none"> Time: Represent and read analog time 2D shapes: Compare and describe features of two-dimensional shapes 		Non-spatial measure: mass & time (A) <ul style="list-style-type: none"> Half Hour Times Five Minute Times 	Represent time using analogue displays <ul style="list-style-type: none"> Representing & reading analogue time displays 	Measurement, Time 2-4 <ul style="list-style-type: none"> Scenic stroll (DOK3) 	(Y3-C) Time and Money <ul style="list-style-type: none"> Time O'clock p 14 Time Half Past pp 15–19 Time Quarter Past pp 20–21 Time Quarter To p 22 Time Quarter to and Past p 23 Time- A Day p 24
LS 4 Big idea Fractions represent multiple ideas and can be represented in different ways Topic Simple fractions	MA2-PF-01 represents and compares halves, quarters, thirds and fifths as lengths on a number line and their related fractions ... MA2-GM-02 measures and estimates lengths in metres, centimetres and millimetres MA2-MR-01 represents and uses the structure of multiplicative relations to 10×10 to solve problems	Partitioned fractions A Geometric measure A Multiplicative relations A	<ul style="list-style-type: none"> Create fractional parts of a length using techniques other than repeated halving Model and represent unit fractions, and their multiples, to a complete whole on a number line Length: Measure and compare objects using metres, centimetres and millimetres Generate and describe patterns Recall multiplication facts of 2 and 4, 5 and 10 and related division facts 	Y3 Partitioned fractions <ul style="list-style-type: none"> Halves, Quarters and Eighths Unit fractions 1 Unit fractions 2 Proper fractions Y3 Division <ul style="list-style-type: none"> Multiplicative relations \div Halves, quarters, thirds, fifths, tenths 	Partitioned fractions (A) <ul style="list-style-type: none"> Halves and Quarters Thirds and Sixths Shade Fractions Identifying Fractions on a Number Line Equivalent Fraction Wall 1 	Halves, quarters, thirds & fifths <ul style="list-style-type: none"> Halves, quarters & eighths Thirds & fifths Working with unit fractions 		(Y3) Rich Learning Task <ul style="list-style-type: none"> Build a number (Y4-D) Fractions <ul style="list-style-type: none"> Introducing fractions pp 1–12 (Y5-E) Fractions <ul style="list-style-type: none"> Working with fractions pp 6–11
LS 5 Big idea Questions can be asked and answered by collecting and interpreting data Topic Data	MA2-DATA-01 collects discrete data and constructs graphs using a given scale MA2-DATA-02 interprets data in tables, dot plots and column graphs MA2-RN-01 applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands	Data A Representing numbers using place value A	<ul style="list-style-type: none"> Collect discrete data Organise and display data using tables and graphs Whole numbers: Read, represent and order numbers to thousands 		Data (A) <ul style="list-style-type: none"> Sorting Data Column Graphs Picture Graphs: Single-Unit Scale Pictographs Tallies 	Collect & organise discrete data <ul style="list-style-type: none"> Posing questions & collecting discrete data Organising & displaying discrete data using graphs Read tables, dot plots & column graphs <ul style="list-style-type: none"> Interpreting tables & column graphs Comparing data displays 	Statistics & Data 2-4 <ul style="list-style-type: none"> Transport trouble (DOK3) What's missing? (DOK3) 	(Y4-D) Chance and Data <ul style="list-style-type: none"> Data pp 10–14 Data – dot plots pp 17–18

NSW New Syllabus (2023) S2 Year 3

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 100 000	MA2-RN-01 applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands MA2-AR-01 selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers	Representing numbers using place value A Additive relations A	<ul style="list-style-type: none"> Whole numbers: Read, represent and order numbers to thousands Whole numbers: Apply place value to partition and regroup numbers up to 4 digits Use the principle of equality Select strategies flexibly to solve addition and subtraction problems of up to 3 digits 	Y3 Representing numbers using place value <ul style="list-style-type: none"> Partitioning Number lines Rounding Compare numbers Order numbers 		Numbers to 100 000 <ul style="list-style-type: none"> Reading, representing & ordering 5-digit numbers 		(Y5-E) Reading and Understanding Whole Numbers <ul style="list-style-type: none"> Looking at whole numbers – reading and writing numbers to 9 999 pp 1–2 Looking at whole numbers – ordering numbers to 9 999 pp 3–4 Place value of whole numbers – place value to 4 digits pp 9–10 Place value of whole numbers – expanded notation pp 11–12
LS 2 Big idea Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations Topic Multiplication facts for 2, 4, 5 and 10	MA2-MR-01 represents and uses the structure of multiplicative relations to 10×10 to solve problems MA2-RN-01 applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands	Multiplicative relations A Representing numbers using place value A	<ul style="list-style-type: none"> Use arrays to establish multiplication facts from multiples of 2 and 4, 5 and 10 Recall multiplication facts of 2 and 4, 5 and 10 and related division facts Represent and solve problems involving multiplication fact families Whole numbers: Apply place value to partition and regroup numbers up to 4 digits Generate and describe patterns 	Y3 Multiplication <ul style="list-style-type: none"> Multiplicative relations \times Multiplication facts 	Multiplicative relations (A) <ul style="list-style-type: none"> Counting by Tens Counting by Twos Skip Counting Grouping in Fours Grouping in Fives Grouping in Tens Dividing by Two Dividing by Five Dividing Tens 	Multiplicative facts for 2, 4, 5 & 10 <ul style="list-style-type: none"> Recalling multiplication & division facts of 2 Recalling multiplication & division facts of 4 Recalling multiplication & division facts of 5 Recalling multiplication & division facts of 10 Solving problems using multiplication facts 		(Y5-E) Multiplication and Division <ul style="list-style-type: none"> Multiplication facts pp 1–4 (Y4-D) Multiplication and Division <ul style="list-style-type: none"> Division pp 1–6
LS 3 Big idea Visual representations help to understand aspects of the world (chance and position) Topic Position	MA2-GM-01 uses grid maps and directional language to locate positions and follow routes MA2-2DS-02 performs transformations by combining and splitting two-dimensional shapes	Geometric measure A Two-dimensional spatial structure A	<ul style="list-style-type: none"> Position: Interpret movement on a map Position: Locate positions on grid maps 2D shapes: Transform shapes by reflecting, translating and rotating 		Geometric measure: position (A) <ul style="list-style-type: none"> Following Directions Coordinate Meeting Place What Direction was That? Using a key 	Use grid maps to describe position <ul style="list-style-type: none"> Interpreting maps to describe position Locating positions on a map 	Geometry, Symmetry, Transformation & Location 2-4 <ul style="list-style-type: none"> A day on the farm (DOK 3) Mighty maze (DOK 4) Geometry, Symmetry, Transformation & Location 3 -5 <ul style="list-style-type: none"> Drawing with grids (DOK 3) 	(Y4-D) Shape, Space and Position <ul style="list-style-type: none"> Position pp 1–7 2D shapes pp 5–7

LS & Topic	Outcomes	Focus	Content	New Courses	Activities (courses)	Skill Quests	Challenges	Ebooks
<p>LS 4</p> <p>Big idea What needs to be measured determines the unit of measurement</p> <p>Topic 3D objects and capacity</p>	<p>MA2-3DS-01 makes and sketches models and nets of three-dimensional objects including prisms and pyramids</p> <p>MA2-3DS-02 estimates, measures and compares capacities (internal volumes) using litres, millilitres and volumes using cubic centimetres</p> <p>MA2-RN-01 applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands</p>	<p>Three-dimensional spatial structure A</p> <p>Representing numbers using place value A</p>	<ul style="list-style-type: none"> 3D objects: Make models of three-dimensional objects to compare and describe key features Volume: Measure and order containers using litres Volume: Compare objects using familiar metric units of volume Whole numbers: Read, represent and order numbers to thousands 		<p>3D spatial structure: 3D objects (A)</p> <ul style="list-style-type: none"> Prisms and Pyramids Collect the Objects Match the Object <p>3D spatial structure: capacity (A)</p> <ul style="list-style-type: none"> How Full? Which Holds More? Filling Fast! 	<p>Identify prisms, pyramids & cylinders</p> <ul style="list-style-type: none"> Identifying prisms Identifying pyramids & cylinders Describing key features of prisms & pyramids Making models of prisms & pyramids Introducing nets of prisms 	<p>Geometry, 3D Shapes 2-4</p> <ul style="list-style-type: none"> Opposite shapes (DOK4) 	<p>(Y4-D) Shape, Space and Position</p> <ul style="list-style-type: none"> 3D shapes pp 1–3 <p>(Y4-D) Measurement</p> <ul style="list-style-type: none"> Volume and capacity p 1
<p>LS 5</p> <p>Big idea Angles are the primary structural component of many shapes</p> <p>Topic Angles</p>	<p>MA2-GM-03 identifies angles and classifies them by comparing to a right angle</p> <p>MA2-NSM-02 represents and interprets analog and digital time in hours, minutes and seconds</p> <p>MA2-PF-01 represents and compares halves, quarters, thirds and fifths as lengths on a number line and their related fractions formed by halving (eighths, sixths and tenths)</p>	<p>Geometric measure A</p> <p>Partitioned fractions A</p> <p>Non-spatial measure A</p>	<ul style="list-style-type: none"> Angles: Identify angles as measures of turn Time: Represent and read analog time Create fractional parts of a length using techniques other than repeated halving Model and represent unit fractions, and their multiples, to a complete whole on a number line 		<p>Geometric measure: angle (A)</p> <ul style="list-style-type: none"> Equal Angles Comparing Angles Right Angle Relation What Type of Angle? Classifying Angles 	<p>Identify & compare angles</p> <ul style="list-style-type: none"> Identifying angles as measures of turn 		<p>(Y5-E) Space, Shape and Position</p> <ul style="list-style-type: none"> Lines, angles and shapes – angles pp 2–3

NSW New Syllabus (2023) S2 Year 3

LS & Topic	Outcomes	Focus	Content	New Courses	Activities (courses)	Skill Quests	Challenges	Ebooks
<p>LS 1</p> <p>Big idea The number system extends infinitely to very large and very small numbers</p> <p>Topic Patterns</p>	<p>MA2-MR-01 represents and uses the structure of multiplicative relations to 10×10 to solve problems</p> <p>MA2-RN-01 applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands</p>	<p>Multiplicative relations A</p> <p>Representing numbers using place value A</p>	<ul style="list-style-type: none"> Generate and describe patterns Use arrays to establish multiplication facts from multiples of 2 and 4, 5 and 10 Recall multiplication facts of 2 and 4, 5 and 10 and related division facts Represent and solve problems involving multiplication fact families Whole numbers: Read, represent and order numbers to thousands Whole numbers: Apply place value to partition and regroup numbers up to 4 digits 	<p>Y3 Multiplication</p> <ul style="list-style-type: none"> Multiplicative relations \times More multiplication facts 		<p>Number patterns</p> <ul style="list-style-type: none"> Generating/describing patterns (1, 2, 5, 10, 25) Generating/describing patterns (3, 4, 6, 7, 8, 9) Identifying number patterns Investigating odd & even numbers Understand the property of 0 & 1 in multiplication 		<p>(Y4-D) Multiplication and Division</p> <ul style="list-style-type: none"> Mental multiplication strategies pp 1–6 <p>(Y3-C) Patterns and Algebra</p> <ul style="list-style-type: none"> Patterns and functions pp 1–12 Equations and equivalence pp 13–22
<p>LS 2</p> <p>Big idea Understanding relationships between the properties of 2D shapes helps visualise and organise spaces in the world</p> <p>Topic 2D shape properties</p>	<p>MA2-2DS-01 compares two-dimensional shapes and describes their features</p> <p>MA2-2DS-02 performs transformations by combining and splitting two-dimensional shapes</p> <p>MA2-MR-01 represents and uses the structure of multiplicative relations to 10×10 to solve problems</p>	<p>Two-dimensional spatial structure A</p> <p>Multiplicative relations A</p>	<ul style="list-style-type: none"> 2D shapes: Compare and describe features of two-dimensional shapes 2D shapes: Transform shapes by reflecting, translating and rotating Generate and describe patterns Use arrays to establish multiplication facts from multiples of 2 and 4, 5 and 10 Recall multiplication facts of 2 and 4, 5 and 10 and related division facts 		<p>2D spatial structure: shape & area (A)</p> <ul style="list-style-type: none"> What Line am I? Collect the Shapes Collect More Shapes Collect the Shapes 2 	<p>Identify features of 2D shapes</p> <ul style="list-style-type: none"> Comparing & describing features of quadrilaterals Identifying, classifying & sorting 2D shapes 	<p>Geometry, 2D shapes 2-4</p> <ul style="list-style-type: none"> Sort these shapes out! (DOK 3) Blip and the rectangle (DOK 3) 	<p>(Y4-D) Shape, Space and Position</p> <ul style="list-style-type: none"> 2D shapes p 4 <p>(Y5-E) Shape, Space and Position</p> <ul style="list-style-type: none"> Lines and angles pp 8–9

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 to area and volume	MA2-2DS-01 compares two-dimensional shapes ... MA2-2DS-02 performs transformations ... MA2-2DS-03 estimates, measures and compares areas ... MA2-3DS-01 makes and sketches models and nets of three-dimensional ... MA2-3DS-02 estimates, measures and compares capacities ... MA2-MR-01 represents and uses the structure of multiplicative relations to 10×10 ...	Two-dimensional spatial structure A Three-dimensional spatial structure A Multiplicative relations A	<ul style="list-style-type: none"> 2D shapes: Compare and describe features of two-dimensional Area: Use square centimetres to measure and estimate the areas of rectangles Area: Use square metres to measure and estimate the areas of rectangles 3D objects: Make models of three-dimensional objects to compare and describe key features Volume: Compare objects using familiar metric units of volume Volume: Compare objects using familiar metric units of volume Generate and describe patterns Use arrays to establish multiplication facts from multiples of 2 and 4, 5 and 10 Recall multiplication facts of 2 and 4, 5 and 10 and related division facts 		Multiplicative relations (A) <ul style="list-style-type: none"> Arrays 1 Arrays 2 2D spatial structure: shape & area (A) <ul style="list-style-type: none"> Area of Shapes Equal Areas 3D spatial structure: capacity (A) <ul style="list-style-type: none"> Comparing Volume 	Calculate area of a rectangle <ul style="list-style-type: none"> Using cm^2 to measure areas of rectangles Using m^2 to measure areas of rectangles Measure capacity & volume <ul style="list-style-type: none"> Measuring & comparing volumes using cubic blocks Introducing a formal measure of capacity (litres) 	Number & Algebra, Multiplication & Division 2-4 <ul style="list-style-type: none"> Party time (DOK 2) Measurement, Volume & Capacity 2-4 <ul style="list-style-type: none"> Cube faces (DOK 3) 	(Y3) Rich Learning Task <ul style="list-style-type: none"> Freckles (Y5-E) Series E Length, Area and Perimeter <ul style="list-style-type: none"> Area p 5
LS 4 Big idea What needs to be measured determines the unit of measurement Topic Length and mass	MA2-GM-02 measures and estimates lengths in metres, centimetres and millimetres MA2-NSM-01 estimates, measures and compares the masses of objects using kilograms and grams	Geometric measure A Non-spatial measure A	<ul style="list-style-type: none"> Length: Measure and compare objects using metres, centimetres and millimetres Mass: Compare objects using the kilogram 		Geometric measure: length (A) <ul style="list-style-type: none"> How Long is That? Measuring Length Perimeter of Shapes Converting cm and mm Centimetres and Metres Non-spatial measure: mass & time (A) <ul style="list-style-type: none"> Everyday Mass 	Use metric measurements for lengths <ul style="list-style-type: none"> Measuring in m, cm, mm Selecting measures for length (m, cm, mm) Comparing length measurements Ordering length measurements Measure mass in kg & g <ul style="list-style-type: none"> Introducing a formal measure for weight (kg) 	Measurement, Length 2-4 <ul style="list-style-type: none"> Measured to perfection (mm) (DOK 2) Paw prints (DOK 3) 	(Y4-D) Measurement <ul style="list-style-type: none"> Units of length pp 1–5
LS 5 Big idea Addition and subtraction problems can be solved by using a variety of strategies Topic Addition and subtraction problems	MA2-AR-01 selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers MA2-RN-01 applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands	Additive relations A Representing numbers using place value A	<ul style="list-style-type: none"> Use the principle of equality Recognise and explain the connection between addition and subtraction Select strategies flexibly to solve addition and subtraction problems of up to 3 digits Represent money values in multiple ways Whole numbers: Read, represent and order numbers to thousands Whole numbers: Apply place value to partition and regroup numbers up to 4digits 	Y3 Addition <ul style="list-style-type: none"> Bridging strategy + Rounding strategy + Problem solving with + 		Select strategies to add or subtract <ul style="list-style-type: none"> Using addition & subtraction with money Solve number sentences with add/subtract <ul style="list-style-type: none"> Solving addition & subtraction number sentences 		(Y5-E) Addition and Subtraction <ul style="list-style-type: none"> Addition mental strategies pp 12–13 Subtraction mental strategies pp 24–25

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	MA2-RN-01 applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands MA2-AR-01 selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers	Representing numbers using place value A Additive relations A	<ul style="list-style-type: none"> Whole numbers: Read, represent and order numbers to thousands Whole numbers: Apply place value to partition and regroup numbers up to 4 digits Use the principle of equality Select strategies flexibly to solve addition and subtraction problems of up to 3 digits 		Refer to: <ul style="list-style-type: none"> Term 1, Learning Sequence 1 Term 2, Learning Sequence 1 Term 3, Learning Sequence 1 			(Y6-F) Reading and Understanding Whole Numbers <ul style="list-style-type: none"> Looking at whole numbers pp 1–3 (Y6-F) Addition and Subtraction <ul style="list-style-type: none"> Addition Mental Strategies pp 1–8 Subtraction Mental Strategies pp 9–16
LS 2 Big idea Fractions represent multiple ideas and can be represented in different ways Topic Fractions review	MA2-PF-01 represents and compares halves, quarters, thirds and fifths as lengths ... MA2-GM-02 measures and estimates lengths in metres, centimetres and millimetres MA2-MR-01 represents and uses the structure of multiplicative relations to 10×10 ...	Partitioned fractions A Geometric measure A Multiplicative relations A	<ul style="list-style-type: none"> Create fractional parts of a length using techniques other than repeated halving Model and represent unit fractions, and their multiples, to a complete whole on a number line Length: Measure and compare objects using metres, centimetres and millimetres Generate and describe patterns Recall multiplication facts of 2 and 4, 5 and 10 and related division facts 	Y3 Partitioned Fractions <ul style="list-style-type: none"> Fractions and wholes Unit fractions and sharing 	Refer to: <ul style="list-style-type: none"> Term 1, Learning Sequence 4 			(Y3) Rich Learning Task <ul style="list-style-type: none"> Build a number (Y4-D) Fractions <ul style="list-style-type: none"> Introducing fractions pp 1–12 (Y5-E) Fractions <ul style="list-style-type: none"> Working with fractions pp 6–11
LS 3 Big idea Questions can be asked and answered by collecting and interpreting data Topic Chance	MA2-CHAN-01 records and compares the results of chance experiments MA2-DATA-01 collects discrete data and constructs graphs using a given scale MA2-DATA-02 interprets data in tables, dot plots and column graphs	Chance A Data A	<ul style="list-style-type: none"> Identify possible outcomes from chance experiments Collect discrete data Organise and display data using tables and graphs Interpret and compare data 		Chance (A) <ul style="list-style-type: none"> Most Likely and Least Likely How many Combinations? Will it Happen? 	Chance concepts <ul style="list-style-type: none"> Identifying outcomes from chance experiments 	Chance & Probability 2-4 <ul style="list-style-type: none"> Picking plums (DOK 3) Multiple mayhem (DOK 3) 	(Y4-D) Chance and Data <ul style="list-style-type: none"> Data pp 15–21 (Y5-E) Chance and Data <ul style="list-style-type: none"> Chance pp 1–2

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LS & Topic	Outcomes	Focus	Content	New Courses	Activities (courses)	Skill Quests	Challenges	Ebooks
<p>LS 4</p> <p>Big idea Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations</p> <p>Topic Multiplication and division problems</p>	<p>MA2-MR-01 represents and uses the structure of multiplicative relations to 10×10 to solve problems</p> <p>MA2-RN-01 applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands</p>	<p>Multiplicative relations A</p> <p>Represents numbers using place value A</p>	<ul style="list-style-type: none"> Use arrays to establish multiplication facts from multiples of 2 and 4, 5 and 10 Recall multiplication facts of 2 and 4, 5 and 10 and related division facts Represent and solve problems involving multiplication fact families Whole numbers: Apply place value to partition and regroup numbers up to 4 digits Generate and describe patterns 	<p>Y3 Multiplication</p> <ul style="list-style-type: none"> Multiplicative relations \times Doubling and tripling Multiply with tens Multiply larger numbers Different groupings <p>Y3 Division</p> <ul style="list-style-type: none"> Multiplicative relations \div Division and repeated subtraction Division facts 2,3,4,5 and 10 Arrays and division facts 	<p>Multiplicative relations (A)</p> <ul style="list-style-type: none"> Model multiplication to 5×5 Fact Families: Multiply and Divide Multiplication Turnarounds Halve it! 	<p>Solve multiplication & division problems</p> <ul style="list-style-type: none"> Find the missing number in mult/division problems 	<p>Number & Algebra, Multiplication & Division 2-4</p> <ul style="list-style-type: none"> A wheel problem (DOK3) 	<p>(Y4-D) Multiplication and Division</p> <ul style="list-style-type: none"> Introducing multiplication groups of 5 pp 1-4 Introducing Multiplication - 10 times tables pp 5-6 Introducing multiplication - multiplying numbers by 0 and 1 p 7 Multiplication facts - 2 times table pp 8-9 Multiplication facts - 4 times table pp 10-11
<p>LS 5</p> <p>Big idea Shapes encountered in daily life can be classified by their attributes</p> <p>Topic 2D shape transformations</p>	<p>MA2-2DS-01 compares two-dimensional shapes and describes their features</p> <p>MA2-2DS-02 performs transformations by combining and splitting two-dimensional shapes</p> <p>MA2-MR-01 represents and uses the structure of multiplicative relations to 10×10 to solve problems</p> <p>MA2-GM-03 identifies angles and classifies them by comparing to a right angle</p>	<p>Geometric measure A</p> <p>Two-dimensional spatial structure A</p> <p>Multiplicative relations A</p>	<ul style="list-style-type: none"> 2D shapes: Compare and describe features of two-dimensional shapes 2D shapes: Transform shapes by reflecting, translating and rotating Generate and describe patterns Angles: Identify angles as measures of turn 		<p>2D spatial structure: transformations (A)</p> <ul style="list-style-type: none"> Symmetry Symmetry or Not? Flip, Slide, Turn Transformations Rotational Symmetry 	<p>Perform transformations</p> <ul style="list-style-type: none"> Transforming shapes by translation & reflections Recognising line symmetry Transforming shapes by rotation 	<p>Geometry, Symmetry, Transformation & Location 2-4</p> <ul style="list-style-type: none"> Flutter bye (DOK4) 	<p>(Y4-D) Space Shape and Position</p> <ul style="list-style-type: none"> Investigating 2D shapes - symmetry and tessellation pp 9-10

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