Syllabus comparison chart

NSW Mathematics K-10 Syllabus (2012)				NSW Mathematics 3-6 Syllabus (2023)				Activities (courses): Topics	Skill Quests
Strand	Substrands	Outcomes	Code	Strand	Substrands	Outcomes	Code	NSW New Syllabus (2023) S2 Year 4	
Number and Algebra	Whole Numbers 2	applies place value to order, read and represent numbers of up to five digits	MA2-4NA	Number and Algebra	Representing numbers using place value B	Applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands.	MA2-RN-01		Represent 5-digit numbers
						Represents and compares decimals up to 2 decimal places using place value	MA2-RN-02	Represent numbers using place value (B)	Represent decimals to hundredths
	Addition and Subtraction 2	uses mental and written strategies for addition and subtraction involving two-, three-, four- and five-digit numbers	MA2-5NA		Additive relations B	Selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers.	MA2-AR-01	Additive relations (B)	Addition & subtraction to 4 digits
						Completes number sentences involving addition and subtraction by finding missing values.	MA2-AR-02		Solve number sentences with add/subtract
	Multiplication and Division 2	uses mental and informal written strategies for multiplication and division	MA2-6NA		Multiplicative relations B	Represents and uses the structure of multiplicative relations to 10 × 10 to solve problems.	MA2-MR-01	Multiplicative relations : multiply (B) Multiplicative relations : divide (B)	Number sequences Use doubling to multiply Multiplication facts: 3, 6, 7, 8, 9 Multiply by multiples of 10
	Patterns and Algebra 2	generalises properties of odd and even numbers, generates number patterns, and completes simple number sentences by calculating missing values	MA2-8NA			Completes number sentences involving multiplication and division by finding missing values.	MA2-MR-02		Solve multiplication & division problems
	Fractions and Decimals 2	represents, models and compares commonly used fractions and decimals	MA2-7NA		Partitioned fractions B	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).	MA2-PF-01	Partitioned fractions (B)	Understand equivalent fractions

NSW Mathematics K-10 Syllabus (2012)				NSW Mathematics 3-6 Syllabus (2023)				Activities (courses): Topics	Skill Quests
Strand	Substrands	Outcomes	Code	Strand	Substrands	Outcomes	Code	NSW New Syllabus (2023) S2 Year 4	
Measurement and Geometry	Position 2	uses simple maps and grids to represent position and follow routes, including using compass directions	MA2-17MG	Measurement and Space	Geometric measure B: Position	Uses grid maps and directional language to locate positions and follow routes	MA2-GM-01	Geometric measure: position (B)	Use maps & compass directions
	Length 2	measures, records, compares and estimates lengths, distances and perimeters in metres, centimetres and millimetres, and measures, compares and records temperatures	MA2-9MG		Geometric measure B: Length	Measures and estimates lengths in metres, centimetres and millimetres.	MA2-GM-02	Geometric measure: length (B)	Convert lengths & calculate perimeters
	Angles 2	identifies, describes, compares and classifies angles	MA2-16MG		Geometric measure B: Angle	Identifies angles and classifies them by comparing to a right angle.	MA2-GM-03	Geometric measure: angle (B)	Classify angles
	Two-dimensional Space 2	manipulates, identifies and sketches two-dimensional shapes, including special quadrilaterals, and describes their features	MA2-15MG		Two-dimensional spatial structure B: 2D shapes	Compares two-dimensional shapes and describes their features.	MA2-2DS-01	2D spatial structure: shape & area (B)	Identify shapes in composite polygons
						Performs transformations by combining and splitting two-dimensional shapes.	MA2-2DS-02	2D spatial structure: transformations (B)	Tessellations
	Area 2	measures, records, compares and estimates areas using square centimetres and square metres	MA2-10MG		Two-dimensional spatial structure B: Area	Estimates, measures and compares areas using square centimetres and squares metres.	MA2-2DS-03	2D spatial structure: shape & area (B)	Calculate area using grid structure
	Three-dimensional Space 2	makes, compares, sketches and names three-dimensional objects, including prisms, pyramids, cylinders, cones and spheres, and describes their features	MA2-14MG		Three-dimensional spatial structure B: 3D Objects	Makes and sketches models and nets of three-dimensional objects including prisms and pyramids.	MA2-3DS-01	3D spatial structure: 3D objects (B)	Connect 3D objects with nets
	Volume and Capacity 2	measures, records, compares and estimates volumes and capacities using litres, millilitres and cubic centimetres	MA2-11MG		Three-dimensional spatial structure B: Volume	Estimates, measures and compares capacities (internal volumes) using litres, millilitres and volumes using cubic centimetres.	MA2-3DS-02	3D spatial structure: capacity (B)	Read scaled instruments in L & mL
	Mass 2	measures, records, compares and estimates the masses of objects using kilograms and grams	MA2-12MG		Non-spatial measure B: Mass	Estimates, measures and compares the masses of objects using kilograms and grams.	MA2-NSM-01	Non-spatial measure: mass & time (B)	Read scaled instruments in kg & g
	Time 2	reads and records time in one-minute intervals and converts between hours, minutes and seconds	MA2-13MG		Non-spatial measure B: Time	Represents and interprets analog and digital time in hours, minutes and seconds.	MA2-NSM-02	Non-spatial measure: mass & time (B)	Represent time using digital displays

Syllabus comparison chart

NSW Mathematics K-10 Syllabus (2012)				NSW Mathematics 3-6 Syllabus (2023)				Activities (courses): Topics	Skill Quests
Strand	Substrands	Outcomes	Code	Strand	Substrands	Outcomes	Code	NSW New Syllabus (2023) S2 Year 4	
Statistics and Probability	Data 2	selects appropriate methods to collect data, and constructs, compares, interprets and evaluates data displays, including tables, picture graphs and column graphs	MA2-18SP	Statistics and Probability	Data B	Collects discrete data and constructs graphs using a given scale.	MA2-DATA-01	Data (B)	Data collection methods
						Interprets data in tables, dot plots and column graphs	MA2-DATA-02		Interpret data with many-to-one scales
	Chance 2	describes and compares chance events in social experimental contexts	MA2-19SP		Chance B	Records and compares the results of chance experiments.	MA2-CHAN-01	Chance (B)	Describe the likelihood of outcomes

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 million** • Apply place value to hundreds-of-thousands • Read, represent and order numbers to 1 000 000 • Partition 6-digit numbers • Round to nearest 1 000, 10 000, and 100 000	**Number and Algebra** **Big idea:** The number system extends infinitely to very large and very small numbers **Introducing decimals** • Express decimals as tenths and hundredths • Locate, compare & order tenths and hundredths • Make connections between fractions and decimal notation	**Number and Algebra** **Big idea:** The number system extends infinitely to very large and very small numbers **Patterns** • Place value review of Base 10 system • 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** • Use quantity values and non-standard partitioning • Use algorithms with and without regrouping • Choose appropriate strategies • Estimate to check solutions	**Number and Algebra** **Big idea:** Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations **Multiplication and division** • Identify and continue number patterns with multiples • Apply commutative and associative properties of multiplication • Use flexible partitioning • Recall multiplication facts to 10x10	**Measurement and Space** **Big idea:** Understanding relationships between the properties of 2D shapes helps visualise and organise spaces in the world **2D shape properties** • Review properties of 2D shapes • Combine common 2D shapes to form other shapes • Split other shapes into two or more common shapes	**Number and Algebra** **Big idea:** Fractions represent multiple ideas and can be represented in different ways **Fractions applications** • Add and subtract fractions with the same or related denominators • Solve word problems involving fractions
LS 3	**Measurement and Space** **Big idea:** What needs to be measured determines the unit of measurement **Time** • Read and set time on digital devices • Determine time remaining • Use am and pm notation • Relate analogue and digital time	**Measurement and Space** **Big idea:** Visual representations help to understand aspects of the world **Position** • Create and interpret grid maps • Use compass directions (N, S, E, W) • Describe journeys using directional language	**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** • Connect grouping to arrays and area models • Estimate, measure & record area in cm2 (using grid overlays) and m2 • Sketch prisms on isometric grids • Create models using connecting cubes	**Statistics and Probability** **Big idea:** Questions can be asked and answered by collecting and interpreting data **Chance** • Use the terms equally likely, likely and unlikely • Compare the likelihood of obtaining outcomes • Identify when events are affected by previous events
LS 4	**Number and Algebra** **Big idea:** Fractions represent multiple ideas and can be represented in different ways **Fractions** • Represent equivalence • Concrete materials, diagrams and number lines • Compare partitioned fractions with same-size whole • Regroup fractional parts beyond one	**Measurement and Space Number and Algebra** **Big idea:** What needs to be measured determines the unit of measurement **3D objects and capacity** • Identify features of prisms, pyramids and cylinders: faces, edges, vertices, curved surfaces • Sketch 3D objects from different views • Measure and record capacity using mL and 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** • Estimate, measure and compare lengths • Identify and measure perimeter • Convert between cm and m, and m and cm • Record lengths using decimals to 2 places • Record and compare mass using g and Kg	**Number and Algebra** **Big idea:** Multiplicative thinking involves flexible use of multiplication and division concepts, strategies, and representations **Multiplication and division problems** • Use flexible strategies to solve word problems involving multiplication and division
LS 5	**Statistics and Probability** **Big idea:** Questions can be asked and answered by collecting and interpreting data **Data** • Create, refine and conduct surveys to collect categorical or numerical data • Use many-to-one scales • Create column graphs • Interpret and evaluate effectiveness of various data displays	**Measurement and Space Number and Algebra** **Big idea:** Angles are the primary structural component of many shapes **Angles** • Compare angles to a right angle • Describe angles in comparison to quarter-turns	**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 word 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 **Transformations of 2D shapes** • Create and record tessellating designs using triangles or quadrilaterals: reflecting, translating and rotating • Apply and describe amounts of rotation: half, quarter and 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 B**	Whole numbers: Order numbers in the thousands	Term 1 LS 1 Term 2 LS 4 Term 4 LS 1
		Whole numbers: Apply place value to partition, regroup and rename numbers up to 6 digits	Term 1 LS 1, 2 Term 2 LS 2 Term 3 LS 1, 5 Term 4 LS 1, 4
		Whole numbers: Recognise and represent numbers that are 10, 100 or 1000 times as large	Term 1 LS 1, 2 Term 2 LS 1, 2 Term 3 LS 1, 5 Term 4 LS 1, 4
MA2-RN-02 represents and compares decimals up to 2 decimal places using place value		Decimals: Extend the application of the place value system from whole numbers to tenths and hundredths	Term 1 LS 4 Term 2 LS 1 Term 3 LS 1, 4 Term 4 LS 1
		Decimals: Make connections between fractions and decimal notation	Term 1 LS 4 Term 2 LS 1 Term 3 LS 1 Term 4 LS 1, 2
MA2-AR-01 selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers	**Additive relations B**	Partition, rearrange and regroup numbers to at least 1000 to solve additive problems	Term 1 LS 2 Term 2 LS 1 Term 3 LS 5 Term 4 LS 1
		Apply addition and subtraction to familiar contexts, including money and budgeting	Term 3 LS 5
MA2-AR-02 completes number sentences involving addition and subtraction by finding missing values		Complete number sentences involving additive relations to find unknown quantities	Term 3 LS 5
MA2-MR-01 represents and uses the structure of multiplicative relations to 10 × 10 to solve problems	**Multiplicative relations B**	Investigate number sequences involving related multiples	Term 1 LS 1 Term 2 LS 2 Term 3 LS 1 Term 4 LS 4
		Use known number facts and strategies	Term 1 LS 1 Term 2 LS 2 Term 3 LS 1 Term 4 LS 4
		Use the structure of the area model to represent multiplication and division	Term 2 LS 2 Term 3 LS 3 Term 4 LS 4
		Use number properties to find related multiplication facts	Term 2 LS 2 Term 3 LS 3 Term 4 LS 4
		Operate with multiples of 10	Term 1 LS 1 Term 2 LS 2 Term 3 LS 3 Term 4 LS 4
MA2-MR-02 completes number sentences involving multiplication and division by finding missing values	**Multiplicative relations B**	Represent and solve word problems with number sentences involving multiplication or division	Term 2 LS 2 Term 3 LS 3 Term 4 LS 4

Outcomes	Focus	Content	Located
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 B**	Model equivalent fractions as lengths	Term 1 LS 4 Term 4 LS 2
		Represent fractional quantities equal to and greater than one	Term 1 LS 4 Term 2 LS 5 Term 4 LS 2
MA2-GM-01 uses grid maps and directional language to locate positions and follow routes	**Geometric measure B**	Position: Create and interpret grid maps	Term 2 LS 3
		Position: Use directional language and describe routes with grid maps	Term 2 LS 3
MA2-GM-02 measures and estimates lengths in metres, centimetres and millimetres		Length: Use scaled instruments to measure and compare lengths	Term 1 LS 4 Term 3 LS 4 Term 4 LS 2
MA2-GM-03 identifies angles and classifies them by comparing to a right angle	**Geometric measure B**	Angles: Compare angles to a right angle	Term 2 LS 5 Term 4 LS 5
MA2-2DS-01 compares two-dimensional shapes and describes their features	**Two-dimensional spatial structure B**	2D shapes: Create two-dimensional shapes that result from combining and splitting common shapes	Term 1 LS 3 Term 3 LS 2 Term 4 LS 5
MA2-2DS-02 performs transformations by combining and splitting two-dimensional shapes		2D shapes: Create symmetrical patterns and shapes	Term 3 LS 2 Term 4 LS 5
MA2-2DS-03 estimates, measures and compares areas using square centimetres and square metres	**Two-dimensional spatial structure B**	Area: Measure the areas of shapes using the grid structure	Term 3 LS 2, 3 Term 4 LS 5
		Area: Compare surfaces using familiar metric units of area	Term 3 LS 2, 3 Term 4 LS 5
MA2-3DS-01 makes and sketches models and nets of three-dimensional objects including prisms and pyramids	**Three-dimensional spatial structure B**	3D objects: Connect three-dimensional objects and two-dimensional representations	Term 2 LS 3, 4 Term 3 LS 3
MA2-3DS-02 estimates, measures and compares capacities (internal volumes) using litres, millilitres and volumes using cubic centimetres		Volume: Use scaled instruments to measure and compare capacities (internal volumes)	Term 2 LS 4
MA2-NSM-01 estimates, measures and compares the masses of objects using kilograms and grams	**Non-spatial measure B**	Mass: Use scaled instruments to measure and compare masses	Term 3 LS 4
MA2-NSM-02 represents and interprets analog and digital time in hours, minutes and second		Time: Represent and interpret digital time displays	Term 1 LS 3
		Time: Use am and pm notation	Term 1 LS 3
MA2-DATA-01 collects discrete data and constructs graphs using a given scale	**Data B**	Select and trial methods for data collection	Term 1 LS 5 Term 4 LS 3
MA2-DATA-02 interprets data in tables, dot plots and column graphs		Construct and interpret data displays with many-to-one scales	Term 1 LS 5 Term 4 LS 3
MA2-CHAN-01 records and compares the results of chance experiments	**Chance B**	Describe the likelihood of outcomes of chance events	Term 4 LS 3
		Identify when events are affected by previous events	Term 4 LS 3

NSW New Syllabus (2023) S2 Year 4

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 million	**MA2-RN-01** applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands **MA2-MR-01** represents and uses the structure of multiplicative relations to 10 × 10 to solve problems	**Representing numbers using place value B** **Multiplicative relations B**	• Whole numbers: Order numbers in the thousands • Whole numbers: Apply place value to partition, regroup and rename numbers up to 6 digits • Whole numbers: Recognise and represent numbers that are 10, 100 or 1000 times as large • Investigate number sequences involving related multiples • Use known number facts and strategies • Operate with multiples of 10	Coming soon: **Y4 Representing numbers using place value** • Numbers to at least 100 000s • Place value • Partitioning • Using number lines • Rounding • Compare numbers • Order numbers	**Represent numbers using place value (B)** • Expanded Notation • Numbers in Words • Partition and Rename 3 • Rounding Numbers • Numbers from Words to Digits 1 • Missing Numbers 2	**Represent 4-digit numbers** • Reading & representing numbers to 1000 • Comparing & ordering numbers up to 10 000 • Partitioning numbers to 4 digits **Represent 5-digit numbers** • Reading, representing & ordering numbers to 10 000 • Rounding numbers to 10 000 • Partitioning 5-digit numbers	**Number & Algebra, Whole Number 2–4** • Swap the digits (DOK 2) **Number & Algebra, Whole Number 3–5** • Exploring a 5-digit number (DOK 2) • Target numbers! (DOK 3) • Too much information (DOK 3) **Number & Algebra, Whole Number 4–6** • Mysterious numbers (DOK 2) • Clued in (DOK 2) • Big number split (DOK 3)	(Y5-E) **Reading and Understanding Whole Numbers** • Looking at whole numbers – read and write numbers to 999 999 pp 1–2 • Looking at whole numbers – order numbers to 999 999 pp 3–4 • Place value of whole numbers – place value to 6 digits pp 13–14
LS 2 **Big idea** Addition and subtraction problems can be solved by using a variety of strategies **Topic** Addition and subtraction	**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 B** **Representing numbers using place value B**	• Partition, rearrange and regroup numbers to at least 1000 to solve additive problems • Whole numbers: Apply place value to partition, regroup and rename numbers up to 6 digits • Whole numbers: Recognise and represent numbers that are 10, 100 or 1000 times as large	Coming soon	**Additive relations (B)** • Magic Mental Addition • Magic Mental Subtraction • Compensation – Add • Compensation – Subtract • Split Add and Subtract • Partition Puzzles 1 • Partition Puzzles 2 • Addition Properties • Strategies for Column Addition • Columns that Add • Column Addition 1	**Addition & subtraction to 4 digits** • Add/subtract using non-standard partitioning • Add/subtract multiples of 100, 1000 & 10 000 • Using algorithms to add (without regrouping) • Using algorithms to add (with regrouping) • Using algorithms to add (with & without regrouping) • Using algorithms to subtract (without regrouping) • Using algorithms to subtract (with regrouping) • Rounding to estimate answers • Choosing efficient strategies for addition • Choosing efficient strategies for subtraction **Solve number sentences with add/subtract** • Solving addition & subtraction number sentences	**Number & Algebra, Addition & Subtraction 2–4** • Choosing chores (DOK 4) **Number & Algebra, Addition & Subtraction 3–5** • Missing numbers! (DOK 3) • All boxed up (DOK 2) • Navigate the number maze (DOK 3) • Shuffle those numbers! (DOK 3) • Explore an addition game (DOK 3)	(Y5-E) **Addition and Subtraction** • Addition mental strategies – jump strategy pp 1–2 • Addition mental strategies – split strategy pp 3–4 • Addition mental strategies – compensation strategy pp 5–8 • Subtraction mental strategies – jump strategy pp 9–10 • Subtraction mental strategies – split strategy pp 11–12 • Subtraction mental strategies – compensation strategy pp 13–17

LS & Topic	Outcomes	Focus	Content	New Courses	Activities (courses)	Skill Quests	Challenges	Ebooks
				NSW New Syllabus (2023) S2 Year 4				
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 second **MA2-2DS-01** compares two-dimensional shapes and describes their features	**Non-spatial measure B** **Two-dimensional spatial structure B**	• Time: Represent and interpret digital time displays • Time: Use am and pm notation • 2D shapes: Create two-dimensional shapes that result from combining and splitting common shapes	Coming soon	**Non-spatial measure: mass & time (B)** • Quarter To and Quarter Past • What is the Time?	**Represent time using digital displays** • Representing & reading digital time displays • Using AM and PM notation	**Measurement Time 2–4** • Time for T.V. (DOK 3) • Mystery birthdate (DOK 3) **Measurement, Time 3–5** • Comparing different measures of time (DOK 2) • The mysteries of time (DOK 2)	(Y4-D) **Time** • Telling time – digital pp 3–6 • Measuring time – am and pm p 7
LS 4 **Big idea** Fractions represent multiple ideas and can be represented in different ways **Topic** Fractions	**MA2-PF-01** represents and compares halves, quarters, thirds and fifths as lengths on a number line and their related fractions ... **MA2-RN-02** represents and compares decimals up to 2 decimal places using place value **MA2-GM-02** measures and estimates lengths in metres, centimetres and millimetres	**Partitioned fractions B** **Representing numbers using place value B** **Geometric measure B**	• Model equivalent fractions as lengths • Represent fractional quantities equal to and greater than one • Decimals: Make connections between fractions and decimal notation • Length: Use scaled instruments to measure and compare lengths	**Y4 Partitioned Fractions** • Unit fractions • Proper fractions • Equivalence • Mixed numbers and improper fractions	**Partitioned fractions (B)** • Compare Fractions 1a • Compare Fractions 1b • Comparing Fractions 1 • Equivalent Fraction Wall 1	**Unit fractions** • Working with unit fractions **Understand equivalent fractions** • Modelling equivalent fractions	**Number & Algebra, Fractions 2–4** • Decorate using fractions (DOK 2) **Number & Algebra, Fractions 3–5** • Running a fraction of the race (DOK 2)	(Y4-D) **Fractions** • Types of fractions – equivalent fractions pp 12–14
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	**Data B**	• Select and trial methods for data collection • Construct and interpret data displays with many-to-one scales	Coming soon	**Data (B)** • Picture Graphs: with scale & half symbols • Reading from a Column Graph • Making Picture Graphs: With Scale	**Data collection & display** • Organising & displaying discrete data using graphs **Interpret data with many-to-one scales** • Interpreting displays with many-to-one scales	**Statistics & data 2–4** • Fruitful investigation **Statistics & data 3–5** • Watch out! (DOK 2) • Create a picture graph (DOK 3)	(Y4-D) **Chance and Data** • Data – asking questions and collecting data pp 12–13 • Data – tallies p 14 • Data – column graphs pp 15–16 • Data – picture graphs pp 17–18

NSW New Syllabus (2023) S2 Year 4

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** Introducing decimals	**MA2-RN-02** represents and compares decimals up to 2 decimal places using place value **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 B** **Additive relations B**	• Decimals: Extend the application of the place value system from whole numbers to tenths and hundredths • Decimals: Make connections between fractions and decimal notation • Whole numbers: Recognise and represent numbers that are 10, 100 or 1000 times as large • Partition, rearrange and regroup numbers to at least 1000 to solve additive problems	**Y4 Decimals: Representing numbers** • Decimal tenths • Decimal hundredths • Place value to hundredths • 10 or 100 times larger or smaller • Partitioning decimals • Tenths on the number line • Hundredths on the number line • The nearest whole number • Fractions and decimals	**Represent numbers using place value (B)** • Decimals on the Number Line • Decimals from Words to Digits 1 • Decimal Place Value • Decimal Order 1	**Represent decimals to hundredths** • Introducing decimal tenths • Introducing decimal hundredths • Comparing & ordering decimals to hundredths • Partitioning decimal hundredths • Connecting decimals to common fractions • Connecting decimals & fractions up to hundredths		(Y5-E) **Fractions, Decimals, and Percentages** • Fractions, decimals and percentages – tenths p 17 • Fractions, decimals and percentages – tenths and hundredths pp 18–19
LS 2 **Big idea** Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations **Topic** Multiplication and division	**MA2-MR-01** represents and uses the structure of multiplicative relations to 10 × 10 to solve problems **MA2-MR-02** completes number sentences involving multiplication and division by finding missing values **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 B** **Representing numbers using place value B**	• Investigate number sequences involving related multiples • Use known number facts and strategies • Use the structure of the area model to represent multiplication and division • Use number properties to find related multiplication facts • Operate with multiples of 10 • Represent and solve word problems with number sentences involving multiplication or division • Whole numbers: Apply place value to partition, regroup and rename numbers up to 6 digits • Whole numbers: Recognise and represent numbers that are 10, 100 or 1000 times as large	Coming soon	**Multiplicative relations: multiply (B)** • Multiples of • Increasing Patterns • Decreasing Patterns • Grouping in Threes • Grouping in Sixes • Grouping in Sevens • Grouping in Nines • Multiplication Turn-Abouts • Related Facts 2 • Times Tables • Bar model × ÷ • Grid Methods 1 • Find the Missing Number 2 • Missing Numbers: × and ÷ facts **Multiplicative relations: divide (B)** • Dividing Threes • Dividing Sixes • Dividing Nines • Dividing Sevens • Dividing Eights • Mental Methods Division	**Number sequences** • Investigating number sequences with multiplication **Use doubling to multiply** • Use doubling to multiply by 8 **Multiplication facts: 3, 6, 7, 8, 9** • Multiplication & division facts for 3 • Multiplication & division facts for 6 • Multiplication & division facts for 7 • Multiplication & division facts for 8 • Multiplication & division facts for 9 • Multiplication fact families up to 10 x 10	**Number & Algebra, Multiplication & Division 4-6** • Multiple relationships (DOK 2) • Steps to success (DOK 2) **Number & Algebra, Patterns 4-6** • Multiple patterns (DOK 3)	(Y4-D) **Multiplication and Division** • Multiplication facts – 8 times table p 5 • Multiplication facts – 3 and 6 times tables pp 6–7 • Using known facts – 9 times table p 8 • Using known facts – 7 times table p 9 • Mental multiplication strategies – multiplying by 10 and 100 - pp 13–14 • Mental division strategies – dividing by 10 and 100 p 29

NSW New Syllabus (2023) S2 Year 4

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	**MA2-GM-01** uses grid maps and directional language to locate positions and follow routes **MA2-3DS-01** makes and sketches models and nets of three-dimensional objects including prisms and pyramids	**Geometric measure B** **Three-dimensional spatial structure B**	• Position: Create and interpret grid maps • Position: Use directional language and describe routes with grid maps • 3D objects: Connect three-dimensional objects and two-dimensional representations	Coming soon	**Geometric measure: position (B)** • Following Directions • Coordinate Meeting Place • What Direction was That? • Using a key	**Use maps & compass directions** • Creating & interpreting grid maps • Using directional language (cardinal compass)	**Geometry, Symmetry, Transformation & Location 3-5** • Map the way (DOK 2) • Routes on a map (DOK 3) • Program the robot (DOK 3) **Geometry, Symmetry, Transformation & Location 4-6** • A journey back in time (DOK 2) • Island towns (DOK 3) • Which way? (DOK 3)	(Y4-D) **Space, Shape and Position** • Position – grids and coordinates p 21 • Position – using a map p 22 • Position – compass directions pp 23–24 • Year 5 Series E Position • Directions – using a compass pp 13–14 • Directions – maps pp 15–16
LS 4 **Big idea** What needs to be measured determines the unit of measurement **Topic** 3D objects and capacity	**MA2-3DS-01** makes and sketches models and nets of three-dimensional objects including prisms and pyramids **MA2-3DS-02** estimates, measures and compares capacities (internal volumes) using litres, millilitres and volumes using cubic centimetres **MA2-RN-01** applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands	**Three-dimensional spatial structure B** **Representing numbers using place value B**	• 3D objects: Connect three-dimensional objects and two-dimensional representations • Volume: Use scaled instruments to measure and compare capacities (internal volumes) • Whole numbers: Order numbers in the thousands	Coming soon	**3D spatial structure: 3D objects (B)** • Relate Shapes and Solids • Faces, Edges, and Vertices 1 • How Many Faces? • How many Edges? • How many Vertices? • Faces, Edges and Vertices • Naming 3D Objects **3D spatial structure: capacity (B)** • Using a Litre • Millilitres and Litres • Litre Conversions	**Connect 3D objects with nets** • Representing & drawing 3D objects **Read scaled instruments in L & mL** • Using scaled instruments for capacities (L & mL) • Select appropriate measures for capacity (L & mL)	**Geometry, 3D Shapes 2-4** • Faces, edges and vertices (DOK 3) **Geometry, 3D Shapes 3-5** • Net animals (DOK 2)	(Y4-D) **Space, Shape and Position** • Investigating 3D shapes – properties of shapes p 10 • Investigating 3D shapes – drawing 3D shapes pp 11–12 • Investigating 3D shapes – different viewpoints p 13 • Investigating 3D shapes – nets pp 15–17 (Y4-D) **Volume, Capacity and Mass** • Volume and capacity – litres pp 1–2 • Volume and capacity – millilitres pp 3–4 • Volume and capacity – measuring volume with cubic centimetres pp 5–8
LS 5 **Big idea** Angles are the primary structural component of many shapes **Topic** Angles	**MA2-GM-03** identifies angles and classifies them by comparing to a right angle **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)	**Geometric measure B** **Partitioned fractions B**	• Angles: Compare angles to a right angle • Represent fractional quantities equal to and greater than one	Coming soon	**Geometric measure: angle (B)** • Equal Angles • Comparing Angles • Right Angle Relation • What Type of Angle? • Classifying Angles	**Classify angles** • Classifying angles	**Geometry, Angles 2-4** • Right angle sort (DOK 3) • Flag flying (DOK 4)	(Y5-E) **Geometry** • Lines and angles – lines p 2 • Lines and angles – introducing angles p 3 • Lines and angles – measuring angles pp 4–5

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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	**MA2-RN-01** applies an understanding of place value and the role of zero to represent numbers ... **MA2-RN-02** represents and compares decimals up to 2 decimal places using place value **MA2-MR-01** represents and uses the structure of multiplicative relations to 10 × 10 to solve problems	**Representing numbers using place value B** **Multiplicative relations B**	• Whole numbers: Apply place value to partition, regroup and rename numbers up to 6 digits • Whole numbers: Recognise and represent numbers that are 10, 100 or 1000 times as large • Decimals: Extend the application of the place value system from whole numbers to tenths and hundredths • Decimals: Make connections between fractions and decimal notation • Investigate number sequences involving related multiples • Use known number facts and strategies • Operate with multiples of 10	Coming soon	**Multiplicative relations: multiply (B)** • Multiplying by 10, 100, 1000	**Represent 5-digit numbers** • Recognising numbers that are 10, 100, 1000 bigger **Multiply by multiples of 10** • Multiplying by a multiple of 10		(Y4-D) **Multiplication and Division** • Mental multiplication strategies – multiplying by 10 and 100 pp 13–14 • Mental division strategies – dividing by 10 and 100 p 29 (Y4-D) **Patterns and Algebra** • Patterns and functions pp 1–12 • Equations and equivalence pp 13–21
LS 2 **Big idea** Understanding relationships between the properties of 2D shapes helps visualise and organise spaces in the world **Topic** 2D shape properties	**MA2-2DS-01** compares two-dimensional shapes ... **MA2-2DS-02** performs transformations by combining and splitting ... **MA2-2DS-03** estimates, measures and compares areas ...	**Two-dimensional spatial structure B**	• 2D shapes: Create two-dimensional shapes that result from combining and splitting common shapes • 2D shapes: Create symmetrical patterns and shapes • Area: Measure the areas of shapes using the grid structure • Area: Compare surfaces using familiar metric units of area	Coming soon	**2D spatial structure: shape & area (B)** • What Line am I? • Shapes • Collect the Shapes • Collect More Shapes • Collect the Shapes 2	**Identify shapes in composite polygons** • Creating shapes from combining & splitting shapes **Identify features of 2D shapes** • Identifying, classifying & sorting 2D shapes	**Geometry, 2D Shapes 2-4** • Shape cutter (DOK 2) • Transformer shapes (DOK 3) • Triangle tiles (DOK 3)	
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-03** estimates, measures and compares areas ... **MA2-3DS-01** makes and sketches models and nets of three-dimensional objects ... **MA2-MR-01** represents and uses the structure of multiplicative relations to 10 × 10 ... **MA2-MR-02** completes number sentences involving multiplication and division ...	**Two-dimensional spatial structure B** **Three-dimensional spatial structure B** **Multiplicative relations B**	• Area: Measure the areas of shapes using the grid structure • Area: Compare surfaces using familiar metric units of area • 3D objects: Connect three-dimensional objects and two-dimensional representations • Use the structure of the area model to represent multiplication and division • Use number properties to find related multiplication facts • Operate with multiples of 10 • Represent and solve word problems with number sentences involving multiplication or division	Coming soon	**2D spatial structure: shape & area (B)** • Area of Shapes • Equal Areas **3D spatial structure: capacity (B)** • How many Blocks? • Volume of Solids and Prisms - 1 cm3 blocks	**Calculate area using grid structure** • Measuring area of shapes using the grid structure	**Measurement, Area 2-4** • Planning that pool (DOK 3) **Measurement, Volume & Capacity 3-5** • Face stickers (DOK 3) **Measurement, Volume & Capacity 5-7** • Constructing cubes (DOK 2)	(Y4-D) **Length, Perimeter and Area** • Area – square centimetres pp 15–16 • Area – square metres pp 17–18 (Y5-E) **Length, Perimeter and Area** • Area – introducing area pp 25–26 • Area puzzles p 31 (Y4-D) **Volume, Capacity and Mass** • Volume and capacity – measuring volume with cubic centimetres p 5

				NSW New Syllabus (2023) S2 Year 4			
LS & Topic	**Outcomes**	**Focus**	**Content**	**New Courses** · **Activities (courses)**	**Skill Quests**	**Challenges**	**Ebooks**
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 **MA2-RN-02** represents and compares decimals up to 2 decimal places using place value	**Geometric measure B** **Non-spatial measure B** **Representing numbers using place value B**	• Length: Use scaled instruments to measure and compare lengths • Mass: Use scaled instruments to measure and compare masses • Decimals: Extend the application of the place value system from whole numbers to tenths and hundredths	Coming soon **Geometric measure: length (B)** • How Long is That? • Measuring Length • Perimeter of Shapes • Converting cm and mm • Centimetres and Metres **Non-spatial measure: mass & time (B)** • How Heavy? • Ordering Mass (g)	**Measure length & perimeter** • Measuring in m, cm, mm • Comparing length measurements • Ordering length measurements • Converting between metric lengths • Calculating the perimeter of quadrilaterals **Read scaled instruments in kg & g** • Measuring mass in grams • Measuring & comparing mass in g & kg	**Measurement, Length 2-4** • Robot race (DOK 2) • Parking problems (DOK 3) • Metres or centimetres? (DOK 3) **Measurement, Mass 2-4** • Placing pumpkins (DOK 2) • Beryl the St Bernard (DOK 3)	(Y4-D) **Length, Area and Perimeter** • Perimeter – measuring shapes pp 8–9 • Perimeter – calculating perimeter pp 10–11 • Perimeter – perimeter word problems pp 12–14 (Y5-E) **Length, Perimeter and Area** • Units of length – m, cm, mm pp 1–2 • Units of length – metres to kilometres pp 5–6 (Y4-D) **Volume, Capacity and Mass** • Mass – kilograms and grams pp 10–13
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-AR-02** completes number sentences involving addition and subtraction by finding missing values **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 B** **Representing numbers using place value B**	• Partition, rearrange and regroup numbers to at least 1000 to solve additive problems • Apply addition and subtraction to familiar contexts, including money and budgeting • Complete number sentences involving additive relations to find unknown quantities • Whole numbers: Apply place value to partition, regroup and rename numbers up to 6 digits • Whole numbers: Recognise and represent numbers that are 10, 100 or 1000 times as large	Coming soon **Additive relations (B)** • Pyramid Puzzles 1 • Pyramid Puzzles 2 • Pyramid Puzzles 3 • Pyramid Puzzles 4 • Missing Numbers • Missing Values	**Addition & subtraction to 4 digits** • Adding & subtracting money	**Number & Algebra, Money 2-4** • Bike for sale (DOK 3) • Fruit salad (DOK 3)	(Y5-E) **Fractions, Decimals and Percentages** • Calculating – adding decimal fractions p 31 (Y5-E) **Adding and Subtracting** • Written methods – adding and subtracting decimals p 22 • Written methods – word problems p 23

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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 … **MA2-RN-02** represents and compares decimals up to 2 decimal places using place value **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 B** **Additive relations B**	• Whole numbers: Order numbers in the thousands • Whole numbers: Apply place value to partition, regroup and rename numbers up to 6 digits • Whole numbers: Recognise and represent numbers that are 10, 100 or 1000 times as large • Decimals: Extend the application of the place value system from whole numbers to tenths and hundredths • Decimals: Make connections between fractions and decimal notation • Partition, rearrange and regroup numbers to at least 1000 to solve additive problems	Coming soon	**Refer to:** • Term 1, Learning Sequence 1 • Term 2, Learning Sequence 1 • Term 3, Learning Sequence 1			
LS 2 **Big idea** Fractions represent multiple ideas and can be represented in different ways **Topic** Fractions applications	**MA2-PF-01** represents and compares halves, quarters, thirds and fifths as lengths on a number line … **MA2-RN-02** represents and compares decimals up to 2 decimal places using place value **MA2-GM-02** measures and estimates lengths in metres, centimetres and millimetres	**Partitioned fractions B** **Representing numbers using place value B** **Geometric measure B**	• Model equivalent fractions as lengths • Represent fractional quantities equal to and greater than one • Decimals: Make connections between fractions and decimal notation • Length: Use scaled instruments to measure and compare lengths	**Y4 Partitioned Fractions** • Counting by fractions • Mixed numbers to improper fractions • Improper fractions to mixed numbers			**Number & Algebra, Fractions 2-4** • The grasshoppers who jumped a fraction (DOK 2) • How many hats and socks (DOK 2) • How many scarves and hats (DOK 2)	(Y5-E) **Fractions, Decimals and Percentages** • Calculating – adding and subtracting fractions with like denominators pp 26–29
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 B** **Data B**	• Describe the likelihood of outcomes of chance events • Identify when events are affected by previous events • Select and trial methods for data collection • Construct and interpret data displays with many-to-one scales	Coming soon	**Chance (B)** • Introductory probability • Chance Gauge • What are the Chances?	**Describe the likelihood of outcomes** • Using the language of probability • Identifying events affected by previous events	**Chance & Probability 3-5** • Roll of the dice (DOK 4)	(Y4-D) **Chance and Data** • Chance – ordering events pp 1–2 • Chance – probability pp 3–5 • Chance – fair and unfair p 6 • Chance – coin investigation p 7 • Chance - two dice investigation pp 8–9

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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** Multiplication and division problems	**MA2-MR-01** represents and uses the structure of multiplicative relations to 10 … **MA2-MR-02** completes number sentences involving multiplication and division by finding missing values **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 B** **Representing numbers using place value B**	• Whole numbers: Apply place value to partition, regroup and rename numbers up to 6 digits • Whole numbers: Recognise and represent numbers that are 10, 100 or 1000 times as large • Investigate number sequences involving related multiples • Use known number facts and strategies • Use the structure of the area model to represent multiplication and division • Use number properties to find related multiplication facts • Operate with multiples of 10 • Represent and solve word problems with number sentences involving multiplication or division	Coming soon	**Multiplicative relations : multiply (B)** • Problems: Times and Divide	**Solve multiplication & division problems** • Find the missing number in mult/division problems • Multiplication & division word problems • Multiplication & division strategies	**Number & Algebra, Multiplication & Division 3-5** • Pair numbers to reach the product (DOK 2) • Pick your numbers (DOK 2)	(Y5-E) **Multiplication and Division** • Written methods – solving problems pp 27–28
LS 5 **Big idea** Shapes encountered in daily life can be classified by their attributes **Topic** Transformation of 2D shapes	**MA2-2DS-01** compares two-dimensional shapes and describes their features **MA2-2DS-02** performs transformations by combining and splitting two-dimensional shapes **MA2-2DS-03** estimates, measures and compares areas using square centimetres and square metres **MA2-GM-03** identifies angles and classifies them by comparing to a right angle	**Two-dimensional spatial structure B** **Geometric measure B**	• 2D shapes: Create two-dimensional shapes that result from combining and splitting common shapes • 2D shapes: Create symmetrical patterns and shapes • Area: Measure the areas of shapes using the grid structure • Area: Compare surfaces using familiar metric units of area • Angles: Compare angles to a right angle	Coming soon	**2D spatial structure: transformations (B)** • Symmetry • Symmetry or Not? • Flip, Slide, Turn • Transformations • Rotational Symmetry	**Perform transformations** • Transforming shapes by translation & reflections • Transforming shapes by rotation **Tessellations** • Creating symmetrical patterns & shapes	**Geometry, Symmetry, Transformation & Location 4-6** • Tessellations (DOK 3)	(Y5-E) **Geometry** • Transformation, tessellation and symmetry – symmetry pp 16–18 • Transformation, tessellation and symmetry – transformation pp 19–20 • Transformation, tessellation and symmetry – tessellation pp 21–23