## 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 3 |
| Number and Algebra | Whole Numbers 1 | applies place value to order, read and represent numbers of up to five digits | MA2-4NA | Number and Algebra | Representing numbers using place value $A$ | Applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands. | MA2-RN-01 | Represent numbers using place value (A) | Represent 4-digit numbers |
|  | Addition and Subtraction 1 | uses mental and written strategies for addition and subtraction involving two-, three-, four- and five-digit numbers | MA2-5NA |  | Additive relations A | Selects and uses mental and written strategies for addition and subtraction involving 1 - and 3 -digit numbers. | MA2-AR-01 | Additive relations: up to 3 digits (A) | Mental strategies to add or subtract <br> Select strategies to add or subtract <br> Addition \& subtraction to 3 digits |
|  | Multiplication and Division 1 | uses mental and informal written strategies for multiplication and division | MA2-6NA |  | Multiplicative relations A | Represents and uses the structure of multiplicative relations to $10 \times 10$ to solve problems. Completes number sentences involving multiplication and division by finding missing values. | MA2-MR-01 | Multiplicative relations (A) | Number patterns <br> Multiplicative facts for <br> $2,4,5$ \& 10 |
|  | Patterns and Algebra 1 | generalises properties of odd and even numbers, generates number patterns, and completes simple number sentences by calculating missing values | MA2-8NA |  |  |  |  |  |  |
|  | Fractions and Decimals 1 | represents, models and compares commonly used fractions and decimals | MA2-7NA |  | Partitioned fractions A and B | Represents and compares <br> 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 (A) | Halves, quarters, thirds \& fifths |
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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Strand | Substrands | Outcomes | Code | Strand | Substrands | Outcomes | Code | NSW New Syllabus (2023) S2 Year 3 |  |
| Statistics and Probability | Data 1 | 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 A | Collects discrete data and constructs graphs using a given scale. | MA2-DATA-01 | Data (A) | Collect $\&$ organise discrete data |
|  |  |  |  |  |  | - Interprets data in tables, dot plots and column graphs | MA2-DATA-02 |  | Read tables, dot plots a column graphs |
|  | Chance 1 | describes and compares chance events in social experimental contexts | MA2-19SP |  | Chance A | Records and compares the results of chance experiments. | MA2-CHAN-01 | Chance (A) | Chance concepts |
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| Learning sequence | Term one | Term two |
| :---: | :---: | :---: |
| LS 1 | Number and Algebra | Number and Algebra |
|  | Big idea: The number system extends infinitely to very large and very small numbers | Big idea: The number system extends infinitely to very large and very small numbers |
|  | Numbers to 10000 | Numbers to 100000 |
|  | - Apply place value to thousands <br> - Read, represent and order numbers to 10000 <br> - Partition numbers | - Apply place value to tens-of-thousands <br> - Read, represent and order numbers to 10000 <br> - Partition numbers |
| LS 2 | Number and Algebra | Number and Algebra |
|  | Big idea: Addition and subtraction problems can be solved by using a variety of strategies | Big idea: Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations |
|  | Addition and subtraction: mental strategies | Multiplication facts for 2, 4, 5 and 10 |
|  | - Apply associative property of addition <br> - Solve inverse operations <br> - Use flexible strategies to add and subtract: bridging, compensation, levelling and constant difference | - Model, describe and record patterns of multiples <br> - Identify fact families <br> - Use commutative property of multiplication |
| LS 3 | Measurement and Space | Measurement and Space |
|  | Big idea: What needs to be measured determines the unit of measurement | Big idea: Visual representations help to understand aspects of the world |
|  | Time | Position |
|  | - Calculate duration of events <br> - Identify half- and quarter-hour time <br> - Read time as past and towards the hour <br> - Read analog clocks to the minute | - Describe and follow routes using landmarks and directional language <br> - Locate positions on grid maps |
| LS 4 | Number and Algebra | Measurement and Space \| Number and Algebra |
|  | Big idea: Fractions represent multiple ideas and can be represented in different ways | Big idea: What needs to be measured determines the unit of measurement |
|  | Simple fractions | 3D objects and capacity |
|  | - Model fractions <br> - Identify fraction families <br> - Make thirds and fifths of a length | - Identify prisms, pyramids and cylinders <br> - Construct 3D models <br> - Create nets <br> - Measure and record capacity using L <br> - Estimate the capacity of containers |
| LS 5 | Statistics and Probability \| Number and Algebra | Measurement and Space \| Number and Algebra |
|  | Big idea: Questions can be asked and answered by collecting and interpreting data | Big idea: Angles are the primary structural component of many shapes |
|  | Data | Angles |
|  | - Collect discrete data <br> - Organise and display data | - Interpret simple maps <br> - Following directions |

Term three Term four

## Number and Algebra

Big idea: The number system extends infinitely to very large and very small numbers

## Patterns

- 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


## Measurement and Space

Big idea: Understanding relationships between the properties of 2 D shapes helps visualise and organise spaces in the world

## 2D shape properties

- Describe and compare 2D shapes
- Identify parallel sides
- Explain properties of quadrilaterals
- Identify right angles in shapes


## 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

- Area: Use square centimetres and metres to
measure and estimate area of rectangles
- Measure capacity and volme


## Measurement and Space | Number and Algebra

Big idea: What needs to be measured determines the unit of measurement

Length and mass

- Measure length using $\mathrm{mm}, \mathrm{cm}$ and m
- Estimate lengths and distances
- Compare and order lengths and distances
- Record and compare mass using kg


## Number and Algebra

Big idea: Addition and subtraction problems can be solved by using a variety of strategies

## Addition and subtraction problems

- Doubling and halving
- Model halves, quarters and eighths


## 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

- Term 3, Learning Sequence 1


## Number and Algebra

Big idea: Fractions represent multiple ideas and can be represented in different ways

## Fractions review

- Recreate the whole unit from a fractional part


## Statistics and Probability

Big idea: Data is collected to solve problems

## Chance (and data review)

- Use the language of chance
- Record possible outcomes and combinations
- Conduct chance experiments

Collect and display data

## 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


## Measurement and Space

Big idea: Shapes encountered in daily life can be classified by their attributes

## 2D shape transformations

- 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

Scope \& Sequence Outcome map

| Outcomes | Focus | Content | Located |
| :---: | :---: | :---: | :---: |
| MA2-RN-01 <br> 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 <br> Term 2 LS 1, 4 <br> Term 3 LS 1, 5 <br> Term 4 LS 1 |
|  |  | Whole numbers: Apply place value to partition and regroup numbers up to 4 digits | Term 1 LS 1,2 <br> Term 2 LS 1, 2 <br> Term 3 LS 1, 5 <br> Term 4 LS 1, 4 |
| MA2-AR-01 <br> 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 |  |
|  |  | Recognise and explain the connection between addition and subtraction | $\begin{aligned} & \text { Term } 1 \text { LS } 2 \\ & \text { Term } 3 \text { LS } 5 \end{aligned}$ |
|  |  | Select strategies flexibly to solve addition and subtraction problems of up to 3 digits | Term 1 LS 2 <br> Term 2 LS 1 Term 3 LS 5 Term 4 LS 1 $\qquad$ |
|  |  | Represent money values in multiple ways | Term 3 LS 5 |
| MA2-MR-01 <br> represents and uses the structure of multiplicative relations to $10 \times 10$ 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 <br> Term 3 LS 1, 2, 3 <br> Term 4 LS 4 |
|  |  | Recall multiplication facts of 2 and 4,5 and 10 and related division facts | Term 1 LS 4 <br> Term 2 LS 2 <br> Term 3 LS 1, 2, 3 <br> Term 4 LS 4 |
|  |  | Represent and solve problems involving multiplication fact families | Term 2 LS 2 <br> Term 3 LS 1 <br> Term 4 LS 4 |
| MA2-PF-01 <br> 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 <br> Term 2 LS 5 <br> Term 4 LS 2 |
|  |  | Model and represent unit fractions, and their multiples, to a complete whole on a number line |  |
| MA2-GM-01 <br> uses grid maps and directional language <br> to locate positions and follow routes | Geometric measure A | Position: Interpret movement on a map | Term 2 LS 3 |
|  |  | Position: Locate positions on grid maps |  |
| MA2-GM-02 <br> measures and estimates lengths in metres, centimetres and millimetres |  | Length: Measure and compare objects using metres, centimetres and millimetres | Term 1 LS 4 Term 3 LS 4 Term 4 LS 2 |

NSW Stage 2 Year 3
Mathletics

| Outcomes | Focus | Content | Located |
| :---: | :---: | :---: | :---: |
| MA2-GM-03 <br> 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 <br> 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 <br> Term 3 LS 2, 3 <br> Term 4 LS 5 |
| MA2-2DS-02 <br> performs transformations by combining and splitting two-dimensional shapes |  | 2D shapes: Transform shapes by reflecting, translating and rotating | Term 2 LS 3 <br> Term 3 LS 2 <br> Term 4 LS 5 |
| MA2-2DS-03 <br> 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 <br> 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 <br> Term 3 LS 3 |
| MA2-3DS-02 <br> 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 <br> Term 3 LS 3 |
|  |  | Volume: Compare objects using familiar metric units of volume | $\begin{aligned} & \text { Term } 2 \text { LS } 4 \\ & \text { Term } 3 \text { LS } 3 \end{aligned}$ |
| MA2-NSM-01 <br> 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 <br> represents and interprets analog and digital time in hours, minutes and seconds |  | Time: Represent and read analog time | $\begin{aligned} & \text { Term } 1 \text { LS } 3 \\ & \text { Term } 2 \text { LS } 5 \end{aligned}$ |
| 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 | $\begin{aligned} & \text { Term } 1 \text { LS } 5 \\ & \text { Term } 4 \text { LS } 3 \end{aligned}$ |
| MA2-DATA- 02 <br> interprets data in tables, dot plots and column graphs |  | Interpret and compare data | Term 4 LS 3 |
| MA2-CHAN-01 <br> 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 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LS 1 <br> Big idea <br> The number system extends infinitely to very large and very small numbers <br> Topic <br> Numbers to <br> 10000 | MA2-RN-01 <br> applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands <br> MA2-MR-01 <br> represents and uses the structure of multiplicative relations to $10 \times 10$ to solve problems | Representing numbers using place value $A$ <br> Multiplicative relations A | - Whole numbers: Read, represent and order numbers to thousands <br> - Whole numbers: Apply place value to partition and regroup numbers up to 4 digits <br> - Generate and describe patterns | Coming soon: <br> Y3 Representing numbers using place value <br> - Numbers to at least 10000 <br> - Place value | Represent numbers using place value (A) <br> - Which is Bigger? <br> - Which is Smaller? <br> - Place Value - Thousands <br> - Expanding Numbers <br> - Put in Order 1 <br> - Ascending Order <br> - Descending Order <br> - Which is Bigger? <br> - Which is Smaller? <br> - Greater Than or Less Than 1 <br> - Place Value 3 <br> - Partition and Rename 2 <br> - Nearest 1000 ? <br> - Missing Numbers 1 <br> Non-spatial measure: mass <br> \& time (A) <br> - What's the Temperature (Celsius)? | Represent 4-digit numbers <br> - Reading \& representing numbers to 1000 <br> - Counting by tens \& hundreds to 1000 <br> - Comparing \& ordering numbers up to 10000 <br> - Partitioning numbers to 4 digits | Number \& Algebra, <br> Whole Number 2-4 <br> - Top score (DOK2 <br> - Partitioning 4-digit numbers ©OK 3 <br> - Bank mistake DOK 3 <br> - Alex's number ©OK 3 <br> - Find the 4 digits ©OK3 <br> - Football friends (DOK 3 <br> - 33 beads (DOK 3 <br> Number \& Algebra, Addition \& Subtraction 2-4 <br> - Magic 9 ©OK 3 <br> Number \& Algebra, <br> Whole Number 3-5 <br> - Build the number ©OK 3 | Reading and Understanding Whole Numbers <br> - Looking at whole numbers pp 1-6 <br> - Place value of whole numbers pp 1-3 <br> (Y4-D) Reading and <br> Understanding Whole <br> Numbers <br> - Looking at whole numbers pp 1-8 <br> - Place value of whole numbers pp 1-8 |
| LS 2 <br> Big idea Addition and subtraction problems can be solved by using a variety of strategies <br> Topic <br> Addition and subtraction: mental strategies | MA2-AR-01 <br> selects and uses mental and written strategies for addition and subtraction involving 2-and 3-digit numbers <br> 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 <br> Representing numbers using place value $A$ | - Use the principle of equality <br> - Recognise and explain the connection between addition and subtraction <br> - Select strategies flexibly to solve addition and subtraction problems of up to 3 digits <br> - Whole numbers: Read, represent and order numbers to thousands <br> - Whole numbers: Apply place value to partition and regroup numbers up to 4 digits | Coming soon | Additive relations: up to 3 digits (A) <br> - Add Two 2-Digit Numbers <br> - Adding to 2-digit numbers <br> - Magic Mental Addition <br> - Complements to 50 and 100 <br> - Add 3 Numbers: Bonds to 100 <br> - Compensation - Add <br> - Estimate Sums <br> - Subtract Tens <br> - Magic Mental Subtraction <br> - Column Subtraction <br> - 2-Digit Differences: Regroup <br> - Repartition to Subtract <br> - Compensation - Subtract <br> - Estimate Differences <br> - Bump Add and Subtract <br> - Related Facts 1 <br> - Bar Model Problems 1 <br> - Bar Model Problems 2 <br> - Missing Values | Mental strategies to add or subtract <br> - Adding using jump strategy to 3 digits <br> - Subtracting using jump strategy to 3 digits <br> - Add/subtract using jump strategy to 3 digits <br> - Adding using bridging to 10 up to 3 digits <br> - Subtracting using bridging to 10 up to 3 digits <br> - Add/subtract using bridging to 10 up to 3 digits <br> - Adding using split strategy to 3 digits <br> - Subtracting using split strategy to 3 digits <br> - Add/subtract using split strategy to 3 digits <br> - Adding using round \& compensate to 3 digits <br> - Subtracting using round \& compensate to 3 digits <br> - Add/subtract using round \& compensate to 3 digits <br> Select strategies to add or subtract <br> - Add/subtract using bar model to 3 digits <br> - Selecting strategies to add/subtract to 3 digits <br> Addition \& subtraction to $\mathbf{3}$ digits <br> - Adding \& subtracting multiple single-digit numbers <br> - Bonds to 100 <br> - Connecting addition \& subtraction <br> - Estimating with addition \& subtraction <br> - Add/subtract multiples of 10 to 3-digit numbers | Number \& Algebra, Addition \& Subtraction 2-4 <br> - Calculate through this maze ©OK3 <br> - Make 200 (DOK3) <br> - Magic 9 (ООК3) | Addition and <br> Subtraction <br> - Addition mental strategies pp 1-4 <br> - Subtraction mental strategies pp 15-16 <br> Addition and <br> Subtraction <br> - Addition mental strategies pp 1-4 <br> - Subtraction mental strategies pp 16-19 |


|  |  |  |  |  | NSW New Sy | s (2023) S2 Year 3 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LS \& Topic | Outcomes | Focus | Content | New Courses | Activities (courses) | Skill Quests | Challenges | Ebooks |
| LS 3 <br> Big idea What needs to be measured determines the unit of measurement Topic Time | MA2-NSM-02 <br> represents and interprets analog and digital time in hours, minutes and seconds <br> MA2-2DS-01 <br> compares two-dimensional shapes and describes their features | Non-spatial measure $A$ <br> Two-dimensional spatial structure $A$ | - Time: Represent and read analog time <br> - 2D shapes: Compare and describe features of two-dimensional shapes | Coming soon | Non-spatial measure: mass <br> \& time (A) <br> - Half Hour Times <br> - Five Minute Times | Represent time using analogue displays <br> - Representing \& reading analogue time displays | Measurement, Time <br> 2-4 <br> - Scenic stroll ©OK3 | Time and Money <br> - Time O'clock p 14 <br> - Time Half Past pp 15-19 <br> - Time Quarter Past pp 20-21 <br> - Time Quarter To p 22 <br> - Time Quarter to and Past p 23 <br> - Time- A Day p 24 |
| LS 4 <br> Big idea <br> Fractions represent multiple ideas and can be represented in different ways <br> Topic Simple fractions | MA2-PF-01 <br> represents and compares halves, quarters, thirds and fifths as lengths on a number line and their related fractions ... <br> MA2-GM-02 <br> measures and estimates lengths in metres, centimetres and millimetres <br> MA2-MR-01 represents and uses the structure of multiplicative relations to $10 \times 10$ to solve problems | Partitioned fractions $A$ <br> Geometric measure A <br> Multiplicative relations A | - Create fractional parts of a length using techniques other than repeated halving <br> - Model and represent unit fractions, and their multiples, to a complete whole on a number line <br> - Length: Measure and compare objects using metres, centimetres and millimetres <br> - Generate and describe patterns <br> - Recall multiplication facts of 2 and 4,5 and 10 and related division facts | Y3 Partitioned fractions <br> - Halves, Quarters and Eighths <br> - Unit fractions 1 <br> - Unit fractions 2 <br> - Proper fractions | Partitioned fractions (A) <br> - Halves and Quarters <br> - Thirds and Sixths <br> - Shade Fractions <br> - Identifying Fractions on a Number Line <br> - Equivalent Fraction Wall 1 | Halves, quarters, thirds \& fifths <br> - Halves, quarters \& eighths <br> - Thirds \& fifths <br> - Working with unit fractions |  | (Y3) Rich Learning Task <br> - Build a number <br> (r4-D) Fractions <br> - Introducing fractions pp 1-12 <br> (Y5-E) Fractions <br> - Working with fractions pp 6-11 |
| LS 5 <br> Big idea Questions can be asked and answered by collecting and interpreting data Topic Data | MA2-DATA-01 <br> collects discrete data and constructs graphs using a given scale <br> MA2-DATA-02 interprets data in tables, dot plots and column graphs <br> MA2-RN-01 <br> applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands | Data A <br> Representing numbers using place value $A$ | - Collect discrete data <br> - Organise and display data using tables and graphs <br> - Whole numbers: Read, represent and order numbers to thousands | Coming soon | Data (A) <br> - Sorting Data <br> - Column Graphs <br> - Picture Graphs: Single-Unit Scale <br> - Pictographs <br> - Tallies | Collect \& organise discrete data <br> - Posing questions \& collecting discrete data <br> - Organising \& displaying discrete data using graphs <br> Read tables, dot plots \& column graphs <br> - Interpreting tables \& column graphs <br> - Comparing data displays | Statistics \& Data 2-4 <br> - Transport trouble DOK 3 <br> -What's missing? ©OK 3 | Y4-D Chance and Data <br> - Data pp 10-14 <br> - Data - dot plots pp 17-18 |


| LS \& Topic | Outcomes | Focus | Content |  | NSW New Syllabus (2023) S2 Year 3 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | New Courses | Activities (courses) | Skill Quests | Challenges | Ebooks |
| LS 1 <br> Big idea <br> The number system extends infinitely to very large and very small numbers <br> Topic <br> Numbers to <br> 100000 | MA2-RN-01 <br> applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands <br> MA2-AR-01 <br> selects and uses mental and written strategies for addition and subtraction involving 2-and 3-digit numbers | Representing numbers using place value $A$ <br> Additive relations A | - Whole numbers: Read, represent and order numbers to thousands <br> - Whole numbers: Apply place value to partition and regroup numbers up to 4 digits <br> - Use the principle of equality <br> - Select strategies flexibly to solve addition and subtraction problems of up to 3 digits | Coming soon: <br> Y3 Representing numbers using place value <br> - Partitioning <br> - Number lines <br> - Rounding <br> - Compare numbers <br> - Order numbers |  | Represent 5-digit numbers <br> - Reading, representing \& ordering numbers to 10000 |  | Y5-E Reading and Understanding Whole Numbers <br> - Looking at whole numbers reading and writing numbers to 9999 pp 1-2 <br> - Looking at whole numbers ordering numbers to 9999 pp 3-4 <br> - Place value of whole numbers - place value to 4 digits pp 9-10 <br> - Place value of whole numbers - expanded notation pp 11-12 |
| LS 2 <br> Big idea Multiplicative thinking involves flexible use of multiplication and division concepts, strategies and representations <br> Topic <br> Multiplication facts for $2,4,5$ and 10 | MA2-MR-01 <br> represents and uses the structure of multiplicative relations to $10 \times 10$ to solve problems <br> MA2-RN-01 <br> applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands | Multiplicative relations A <br> Representing numbers using place value $A$ | - Use arrays to establish multiplication facts from multiples of 2 and 4,5 and 10 <br> - Recall multiplication facts of 2 and 4,5 and 10 and related division facts <br> - Represent and solve problems involving multiplication fact families <br> - Whole numbers: Apply place value to partition and regroup numbers up to 4 digits <br> - Generate and describe patterns | Coming soon | Multiplicative relations (A) <br> - Counting by Tens <br> - Counting by Twos <br> - Skip Counting <br> - Grouping in Fours <br> - Grouping in Fives <br> - Grouping in Tens <br> - Dividing by Two <br> - Dividing by Five <br> - Dividing Tens | Multiplicative facts for 2, 4, 5 \& 10 <br> - Recalling multiplication \& division facts of 2 <br> - Recalling multiplication \& division facts of 4 <br> - Recalling multiplication \& division facts of 5 <br> - Recalling multiplication \& division facts of 10 <br> - Solving problems using multiplication facts |  | Y5-E) Multiplication and Division <br> - Multiplication facts pp 1-4 <br> Y4-D Multiplication and Division <br> - Division pp 1-6 |
| LS 3 <br> Big idea <br> Visual representations help to understand aspects of the world (chance and position) <br> Topic <br> Position | MA2-GM-01 <br> uses grid maps and directional language to locate positions and follow routes <br> MA2-2DS-02 <br> performs transformations by combining and splitting two-dimensional shapes | Geometric measure A <br> Two-dimensional spatial structure A | - Position: Interpret movement on a map <br> - Position: Locate positions on grid maps <br> - 2D shapes: Transform shapes by reflecting, translating and rotating | Coming soon | Geometric measure: position (A) <br> - Following Directions <br> - Coordinate Meeting Place <br> - What Direction was That? <br> - Using a key | Use grid maps to describe position <br> - Interpreting maps to describe position <br> - Locating positions on a map | Geometry, Symmetry, <br>  <br> Location 2-4 <br> - A day on the farm (DOK3 <br> - Mighty maze ©OK4 <br> Geometry, Symmetry, <br>  <br> Location 3-5 <br> - Drawing with grids ${ }^{00 \mathrm{~K} 3}$ | Y4-D Shape, Space and Position <br> - Position pp 1-7 <br> - 2D shapes pp 5-7 |

## Scope $\mathbb{E}$ Sequence Term 2

NSW Stage 2 Year 3
Mathletics

| LS \& Topic | Outcomes | Focus | Content | New Courses | Activities (courses) | Skill Quests | Challenges | Ebooks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LS 4 <br> Big idea <br> What needs to be <br> measured <br> determines the unit of <br> measurement <br> Topic <br> 3D objects and <br> capacity | MA2-3DS-01 makes and sketches models and nets of three-dimensional objects including prisms and pyramids <br> MA2-3DS-02 <br> estimates, measures and compares capacities (internal volumes) using litres, millilitres and volumes using cubic centimetres <br> 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 A <br> Representing numbers using place value $A$ | - 3D objects: Make models of three-dimensional objects to compare and describe key features <br> - Volume: Measure and order containers using litres <br> - Volume: Compare objects using familiar metric units of volume <br> - Whole numbers: Read, represent and order numbers to thousands | Coming soon | 3D spatial structure: 3D objects (A) <br> - Prisms and Pyramids <br> - Collect the Objects <br> - Match the Object <br> 3D spatial structure: <br> capacity (A) <br> - How Full? <br> - Which Holds More? <br> - Filling Fast! |  <br> cylinders <br> - Identifying prisms <br> - Identifying pyramids \& cylinders <br> - Describing key features of prisms \& pyramids <br> - Making models of prisms \& pyramids <br> - Introducing nets of prisms | Geometry, 3D Shapes <br> 2-4 <br> - Opposite shapes $00 \mathrm{K4}$ | (44-D) Shape, Space and Position <br> -3D shapes pp 1-3 <br> (r4-D) Measurement <br> - Volume and capacity p 1 |
| LS 5 <br> Big idea <br> Angles are the primary structural component of many shapes <br> Topic <br> Angles | MA2-GM-03 identifies angles and classifies them by comparing to a right angle <br> MA2-NSM-02 represents and interprets analog and digital time in hours, minutes and seconds <br> 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 $A$ <br> Partitioned fractions $A$ <br> Non-spatial measure A | - Angles: Identify angles as measures of turn <br> - Time: Represent and read analog time <br> - Create fractional parts of a length using techniques other than repeated halving <br> - Model and represent unit fractions, and their multiples, to a complete whole on a number line | Coming soon | Geometric measure: angle <br> (A) <br> - Equal Angles <br> - Comparing Angles <br> - Right Angle Relation <br> - What Type of Angle? <br> - Classifying Angles | Identify \& compare angles <br> - Identifying angles as measures of turn |  | Y5-E Space, Shape and Position <br> - Lines, angles and shapes angles pp 2-3 |


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| LS 1 <br> Big idea <br> The number system extends infinitely to very large and very small numbers Topic Patterns | MA2-MR-01 <br> represents and uses the structure of multiplicative relations to $10 \times 10$ to solve problems <br> 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 <br> Representing numbers using place value $A$ | - Generate and describe patterns <br> - Use arrays to establish multiplication facts from multiples of 2 and 4,5 and 10 <br> - Recall multiplication facts of 2 and 4,5 and 10 and related division facts <br> - Represent and solve problems involving multiplication fact families <br> - Whole numbers: Read, represent and order numbers to thousands <br> - Whole numbers: Apply place value to partition and regroup numbers up to 4 digits | Coming soon |  | Number patterns <br> - Generating/describing patterns (1, <br> 2, 5, 10, 25) <br> - Generating/describing patterns (3, <br> 4, 6, 7, 8, 9) <br> - Identifying number patterns <br> - Investigating odd \& even numbers <br> - Understand the property of 0 \& 1 in multiplication |  | (Y4-D) Multipication and Division <br> - Mental multiplication strategies pp 1-6 <br> (73-C) Patterns and Algebra <br> - Patterns and functions pp 1-12 <br> - Equations and equivalence pp 13-22 |
| LS 2 <br> 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 <br> compares <br> two-dimensional <br> shapes and describes <br> their features <br> MA2-2DS-02 <br> performs <br> transformations by <br> combining and <br> splitting <br> two-dimensional <br> shapes <br> MA2-MR-01 <br> represents and uses the structure of multiplicative relations to $10 \times 10$ to solve problems | Two-dimensional spatial structure A <br> Multiplicative relations $A$ | - 2D shapes: Compare and describe features of two-dimensional shapes <br> - 2D shapes: Transform shapes by reflecting, translating and rotating <br> - Generate and describe patterns <br> - Use arrays to establish multiplication facts from multiples of 2 and 4,5 and 10 <br> - Recall multiplication facts of 2 and 4,5 and 10 and related division facts | Coming soon | 2D spatial structure: shape $\&$ area (A) <br> - What Line am I? <br> - Collect the Shapes <br> - Collect More Shapes <br> - Collect the Shapes 2 | Identify features of 2D shapes <br> - Comparing \& describing features of quadrilaterals <br> - Identifying, classifying \& sorting 2D shapes | Geometry, 2D shapes 2-4 <br> - Sort these shapes out! <br> DOK 3 <br> - Blip and the rectangle (DOK 3) | (Y4-D Shape, Space and Position <br> - 2 D shapes p 4 <br> Y5-E Shape, Space and Position <br> - Lines and angles pp 8-9 |


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| LS 3 <br> Big idea Multiplicative thinking involves flexible use of multiplication and division concepts, strategies, and representations <br> Topic Linking multiplication to area and volume | MA2-2DS-01 <br> compares <br> two-dimensional shapes ... <br> MA2-2DS-02 <br> performs <br> transformations ... <br> MA2-2DS-03 <br> estimates, measures and compares areas ... <br> MA2-3DS-01 <br> makes and sketches models and nets of three-dimensional ... <br> MA2-3DS-02 <br> estimates, measures <br> and compares <br> capacities ... <br> MA2-MR-01 <br> represents and uses <br> the structure of multiplicative <br> relations to $10 \times 10 \ldots$ | Two-dimensional spatial structure A <br> Three-dimensional spatial structure $A$ <br> Multiplicative relations $\mathbf{A}$ | - 2D shapes: Compare and describe features of two-dimensional <br> - Area: Use square centimetres to measure and estimate the areas of rectangles <br> - Area: Use square metres to measure and estimate the areas of rectangles <br> -3D objects: Make models of three-dimensional objects to compare and describe key features <br> - Volume: Compare objects using familiar metric units of volume <br> - Volume: Compare objects using familiar metric units of volume <br> - Generate and describe patterns <br> - Use arrays to establish multiplication facts from multiples of 2 and 4,5 and 10 <br> - Recall multiplication facts of 2 and 4,5 and 10 and related division facts | Coming soon | Multiplicative relations (A) <br> - Arrays 1 <br> - Arrays 2 <br> 2D spatial structure: shape <br> $\&$ area (A) <br> - Area of Shapes <br> - Equal Areas <br> 3D spatial structure: <br> capacity (A) <br> - Comparing Volume | Calculate area of a rectangle <br> - Using $\mathrm{cm}^{2}$ to measure areas of rectangles <br> - Using $\mathrm{m}^{2}$ to measure areas of rectangles <br> Measure capacity \& volume <br> - Measuring \& comparing volumes using cubic blocks <br> - Introducing a formal measure of capacity (litres) | Number \& Algebra, <br>  <br> Division 2-4 <br> - Party time ©OK2 <br> Measurement, Volume <br> \& Capacity 2-4 <br> - Cube faces (DOK 3) | (Y3) Rich Learning Task <br> - Freckles <br> Y5-E Series E Length, Area and Perimeter <br> - Area p 5 |
| LS 4 <br> Big idea What needs to be measured determines the unit of measurement Topic Length and mass | MA2-GM-02 <br> measures and estimates lengths in metres, centimetres and millimetres <br> MA2-NSM-01 estimates, measures and compares the masses of objects using kilograms and grams | Geometric measure $A$ <br> Non-spatial measure $A$ | - Length: Measure and compare objects using metres, centimetres and millimetres <br> - Mass: Compare objects using the kilogram | Coming soon | Geometric measure: length <br> (A) <br> - How Long is That? <br> - Measuring Length <br> - Perimeter of Shapes <br> - Converting cm and mm <br> - Centimetres and Metres <br> Non-spatial measure: mass <br> \& time (A) <br> - Everyday Mass | Use metric measurements for lengths <br> - Measuring in $\mathrm{m}, \mathrm{cm}, \mathrm{mm}$ <br> - Selecting measures for length (m, cm, mm) <br> - Comparing length measurements <br> - Ordering length measurements <br> Measure mass in $\mathbf{k g}$ \& $\mathbf{g}$ <br> - Introducing a formal measure for weight (kg) | Measurement, Length <br> 2-4 <br> - Measured to perfection (mm) DOK 2 <br> - Paw prints $0 \mathrm{OK}_{3}$ | (Y4-D) Measurement <br> - Units of length pp 1-5 |
| LS 5 <br> Big idea Addition and subtraction problems can be solved by using a variety of strategies <br> Topic <br> Addition and subtraction problems | MA2-AR-01 <br> selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers <br> 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 <br> Representing numbers using place value $A$ | - Use the principle of equality <br> - Recognise and explain the connection between addition and subtraction <br> - Select strategies flexibly to solve addition and subtraction problems of up to 3 digits <br> - Represent money values in multiple ways <br> - Whole numbers: Read, represent and order numbers to thousands <br> - Whole numbers: Apply place value to partition and regroup numbers up to 4digits | Coming soon |  | Select strategies to add or subtract <br> - Using addition \& subtraction with money <br> Solve number sentences with add/subtract <br> - Solving addition \& subtraction number sentences |  | Y5-E Addition and Subtraction <br> - Addition mental strategies pp 12-13 <br> - Subtraction mental strategies pp 24-25 |


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| LS 1 <br> Big idea The number system extends infinitely to very large and very small numbers <br> Topic Number review | MA2-RN-01 <br> applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands <br> MA2-AR-01 <br> selects and uses mental and written strategies for addition and subtraction involving 2-and 3-digit numbers | Representing numbers using place value $A$ <br> Additive relations A | - Whole numbers: Read, represent and order numbers to thousands <br> - Whole numbers: Apply place value to partition and regroup numbers up to 4 digits <br> - Use the principle of equality <br> - Select strategies flexibly to solve addition and subtraction problems of up to 3 digits | Coming soon | Refer to: <br> - Term 1, Learning Sequence 1 <br> - Term 2, Learning Sequence 1 <br> - Term 3, Learning Sequence 1 |  |  | Y6-F Reading and Understanding Whole Numbers <br> - Looking at whole numbers pp 1-3 <br> Y6-F Addition and <br> Subtraction <br> - Addition Mental Strategies pp 1-8 <br> - Subtraction Mental Strategies pp 9-16 |
| LS 2 <br> Big idea <br> Fractions represent multiple ideas and can be represented in different ways <br> Topic Fractions review | MA2-PF-01 <br> represents and compares halves, quarters, thirds and fifths as lengths ... <br> MA2-GM-02 <br> measures and estimates lengths in metres, centimetres and millimetres <br> MA2-MR-01 represents and uses the structure of multiplicative $\qquad$ | Partitioned fractions A <br> Geometric measure A <br> Multiplicative relations A | - Create fractional parts of a length using techniques other than repeated halving <br> - Model and represent unit fractions, and their multiples, to a complete whole on a number line <br> - Length: Measure and compare objects using metres, centimetres and millimetres <br> - Generate and describe patterns <br> - Recall multiplication facts of 2 and 4,5 and 10 and related division facts | Y3 Partitioned Fractions <br> - Fractions and wholes <br> - Unit fractions and sharing | Refer to: <br> - Term 1, Learning Sequence 4 |  |  | ( ${ }^{3}$ 3) Rich Learning Task <br> - Build a number <br> (Y4-D) Fractions <br> - Introducing fractions pp 1-12 <br> Y5-E Fractions <br> - Working with fractions pp 6-11 |
| LS 3 <br> 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 <br> MA2-DATA-01 collects discrete data and constructs graphs using a given scale <br> MA2-DATA-02 interprets data in tables, dot plots and column graphs | Chance A <br> Data A | - Identify possible outcomes from chance experiments <br> - Collect discrete data <br> - Organise and display data using tables and graphs <br> - Interpret and compare data | Coming soon | Chance (A) <br> - Most Likely and Least Likely <br> - How many Combinations? <br> - Will it Happen? | Chance concepts <br> - Identifying outcomes from chance experiments | Chance \& Probability <br> 2-4 <br> - Picking plums DOK 3 <br> - Multiple mayhem ©OK3 | Y4-D Chance and Data <br> - Data pp 15-21 <br> Y5-E Chance and Data <br> - Chance pp 1-2 |


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| LS 4 <br> Big idea <br> Multiplicative <br> thinking involves <br> flexible use of <br> multiplication and <br> division concepts, <br> strategies and <br> representations <br> Topic <br> Multiplication and <br> division problems | MA2-MR-01 represents and uses the structure of multiplicative relations to $10 \times 10$ to solve problems <br> 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 <br> Represents numbers using place value $A$ | - Use arrays to establish multiplication facts from multiples of 2 and 4,5 and 10 <br> - Recall multiplication facts of 2 and 4,5 and 10 and related division facts <br> - Represent and solve problems involving multiplication fact families <br> - Whole numbers: Apply place value to partition and regroup numbers up to 4 digits <br> - Generate and describe patterns | Coming soon | Multiplicative relations (A) <br> - Model multiplication to $5 \times 5$ <br> - Fact Families: Multiply and Divide <br> - Multiplication Turnarounds <br> - Halve it! | Solve multiplication \& division problems <br> - Find the missing number in mult/divison problems | Number \& Algebra, <br>  <br> Division 2-4 <br> - A wheel problem DOK 3 | (Y4-D Multiplication and Division <br> - Introducing multiplication groups of 5 pp 1-4 <br> - Introducing Multiplication - 10 times tables pp 5-6 <br> - Introducing multiplication - multiplying numbers by 0 and 1 p 7 <br> - Multiplication facts - 2 times table pp 8-9 <br> - Multiplication facts - 4 times table pp 10-11 |
| LS 5 <br> Big idea <br> Shapes <br> encountered in <br> daily life can be <br> classified by their <br> attributes <br> Topic <br> 2D shape <br> transformations | MA2-2DS-01 <br> compares <br> two-dimensional <br> shapes and <br> describes their <br> features <br> MA2-2DS-02 <br> performs <br> transformations by <br> combining and <br> splitting <br> two-dimensional <br> shapes <br> MA2-MR-01 <br> represents and uses <br> the structure of <br> multiplicative <br> relations to $10 \times 10$ <br> to solve problems <br> MA2-GM-03 <br> identifies angles <br> and classifies them <br> by comparing to a <br> right angle | Geometric measure A <br> Two-dimensional spatial structure A <br> Multiplicative relations A | - 2D shapes: Compare and describe features of two-dimensional shapes <br> - 2D shapes: Transform shapes by reflecting, translating and rotating <br> - Generate and describe patterns <br> - Angles: Identify angles as measures of turn | Coming soon | 2D spatial structure: <br> transformations (A) <br> - Symmetry <br> - Symmetry or Not? <br> - Flip, Slide, Turn <br> - Transformations <br> - Rotational Symmetry | Perform transformations <br> - Transforming shapes by translation \& reflections <br> - Recognising line symmetry <br> - Transforming shapes by rotation | Geometry, <br> Symmetry, <br>  <br> Location 2-4 <br> - Flutter bye ©OK4 | $\qquad$ Space Shape and Position <br> - Investigating 2D shapes symmetry and tessellation pp 9-10 |

