

Scope and Sequencing in Mathematics: example only, scope and sequences need to reflect school context and student needs

Outcomes	MA2-1WM, MA2-2WM, MA2-3WM, MA2-4NA, MA2-5NA, MA2-9MG			MA2-1WM, MA2-2WM, MA2-3WM, MA2-6NA, MA2-7NA	
Substrand	Whole Numbers	Length	Addition & Subtraction	Multiplication & Division	Patterns & Algebra
Key Ideas	Count forwards and backwards by tens and hundreds from any starting point  State the place value of digits in numbers of up to four digits	Use metres, centimetres and millimetres to measure, compare, order and estimate lengths	Model and apply the associative property for addition  Use and record a range of mental strategies for addition and subtraction of two-, three- and four-digit numbers	Recall multiplication facts for twos, threes, fives and tens	Identify, continue, create, describe and record increasing and decreasing number patterns
Concepts	<b>Counting</b> Tens and ones can be counted on and off the decade <b>Place value</b> 100 can be represented as one hundred 'ones', ten 'tens' and one unit of a 'hundred'	<b>Place value</b> A countable unit needs to be repeated to measure length Length can be partitioned into units and counted <b>Knowledge of units</b> Units used to measure must be identical for comparison	<b>Mental Computation</b> Flexible reorganising of units to solve problems <b>Associative property</b> The order of numbers can be rearranged or regrouped to aid in calculation <b>Combining &amp; Partitioning</b> Part-whole knowledge of combinations to ten Making a ten can be used as a base for further addition	<b>Repeated Addition</b> Numbers can be used as a countable unit to repeat 'skip counting' 'doubling' <b>Coordinating composite units</b> The number in each unit and the number of units are coordinated for counting <b>Mental Strategies</b> Visualises the rows and columns	<b>Recognising patterns</b> Patterns are equal groups of countable units Numbers can be counted as units to create and continue patterns
Related Content	Recognise, model, represent and order numbers to at least 10 000 (ACMNA052) <ul style="list-style-type: none"> <li>▪ represent numbers of up to four digits using objects, words, numerals and digital displays               <ul style="list-style-type: none"> <li>➤ make the largest and smallest number from four given digits (Communicating)</li> </ul> </li> <li>▪ identify the number before and after a given two-, three- or four-digit number               <ul style="list-style-type: none"> <li>➤ describe the number before as 'one less than' and the number after as 'one more than' a given number (Communicating)</li> </ul> </li> <li>▪ count forwards and backwards by tens and hundreds on and off the decade, eg 1220, 1230, 1240, ... (on the decade); 423, 323, 223, ... (off the decade)</li> </ul> Recall addition facts for single-digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation (ACMNA055) <ul style="list-style-type: none"> <li>▪ add three or more single-digit numbers</li> <li>▪ model and apply the associative property of addition to aid mental computation, eg <math>2 + 3 + 8 = 2 + 8 + 3 = 10 + 3 = 13</math></li> <li>▪ apply known single-digit addition and subtraction facts to mental strategies for addition and subtraction of two-, three- and four-digit numbers</li> </ul> Measure, order and compare objects using familiar metric units of length (ACMMG061) <ul style="list-style-type: none"> <li>▪ measure lengths and distances using metres and centimetres</li> <li>▪ record lengths and distances using metres and centimetres, eg 1 m 25 cm</li> </ul>			Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056) <ul style="list-style-type: none"> <li>▪ count by twos, threes, fives or tens using skip counting</li> <li>▪ use mental strategies to recall multiplication facts for multiples of two, three, five and ten               <ul style="list-style-type: none"> <li>➤ relate 'doubling' to multiplication facts for multiples of two, eg 'Double three is six' (Reasoning)</li> </ul> </li> </ul> Describe, continue and create number patterns resulting from performing addition or subtraction (ACMNA060) <ul style="list-style-type: none"> <li>▪ identify and describe patterns when counting forwards or backwards by threes, fours, sixes, sevens, eights and nines from any starting point               <ul style="list-style-type: none"> <li>➤ model, describe and then record number patterns using diagrams, words or symbols ask questions about how number patterns have been created and how they can be continued (Communicating)</li> </ul> </li> </ul>	

Scope and Sequencing in Mathematics: example only, scope and sequences need to reflect school context and student needs

Outcomes	MA2-1WM, MA2-2WM, MA2-3WM, MA2-4NA, MA2-5NA, MA2-9MG			MA2-1WM, MA2-2WM, MA2-3WM, MA2-6NA, MA2-7NA	
Substrand	Whole Numbers	Length	Addition & Subtraction	Multiplication & Division	Patterns & Algebra
Key Ideas	Count forwards and backwards by tens and hundreds from any starting point  State the place value of digits in numbers of up to four digits	Use metres, centimetres and millimetres to measure, compare, order and estimate lengths	Model and apply the associative property for addition  Use and record a range of mental strategies for addition and subtraction of two-, three- and four-digit numbers	Recall multiplication facts for twos, threes, fives and tens	Identify, continue, create, describe and record increasing and decreasing number patterns
Concepts	<b>Counting</b> Tens and ones can be counted on and off the decade <b>Place value</b> 100 can be represented as one hundred 'ones', ten 'tens' and one unit of a 'hundred'	<b>Place value</b> A countable unit needs to be repeated to measure length Length can be partitioned into units and counted <b>Knowledge of units</b> Units used to measure must be identical for comparison	<b>Mental Computation</b> Flexible reorganising of units to solve problems <b>Associative property</b> The order of numbers can be rearranged or regrouped to aid in calculation <b>Combining &amp; Partitioning</b> Part-whole knowledge of combinations to ten Making a ten can be used as a base for further addition	<b>Repeated Addition</b> Numbers can be used as a countable unit to repeat 'skip counting' 'doubling' <b>Coordinating composite units</b> The number in each unit and the number of units are coordinated for counting <b>Mental Strategies</b> Visualises the rows and columns	<b>Recognising patterns</b> Patterns are equal groups of countable units Numbers can be counted as units to create and continue patterns
Related Content	<ul style="list-style-type: none"> <li>model, represent and order numbers to at least 10 000 (ACMNA052)</li> <li>represent numbers of up to four digits using objects, words, numerals and digital displays</li> <li>identify the largest and smallest number from four given digits (Communicating)</li> <li>represent the number before and after a given two-, three- or four-digit number</li> <li>represent the number before as 'one less than' and the number after as 'one more than' a number (Communicating)</li> <li>count forwards and backwards by tens and hundreds on and off the decade, eg 1220, 1230, 1240, ... (off the decade); 423, 323, 223, ... (off the decade)</li> <li>use mental strategies for single-digit numbers and related subtraction facts to develop increasingly complex mental strategies for computation (ACMNA055)</li> <li>use mental strategies for two or more single-digit numbers</li> <li>model and apply the associative property of addition to aid mental computation, eg <math>2 + 3 + 8 = 2 + (3 + 8) = 2 + 11 = 13</math></li> <li>use mental strategies to apply known single-digit addition and subtraction facts to mental strategies for addition and subtraction of two-, three- and four-digit numbers</li> </ul>	<ul style="list-style-type: none"> <li>measure, order and compare objects using familiar metric units of length (ACMMG061)                             <ul style="list-style-type: none"> <li>measure lengths and distances using metres and centimetres</li> <li>record lengths and distances using metres and centimetres, eg 1 m 25 cm</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056)                             <ul style="list-style-type: none"> <li>count by twos, threes, fives or tens using skip counting</li> <li>use mental strategies to recall multiplication facts for multiples of two, three, five and ten                                     <ul style="list-style-type: none"> <li>relate 'doubling' to multiplication facts for multiples of two, eg 'Double three is six' (Reasoning)</li> </ul> </li> </ul> </li> <li>Describe, continue and create number patterns resulting from performing addition or subtraction (ACMNA060)                             <ul style="list-style-type: none"> <li>identify and describe patterns when counting forwards or backwards by threes, fours, sixes, sevens, eights and nines from any starting point                                     <ul style="list-style-type: none"> <li>model, describe and then record number patterns using diagrams, words or symbols ask questions about how number patterns have been created and how they can be continued (Communicating)</li> </ul> </li> </ul> </li> </ul>		

**What do you want the students to do?**  
The key ideas are in addition to the syllabus content and are overarching big ideas of each strand and its content

**What do you want the students to know?**  
Concepts are understandings that develop over time. Starts robust professional discussion

Content is the 'what' and 'how' you will teach your students.

Concepts can be difficult to pinpoint and there are many concepts that make up broader mathematical concepts. They provide teachers with what specific knowledge you want your students to understand after teaching your unit

Related content is the syllabus descriptors and content statements. These need to not only match your key ideas but need to be chosen based on 'Where your students are at'.