



# Using Maths Aotearoa and Wilkie Way to deliver the refreshed New Zealand Curriculum

The Maths Aotearoa teacher books 1A and 1B are set out in 4 units (as described below) providing a sequenced approach to developing key knowledge and concepts. Each unit has suggested teaching activities and accompanying activity cards (100 cards for each book instead of a textbook) for follow up work. More practice material for each unit is available through write on practice workbooks downloaded from the membership area of [wilkieWay.co.nz](http://wilkieWay.co.nz)

*Maths Aotearoa teacher books and activity cards are available from [edify.co.nz](http://edify.co.nz)*

## Phase 1: Year 1

### Understand: (big ideas)

As students build knowledge through their use of the mathematical and statistical processes, they begin to understand:

- Patterns and variation
- Logic and reasoning
- Visualisation and application

### Do (practices)

Students will have learning opportunities, and be guided to:

- Investigate situations
- Represent situations
- Connect situations
- Generalise findings
- Explain and justify findings

## Know: Contexts of Number & Algebra

Number Structure	Operations	Rationale Numbers	Equations & relationships
Subitise the number of objects in a collection of up to 10 (including combining 2 patterns of 1-5) Count forwards & backwards in 1s, 2s & 10s between 1- 20 then 1 - 100 Identify, read & write numbers up to at least 20 Represent teen numbers as 10 + and -ty as multiples of 10 Compare and order numbers to at least 20 and use ordinal words & symbols 1st 2nd 3rd partition & regroup up to 20 objects in different ways using a systematic approach and noticing patterns	Use estimation to predict results and to check reasonableness of calculations Join and separate groups of up to a total of 20 objects and find the difference between groups by grouping and counting. Explore addition facts to 10 and corresponding subtraction facts including doubles and halves. Multiply and divide using equal grouping or counting	Identify and represent halves & quarters as fractions of sets and regions, using equal parts of the whole	Solve true and false number statements and open number sentences involving addition and subtraction of 1-digit numbers using an understanding of the equals sign. Copy, continue, create and describe a repeating pattern with three elements, and identify missing elements in a pattern.
			<b>Algorithmic Thinking</b> Follow step by step instructions to complete a simple task.

## Maths Literacy Development

- Assistance with learning specialist vocabulary.
- Assistance with reading & understanding math texts.
- Communicate and explain counting, grouping and equal sharing strategies, using manipulatives, words, numbers and pictures.
- Begin to use the symbols (+, -) for addition and subtraction conceptual ideas
- Recognise the symbols for half and quarter
- See vocabulary list in curriculum document

Concepts being developed	Key knowledge being developed
<ul style="list-style-type: none"> <li>• The next counting number is the result of adding one more;</li> <li>• Addition is commutative;</li> <li>• Addition is associative;</li> <li>• Subtraction as takeaway;</li> <li>• Subtraction as difference;</li> <li>• Subtraction and addition are inverse relationships.</li> <li>• Multiplication as repeated addition</li> <li>• Equal sharing and equal grouping</li> <li>• Fractions as equal sharing and equal partitioning</li> <li>• The importance of a group of ten to the number system.</li> </ul>	<ul style="list-style-type: none"> <li>• Read, write and order numbers to 100</li> <li>• Recall doubles to 10, all family of facts for 10, family of facts within 5</li> <li>• Recognise and create fraction representations using materials, for regions and sets of objects (halves and quarters)</li> </ul>

### Maths Aotearoa Book 1A

Unit 1: Making Sense of Small Numbers	Unit 2: Exploring Numbers to 10	Unit 3: Combining, Comparing & Ordering	Unit 4: Combining, Grouping & Sharing
<ul style="list-style-type: none"> <li>• Say the number words in sequence in English and in Te Reo</li> <li>• Count objects in a sequence</li> <li>• Copy a simple repeating pattern</li> <li>• Create a simple repeating pattern</li> <li>• Make a set of objects using one to one counting (to at least a set of 6)</li> <li>• Students will be able to match the correct numeral to a set of objects up to at least 6</li> <li>• Describe the position of a number in relation to another number</li> <li>• Give the number before and after a given number in the range 1 – 6</li> <li>• Give the number between two numbers in the range 1 – 6</li> </ul>	<ul style="list-style-type: none"> <li>• Make a set of objects using one to one counting (to at least a set of 10)</li> <li>• Match the correct numeral to a set of objects up to at least 10</li> <li>• Understand zero as an empty set</li> <li>• Recognise finger patterns</li> <li>• Write numerals 0 to 10</li> <li>• Describe the position of a number in relation to another number</li> <li>• Give the number before and after a given number in the range 0 – 6</li> <li>• Give the number between two numbers in the range 0 – 6</li> <li>• Count forwards and backwards in the range 0 - 10</li> <li>• Partition a set of objects into two or more smaller sets of objects.</li> <li>• Notice patterns in teacher modelled recording of partitions.</li> <li>• Combine two or more sets Partition numbers 2, 3 4 and 5 into two groups and recall all possible pairings.</li> <li>• Recognise these are the only possible pairs for these numbers.</li> </ul>	<ul style="list-style-type: none"> <li>• Draw a picture to show an addition or subtraction situation;</li> <li>• Count all objects to find how many altogether;</li> <li>• Image objects and count all to find how many altogether;</li> <li>• Take a number of objects away from a set and count how many remain using the objects:</li> <li>• Image take a number of objects away from a set and count how many remain using imaging.</li> <li>• Recall doubles to 10</li> <li>• Recalls pairs within 5</li> </ul>	<ul style="list-style-type: none"> <li>• Read and write numbers to 20</li> <li>• Sequence and order numbers to 20</li> <li>• Reliably count a set of objects up to 20</li> <li>• Give the number before and after in the range 0 – 20</li> <li>• Give the number between two numbers in the range 0 – 20</li> <li>• Give the number one more and one less/fewer in the range 0 - 20</li> <li>• Investigate teen numbers as 10 + (including Te Reo Maori)</li> <li>• Create equal groups from a set of objects</li> <li>• Solve equal group type word problems</li> <li>• Count in twos, fives and tens</li> <li>• Solve a word problem by equal sharing</li> <li>• Halve a shape into equal pieces</li> <li>• Find half of a number of objects by equal sharing between two</li> <li>• Quarter a shape into four equal pieces</li> <li>• Find quarter a number of objects by equal sharing between four</li> </ul>

**Support Material available from Wilkie Way website [wilkieway.co.nz](http://wilkieway.co.nz): membership area (subscription)**

<p><b>Practice workbooks:</b>                  1. Numbers to 6                  2. Ordering numbers to 6</p>	<p><b>Practice workbooks:</b>                  3. Numbers to 10                  4. Ordering numbers to 10                  5. Joining &amp; Partitioning                  6. Groupings to 5</p>	<p><b>Practice workbooks:</b>                  7. Addition                  8. Subtraction                  9. Comparing Numbers</p>	<p><b>Practice workbooks:</b>                  10. Numbers to 20                  11. Doubles to 20                  12. Equal sharing, halves &amp; quarters</p>
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**Maths Aotearoa Book 1B**

<p><b>Unit 1: Understanding Addition &amp; Subtraction</b></p>	<p><b>Unit 2: Larger Numbers &amp; Beginning Multiplication</b></p>
<ul style="list-style-type: none"> <li>• Use counting on to solve addition problems.</li> <li>• Use counting backwards to solve subtraction (take away) type problems.</li> <li>• Recognise and use patterns to recall basic facts</li> <li>• Apply recall of known facts to addition and subtraction situation;</li> <li>• Use known facts to reason unknown facts.</li> <li>• Begin connecting addition and subtraction facts.</li> <li>• Compare numbers to find the difference in quantity</li> <li>• Use counting on to solve a difference situation – how many more or how many less?</li> <li>• Use counting backwards to solve a difference situation</li> <li>• Use recall of known facts to solve a difference situation.</li> <li>• Recognise the pairs to make ten</li> <li>• Notice the pattern in pairs to make ten</li> <li>• Reason unknown pairs from known pairs to make ten.</li> </ul>	<ul style="list-style-type: none"> <li>• Count on from any number within the range 0 – 100</li> <li>• Count backwards from any number in the range 0 – 100</li> <li>• Read and write two digit numbers</li> <li>• Count in twos, fives and tens</li> <li>• Recognise patterns in counting sequences</li> <li>• Notice odd and even numbers</li> <li>• Make equal groups</li> <li>• Count how many altogether using the appropriate counting sequence</li> <li>• Recognise and solve repeated addition (equal grouping multiplication) type problems using the appropriate counting sequence.</li> <li>• Recall doubles up to <math>10 + 10</math></li> <li>• Make a connection between counting in twos and the recall of doubles.</li> <li>• Begin to use doubles as an additive strategy for recalling addition facts.</li> </ul>

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<p><b>Practice Workbooks:</b>                  13. Adding and Taking Away                  14. Patterns and Relationships                  15. Finding the Difference                  16. Making 10</p>	<p><b>Practice Workbooks:</b>                  17. Sequencing to 100                  18. Equal Grouping                  19. Working with Doubles</p>
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