



## Using Maths Aotearoa to support the implementation of the October 2025 New Zealand Maths Curriculum

While the curriculum statements are the knowledge students need to acquire, the mathematical processes are the ways in which the knowledge is taught. Activities within Maths Aotearoa provide the opportunities for: Investigating situations, representing situations, connecting situations, generalising findings, exploring and justifying findings.

### Phase 1 During the second year

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<p><b>Maths Aotearoa Book 1B</b>  <b>Unit 4 Beginning Place Value</b>  <b>Element 1 Using 10 as a counting set</b></p> <ul style="list-style-type: none"> <li>Recognise the 10s and 1s columns</li> <li>Recognise and use patterns on a hundreds square</li> <li>Give the number 10 more and 10 less than any number</li> <li>Expand a two digit number into a standard partition</li> </ul> <p><b>Element 2 The importance of a group of ten</b></p> <ul style="list-style-type: none"> <li>Give the number of groups of ten in a two digit number</li> <li>Give the number of groups of one in a two digit number</li> </ul> <p><b>Unit 2 Larger Numbers and Beginning Multiplication</b>  <b>Element 1 Sequencing to 100 (extend to 120)</b></p> <ul style="list-style-type: none"> <li>Identify the nearest decade to any number</li> </ul> <p><b>Element 2 Number Patterns with Multiples</b></p> <ul style="list-style-type: none"> <li>Count in 2s, 5s and 10s</li> <li>Recognise patterns in counting sequences</li> <li>Notice odd and even numbers</li> </ul> <p><b>Maths Aotearoa Book 2A</b>  <b>Unit 1 Addition, Subtraction &amp; Place Value</b>  <b>Chapter 2 Numbers to 20</b></p> <ul style="list-style-type: none"> <li>Know number words to at least 20 in te reo Maori</li> </ul> <p><b>Chapter 4 Tens and Ones</b></p> <ul style="list-style-type: none"> <li>Know column headings</li> <li>Understand zero as nothing of something (tens or ones)</li> </ul>	<p><b>Knowledge: The facts, concepts, principles and theories to teach</b></p> <p><b>Number Structures</b></p> <ul style="list-style-type: none"> <li>The whole numbers from 0 to 120 form a sequence.</li> <li>The base 10 number system is organised by place value (hundreds, tens, and ones for three-digit numbers).</li> <li>The names of numbers between 101 and 120 use 'one hundred and –' phrasing.</li> <li>The place value of digits helps with comparing and ordering.</li> </ul> <ul style="list-style-type: none"> <li>Arranging objects into groups can help when finding their total.</li> <li>Groups of 10s are used to structure and count larger collections.</li> <li>Ten 10s can be renamed as one 100.</li> </ul> <ul style="list-style-type: none"> <li>Rounding to the nearest 10 depends on the value of the ones place; a number line supports this.</li> </ul> <ul style="list-style-type: none"> <li>Sequences generated by counting can overlap (e.g. counting in 2s and counting in 5s overlap for numbers that are multiples of 2 and 5).</li> <li>Counting in 3s produces alternating patterns of odd and even numbers.</li> <li>Numbers ending in the digits 0, 2, 4, 6, and 8 are even and numbers ending in 1, 3, 5, 7, and 9 are odd.</li> </ul> <p><b>This content is to be taught across the second and third years.</b></p>

**Maths Aotearoa Book 1B****Unit 2 Larger Numbers and Beginning Multiplication****Element 3 Equal grouping and repeated addition**

- Make equal groups
- Recognise and solve equal grouping multiplication type problems

**Element 4 Doubles and Halves**

- Recall doubles and halves to 20
- Make connection between counting in 2s and recall of doubles
- Use doubles as a mental strategy to recall addition facts

**Unit 4 Beginning Place Value****Element 2 The importance of a group of ten**

- Recall the tens times table

**Element 3 Addition and Subtraction to 20**

- Recall facts to 10
- Recall doubles to 20
- Recall teens as 10+
- Use known facts to reason unknown facts
- Use the inverse relationship between addition and subtraction

**Maths Aotearoa Book 2A****Unit 1 Addition, Subtraction & Place Value****Chapter 1 Addition and Subtraction**

- Solve addition and subtraction problems within 20 including open number sentences

**Chapter 2 Numbers to 20**

- Using the associative property of addition
- Identifying patterns in the basic facts

**Chapter 3 Using a Hundreds Square**

- Add and subtract tens and ones (no regrouping)

**Number Operations**

- Number facts can be derived from known facts using place value (e.g.  $70+20=90$  can be derived from  $7+2=9$ ).
- Addition and subtraction are inverse operations.
- Numbers can be added and subtracted using representations, mental strategies, known facts, and place value. Number facts can be derived from known facts using place value (e.g.  $70+20=90$  can be derived from  $7+2=9$ ).
- Addition and subtraction are inverse operations.
- Numbers can be added and subtracted using representations, mental strategies, known facts, and place value.
  
- Arrays and groups can be used to represent and solve multiplication and division problems.
- Multiplying and dividing by 1 gives the same number (the identity property of multiplication).
- Multiplying by zero always results in zero (the zero property of multiplication).
- Two numbers can be multiplied in either order without changing the result; the same is not true when dividing (the commutative property of multiplication).
- Multiplication and division are inverse operations.

<p><b>Maths Aotearoa Book 1B</b>  <b>Unit 3 Beginning Fractions</b>  <b>Element 1 Fractions of Shapes</b></p> <ul style="list-style-type: none"> <li>Recognise symbols for fractions</li> <li>Understand 2 halves is equal to one whole</li> <li>Understand 4 quarters in equal to 1 whole</li> <li>Understand the denominator and the numerator</li> </ul> <p>(Will need to extend to thirds)</p> <p><b>Element 2 Equal sharing</b></p> <ul style="list-style-type: none"> <li>Make the connection between fractions and equal sharing</li> </ul> <p><b>Element 3 Fractions of numbers</b></p> <ul style="list-style-type: none"> <li>Find a half using recall of doubles</li> <li>Find a quarter by repeated halving</li> </ul>	<p><b>Rational Numbers</b></p> <ul style="list-style-type: none"> <li>The denominator of a fraction shows the total number of equal parts a whole is divided into.</li> <li>The numerator of a fraction shows the number of parts being counted or considered.</li> <li>Fractions can be named (e.g. half) or written using words and symbols.</li> <li>Equivalent fractions represent the same amount of the whole value (e.g. two quarters vs a half).</li> <li>A half is 1 of 2 equal parts, a third is 1 of 3 equal parts, and a quarter is 1 of 4 equal parts.</li> <li>Halves are larger than thirds, which are larger than quarters (when comparing fractions of the same whole).</li> <li>The size of the whole can be determined if a fractional part is known (e.g. if <math>12 = 5</math>, then the whole is 10).</li> </ul>
<p><b>Maths Aotearoa Book 1B</b>  <b>Unit 4 Beginning Place Value</b>  <b>Element 4</b></p> <ul style="list-style-type: none"> <li>Combine coins and notes (whole dollars)</li> <li>Combine coins (cents)</li> </ul>	<p><b>Financial Mathematics</b></p> <ul style="list-style-type: none"> <li>New Zealand coins and notes can be ordered and grouped to find the total value.</li> </ul>
<p>Maths Aotearoa Books 1A and 1B deliberately did not introduce more symbols as developing an understanding of what the symbols represent was a first priority. If you feel your students are ready for the symbolic then introduce or leave until year 3.</p> <p><b>Maths Aotearoa Book 1B</b>  <b>Unit 2 Larger Numbers &amp; beginning Multiplication</b>  <b>Element 2 Number Patterns with Multiples</b></p> <ul style="list-style-type: none"> <li>Recognise patterns in counting sequences</li> <li>Create patterns identifying the unit of repeat</li> </ul> <p><b>Unit 3 Beginning Fractions</b>  <b>Element 4 Reflective Symmetry</b></p> <ul style="list-style-type: none"> <li>Recognise and create patterns with reflective symmetry</li> </ul>	<p><b>Algebra</b></p> <ul style="list-style-type: none"> <li>The symbols <math>\times</math> and <math>\div</math> represent multiplication and division in number sentences.</li> <li>Numbers can be compared using 'greater than' (<math>&gt;</math>), 'less than' (<math>&lt;</math>), and equals (<math>=</math>).</li> </ul> <p><b>This content is to be taught across the second and third years.</b></p> <ul style="list-style-type: none"> <li>Patterns are made up of elements (including numeric or spatial elements) in a sequence governed by a rule, and they arise in a range of situations (e.g. cultural patterns, patterns in the local environment, patterns on everyday objects).</li> <li>Ordinal numbers (e.g. 1st, 2nd, 3rd) can be used to describe the elements in a sequence.</li> <li>Repeating patterns have a repeating group of elements called the unit of repeat.</li> <li>A missing element can be predicted from other elements in the pattern.</li> </ul> <p><b>This content is to be taught across the first two years.</b></p>

<p><b>Maths Aotearoa Book 1B</b>  <b>Unit 1 Understanding Addition and Subtraction</b>  <b>Element 6 Position and Orientation</b>          Make whole turns, half turns and quarter turns</p> <p><b>Unit 3 Beginning Fractions</b>  <b>Element 5 Exploring Measurement</b></p> <ul style="list-style-type: none"> <li>• Measure the length of an object by selecting and counting the number of units</li> <li>• Use a balance scale to measure the mass of an object by counting units</li> <li>• Measure capacity and volume by counting the number of units</li> <li>• Describe passage of time as “earlier than” or “later than” a specific time or event</li> <li>• Measure area by counting the number of squares</li> </ul> <p>Telling time has not been included in book 1 but is covered in Book 2A. You may wish to introduce specific times as read on a clock face.</p>	<p><b>Measuring</b></p> <ul style="list-style-type: none"> <li>• Standard measuring units are universally agreed and commonly used units for making measurements that enable people to communicate clearly.</li> <li>• Measuring tools are usually marked with standard units to ensure consistent measurements of properties such as length, mass (weight), and capacity.</li> <li>• When measuring length, area, or volume, the measurement units must remain the same and there must be no gaps or overlaps between them.</li> <li>•</li> <li>• The distance around the boundary of a 2D shape gives its perimeter.</li> <li>• A polygon is a 2D straight-edged shape where the sides connect to form a closed shape.</li> <li>•</li> <li>• A turn is a rotation around a point.</li> <li>• A turn can be directional and is described using clockwise (to the right) and anticlockwise (to the left).</li> </ul> <p><b>This content is to be taught across the second and third years.</b></p> <ul style="list-style-type: none"> <li>• Duration is the length of time between the start and end of an event.</li> </ul> <p><b>This content is to be taught across the second and third years.</b></p> <p>There are 60 minutes in an hour.          There are 30 minutes in half an hour.</p>
<p><b>Maths Aotearoa Book 1B</b>  <b>Unit 1 Understanding Addition and Subtraction</b>  <b>Element 6 Position and Orientation</b></p> <ul style="list-style-type: none"> <li>• Make whole turns, half turns and quarter turns</li> <li>• Follow instructions involving direction, distance and turning</li> <li>• Give instructions involving direction, distance and turning</li> </ul> <p><b>Unit 3: Beginning Fractions</b>  <b>Element 4 Reflective Symmetry</b></p> <ul style="list-style-type: none"> <li>• Recognise reflective symmetry in a pattern</li> <li>• Create a pattern with reflective symmetry</li> </ul> <p><b>Element 6 Exploring 2D and 3D shapes</b></p> <ul style="list-style-type: none"> <li>• Know names of common 2D and 3D shapes</li> <li>• Use attributes to identify common 2D shapes (regular and irregular shapes)</li> </ul>	<p><b>Geometry</b>  <b>Shapes</b></p> <ul style="list-style-type: none"> <li>• Te reo Māori supports identifying shape attributes (e.g. triangle   tapatoru, square   tapawhā rite, same   ōrite, different   rerekē). Te reo Māori supports identifying shape attributes (e.g. triangle   tapatoru, square   tapawhā rite, same   ōrite, different   rerekē).</li> </ul> <p><b>Spatial Reasoning</b></p> <ul style="list-style-type: none"> <li>• Shapes can flip (reflect), turn (rotate), slide (translate), and be used to create patterns.</li> </ul> <p><b>Pathways</b></p> <ul style="list-style-type: none"> <li>• Paths can be described using sequenced instructions for moving or locating an object (e.g. for moving to another part of the school).</li> <li>• Maps are 2D representations of places in the world showing the view from above with symbols to show locations and landmarks.</li> </ul> <p>This content is to be taught across the first two years.</p>

## Maths Aotearoa Book 1B

### Unit 1: Understanding Addition and Subtraction

#### Element 5 Exploring Statistics and Probability

With teacher assistance:

- Pose a question or assertion
- Decide the data to be collected
- Collect the data
- Use tally marks as a data collection tool
- Display the data in a pictograph or bar chart
- Answer questions based on the data
- Draw conclusions around the question asked or assertion made

**Will need to add dot lots to the type of data display**

## Statistics

### Developing knowledge from data

- Data is information collected about the world.
- A variable refers to an attribute being studied (e.g. colour, height, age of children).
- A categorical variable (e.g. colour, brand) classifies objects into groups (categories).
- Categorical data can be counted.

**This content is to be taught across the first two years.**

### Visualisation of data

- Data visualisations are representations (including picture graphs and dot plots) of all available values for a variable that show the frequency for each value.
- Dot plots represent each data point with a dot of the same size.

### Interpretation of data

- Data visualisations are representations that help reveal the story of a set of data.

**This content is to be taught across the first three years.**