

Index of Numicon Online NZ Resources

Tabs along the top of the screen go to different parts of your subscription.

Home NZ

On the 'Home NZ' tab at the top of the Numicon Online NZ screen you will find an introduction to *Numicon Online NZ*.

There are six recommendation boxes that will direct you to key resources such as Numicon planning documents (containing the recommended teaching progression) and NZ curriculum matching charts. You can follow links to the online resources.

Firm Foundations

Click on the 'Firm Foundations' tab at the top of the *Numicon Online NZ* screen and you will find all the planning and classroom resources needed for teaching with *Firm Foundations* to support NZ Years 0 and 1.

Teaching Handbooks 1–6

Click on the 'Teaching Handbooks 1–6' tab at the top of the *Numicon Online NZ* pages.

There is a User guide to download explaining how to access the online Teaching Resource Handbook (TRH) content. This will be further updated as the new style Owl pages are developed throughout 2025.

You can also search the available TRH resources using the filter tools to quickly find exactly what you are looking for.

Supporting Resources

You can access all of your key planning documents via the highlight buttons on the 'Home NZ' tab. However, if you are looking for any further planning support, click on the 'Supporting Resources' tab at the top of the *Numicon Online NZ* pages.

Use a text search and/or the filter buttons on the page to view by Numicon Level, Classroom or Planning resource type or Year Group to go straight to what you need.

Interactive Whiteboard Software

Click on the 'IWB Software' tab at the top of the *Numicon Online NZ* pages.

There is a short introductory video on how to use the software, and you can also access the full [User Guide](#). Any saved files are also shown on this page.

Getting Started

To help you get started with *Numicon Online NZ* and find out about key resources, sign up for a webinar [here](#).

Year group correlation

The Numicon programme runs from Firm Foundations to Numicon 6, and fully supports Phases 1–3 as follows:

New Zealand Year 0/1:	Firm Foundations
New Zealand Year 2:	Numicon 1
New Zealand Year 3:	Numicon 2
New Zealand Year 4:	Numicon 3
New Zealand Year 5:	Numicon 4
New Zealand Year 6:	Numicon 5
New Zealand Year 7:	Numicon 5 continued
New Zealand Year 8:	Numicon 6

Numicon Online Resources

The following resources are available to *Numicon Online NZ* subscribers. Clicking on the links in the table below will take you to information about each category, with a list of all the resources you can find there. Resources are provided for every year group (Firm Foundations and Numicon 1–6) unless otherwise specified. You can also use the ‘Resource type’ filter to select any of these categories.

<i>Planning Resources</i>	<i>Classroom Resources</i>
<u>Assessment</u>	<u>Classroom display</u>
<u>Planning</u>	<u>Photocopy master</u>
<u>Teacher support videos</u>	<u>Maths story starter</u>
<u>Professional development</u>	<u>Activity</u>
<u>Curriculum coverage</u>	<u>Activity group summaries</u>
<u>Answers</u>	<u>Discussion materials</u>
<u>Teaching handbooks</u>	<u>Whiteboard resources</u>
<u>Guide</u>	

Assessment	
Resource	Description
Explorer Progress Books for Numicon 1 and 3 Explorer Progress Books for Numicon 2 & 4-6	Each full book is downloadable as a PDF and contains rich and engaging activities for children to complete. Each activity links to a topic in the Teaching Resource Handbook providing opportunities for assessment and monitoring individual progress. Answers are available as a separate resource.
Milestone Tracking Spreadsheets for Numicon 1–6	Tracking spreadsheets for all Teaching Resource Handbooks in Numicon 1–6, Test Practice Questions and Numicon Big Ideas. Enter a rating for each milestone statement to see overall assessment of children's progress
Milestone Assessment Cards for Numicon 1–6	Materials for children's self-assessment including printable question cards, category cards, a quick guide, milestone statements, Teaching Progression chart and answer cards
Milestones for Numicon 1–6	Editable statements of the skills and understanding needed at each milestone
Individual Student Assessment Record – Milestones (Numicon 1–6)	Editable photocopy master showing the milestone statements
Assessment Grids	Editable assessment grids for each Teaching Resource Handbook in Numicon 1–6
Breaking Barriers Assessment Tools	Printable copies of the assessment tools for the Breaking Barriers (SEND) programme: Assessment Signposts, Individual Record of Progress and Child Profile

Planning	
Resource	Description
Numicon Planning Documents for NZ Firm Foundations Numicon Planning Documents for NZ (Numicon 1–6)	Charts showing how to use Numicon as a complete teaching programme. We recommend that you follow the teaching progression outlined in these long-term plans, which have direct links to your core teaching activities (for Numicon 1-6).
Numicon 1–6 Editable Planning Templates with Curriculum Links	Medium term plans for each Numicon level, including Te Mātaiaho curriculum links.
Numicon Mixed-age Plans for NZ	Guidance documents on how to plan for mixed-age classes using Numicon
Medium-term Planning Charts	Editable statements of the understanding children need to progress
Maths No Problem Matching Charts	Charts showing how Numicon matches with the Maths No Problem scheme.

Assessment	Planning	Teacher support videos	Professional development	Curriculum coverage	Answers	Teaching handbooks	Guide
Classroom display	Photocopy master	Maths story starter	Activity	Activity group summaries	Discussion materials	Whiteboard resource	

Planning (continued)

Short-term Planning Charts	Suggestions for planning and editable templates for creating short-term plans (Word or PDF formats)
Linking Breaking Barriers and Numicon 1–3	Two charts: 1. Shows the links between Breaking Barriers Activity Groups and Numicon 1, 2 & 3 2. Identifies Activity Groups in the Breaking Barriers Handbook to support work in Numicon 1, 2 & 3. Both charts are grouped by theme to help you plan

Teacher support videos

Resource

IWB idea videos	Videos of activity ideas to use with the Numicon IWB, with supporting notes including curriculum and Numicon milestone matches; resources to use with the whiteboard to keep the whole class engaged; and links to other materials
Numicon Firm Foundations	Numicon 4
Halving and doubling	Adding and subtracting fractions beyond 1
Matching Numicon Shapes with numerals, using spinners or numeral cards	Exploring patterns in sequences of multiples
Numicon 1	Using arrays to explore the commutative property of multiplying
Halving collections of objects	Multiplying in parts
Exploring adding facts to 10	Introducing negative numbers on the –12 to 12 Number Line
Understanding ‘how many more?’ with number rods	Numicon 5
Looking at quantity and column value of 2-digit numbers	Fractions - illustrating equivalence with Numicon Shapes
Numicon 2	Multiplying proper fractions by whole numbers
Finding quarters and three-quarters	Testing general statements about factors, multiples and divisibility
Adding to 20	Numicon 6
Rounding double-digit numbers using Numicon Shapes and number rods	Adding and subtracting fractions with different denominators
Numicon 3	Using arrays to support calculating with fractions
Fractions on a number line	Investigating rules and generalizing with algebra, to build a sequence and generate the nth term
Exploring equivalence with number rods	
Adding hundreds, tens and ones	

Assessment	Planning	Teacher support videos	Professional development	Curriculum coverage	Answers	Teaching handbooks	Guide
Classroom display	Photocopy master	Maths story starter	Activity	Activity group summaries	Discussion materials	Whiteboard resource	

Teacher support videos (continued)

[‘How to’ videos](#)

Short videos with Professional Development expert Louise Pennington, demonstrating ways to use manipulatives and the CPA approach:

[How to: Use Spinners for addition](#)

Louise Pennington shows how to use Numicon Spinners to help children with addition (35 secs)

[How to: Use Spinners for multiplication](#)

Louise Pennington shows how to use Numicon Spinners to help children with multiplication (40 secs)

[How to: Use Numicon Shapes at KS2](#)

Ideas for using Numicon manipulatives at Key Stage 2 from Louise Pennington (37 secs)

[Exemplifying the CPA approach](#)

Louise Pennington explains how Numicon manipulatives help to exemplify the concrete-pictorial-abstract approach (1 min 11 secs)

[How to: Algebra using the Pan Balance](#)

Louise Pennington shows how to use the Numicon Pan Balance to help children with algebra (1 min 1 sec)

[How to: Use manipulatives to add fractions](#)

Louise Pennington shows how Numicon manipulatives can be used to add fractions (56 secs)

[How to: Use Numicon Shapes at KS1](#)

Ideas for using Numicon manipulatives at Key Stage 1 from Louise Pennington (58 secs)

[How to: Round numbers using Number Lines](#)

Louise Pennington shows how to use Numicon manipulatives to help children with rounding numbers (1 min 12 secs)

[How to: Number bonds using the Pan Balance](#)

Louise Pennington shows how number bonds can be developed using the Numicon Pan Balance (1 min 17 secs)

[How to: Negative numbers with Number Rods](#)

Louise Pennington shows how to use Number Rods to help children with negative numbers (42 secs)

[How to: Subtraction using the Number Rods and Track](#)

Louise Pennington shows how to use the Number Rods and Track to help children with subtraction (1 min 9 secs)

[How to: Comparison using the Number Rods](#)

Louise Pennington shows how to use Number Rods to help children with comparison (52 secs)

Assessment	Planning	Teacher support videos	Professional development	Curriculum coverage	Answers	Teaching handbooks	Guide
Classroom display	Photocopy master	Maths story starter	Activity	Activity group summaries	Discussion materials	Whiteboard resource	

Teacher support videos (continued)

[How to: Adding and subtracting fractions](#)

Louise Pennington shows how Numicon manipulatives can be used to add and subtract fractions from mixed numbers with common denominators (1 min 8)

[How to: Calculations with brackets](#)

Louise Pennington uses Number Rods to model two different ways of solving calculations with brackets (1 min 11 secs)

[How to: Investigating general rules](#)

Louise Pennington uses Number Rods to demonstrate how children can begin to investigate general rules (1 min 37 secs)

[How to: The associative properties of multiplying](#)

Louise Pennington shows how the Numicon shapes can help children with the associative property of multiplication (54 secs)

[How to: Visualising 50% using knowledge of fractions](#)

Louise Pennington shows how the Numicon shapes can be used to visualise and discuss percentages (48 secs)

[What's included in your teaching handbook? \(Numicon 1–6\)](#)

What teaching material supports Numicon 1–6: introducing the printed teaching resources

[What physical apparatus supports the Numicon teaching programme? \(Numicon 1–6\) \(Firm Foundations\)](#)

An introduction to the Numicon apparatus children will be using in class

[How do the Numicon resources support your maths teaching? \(Numicon 1–6\)](#)

Teachers share their experiences of using the Numicon teaching programme

[How to set up your classroom \(Numicon 1–6\) \(Firm Foundations\)](#)

Creating a maths-rich classroom environment, covering both inside and outdoors for NZ Years 0/1

[Numicon in use in the classroom \(Numicon 1–6\)](#)

Using the published resources in the classroom

[Planning and assessing with Numicon \(Numicon 1–6\)](#)

Organizing time and monitoring progress with Numicon

[An activity in action \(Numicon 1–6\)](#)

Watch an activity in action in the classroom, and hear how the activity benefits teaching and learning

Assessment	Planning	Teacher support videos	Professional development	Curriculum coverage	Answers	Teaching handbooks	Guide
Classroom display	Photocopy master	Maths story starter	Activity	Activity group summaries	Discussion materials	Whiteboard resource	

Teacher support videos (continued)	
Videos to support teaching the Big Ideas programme	<ul style="list-style-type: none"> • Introducing the Numicon approach • What's in the Numicon Big Ideas folder? • What physical apparatus supports the Big Ideas programme? • The theory of effective catch-up: what are the barriers to learning? • How to implement effective catch-up: practical guidance • Assessing before and after the intervention

Professional development	
Resource	Description
Teacher interviews	Videos detailing teachers' views on using the Numicon 1–6 and teaching programmes
‘How to’ videos	Short videos with Professional Development expert Louise Pennington, demonstrating ways to use manipulatives and the CPA approach
Videos to support teaching the Big Ideas programme	<ul style="list-style-type: none"> • Introducing the Numicon approach • What's in the Numicon Big Ideas folder? • What physical apparatus supports the Big Ideas programme? • The theory of effective catch-up: what are the barriers to learning? • How to implement effective catch-up: practical guidance • Assessing before and after the intervention
Bar Modelling Teacher Resources	<p>Introduction to bar modelling, using manipulatives including Numicon Shapes and number rods</p> <p>Resources to support teaching with bar modelling in specific areas of maths, with examples from the Numicon teaching programme:</p> <p>Early Years Adding and Subtracting Multiplying and Dividing Fractions</p>
CPA Teacher Resources	<p>Two resources to support teaching with the Concrete-Pictorial-Abstract approach:</p> <ul style="list-style-type: none"> • Background to the Concrete-Pictorial-Abstract approach and how Numicon supports it • Guidance on using the Concrete-Pictorial-Abstract approach in your teaching, with examples from the Numicon teaching programme

Assessment	Planning	Teacher support videos	Professional development	Curriculum coverage	Answers	Teaching handbooks	Guide
Classroom display	Photocopy master	Maths story starter	Activity	Activity group summaries	Discussion materials	Whiteboard resource	

Maths story starter

Resource	Description
Maths story starters 1–10	Printable colour pages for Numicon 1, with starting points for number stories about the numbers 1–10, using the Numicon Shape patterns

Classroom display

Resource	Description
Classroom display ideas	A PDF document of suggestions for creating your own classroom displays, written by Numicon authors, plus PDF photocopy masters to support you with this. These resources are designed for use with Numicon 1–4

Curriculum coverage

Resource	Description
Printable NZ Curriculum content for Numicon Firm Foundations and levels 1–6	A downloadable pdf per level of all new NZ curriculum content for users of the print resources including new activities, Activity Card for Firm Foundations and Statistics & Probability material for 1–6
Numicon Online NZ Matching Chart	A curriculum matching chart linking Numicon teaching activities to Te Mātaiaho, the New Zealand curriculum. NB. This document is provided as a reference tool; we recommend following the teaching progression in the Numicon Planning Documents for NZ .
Maths No Problem Matching Charts	Charts showing how Numicon supports Maths No Problem 1–6 Book A and Book B

Discussion materials

Resource	Description
Student Book opening questions	These are the opening questions and images taken from the <i>Numicon Student Books</i> . You can display these on screen or on an interactive whiteboard and use them for class discussion. The first question (or opening questions) has been provided for each chapter (or Activity Group) of <i>Numicon Student Books</i> 3, 4, 5 and 6

Assessment	Planning	Teacher support videos	Professional development	Curriculum coverage	Answers	Teaching handbooks	Guide
Classroom display	Photocopy master	Maths story starter	Activity	Activity group summaries	Discussion materials	Whiteboard resource	

Answers

Resource	Description
Student Book answers	<p>Full answers to the questions in <i>Numicon 3, 4, 5 and 6 Student Books</i>, for reference.</p> <p>At the start of each answer book, you will also find an introduction to <i>Numicon Student Books</i> from Dr Tony Wing, a guide to key Numicon resources and how these fit together and a planning chart.</p> <p>The planning chart gives you the topic covered by each Activity Group, the corresponding pages in the Student Book and the milestone assessment statements</p>

Teaching Handbooks

Resource	Description
Teaching Resource Handbooks	<p>Online eBook versions of the Numicon 1–6 Teaching Resource Handbooks for NPC and GMS incorporating NZ curriculum activities and NZ currency updates</p> <p>*Levels 2, 4, 5 and 6 to follow</p>

Guide

Resource	Description
Numicon Interactive Glossary	Look up definitions and images for key maths terms. Display the glossary on screen for your class or use to prepare your lessons

Assessment	Planning	Teacher support videos	Professional development	Curriculum coverage	Answers	Teaching handbooks	Guide
Classroom display	Photocopy master	Maths story starter	Activity	Activity group summaries	Discussion materials	Whiteboard resource	

Photocopy master	
Resource	Description
Photocopy master packs	A selection of general photocopy masters for regular use. Available in packs for ages 3–5 , 5–7 and 7–11
Teaching Resource Handbook photocopy master packs Numicon 1–6 / Firm Foundations	Quickly download a PDF pack of all the photocopy master pages from any Teaching Resource Handbook (Firm Foundations to Numicon 6) with links to all the individual photocopy masters Always print at 100% (not print to fit)
Online photocopy pages	Online-only printable resources, including a quick guide to the number rods. For Firm Foundations, this includes classroom labels, the Counting and Number Ideas book, recipe cards and more
Activity sheets (print at A3)	Activities for ages 3+, 4–7, 7–9 and 9–11 including: <ul style="list-style-type: none"> Numicon Ordering Numicon House Fraction windows Ancient Egyptians Cut-and-stick Christmas tree Snow tracks Christmas tree Christmas presents farm in winter winter pictures (ice skate) snow people wrapping paper garden birds spring flowers flower beds spring chicks spring animals beanbag maths building brick patterns camping conundrum summer fair autumn leaves/maths outdoors firework patterns food collection
Breaking Barriers photocopy pages	The photocopy masters for Breaking Barriers (programme for children with learning difficulties or SEND). You can also find the Breaking Barriers Assessment Tools in the Assessment section
Gattegno Chart (millions and decimals)	A printable Gattegno chart including decimals that can be used to support a range of topics
Printable Numicon Shapes and Baseboard	Printable Numicon Shapes and Baseboard to download and cut out which can be used for a wide variety of activities

Assessment	Planning	Teacher support videos	Professional development	Curriculum coverage	Answers	Teaching handbooks	Guide
Classroom display	Photocopy master	Maths story starter	Activity	Activity group summaries	Discussion materials	Whiteboard resource	

Activity	
Resource	Description
Mental maths practice ideas for Numicon 2	Checklist of ideas for practising mental maths throughout Numicon 2
Activity sheets (print at A3)	<p>Activities for ages 3+, 4–7, 7–9 and 9–11 on these topics:</p> <ul style="list-style-type: none"> NEW Numicon ordering NEW Numicon house NEW Fraction windows NEW Ancient Egyptians Cut-and-stick Christmas tree Snow tracks Christmas tree Christmas presents farm in winter winter pictures (ice skate) snow people wrapping paper garden birds spring flowers flower beds spring chicks Spring animals beanbag maths building brick patterns camping conundrum Summer fair Autumn leaves/maths outdoors firework patterns food collection

Activity group summaries	
Resource	Description
Activity Group summaries for each Teaching Resource Handbook	<p>These provide a summary of the information contained on the 'Educational context' page of each activity group for <i>Number, Pattern and Calculating</i> (NPC) and <i>Geometry, Measurement and Statistics</i> (GMS) 1–6, including:</p> <ul style="list-style-type: none"> Key mathematical ideas Learning opportunities Assessment opportunities Words and terms for use in conversation Cross-references to the Explorer Progress Books (student pages) and Explore More resources (for homework)

Assessment	Planning	Teacher support videos	Professional development	Curriculum coverage	Answers	Teaching handbooks	Guide
Classroom display	Photocopy master	Maths story starter	Activity	Activity group summaries	Discussion materials	Whiteboard resource	

Whiteboard resources	
Resource	Description
Numicon Interactive Glossary	Definitions and images for key maths terms to use with your class, groups, individuals or when preparing lessons
Teaching notes for the IWB idea videos	Activity ideas to use with the Numicon IWB, with supporting notes including curriculum and Numicon milestone matches, resources to use with the whiteboard to keep the whole class engaged; and links to other materials
IWB idea videos	Videos of activity ideas to use with the Numicon IWB, with supporting notes including curriculum and Numicon milestone matches; resources to use with the whiteboard to keep the whole class engaged; and links to other materials
Firm Foundations	Halving and doubling Matching Numicon Shapes with numerals, using spinners or numeral cards
Numicon 1	Halving collections of objects Exploring adding facts to 10 Understanding 'how many more?' with number rods Looking at quantity and column value of 2-digit numbers
Numicon 2	Finding quarters and three-quarters Adding to 20 Rounding double-digit numbers using Numicon Shapes and number rods
Numicon 3	Fractions on a number line Exploring equivalence with number rods Adding hundreds, tens and ones
Numicon 4	Adding and subtracting fractions beyond 1 Exploring patterns in sequences of multiples Using arrays to explore the commutative property of multiplying Multiplying in parts Introducing negative numbers on the -12 to 12 Number Line
Numicon 5	Fractions - illustrating equivalence with Numicon Shapes Multiplying proper fractions by whole numbers Testing general statements about factors, multiples and divisibility
Numicon 6	Adding and subtracting fractions with different denominators Using arrays to support calculating with fractions Investigating rules and generalizing with algebra, to build a sequence and generate the n th term

Assessment	Planning	Teacher support videos	Professional development	Curriculum coverage	Answers	Teaching handbooks	Guide
Classroom display	Photocopy master	Maths story starter	Activity	Activity group summaries	Discussion materials	Whiteboard resource	