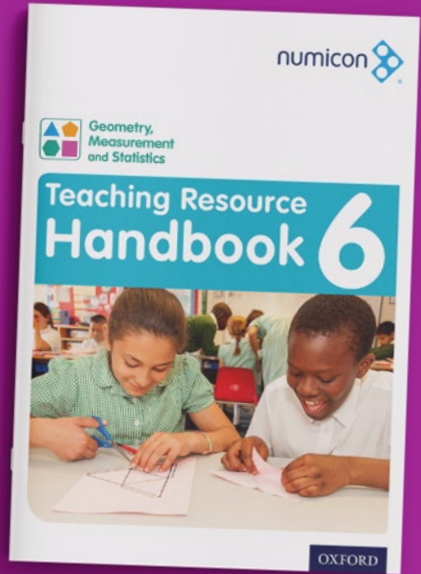
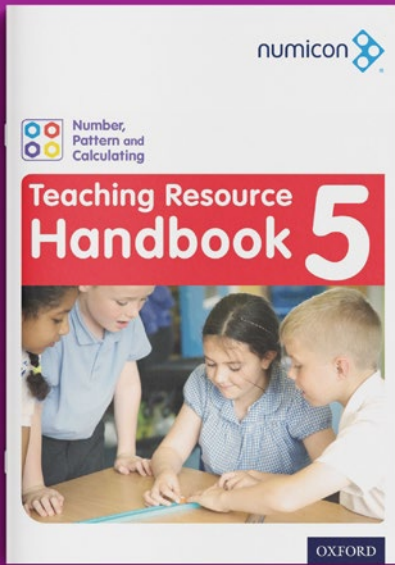


# Making Maths Real in Years 6–9





## Adding Polynomials

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**Add:**  $3x + 1$  and  $x + 3$

$$\begin{array}{l}
 \boxed{\phantom{000}} \\
 \boxed{\phantom{000}} \square + \boxed{\phantom{000}} \square \square \square \\
 \boxed{\phantom{000}}
 \end{array}$$

$$= 4x + 4$$

**Add:**  $(-2x + 3) + (x + 1)$

$$\begin{array}{l}
 \boxed{\phantom{000}} \\
 \boxed{\phantom{000}} \square \square \square + \boxed{\phantom{000}} \square
 \end{array}$$

# Understand Embed Apply

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Do you want your Years 6–9 students to be ready for future learning and feel confident in their abilities?

Numicon 5 is rich in content as the closing book for Level 3/Phase 2 Te Mataiaho and reaching into the next Level 4/Phase 3.

Numicon 6 is ideal for embedding early Level 4/Phase 3 learning and preparing for high school. Using a problem solving approach, students are given real life context, exploring and applying new mathematical concepts in situations they can relate to. They form an appreciation of mathematics and its practical application in their own lives.

Every lesson is designed to build on previous learning, allowing for a depth of understanding to occur and reducing the cognitive load. Students are given the opportunity to follow their own lines of inquiry and communicate their findings to their peers.

Emphasis is placed on generalising and communicating to others, creating true mathematical thinkers.

.....

**It helps those working above to address misconceptions or gaps, and also gain a better understanding so they can progress quickly to tackle higher level problems.**

– Maths Coordinator,  
North East

# Explore Communicate Collaborate

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The abstract nature of mathematics can make it difficult to explain. Concrete manipulatives are needed at all levels to enable students to explore, reason, make generalizations and communicate findings

Numicon is based on the CPA (Concrete, Pictorial, Abstract) approach. It uses a variety of manipulatives and real life contexts to explore mathematical concepts. Students are encouraged to work together to solve problems and explain their thinking.

Through the use of the CPA approach, students are able to easily make connections. It provides clear progressions of learning, building on the previous learning and revisiting key concepts.

Numicon supports both the learner and the teacher.

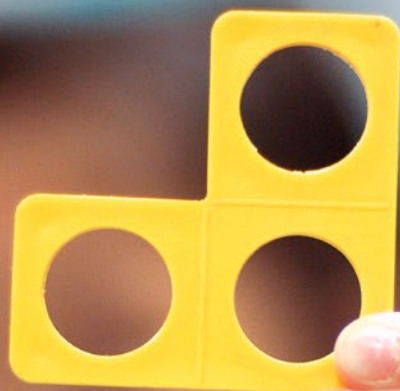
.....  
**The students are really enjoying the structure of the lessons. The fact the lessons are condensed and focused has helped the boys. It really encourages discussion and communication.**

– Robyn, Teacher



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**Over 90% of teachers using Numicon in their lessons felt that the quality of maths teaching had improved since they adopted the approach, with over 30% finding a significant improvement.**

– Impact Study, 2011



# Researched Learner-Focused Reliable

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## Numicon is the market-leading primary school maths programme developed by Oxford University Press

Numicon shapes have become popular and effective teaching tools, used by educators all around the world to support children's maths and numeracy development.

The teaching programme behind the shapes has been used for many years in classrooms around the world. Researchers internationally have explored its impact on students learning:

- Pilot studies in Australia, NZ and UK where schools have implemented the programme and followed the progress across the years with outstanding results.
- Doctorates and Undergrads have written their theses about the impact of the multi-sensory approach Numicon provides and the progress students make.

- Case Studies of individual students have been written and shared across the teaching profession to show the impact Numicon can have.
- Independent Research teams across the world have used data from different schools who are using Numicon and show significant improvements.

Join the Numicon journey and discover this for yourself – you will be amazed by not only the learning transformation of your students but also the change in your own approach to teaching Mathematics.

To find out more, visit our website **[numicon.co.nz](http://numicon.co.nz)**

# Support Accelerate Engage

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Do you have Year 6 students working below their expected level? Are they struggling with key aspects of numeracy?

You can help these students catch up quickly using the *Big Ideas* programme. Big Ideas is a 12 week acceleration programme focusing on five key aspects essential to understanding Level 3NZC/Phase 3 Te Mātaiaho mathematical concepts laying the foundation for success further on.

Students will explore, discover, generalise, make connections and apply learning across these five domains:

- Adding and subtracting
- Multiplying and dividing
- Place value
- Fractions
- Working with fractions, decimals and percentages.

This short programme will not just accelerate students' learning and fill the gaps but will ensure the learning is confidently embedded. It begins with an introduction to number sense then is linked with Numicon 4 and 5.

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**Numicon is a great way for students to show their understanding in a different way. I was amazed how students that I thought would need extra support or may not understand, *did* understand!**

– Katie, Teacher





numicon 

## Numicon Big Ideas



Lead author: Steve Chinn

OXFORD



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**I am so excited about Numicon and have been trialling it in my classroom since attending some of the Zoom PD sessions. I have seen some excellent progress with my students.**

– Anne, Auckland Teacher

# Professional Learning & Development

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Tired of being offered support that turns out to be web based only?

We are unique – Edushop NZ offers ongoing person to person support. Our highly trained consultants are all teachers with years of experience in the classroom. They are passionate about the teaching and learning of mathematics and have demonstrated great success in their own classrooms. They are immersed in current research and have a great understanding of the learning process in mathematics.

**Services we offer:**

- Run PLD sessions and help you embed best practice across your team
- Assist with planning and assessment
- Demonstrate lessons and best teaching practices
- Observe lessons and provide feedback with goals
- Tailor programmes for individual learners

Contact us today to find out more.

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**Thank you for a great day. It was the best PD we have undertaken and I know that it will greatly benefit my maths programme.**

– Teacher, Wellington

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## We inspire others to learn.

Feeding young minds and enriching lives through learning is the world's most important job. That's why you're a teacher – right?

We're here to help you create a better future for our nation's children.

 Numicon users NZ

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[www.numicon.co.nz](http://www.numicon.co.nz)

### About Numicon

Numicon is a collaborative endeavour to facilitate children's understanding and enjoyment of maths.

Numicon was founded in the daily experience of intelligent children having real difficulty with maths, the frequent underestimation of the complexity of the ideas that we ask young children to face and a recognition of the importance of maths to them and to society as a whole.

We appreciate the complexity of these early number ideas and seek to foster the self-belief necessary to achieve in the face of difficulty; we are not about 'making maths easy'.

We believe that the combination of action, imagery and conversation helps children to

structure their experiences, which is such a vital skill for both their mathematical and their overall development.

By watching and listening to what children do and say, we and many others are finding that our developing multi-sensory approach provides learners with the opportunity to play to their strengths, thereby releasing their potential to enjoy, understand and achieve in maths. This enjoyment in achievement is also shared by teachers and parents.

We strive to support teachers' subject knowledge and pedagogy with teaching materials, training and on-going feedback as we continue to develop a better understanding of how we can work together to encourage all learners in the vital early stages of their own mathematical journey.

