EDUSHOP

Success in Maths Years 1–8

Explore Communicate Embed

Create a class full of mathematical thinkers

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.

Using the CPA approach, students can easily make connections. It provides clear progressions of learning, building on the previous learning and revisiting key concepts.

I keep the Numicon pieces right by the mat where I teach. The children love to choose Numicon to show their mathematical thinking. I can't imagine teaching without it.

– Allyson, Auckland Teacher

Confidence Engagement Mastery

Every student in your class will succeed in maths and have fun!

Numicon does exactly this, through the mastery approach. The mastery approach is a methodology that builds conceptual understanding, language and communication, and mathematical thinking to problem solve effectively (Dr. Helen Drury, *Mastering Mathematics* 2015).

Key points to note about mastery:

1. Maths concepts are broken into small accessible steps with clear objectives. Each objective builds upon the previous one, creating a cyclic approach to aid memory and develop a deeper understanding.
2. Depth is valued over speed and acceleration.
3. The whole class learns the concept together, with flexible groupings and partnerships providing support and the opportunity for mathematical conversations.
4. It is essential to have a growth mindset, both teacher and learner.
5. Deep understanding of a concept is a priority. Procedural thinking is supported, but it's not 'rote'.
6. The CPA approach is foundational to mastery.

For a school to be successful, whole school in-depth PD is undertaken to create a rich learning environment for teachers and students. Ask our consultants about learning more today.

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

Maths Coordinator, North Island


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Notice Recognise Respond

Have faith in your OTJs with Numicon

Numicon uses formative assessment and OTJs to guide learning and reflect on students' progress.

Daily questions and prompts in the teaching guides, support teachers to notice, recognise and respond to students in the moment i.e 'Look and listen for children who...'.

These are linked to Milestones which are used to track progress over time. Snapshots of their learning and thinking are recorded using the Explorer Progress Books and Assessment Cards. These support the gathering of evidence and sit alongside the units of work to show when mastery is achieved over time.

Because the teaching sequence with Numicon is cyclic, students have repeated opportunities to embed the learning in revisiting and building their learning again and again, and across the strands making deep connections in maths.

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!

Kate, NZ Teacher

Fluency Understanding Reasoning

A balanced programme with a variety of learning experiences that help develop deeper understanding

Numicon takes all the stress away:

- Decades of research
- Decades of international classroom use
- Input from lead thinkers and writers
- Opportunities for teachers to use their own creativity

Maths involves 'doing'. The Numicon Teaching Guide and Online resources provide the perfect balance:

- Varied, age-appropriate contexts
- Problem Solving opportunities
- Explicit teaching and student-led inquiry lessons
- Flexible groups
- Low floor high ceiling activities
- Rich tasks
- Cyclic

Numicon is not a textbook programme, but rather a maths lab providing different learning opportunities to allow students to explore math concepts in different contexts and approaches. The use of patterns and relationships runs through all of this to encourage students to make connections, develop mathematical reasoning and form generalisations, embedding the learning.

It provides flexibility and a range of learning pathways

Lauren & Michelle,
Auckland Teachers

NZ 2023 Maths Curriculum links with Numicon

Year	0/1	2	3	4	5	6	7	8	9/10
Phases	1			2			3		4
Numicon Levels	FF	1	2	3	4	5	5/6	6	
Intervention Tier 3	Breaking Barriers								
Intervention Tier 2		Intervention Programme							
Senior Catch-up						Big Ideas			

PLD Growth Passion

Impact the whole school alongside inclusive practice and regain passion, confidence and skills

Edushop offers PLD and support for individuals, syndicates and the whole school.

Our passion is:

- Unparalleled throughout NZ
- We are focused explicitly on Maths
- We are highly trained and experienced and successful classroom teachers
- We are immersed in current research and studies extending our knowledge
- We have a great understanding of the learning process including those with neuro-diversities. Success for all!
- We love teaching and learning!

Contact us today to discover how we can support you and your school.

Our consultant has been amazing! It's easy to see the knowledge and passion she has for maths. We are so fortunate to have her support us on our Numicon journey.

Michelle, Wellington Teacher

Thanks for a great day! It was the best PD we have undertaken.

North Island Teacher

EDUSHOP

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.

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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.

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