

8 May 2025

Dear Parents and Caregivers,

It was wonderful to see so many of you at our *Maths — No Problem!* information evening on Thursday, 27 March 2025. Your engagement and interest in your children's learning are greatly appreciated.

As you may be aware, the New Zealand mathematics curriculum has been updated, and with these changes comes a progression in how we teach maths. This does not mean disregarding effective past practices but rather incorporating new developments from research about how children learn mathematics best.

Our approach ensures that students develop a deep understanding of mathematical concepts while gaining the essential knowledge and skills they need. By using evidence-based teaching methods, we aim to build confidence, fluency, and problem-solving abilities in all our learners.

# **Parent Information Evening**

Please click on the <u>link</u> to view a recording of the presentation slides from Thursday 27 March.

# Parent information provided by Maths - No Problem!

Please read the parent information below.

For more information, please visit https://mathsnoproblem.com/en/resources/maths-mastery-guide https://mathsnoproblem.com/en/parent-videos

Thank you for your ongoing support. If you have any further questions about *Maths* — *No Problem!* or our mathematics programme, please don't hesitate to get in touch.

Many thanks,

Mrs Larissa Schick Junior Years Mathematics Lead



# Same maths, different thinking

Our feelings towards maths usually reflect how we were taught at school. For most of us, that meant rote-learning, memorisation and tests — lots of tests.

**Maths** — **No Problem!** is different. Using a mastery approach to learning, MNP is changing the way children learn mathematics. Based on the research of influential educational theorists, maths mastery first gained popularity in Singapore where pupils rank among the highest worldwide in maths education.



Now, it's your child's turn.

# How it works

#### Structured maths lessons

Lessons build upon previous learning in a spiral structure, revisiting prior concepts to encourage essential connections and deeper understanding.

## Research-based approach

Children learn using methods proven to help them develop a better understanding of abstract concepts: the CPA approach, bar modelling, journalling.

#### Whole-class teaching

Everyone learns at the same pace and no one gets left behind. Content is differentiated by depth to support struggling and advanced learners alike.

#### Peer to peer learning

Collaboration is key. Children are encouraged to work through problems in pairs or groups, promoting teamwork and building resilience.

Learn more at mathsnoproblem.com/maths-success



# Set them up for success

The MNP approach makes maths intuitive for all learners. It helps pupils build a strong foundation of skills that will take them through secondary school, university and into a future workplace.

#### Deeper problem solving

Children learn to think flexibly and are more engaged with mathematics. They learn to apply their knowledge and skills to effectively solve problems.

## A growth mindset

MNP fosters a culture that rewards growth over inherent ability. Children learn that it's okay to struggle, in fact, struggle is an important part of the learning process.

### Increased confidence

Every child can succeed with MNP. Knowing this helps pupils develop a strong sense of efficacy, take more risks and explain their thinking with confidence.

### Transferable skills

A strong maths foundation goes beyond the maths class. Teachers using MNP have seen improvements in other subject areas — even in English class.

# How to get involved

### Watch parent videos

Led by world-renowned maths expert Dr Yeap Ban Har, you'll cover essential maths mastery techniques you can use at home. Go to **mathsnoproblem.com/parents** 

#### Work through problems

Ask your child to show you how they solve the problem. If they get stuck, don't rush them. Praise their effort and reassure them that they'll get it with practice. Ask them if they can think of two more ways to solve the problem.

#### Find maths opportunities

Maths problems are everywhere. Take real-life situations and look for patterns, connections and things that can be matched. Play games that involve numbers. Show them that maths is fun and isn't only reserved for the classroom.

'I love doing Maths — No Problem! I learn so well with it. I never find the lessons easy, there is always something where I get stuck, but I work hard and work it out... It has made me a better mathematician.'

David, Year 5



# What will be different ?

- We will use lots of equipment (cubes, ten frames, number discs) to explore word problems. A key piece of research underpinning this approach is Jerome Bruner's CPA approach. He concluded that people learn in three stages through: Concrete objects, Picture representations and Abstract thought (CPA). Children (and adults!) can find maths difficult because it is abstract. The CPA approach introduces abstract mathematical concepts in a concrete and tangible way. You might hear: How would we show this? Could we show this in more than one way? Can you draw a diagram and write an equation?
- Tasks are designed to be accessible to all learners. The whole class will learn the content together, with built in extension opportunities for advanced learners to develop a deeper level of understanding and continually be challenged in every lesson.
- Each lesson carefully builds on the previous one, creating small steps to build a mastery level understanding of concepts and confidence.
- Lessons are designed to be taught in 60 minutes. Whole class teaching means your child will have 60 minutes of teacher taught maths lesson, every lesson.
- Every lesson has opportunities for the students to work collaboratively and independently. The collaborative components help develop your child's ability to effectively communicate their mathematical thinking and further develop their ideas through conversation. The independent components help your child consolidate and apply the concepts they have been learning during the lesson.
- We will challenge children to use a number of methods to show that their understanding of a concept is in-depth. Multiple representations help students develop an understanding of the relationships mathematical concepts have to each other and will build their critical thinking skills.
- For advanced learners, rather than getting them to do more of the same, we want to
  enrich their understanding of a mathematical concept by providing them opportunities to
  explore a concept in more depth. Opportunities for enrichment are built into every lesson
  and are an expectation for the students every lesson.
- Built on research, the maths problems are carefully chosen and subtly varied as they move through the lesson. Each example challenges and further develops the student's knowledge and understanding, providing a strong foundation.
- All concepts are covered in depth, including both number, geometry and statistics. It
  meets all the requirements of the New Zealand curriculum with opportunities to go
  beyond them in all year levels.

# Elim Christian College

# What does MNP look like at home?

- Ask lots of questions. Instead of telling children if the got the answer correct or not, help them develop the skills to check for themselves: 'How do you know?', "I'm not sure how to do it, could you explain it to me?" 'My friend thought this, would that be helpful?' 'What do you notice about...? What's the same and different about...? Do you agree with...?
- Build your child's confidence in maths by encourage productive struggle and viewing mistakes as valuable learning opportunities. Making mistakes are an important part of developing problem solving and thinking skills in mathematics.
- Help your child develop critical thinking skills: Uncle Roger says that you need to... do you agree with him? Why? Why not? Is there another way to do it? Do you think this way is better than Uncle Roger's?
- Encourage your child to demonstrate their understanding in a variety of ways explaining or orally, making a physical model, making a visual model.
- Encourage your child to think of their own word problems using every day contexts within the home and local community
- Playing games, particularly card games, is great for helping with maths. They
  don't have to be number based, as most games ask children to follow rules –
  look for patterns, make connections and match things which are all important
  mathematical skills. And they are FUN!
- Ask your child to 'show' you how to solve a problem related to the activities they
  are doing at school. Pretend that you don't understand as you did it differently
  when you were at school. If they get stuck, try and give them an opportunity to
  work it out themselves by offering helpful hints rather than showing them 'how
  you might do it'.

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# Give these a try.

## (1)

Sam has 5 times as many marbles as Ruby. Sam gives Ruby 26 marbles and then they have the same amount. How many marbles do they have altogether?

## (2)

I have \$177 and I'm given another \$9. How much do I now have? Can you think of 3 different ways of working out the answer?

# (3)

Use 4 matchsticks to make this shape:



Can you move 2 matchsticks so that the sweet is no longer in

the glass while maintaining the shape?