



St Patrick's School

Numicon Impact Report

School Profile

Location: Christchurch

Roll Size: 183

Diversity: 9.3% Māori, 9.3% Asian

Start Of Numicon: 2018

Description

St Patrick's School is a state-integrated Catholic full primary school in Christchurch that provides quality education for children aged 5 – 13.

St Patrick's School is committed to fostering confident, self-motivated and life-long learners. Through their Mercy Values St Patrick's fosters an environment where students are 'Called to Shine.'

The school provides an evidence-based, quality Catholic education, fostering academic excellence and values-based learning. It has a great community partnership between school, family and parish to nurture students' faith and help them reach their full potential.

Why Numicon?

In 2016 Tom Wallis, as a new Principal at St Patrick's School was concerned the Numeracy Project, which had been around for almost 20 years, was failing many students across New Zealand.

A report from 2015 showed that students were failing mathematics in higher numbers than ever before.

At St Patricks, overall students achievement results were good. There was concern however that the needs of those students performing just at and below were not being met. There were also inconsistencies with teachers using a variety of approaches and resources and no clear scope and sequence being followed.

Through Tom's study and investigations, he found that the evidence-based Numicon Programme would offer the school:

- an explicit, structured, well-resourced programme that provided a clear scope and sequence from Years 0 – 8.
- a Concrete, Pictorial, Abstract (CPA) approach that caters for all learners.
- quality PLD support so the programme and the approach could be implemented successfully.
- excellent intervention programmes that could be taken by teacher aides for those who needed to work at a slower pace.

Our Aims

Our aims were simple:

- Raise confidence, engagement and enthusiasm for maths in both teachers and students
- Meet all students' needs using the proven CPA approach.
- Consistency in teaching, planning and assessment across the school
- Provide all students with a strong foundational grounding in maths.

Our Journey

We were very fortunate as a school to go on the Numicon journey together, fully implementing the program from Years 0 – 8 in 2018.

At the beginning of the year, every teacher was fully resourced to start the year, with teacher manuals and their recommended apparatus kit.

With PLD from Numicon Consultant, Margi Leech, we delved into our teaching manuals, explored the equipment and resources, followed the CPA approach and started teaching. We were told to drop everything else we had used in the past and use Numicon. We gave away our old assessments and pre-tests. We followed the Numicon Scope and Sequence, taught the lessons within the Teacher Handbooks and assessed using the milestones. It was a change of thinking for us all.

Our first year was at times challenging but also extremely rewarding. With each lesson, we were exploring, communicating and generalising our mathematical understanding with the equipment. Both teachers and children started having fun, were having light bulb moments and maths began to make more sense. For the first two years, we found we had to work slowly through the books filling gaps. We needed reassurance that completing the scope and sequence was not the priority but to trust the programme and take the time to do it right.

Advice for Others

Learn the theories behind the Numicon approach. The professional development we had looking at the Mastery Approach and more explicitly the Concrete, Pictorial, Abstract (CPA) approach was invaluable in making the changes to go whole class teaching.

Take your time the first year. Get to know the programme and take the time to teach the children how to explore, communicate with each other and make generalisations.

Teach and display the mathematical language and terms. Give children plenty of opportunities to share their thinking using the explicitly taught language in pairs, groups or back to the class.

Have plenty of equipment. More equipment means all children can be exploring, communicating and generalising in pairs or small groups.

Start as a whole school and go on the journey together, making the most of the professional development available. This way you can share your resources, experiences and create consistency across the school.

Results

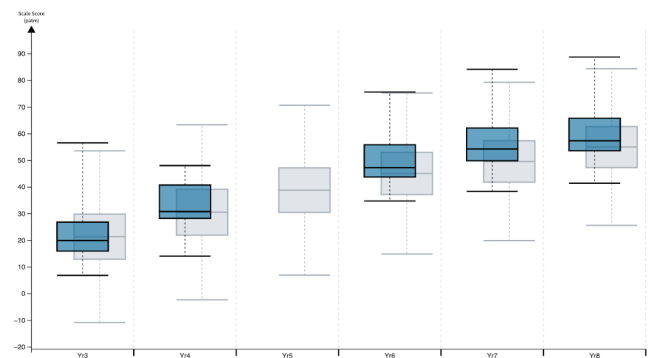
We have tracked our Year 8s and their P.A.T results from 2018.

The data clearly shows a rise in the average level of achievement against national norms. While this was not our only goal, we are very excited to see the impact on achievement.

We can also see that even our learners who struggle are achieving well above the national norms, allowing us to hold true to our values of excellence.

The rest of the school's data follows a similar trend, with achievement tracking above the national norms.

Year 8 Cohort



In Summary

Through conversations and observations, as well as student voice surveys, we feel that we have successfully met our original aim of raising engagement and enjoyment in mathematics.

We are proud of our school, students and staff for their commitment in implementing Numicon successfully across the school. We are all reaping the rewards.

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**“Teachers and Students
had light bulb moments.
Maths made more sense.”**