

Lifting Achievement in Maths

Goal:

To examine teaching and learning programmes to improve progress in Mathematics for our lowest cohort - Year 3.

Links to School Strategic Plan

Goal 2 - Our Akoranga/Teaching -

"Poipoia te kakano, kia puawai - Nurture the seed and it will grow"

We will promote a supportive and inclusive environment to support quality teaching and learning.

Increasing teacher capability to focus on child-centred learning

Target Group(s):

Students who were not achieving in maths in Year 3:

Of the 34 students in Year 3:

17/34 (50%) below in maths - looking at pact data it's 35%

17/34 (50%) below in reading

20/34 (59%) below in writing

As 15/34 (44%) are achieving below across reading, writing AND maths, our hunch was that maths may not be the issue- there is more going on than just maths. Additionally:

12/34 (35%) ESOL

3/34 (9%) Learning support

6/34 (18%) Migrant families

Consideration was also given to expanding the target group to the Y4s, as the next lowest cohort.

Description of Leadership Inquiry

We have the highest percentage of mathematicians who are below the expected level of achievement in Y3. We have noticed that our students in Y4 are the next highest percentage of mathematicians who are below the expected level of achievement.

Hunches

It could be language based??

Do we think it's because of the BSLA focus, less time able to be spent on maths??

Some of the cohort were in a Y0-2 learning environment and BSLA for the first time - does this have an effect on progress in other curriculum areas? Big focus on getting BSLA up and running. Extra load on teachers.

Actions

The original plan for the year was to focus on structured literacy for T1/2 and move to maths in T3/4. However, after Term 1, it was decided to keep the focus on structured literacy for the school. This gives the teachers the time to properly embed structured literacy into Y2/3 (Y1 had started in 2023).

Due to this change, we looked at where we could ‘add value’ and looked into where we could make a difference in the Y4-6 team.

Using the PaCT data we identified where the teaching should focus, so our learners made progress.
Year 4-6 PaCT data suggested gains could be made in:

- Patterns and Relationships - 25 at SP2
- Geometric thinking - 15 at SP1 rest at SP2
- Statistical investigations and interpreting and probability - half at SP1

Revised Plan:
Term 2 - use a mixture of NZMaths plans to move students in Patterns and Relationships. Planning needs to be at CL2 - CL4, so the NZMaths plans will need to be modified for individual class needs. Continuing with the Additive thinking and Multiplicative thinking

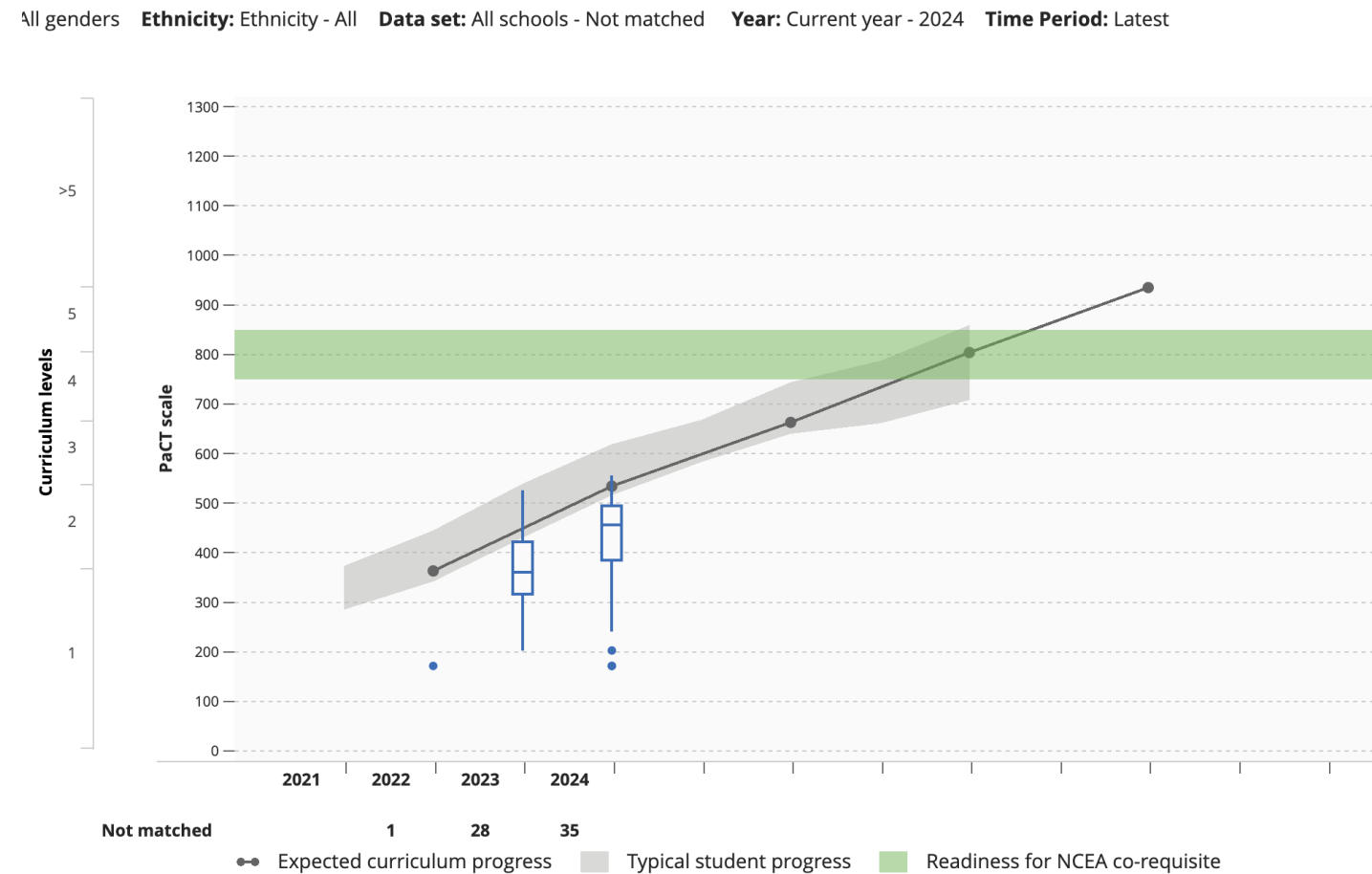
Term 3 - focus on Geometric thinking and Using Symbols and Expressions as this was the next area where progress could be made. The geometric thinking sign post is very broad so more gains would have been made in Y4 and 5 than 6.

Those teachers who have a cohort for two years are also able to build on the signposts that we covered some of last year but not enough to ‘tick off’.

Outcomes including specific links to Data Analysis

Year 3
In 2023 - 50% of students in Y2 were below in maths at EOY
In 2024 - 29% of students in Y3 were below in maths at EOY- so there has been an improvement.

The results from the PaCT tool also show the improvement in the mean for this cohort against the expected progress



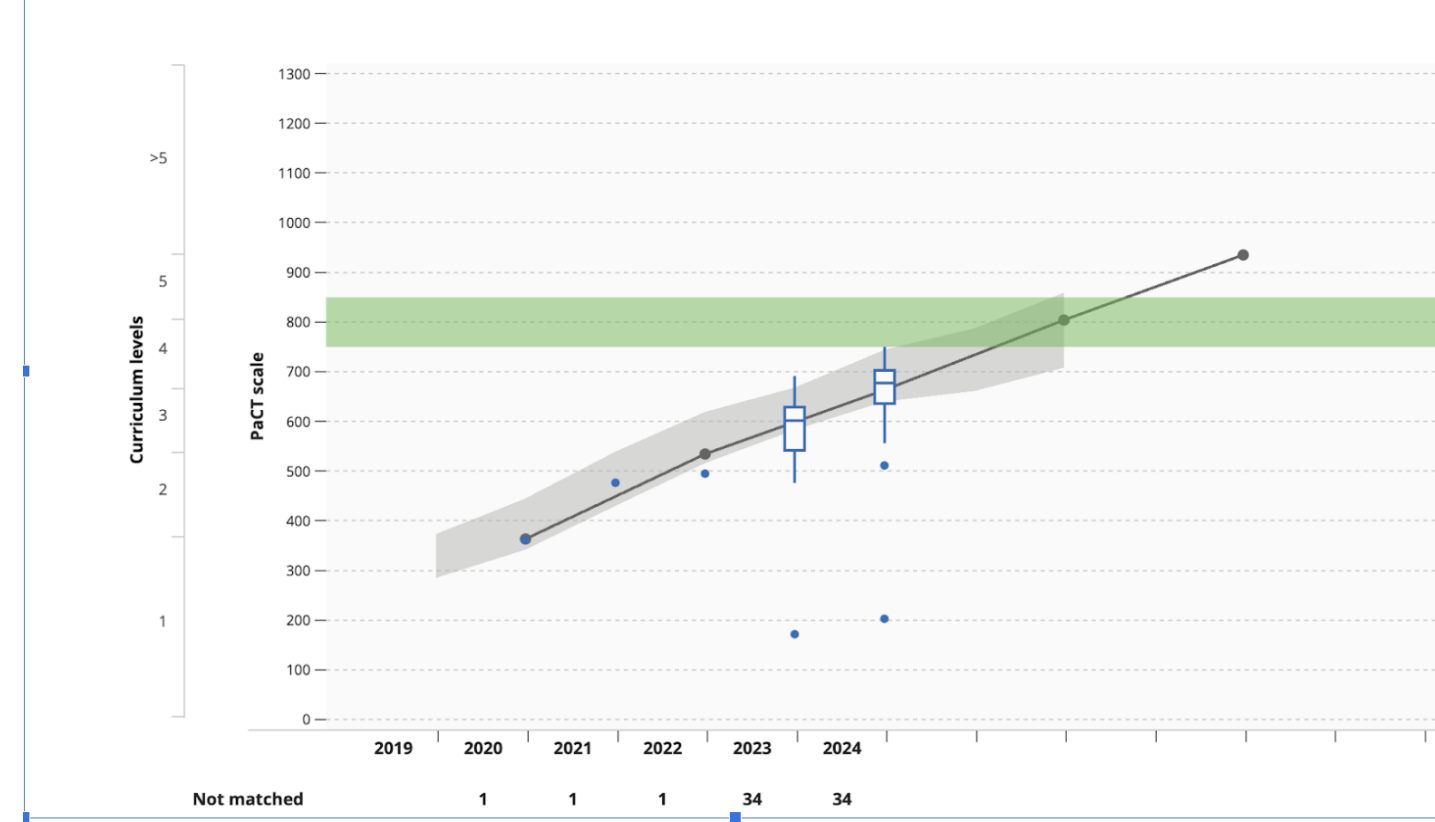
Year 4-6

The results below show the impact of targeting the teaching where there was the greatest need for improvement, according to the PaCT tool signposts.

There is an improvement in relation to the expected progress for the year group.

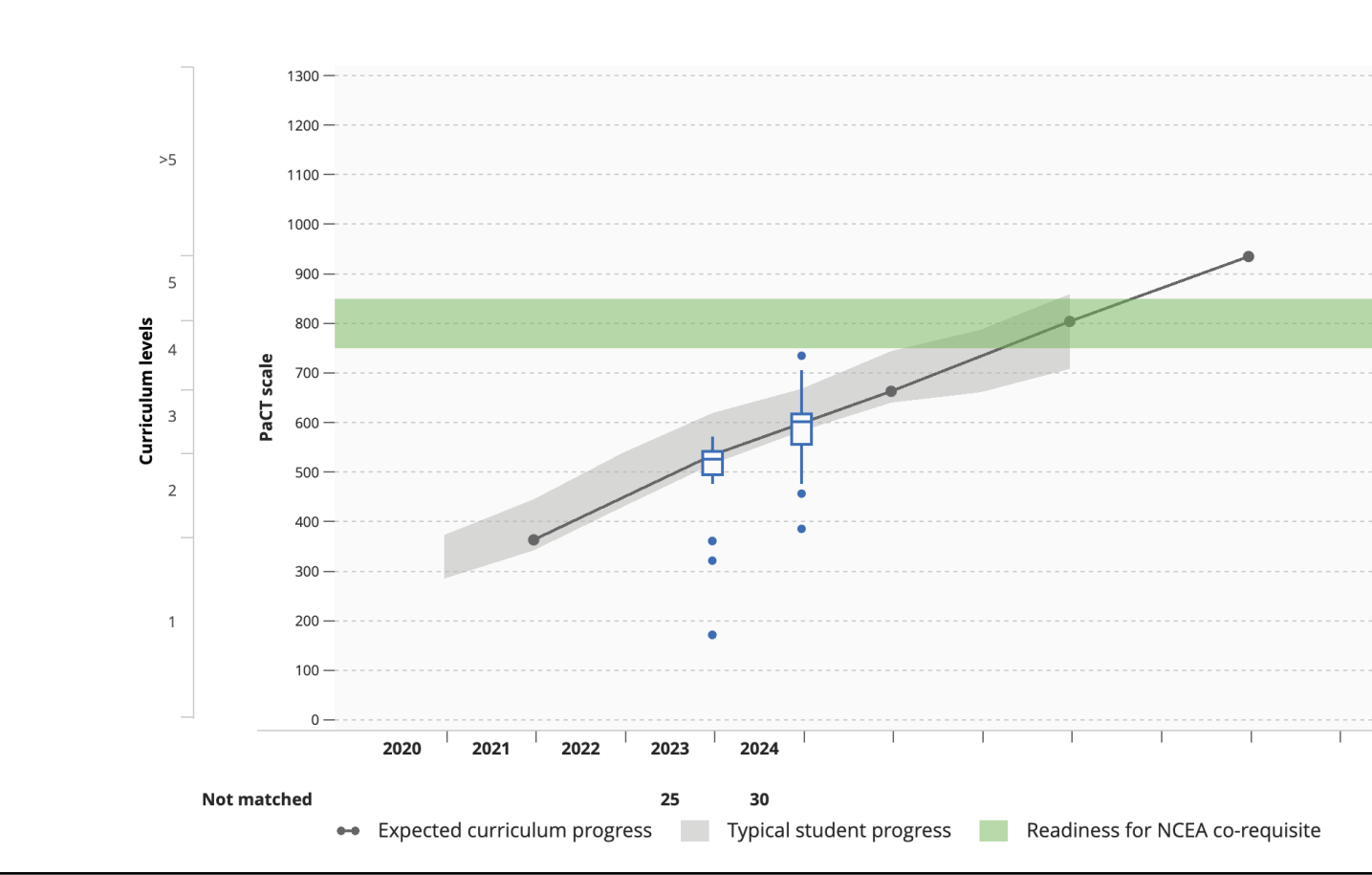
Year 6

Gender: All genders Ethnicity: Ethnicity - All Data set: All schools - Not matched Year: Current year - 2024 Time Period: Latest



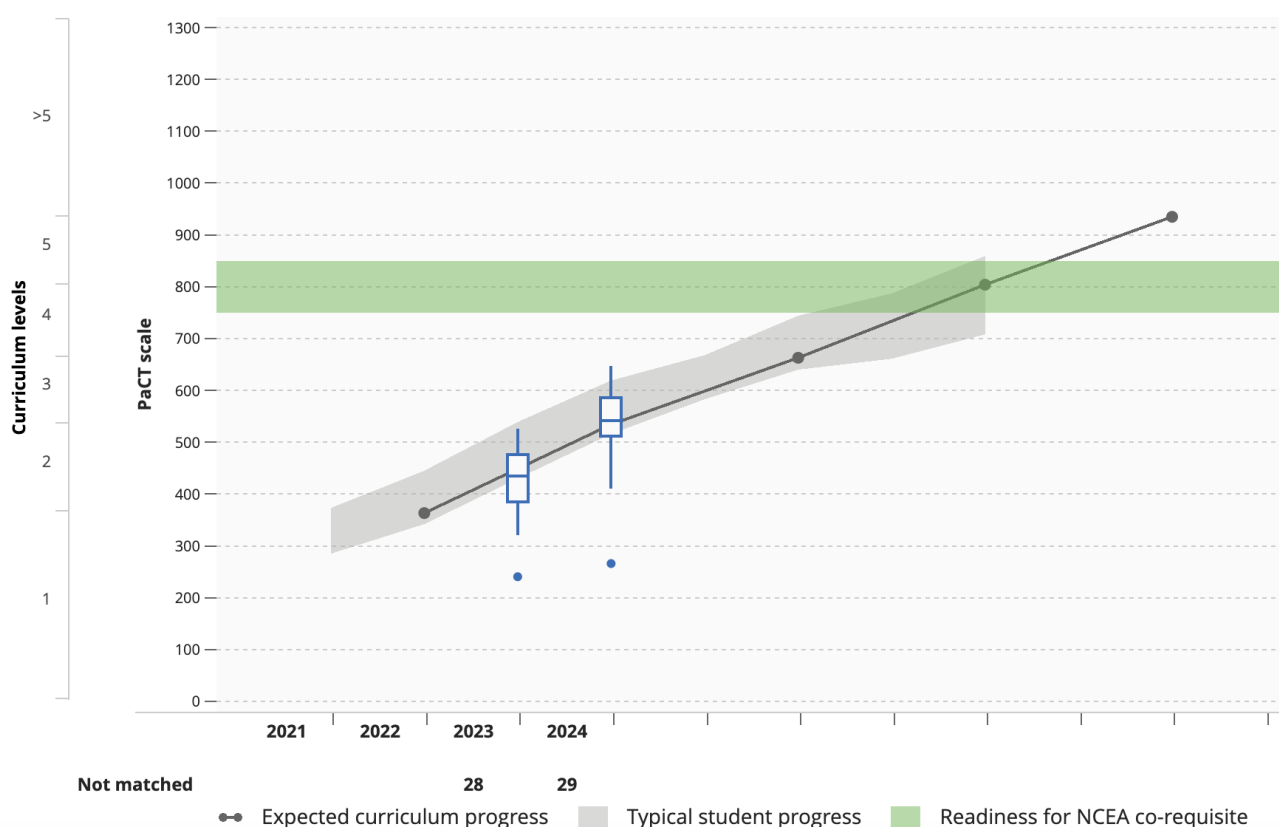
Year 5

Gender: All genders Ethnicity: Ethnicity - All Data set: All schools - Not matched Year: Current year - 2024 Time Period: Latest



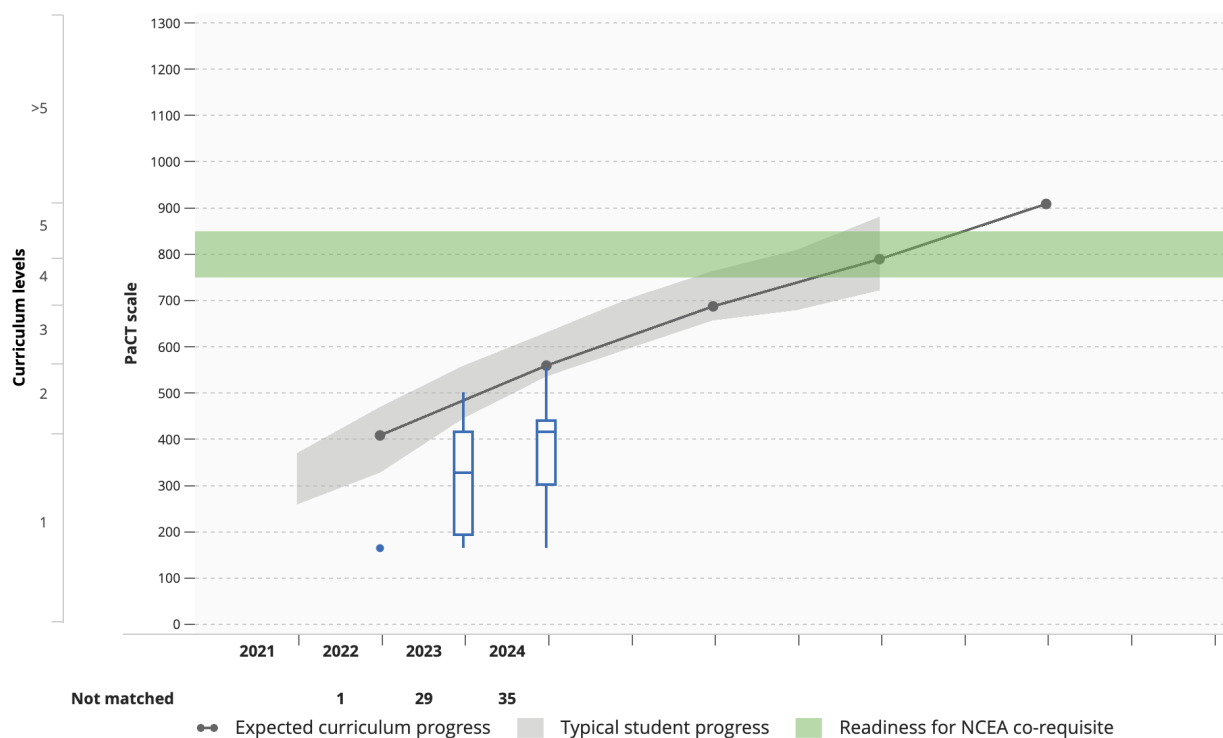
Year 4

Gender: All genders Ethnicity: Ethnicity - All Data set: All schools - Not matched Year: Current year - 2024 Time Period: Latest



Highlights

- The Within School Lead being able to work with the Kāhui Ako Collab group .Of particular benefit was discussion with other teachers working in the Primary Maths area. Other members gave great ideas about what to focus on. The level of pedagogical knowledge was amazing.
- Sharing maths snippets in school Admin meetings and hearing that other teachers were using them in their programmes and that the kids were loving them.
- Leading our Teacher-only day on the new Maths Curriculum
- Reading Data improvement perhaps having a flow on effect to maths- the graph below shows that for one selected class, there has been an improvement in the reading mean and the hunch is that the improved literacy levels have allowed more students to access the maths curriculum



Challenges

- Through no-one's fault - the constant moving of goal posts (MOE and Government).
- Keeping the focus on structured literacy in the area where we wanted to improve maths outcomes as well. Literacy is also an area where accelerated progress is needed for this cohort. The literacy focus does seem to have fed through into the Maths achievement.
- Having the math curriculum change.
- The work done around the PaCT tool became obsolete very quickly as the PaCT tool does not currently match the new curriculum. The PaCT tool may be updated.
- While you can see the mean data is moving closer towards expected progress, it is unclear if the scale score improvement is showing a more than expected rate of progress. This needs to be clarified

Where to next

- Investigate Numicon and the new maths curriculum.
- Continue to investigate if literacy improvements are having an impact on students and their ability to access the curriculum.