

Analysis of Variance: 2021 Maths Student Achievement Targets [\(data\)](#)

Target group: Year 4-8 students (Y4 n=58, Y5 n=58, Y6 n=58, Y7 n=62, Y8 n=53)

The data being used to inform this target is e-asTTle Mathematics data. Initial data was collected in March 2021, and end of year data will be collected in November.

We are very aware that an e-asTTle test is only one small measure of what a child can achieve. It is much a test of reading and interpretation of the wording of the problem and also IT skills. It is an online test and there are therefore no workings visible for consideration.

Notes: Some children had a reader to help them.

Wonderings:

- Year 4 students (n=58) haven't ever sat an e-asTTle before - this could have impacted on their results?
- Year 7/8 students who find maths difficult switch off and struggle to engage with an assessment of this nature, and this is also a test of their executive functioning.
- How did engaging in a timed test affect the children's ability to sit the test and their achievement levels?

Overall Level	4	5	6	7	8	Grand Total
1	36%	3%	2%	2%	2%	9%
2i	26%	16%	9%	8%	2%	12%
2ii	22%	22%	17%	5%	8%	15%
2iii	5%	21%	21%	11%	11%	14%
3i	2%	5%	10%	8%	8%	7%
3ii	3%	14%	12%	24%	13%	13%
3iii		12%	16%	11%	8%	9%
4i		3%	7%	15%	13%	8%
4ii			2%	3%	4%	2%
4iii			2%	3%	11%	3%
5i		2%	2%		6%	2%
5ii		2%		6%	9%	3%
5iii				2%	6%	1%
DNS	5%		2%	2%		2%
Grand Total	100%	100%	100%	100%	100%	100%

*DNS - Did not sit

Colour coding:

White: where we would expect to see children achieving **by the end** of the year for their year level.

Orange: not yet achieving at typical expectation **by the end** of that year level.

Green: Above where we would expect to see children achieving **by the end** of the year level

General Target:

We want to lift the maths achievement (as measured by the easTTle) across each year level cohort from Years 4-8, by 2 sub-levels.

We have identified our Māori students as a subset, and note that their achievement in each year group is lower than their NZE peers. Particular focus will be placed on lifting their achievement.

At the end of the year, we will look at the results of each year group, and of the Māori student subsets.

Actions planned to achieve the targets:

- Each team will write specific action plans to support these targets.
- The Within School Teacher (Mathematics) will support teams with development of action plans.
- Specific Mathematics Professional Development for staff will be built into the PLD plan for the year.

Resources:

A significant financial resource has been invested in purchasing new mathematics equipment across the school to replenish and update team resources.

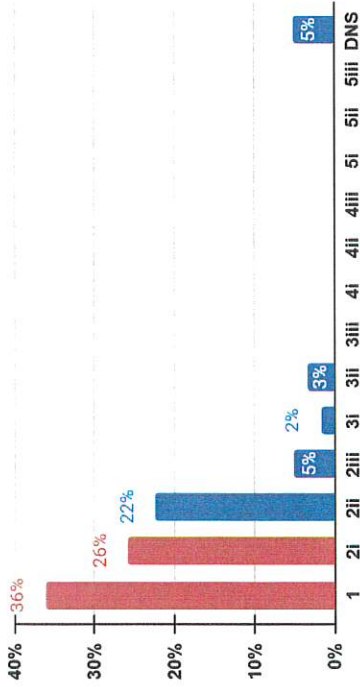
A Kahui Ako Within School Teacher position has been applied to mathematics and this teacher will be supporting teams with this work.

An independent maths advisor will work with the Within School Teacher to support and build capacity within our staff.

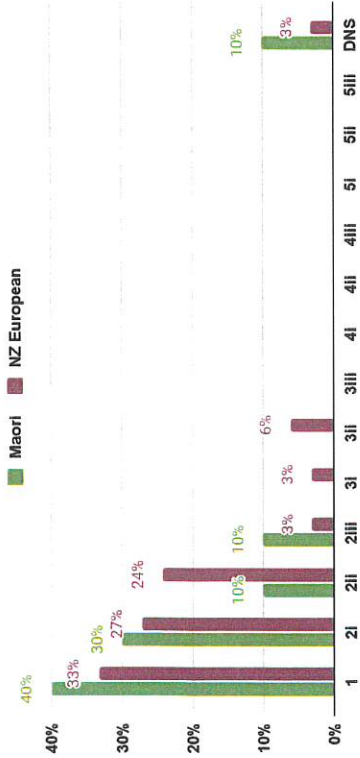
Year 4:

Year 4 Target Total Year 4 cohort = 58 students Students currently at Level 1 and Level 2i (n=need to be working towards being at Level 2ii by the end of the year. This will involve 62% (n=36) of the Year 4 students.	End of Year: 29% of the Y4 cohort are still working below where we would like them to be. 9% (DNS) had no end of year data, meaning that potentially, there are 38% of Y4 students still at risk. 61% of students are working at or above expectation.
Māori (n=10), NZ European (n=43) Māori students - 70% (n=7) are below where we would like them to be. 10% (n=1) DNS (not tested)	Māori students - 40%(n=4) still below and 20% (n=2) DNS - not tested 40% (n=4) are now achieving at expectation.

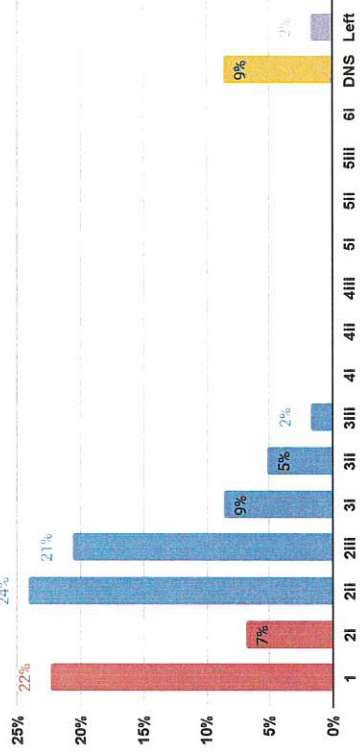
Year 4 eASttle Maths, March 2021



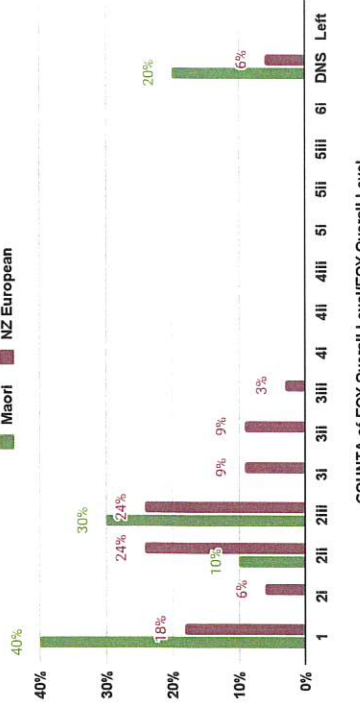
Year 4: Māori and NZ European March 2021



Year 4 eASttle Maths, Oct 2021

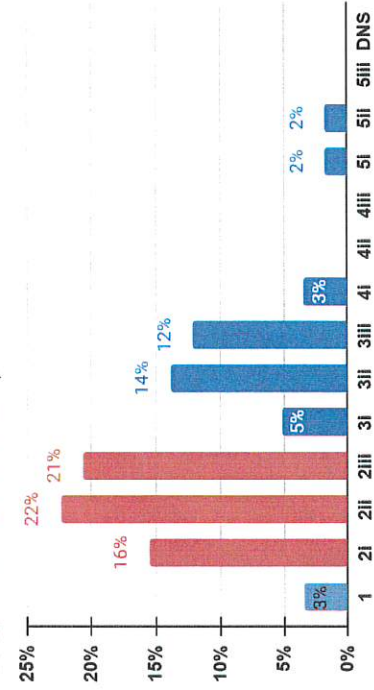


Year 4: Māori and NZ European EOY

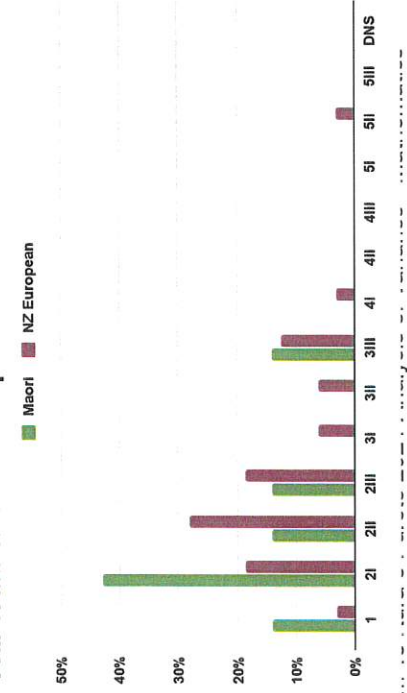


Year 5 Target Total Year 5 cohort = 58 students Students currently at Level 2 need to be working towards being at Level 3i by the end of the year. This will involve 59% (n=34) of the Year 5 students. Students at Level 1 (n=2) already have specific, targeted learning support..	End of Year: At the end of the year, there are no students still working at level 1 40% of students (shift from 59%) are working at Level 2 (below expectation) 58% are now working at Level 3 or above (at or above expectation)
Māori (n=7), NZ European (n=32) Māori students - 6 out of 7 students are working at Level 1 or 2 (below expectation)	Māori students - There are no Māori students working at Level 1 4 out of 7 are still working at Level 2 (below expectation) 3 students are working at Level 3 (at expectation)

Year 5 eASttle Maths, March 2021



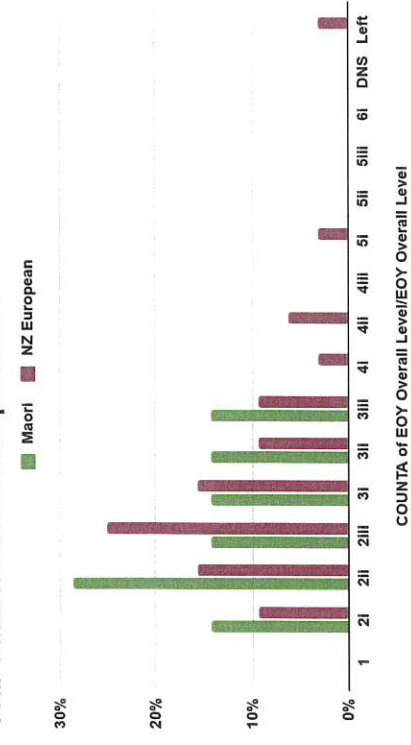
Year 5: Māori and NZ European March 2021



Year 5 e-asTTle Maths, Oct 2021

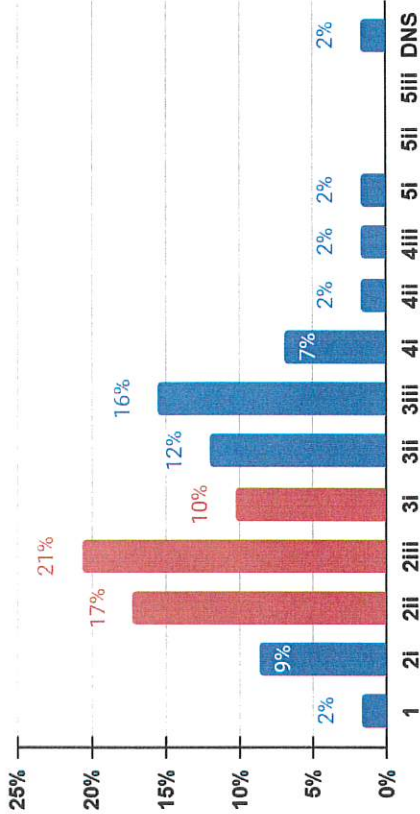


Year 5 Māori and NZ European EOY



Year 6 Target Total Year 6 cohort = 58 students; Students currently at Mid-Late Level 2 and Early Level 3 need to be working towards being at Mid to Late Level 3 by the end of the year. This will involve 48% (n=28) of the Year 6 students. Students at Level 2i (n=6) and Level 1 have specific, targeted learning support.	Year 6 End of Year No students are working at Level 1 5% are working at Level 2i instead of 11% 36% are working at Mid-Late Level 2 and Early Level 3 instead of 48% 55% are working at Mid Level 3 or above (at or above expectation)
Māori students: Māori students n=9 77% are working below expectation	Māori students: 44% are still working below expectation (down from 77%) 56% are working at or above expectation

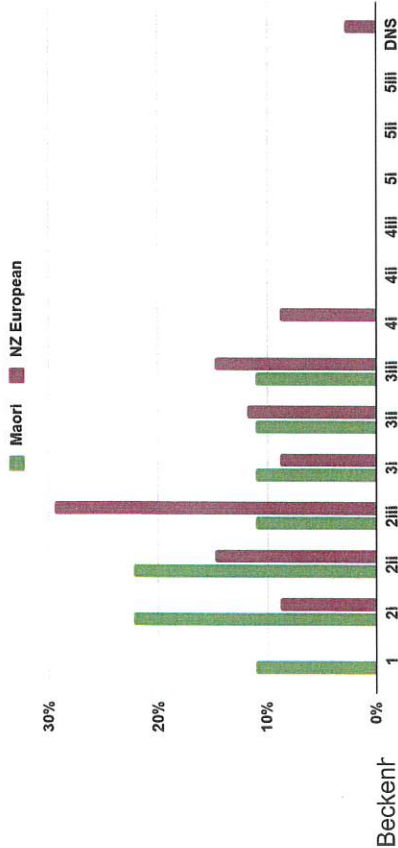
Year 6 eASttle Maths, March 2021



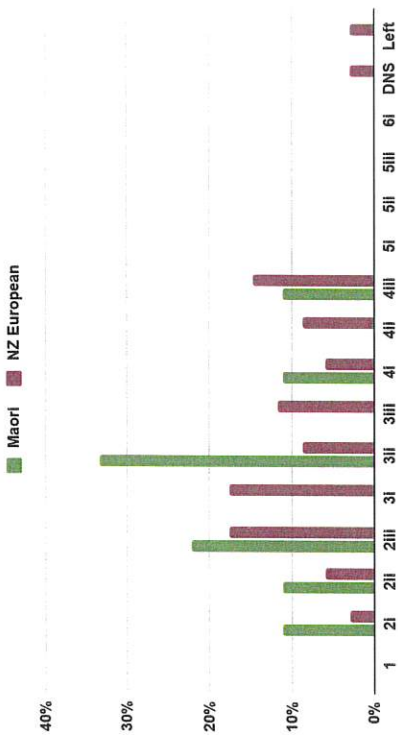
Year 6 eASttle Maths, Oct 2021



Year 6: Māori and NZ European March 2021



Year 6: Māori and NZ European EOY



Year 7 Target Total Year 7 cohort = 62 students Students currently at Late Level 2 and Early to Mid Level 3 need to be working towards being at Late Level 3 to Early Level 4 by the end of the year. This will involve 43% (n=27) of the Year 7 students. Students at Level 2ii (n=9) and below already have specific, targeted	Year 7 End of Year 29% of students are still working at Late L2 and Early to Mid L3 (down from 43%) Only 8% of students are working well below expectation (down from 15%) 56% of students are working at or above expectation, up from 40%
Year 7 eAstle Maths, March 2021 24% 25% 20% 15% 10% 5% 0% 1 2i 2ii 3i 3ii 4i 4ii 5i 5ii 5iii DNS 2% 8% 5% 11% 24% 11% 15% 6% 3% 2% 2%	Year 7 e-asTTle Maths, Oct 2021 15% 15% 10% 5% 0% 1 2i 2ii 3i 3ii 4i 4ii 5i 5ii 5iii 6i DNS Left 3% 5% 5% 8% 15% 5% 11% 13% 5% 2% 5% 3%
Year 7: Māori and NZ European March 2021 40% 30% 20% 10% 0% 1 2i 2ii 3i 3ii 4i 4ii 5i 5ii 5iii DNS Maori NZ European	Year 7: Māori and NZ European EOY 25% 20% 15% 10% 5% 0% 1 2i 2ii 3i 3ii 4i 4ii 5i 5ii 5iii 6i DNS Left Maori NZ European
	Māori students 50% (4) at or above expectation % (4) at or above expectation

Year 8 Target Total Year 8 cohort = 53 students Students currently at Mid to Late Level 3 and Early Level 4 need to be working towards being at Mid to Late Level 4 by the end of the year. This will involve 34% (n=18) of the Year 8 students. Students at Level 2i (n=16) and below already have specific targeted learning	Year 8 End of Year 16% of students are still well below expectation, down from 31% 34% are still below expectation 50% are at or above expectation, up from 36%																																																																																													
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End of Year Summary

Whilst good achievement was made at each year level in e-asTTle, we still only have between 50-61% at each year level working at expectation. Māori student achievement in e-asTTle is a concern. Whilst the number of Māori students at each year level is 10 or less, the percentage of Māori students underachieving mirrors the national mathematics data and is below that of NZ European students at every year level.

An eAsTTle result is just one measure of student achievement in mathematics, and requires a reasonable to good level of literacy, meaning that, for some students, the eAsTTle test is as much or more a measure of their literacy achievement as it is of their mathematical ability.

However, it is a national tool, and we can use it for most students to assist with measuring their progress over time.

Further focused efforts in the teaching of mathematics will need to be progressed.

Next Steps

In 2022, we will again dedicate one of the Within School Teacher kahui Ako positions to supporting the professional development of teachers in mathematics.

We have a programme of Professional Development in place for 2022, linked with other local schools and supported by the Ministry of Education PLD being delivered by Rob Proffit-White.

During 2022 we will be shifting to using more detailed goals in Mathematics through HERO. Whilst these will not, in themselves, improve any outcomes for students, they will make the sharing of student progress and achievement in Mathematics with whānau more visible.

2021 Analysis of Variance Literacy Student Achievement Targets (data)

Target group: Year 1-3 students

The data being used to inform this target are the Structured Literacy Groups, created in March 2021, and again in December 2021, from a variety of data sources (see below).

This is a new way of measuring literacy progress and is our baseline data.

2021 is the first year of the programme being implemented across the school. We are aware that children found this assessment new and different to what they have seen and experienced before, particularly in Years 2 & 3.

The majority of students are being taught using the Structured Literacy approach for the first time.

Areas of focus

Explicit literacy teaching using the Structured Literacy Approach based on the Science of Reading. Assessments will be plotted on heat graphs and used for planning across hubs.

- Year 0 - 4 students are assessed using a Phonological Awareness, Phoneme and Grapheme, Word Reading (decoding) and Spelling (encoding) check.
- Most Years 5 - 6 students are assessed using Phonological Awareness, Phoneme and Grapheme, Word Reading (decoding) and Spelling (encoding) check.
- Year 7 - 8 tier 3 and tier 2 students checked using Phonological Awareness, Phoneme and Grapheme, Word Reading (decoding) and Spelling (encoding) check.

Programmes use the scope and sequence in the Little Learners Love Literacy books sets for planning, teaching and learning programmes.

Wonderings:

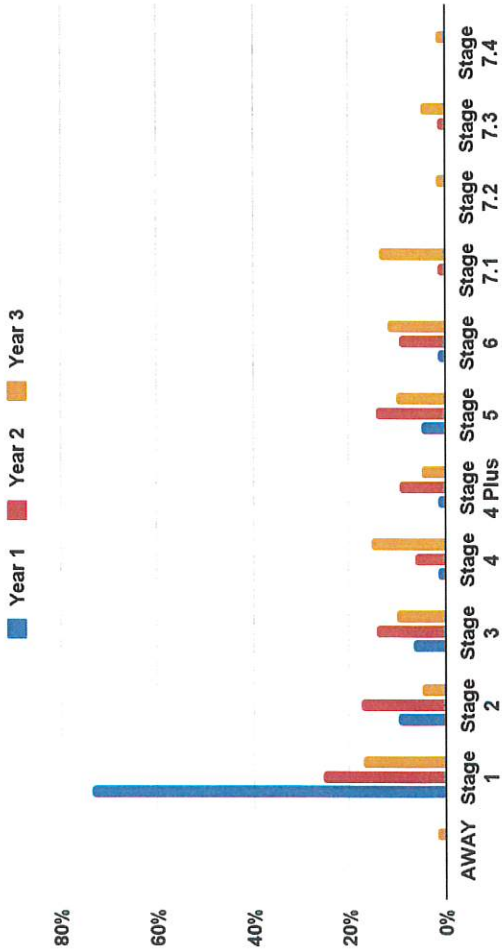
- Year 1 students have been at school for different amounts of time ranging from 6 weeks 3+ terms. Effects on data?
- Year 3 students are spread widely across the stages and many of these children are reading within Level 2 of the curriculum. How will explicit teaching enable the students to plug gaps and what effect will we see on running records?
- Regular monitoring of data will provide data collection points where review and tweaking of the structured literacy programme will be made.
- We have recently received our first set of decodable texts from the Ministry. How will these be integrated into our approach?

Data:

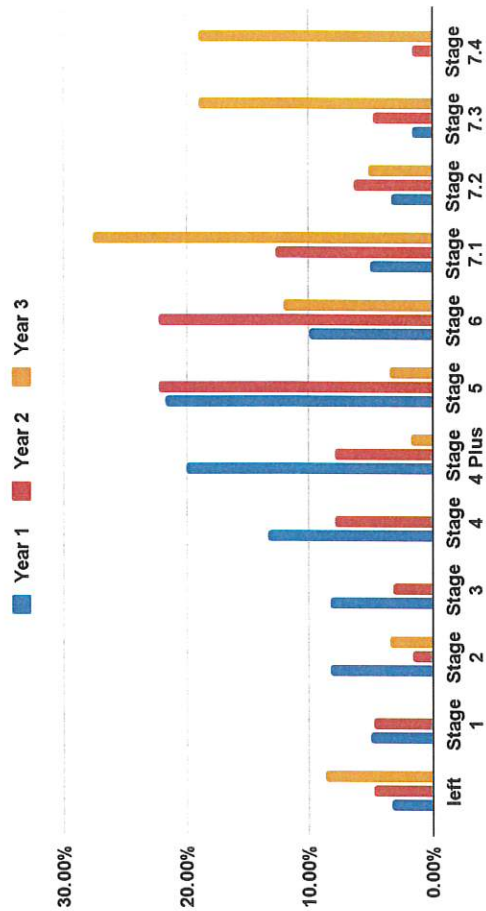
(note that this is the instructional/'working at' stage, as opposed to the 'completed' stage)

Reading Group	Year 1	Year 2	Year 3
AWAY			2%
Stage 1	73%	25%	17%
Stage 2	10%	17%	5%
Stage 3	7%	14%	10%
Stage 4	2%	6%	16%
Stage 4 Plus	2%	10%	5%
Stage 5	5%	14%	10%
Stage 6	2%	10%	12%
Stage 7.1		2%	14%
Stage 7.2			2%
Stage 7.3		2%	5%
Stage 7.4			2%

Year 1-3 Structured Literacy Reading Groups March 2021



Year 1-3 Structured Literacy Level December 2021



Typical expectations of an ongoing Structured Literacy Programme:

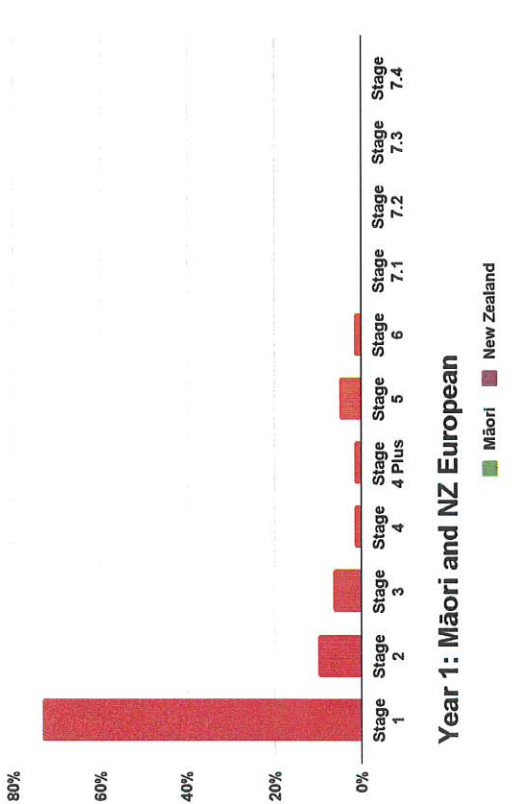
- At the end of Year 1, children are working at Stage 7.1 or above
- At the end of Year 2, children are working at Stage 7.4 or above
- At the end of Year 3, children are working on the Colour Wheel at Purple/Gold (Level 2)

As this is our first year of working with Structured Literacy across the school, we have modified our targets to the following:
Targets:

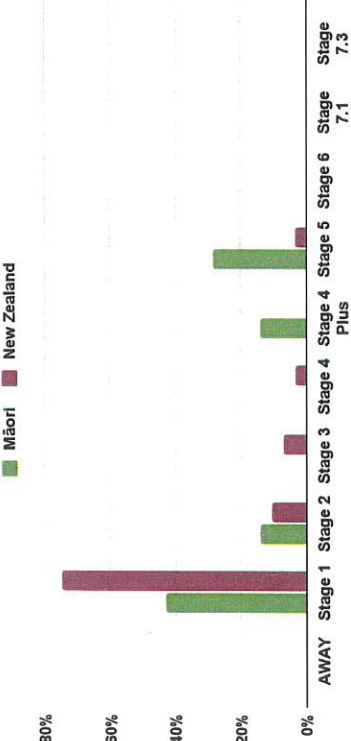
- Year 1 - 80% of students will be working at Stage 7.1 or above by the end of the year.
- Year 2 - 70% of students will be working at Stage 7.4 or above by the end of the year.
- Year 3 - 70% of students will have completed the scope and sequence of the Structures Literacy programme Stage 7.4 and be working within Level 2 of the curriculum or above.

Year 1

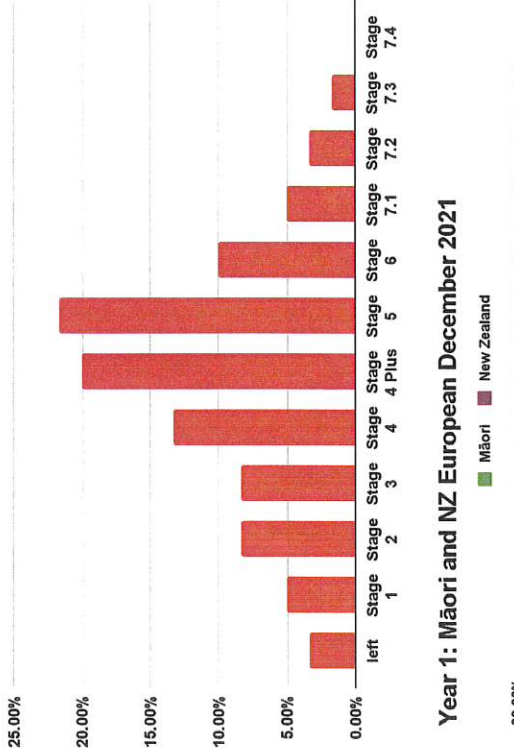
Year 1 Structured Literacy Reading Groups March 2021



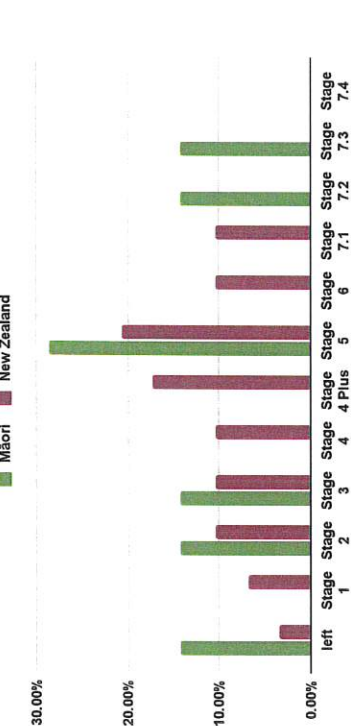
Year 1: Māori and NZ European



Year 1 Structured Literacy Level December 2021



Year 1: Māori and NZ European December 2021

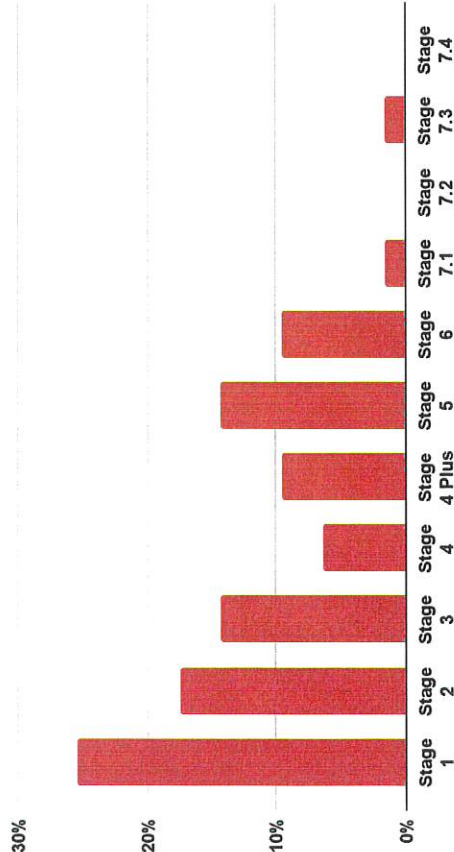


End Data (Year 1):

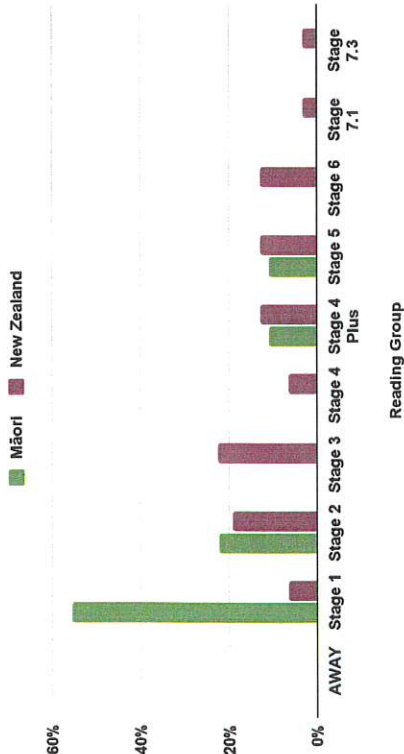
- At the start of the year 73% of Year 1 students were at Stage 1 (expectation after one full term at school). At the end of the year 5% were operating at Stage 1
- At the end of the year 55% were operating in Stage 4 plus to Stage 6 (starting stage 6 is the expectation after three terms at school)
- We set a target of 80% at Stage 7.1 or above by the end of the year.
 - The target was not met, yet there is a considerable shift in progress across the year
- 24% of Māori students were working at 7.2 or higher. 29% at Stage 5 40% were at Stage 1 at the beginning of the year.
- Overall there has been a considerable shift in Year 1 stages

Year 2:

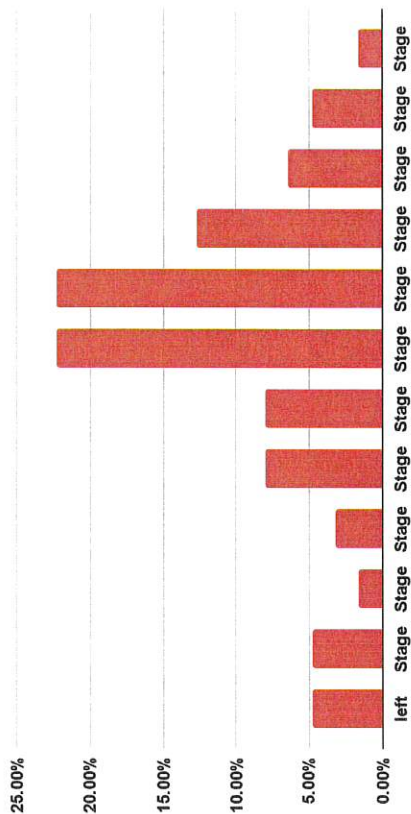
Year 2 Structured Literacy Reading Groups March 2021



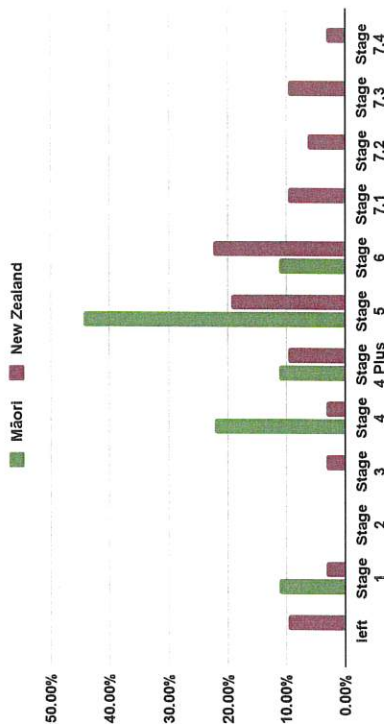
Year 2: Māori and NZ European



Year 2 Structured Literacy Level December 2021



Year 2: Māori and NZ European December 2021

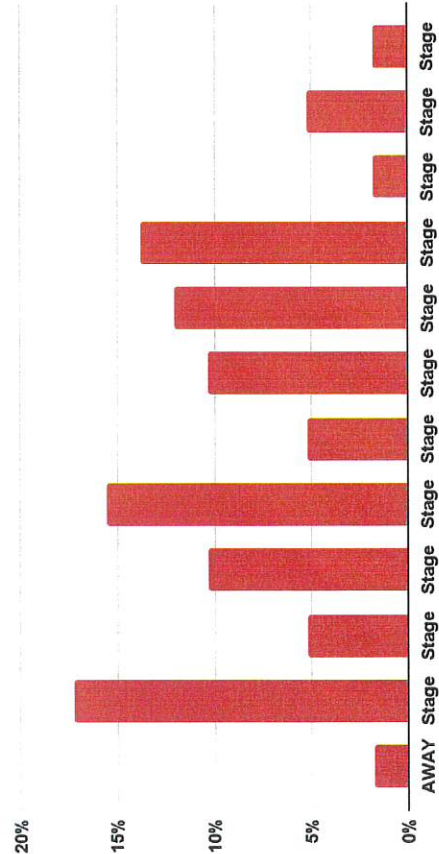


End Data:

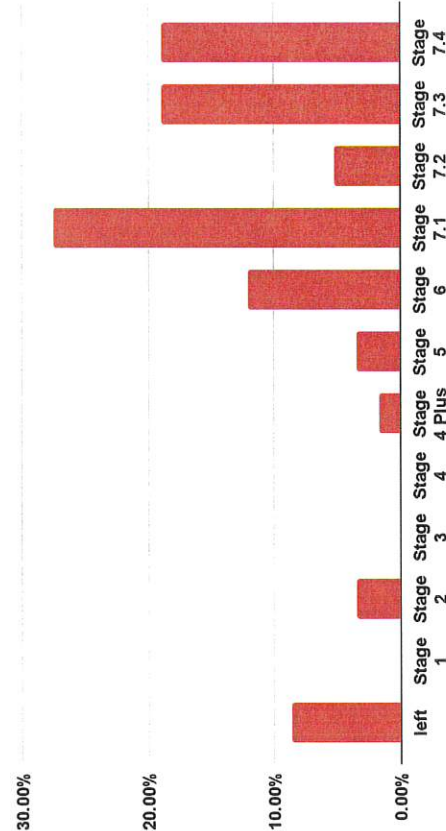
- 59% of Māori students are working at Stage 4 plus or higher
- We set a target of 70% of students will be working at Stage 7.4 or above by the end of the year
 - The target was not met, yet there is a considerable shift in progress across the year
- 78% of students are working at Sage 4 plus or higher compared to 38% at the start of the year
- For the majority of Year 2 students, this was their first year learning with the Structured Literacy approach

Year 3:

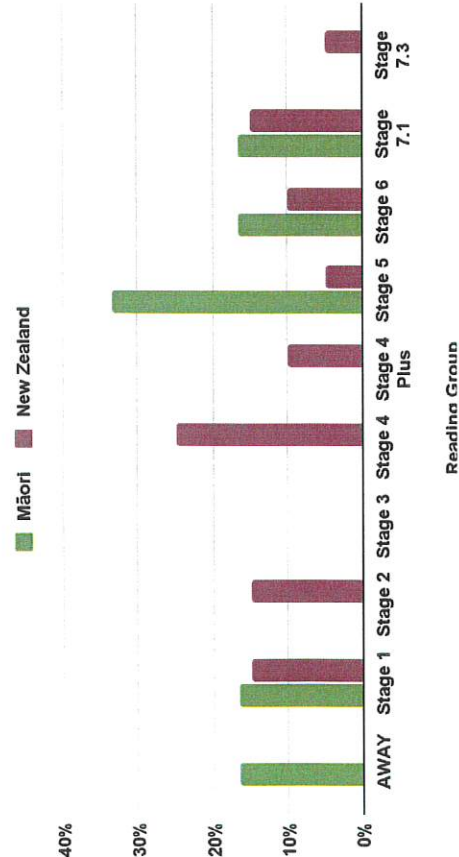
Year 3 Structured Literacy Reading Groups March 2021



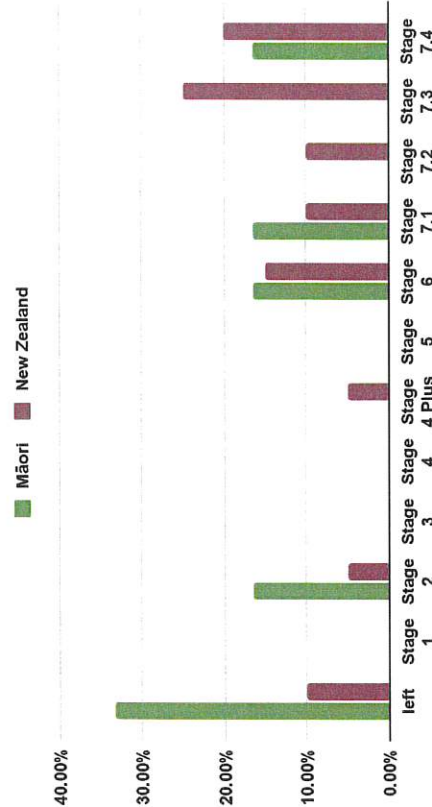
Year 3 Structured Literacy Level December 2021



Year 3: Māori and NZ European



Year 3: Māori and NZ European December 2021



End Data:

- Of the Year 3 Māori students, 75% are working at Stage 6 or higher
- We set a target of 70% of students will have completed the scope and sequence of the Structures Literacy programme Stage 7.4, and be working within Level 2 of the curriculum or above. Whilst we haven't quite met this target, significant progress has clearly been made.
 - 19% of students have completed the scope and sequence of the Structures Literacy programme Stage 7.4 and are working within Level 2 of the curriculum or above.
- There was a large shift to stage 7.1 and above. 70% of Year 3 students are working at Stage 7.1 or higher

General Comments:

- 2021 was the first year of implementation of the Structured Literacy approach
- Term 1 consisted of Teacher training, student assessment of all children in Years 1-4, identifying the next steps in student learning, and the beginning of explicit targeted teaching.
- Across all Years there was a significant shift in progress for an implementation year
- Overall Māori students made good progress, and there is still work to be done.
- Teachers' knowledge and practice in Structured Literacy strengthened throughout the year. Considerable time was given to upskilling teachers and Teaching Assistants
- A significant budget was used to support the purchase of resources to support the programme, including purchasing a large quantity of decodable text

Next Steps 2022:

- We have realised that our data collection system for this Structured Literacy assessment didn't allow teachers to show when a student had 'finished' Stage 7.4, and moved on to be working within Level 2 of the Curriculum or above, so we have added that ability for 2022.
- We expect to see at least this level of progress, and more, as both students and teachers are more familiar with the way Structure Literacy works
- We recognise the need to ensure that new staff are both trained and supported in the teaching of Structured Literacy.
- Further budget for resources will need to be allocated.
- We will allocate again one of the Within School Teacher positions to support the professional development of Literacy teaching in our school.