

ANALYSIS OF VARIANCE

January 2023



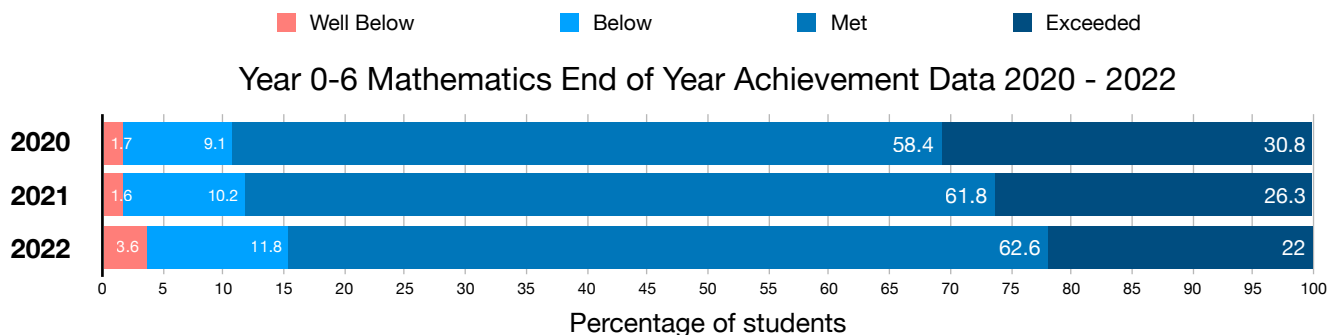
MATHEMATICS

January 2023

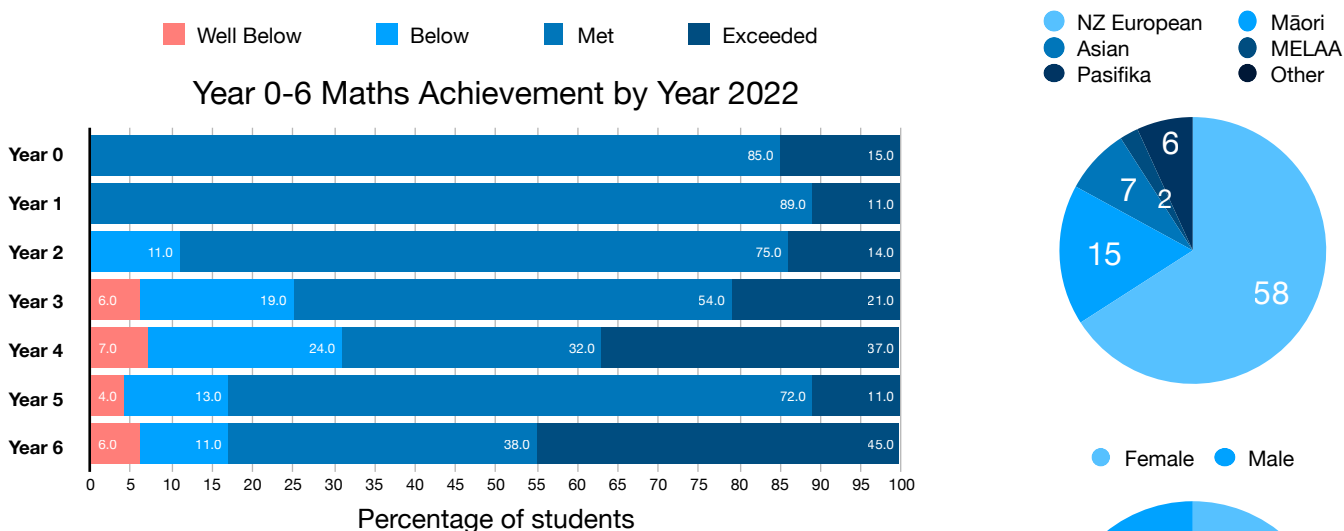


MATHEMATICS ACHIEVEMENT DATA- END OF YEAR

2022



At the end of 2022, we can report that 84.6% of students across the school are achieving At or Above the expected achievement standard in Mathematics. After another COVID impacted year, our End of Year summative data is pleasingly consistent with 88.2% reported at the end of 2021. There is a noticeable decrease in the amount of students who are exceeding standard in Mathematics and an increase in the amount of students achieving as Below, which is emerging as a pattern across year groups.



At the End of 2022, we have 86 students achieving as Below expectation across the school. The highest representations by year group are in Year 3, with 25 students, and in Year 4, with 22 students. At the end of 2021, we saw a similar representation, with 18 Year 3 students and 24 Year 4 students represented as Below achievement standard. Achievement patterns over time show us that sub-level progress takes longer during the transition between Level 1a and Level 2b. This combined with a necessary 2-step sub-level shift to maintain achievement results at the end of Year 2 contributes to overrepresentations for Year 2-3 children in Below expectation data.

In this Year 3 cohort, 66.6% are making positive sub-level progress, and are working on this Level 1-2 transition. In this Year 4 cohort, 52% of this group are making positive sub-level progress and are working on Early Level 2. We can celebrate that our Year 5 cohort has decreased from 24 students at the end of 2021, to 16 students this year. Our Below expectation gender breakdown shows 38 males and 48 females, and our Ethnicity breakdown shows ratios that are proportionately similar to Ethnicity representations within our total school roll, with an overrepresentation of Pasifika students.

Target Students 2022:

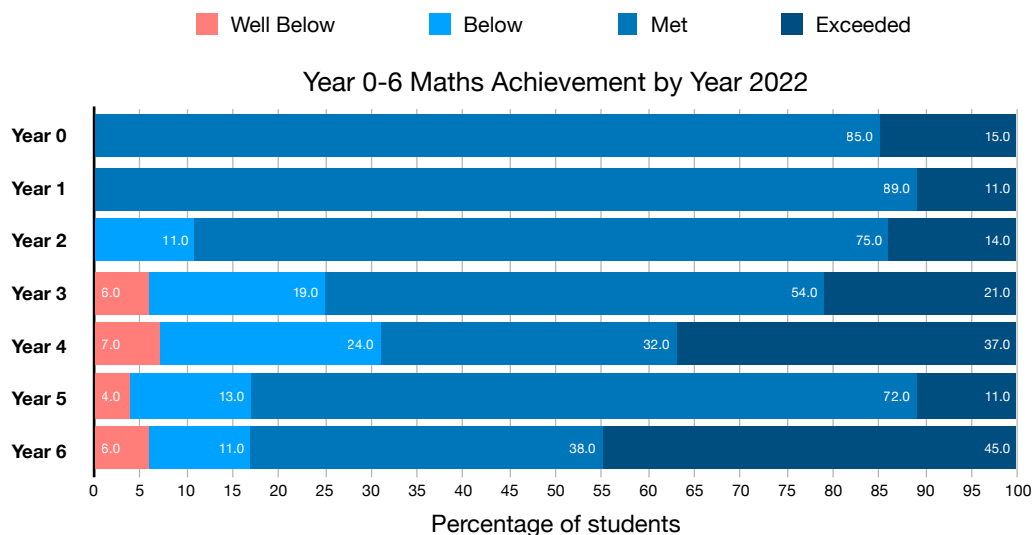
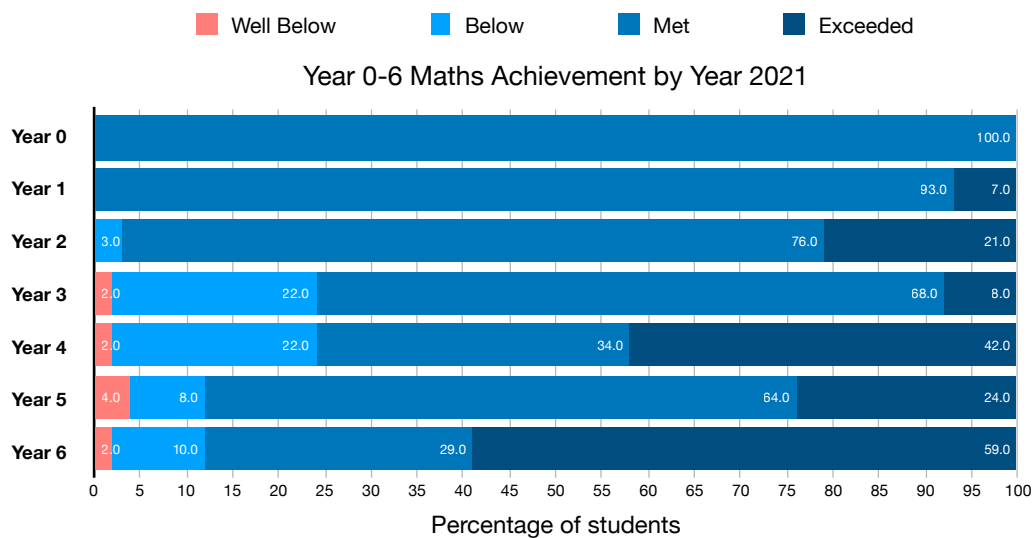
At the end of 2021, we identified 55 Year 1-5 students achieving At Risk or Below. Of these 55, we have EOY data for 48 students at the end of 2022. Using shift data from EOY 2021 - EOY 2022, we are pleased to report that 35 students made positive sub-level shift progress, continuing their achievement growth in Mathematics. The remaining 6 students, maintained the same reported level, and overall 17 students made accelerated progress to regain At achievement appropriate for their year level. The greatest accelerated achievement was seen in Year 5.

Target Students 2023:

At the end of 2022, we have 72 identified students achieving At Risk or Below expectation who will become our target student cohort this year. There are 38 females and 33 males, and clusters that are overrepresented in Year 3 and Year 4, both achieving at Curriculum Level 1 or Early Curriculum Level 2. Within this group, 30 students have an identified learning support need.

MATHEMATICS ACHIEVEMENT DATA- VARIANCE

2021 - 2022



Analysis of variance:

Looking at the overall achievement breakdown by year between EOY 2021 and EOY 2022, we can see a mostly similar pattern of achievement with a few variations. Excluding Year 0 and 1, in 2021, the year groups with the highest achievement percentage overall (At and Above combined) were Year 2, Year 5, and Year 6. We see similar representations in 2022, with a rise in Below achievement in both Year 3 and Year 4. These students are achieving at curriculum Level 1, transitioning into Level 2 which we have highlighted as an area where we see slowed progress in Mathematics. We can see a growing number of students achieving Above standard in our graph, and hope to see further additions to these numbers as each cohort moves through another academic year. Classroom teachers have highlighted Above learners in each area and are strategising in teams how to ensure continued acceleration in order to maintain this achievement.

In 2021, 38 Year 4 students were achieving Above at the end of the year, and this number has declined in 2022, with only 11 students achieving Above at the end of the year in Year 5. Looking at progress momentum for this cohort, we can see that a satisfactory portion of students in this Above group have made sufficient progress, and this dip is most likely affected by a combination of students reaching higher strategy stages which require greater teaching & learning breadth to master, as well as a two-step sub-level shift required to maintain Above achievement.

WRITING

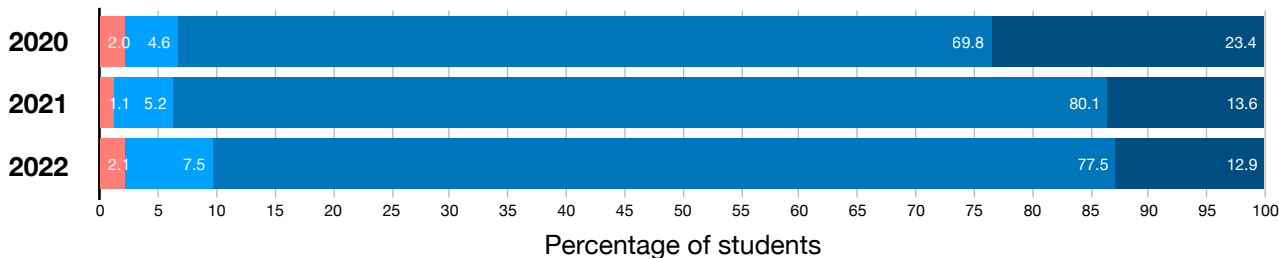
January 2023



WRITING ACHIEVEMENT DATA- END OF YEAR 2022

Well Below Below Met Exceeded

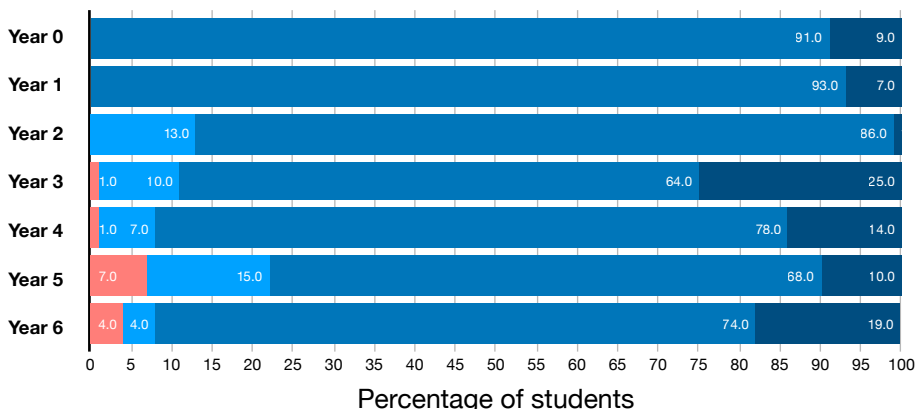
Year 0-6 Writing End of Year Achievement Data 2020 - 2022



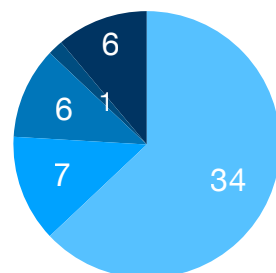
At the end of 2022, we are pleased to report that our achievement data in Writing has remained strong, with 90.4% of children across the school achieving At or Above. The amount of students achieving Above the expected standard in Writing is mostly consistent with last year at 12.9% (72 children), and there is an increase in students achieving below standard, from 35 children in 2021 to 54 children in 2022. The biggest increase to Below achievement data is in Year 3 and Year 5, which aligns with our overrepresented Year 2 cohort in 2021, and the acceleration required to maintain achievement momentum in Year 5.

Well Below Below Met Exceeded

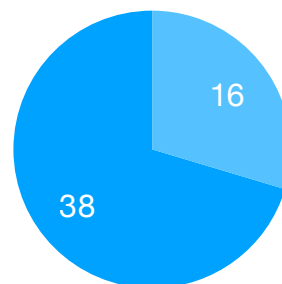
Year 0-6 Writing Achievement by Year 2022



NZ European Māori
Asian MELAA
Pasifika Other



Female Male



Here we can see a large cohort of 21 students achieving Below the expected achievement standard in Year 5. Year 3 has the highest percentage by Year of students achieving Above, with 25 students in this group. The Year 6 achievement data is a close proportionate likeness to our overall school achievement percentages, with 6 students (8%) Below, 62 students (74%) At, and 16 students (19%) Above. Again, Ethnicity achievement is proportionately similar to Ethnicity representations across our total roll, with an overrepresentation of Pasifika students. There are 16 female students achieving Below, compared with 38 males, which is consistent with data patterns from 2021.

Target Students 2022:

At the end of 2021, we identified 35 students achieving Below expectation in Writing. We have shift data for 24 of these students, and we can celebrate excellent acceleration with 17 students making accelerated progress, 4 students making sufficient 1-step progress, and 3 students making insufficient progress, remaining on the same sub-level from EOY 2021 to EOY 2022. Of these 3 students, 2 are ESOL and the other has diagnosed ASD impacting learning progress.

Target Students 2023:

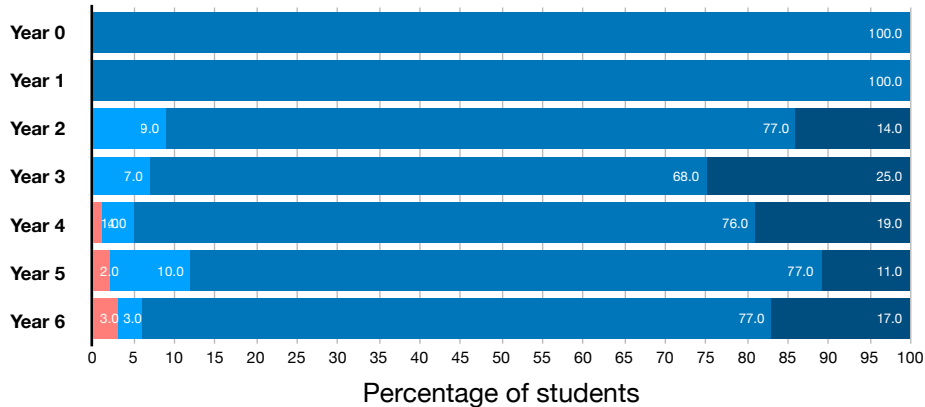
This year, we have 47 target students identified as achieving below expectation in Writing. There are 34 males and 13 females, and clusters in Year 3, 4, and 6. 9 students are achieving Well Below expectation; within this group, 2 students are ESOL, and 5 have identified learning support needs. Looking at the needs of the remaining cohort of 38 students achieving Below, 6 are ESOL, 9 have identified learning support needs, and 5 students have joined us within the last academic year.

WRITING ACHIEVEMENT DATA- VARIANCE

2021 - 2022

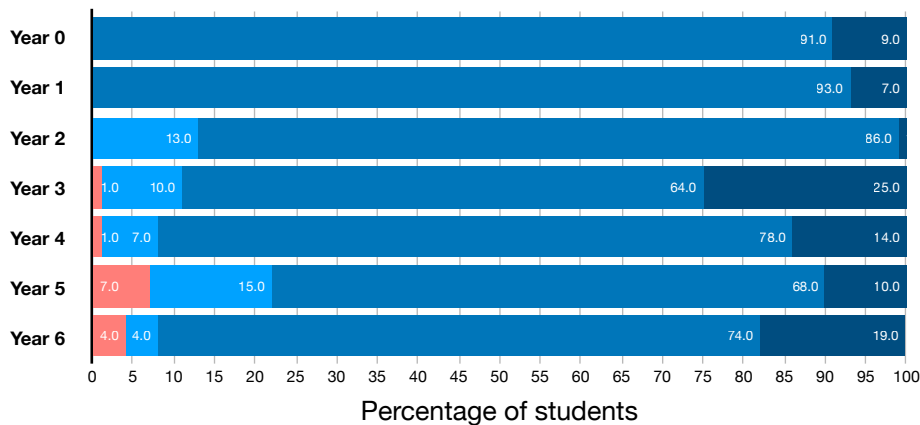
Well Below Below Met Exceeded

Year 0-6 Writing Achievement by Year 2021



Well Below Below Met Exceeded

Year 0-6 Writing Achievement by Year 2022



Analysis of variance:

Looking at the overall achievement breakdown by year between EOY 2021 and EOY 2022, we can see similar achievement patterns, with increased numbers in some cohorts. In general, the students achieving Below expectation are greater, with 54 students across the school at the end of 2022, compared with 35 in 2021. 10 of these students have enrolled with our school in 2022, so the number of students who we have had over time achieving Below standard is 44. Within this group, 26 students have identified learning support needs, including but not limited to: ESOL, ASD, ADHD, and are currently receiving support from external agencies/funding sources such as RTLB, STOS, and ORS. The year levels with the largest cohort of Below students, are Year 2 and Year 5. There are also notable clusters of learning needs within these cohorts.

In 2021, we recorded 75 students achieving Above expectation in Writing, and in 2022 we have 73. Pleasingly, we can see students achieving Above in Year 0 and 1 where they have been implementing the Better Start Literacy Approach throughout the course of 2022. As reported earlier, we saw excellent acceleration in our target students within 2022, with 70% of the group we have shift data for making accelerated progress and regaining achievement. This year, we have 47 students achieving Below expectation, compared with 35 last year. We had higher numbers in Year 2, 3, and 5 in 2022.

READING

January 2023

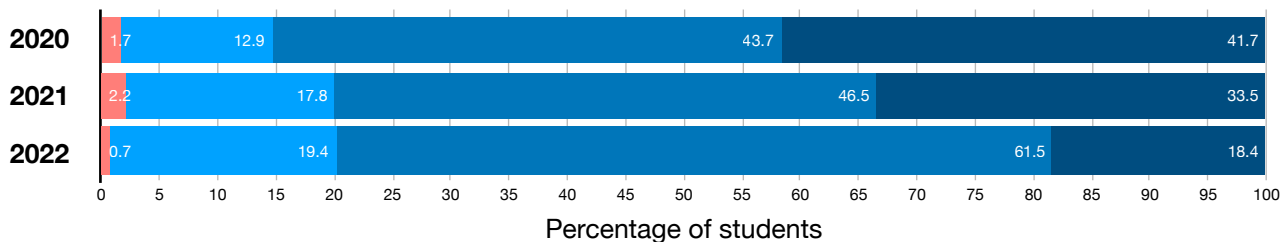


READING ACHIEVEMENT DATA- END OF YEAR

2022

Well Below Below Met Exceeded

Year 0-6 Reading End of Year Achievement Data 2020 - 2022

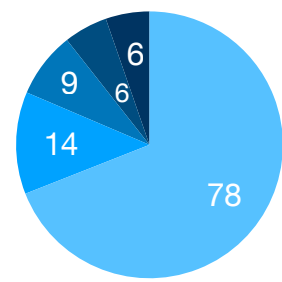
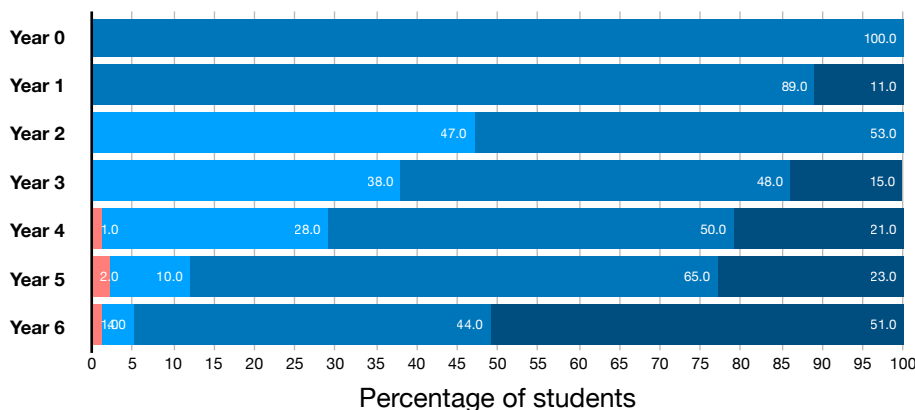


At the end of 2022, we can celebrate that 79.9% of our school is achieving At or Above the achievement standard in Reading, which is consistent with 80% at the end of 2021. There are 448 students achieving At or Above standard across the school, and 113 students achieving Below the expected achievement standard for their age. There is an overall decrease in the amount of students achieving Above, with 103 students overall this year, compared with 186 students at the end of 2021. This shift is visible in key areas, shown in the breakdown by Year below. We have been seeing a trend of fewer students represented as Above, and greater students represented as At, which is reinforced by this data set.

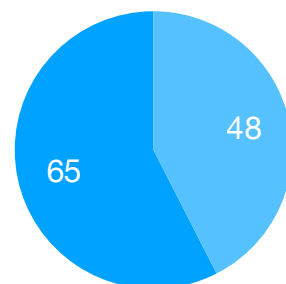
Well Below Below Met Exceeded

NZ European Māori
Asian MELAA
Pasifika Other

Year 0-6 Reading Achievement by Year 2022



Female Male



We can see how our Below, At, and Above data is represented by year levels. In Year 0-1, all students are working at the Foundations of Reading, which is appropriate achievement for this age group. 38 students (47%) of the Year 2 cohort are also working at the Foundations of Reading, with the remaining 42 students (53%) working At. With the addition of Structured Literacy, we are beginning to see a new data pathway emerge that highlights a slowed progress speed for learners as they gain mastery over Foundational Reading skills. Our cohort of students achieving Below the expected level for their age steadily decreases as the year level increases, and children gain mastery over reading. Alongside this pattern, the amount of students achieving Above expectation rises, with the greatest percentage in Year 6. Again, Ethnicity achievement is proportionately similar to Ethnicity representations across our total roll, with an overrepresentation of Pasifika students. There are 48 female students achieving Below, compared with 65 males.

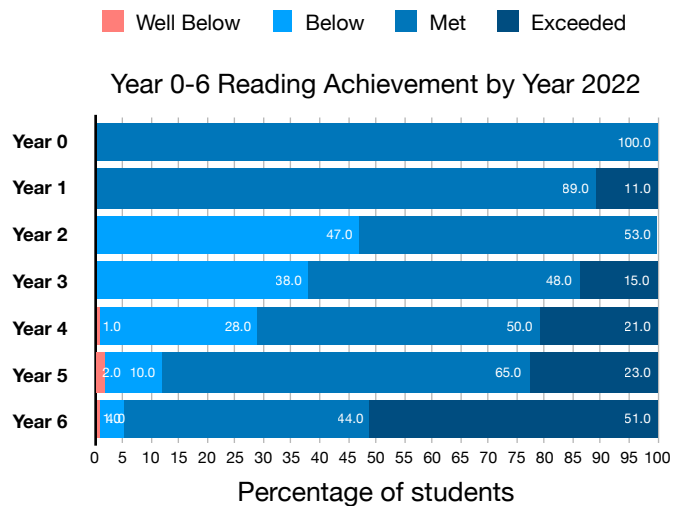
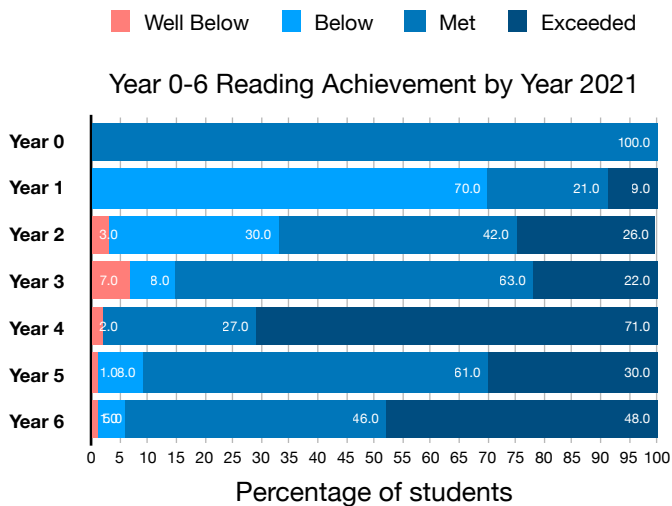
Target Students 2022:

111 students were achieving Below expectation at the end of 2021. We have EOY data in 2022 for 97 of these students, which shows that 32 students regained achievement throughout the year, and the remaining 65 have continued Below. Majority of these students sit within Year 2, and are working through the Foundation stages of Structured Literacy. We hope to see these numbers improve as our journey through Structured Literacy continues this year.

Target Students 2023:

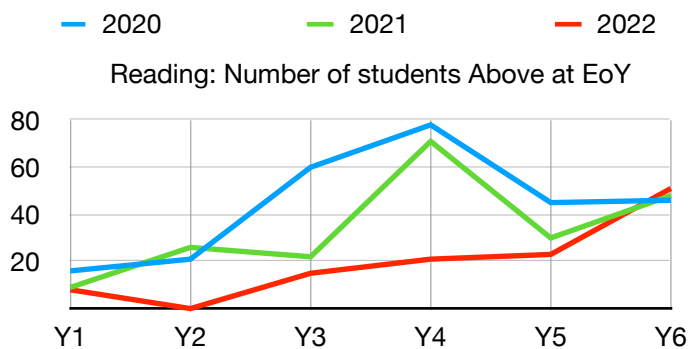
This year, we have 104 students identified as working Below expected standard in Reading. Within this group, there are 43 females and 61 males, with clusters in Year 3 and 4. 38 of these students have learning support needs (including ESOL), and 19 students have joined Matua School throughout 2022.

READING ACHIEVEMENT DATA- END OF YEAR 2022



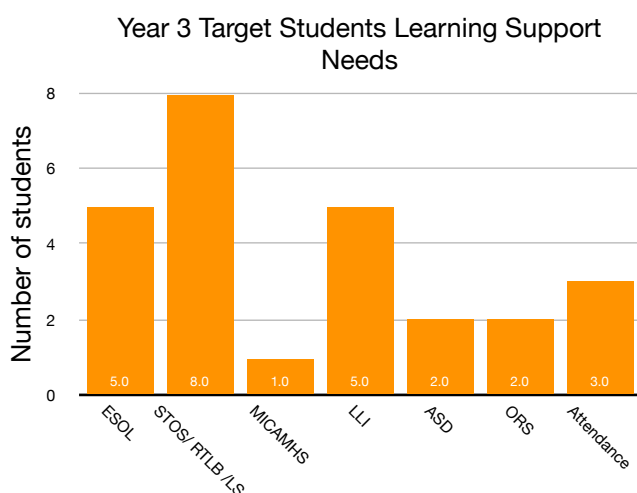
Analysis of variance:

Looking at EOY data from 2021 compared with 2022, we can see visually very different data patterns. Large rises and falls across year groups, where we would usually aspire to see building growth or gradual decreases over time, and a general picture of inconsistency. In 2021, we can see notable overrepresentations of Below achievement in Year 1 and Year 2. During this time, we were working through the transition phase of adding Structured Literacy elements to our Literacy instruction, and were yet to align our EOY assessment tools with the core teaching happening at the Foundation levels of our school. We can note that the assessment used to gather this data was misaligned with the practise happening within the classroom. While we can acknowledge that some year groups will carry particular needs and can be visibly tracked as outliers within graphs over time, we expect to see more of a consistent picture like our 2022 graph on the right. We anticipate this flow of achievement to develop positively over time as we continue our journey with Structured Literacy. Our focus cohorts for tracking this year are Year 2 and 3 (this year's Year 3 and 4 students) and we aim to build our overall achievement level in these spaces to more closely reflect the achievement level of the school, while working to respond to the large cohort of learning support needs currently in the Year 3 team.



Maintaining growth:

The graph to the left illustrates a comparative data picture for those achieving Above expectation in Reading between 2020 and 2022. We can expect to see future data representations that look similar to 2022, as students take longer to achieve mastery within the foundations of Reading, resulting in more time spent in these levels and less spikes of Above expectation achievement in Years 1-3. We expect that this will ensure that students maintain achievement that builds over time with less fluctuations, indicating learning retention is occurring.



Learning Support Needs:

There is a high proportion of learning support needs recognised within the Year 3 cohort of Target learners. 16 students within our total At Risk or Below cohort in Year 3 (42%) are receiving additional support to growth their social and academic progress. This graph highlights a breakdown of agency referrals and identified learning needs that are being supported over time by the school. There is a notable amount of ESOL and LLI students identified within this group, who require ongoing language support to master the foundations of Literacy. Based on the high amount of needs, this cohort is likely to require ongoing support to maintain achievement momentum and excel academic progress beyond this year.

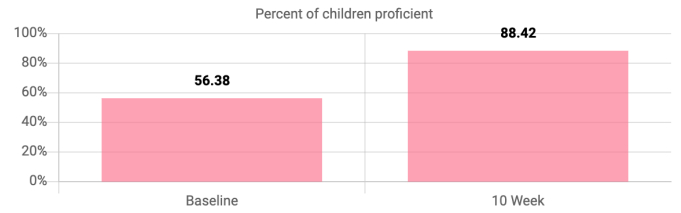
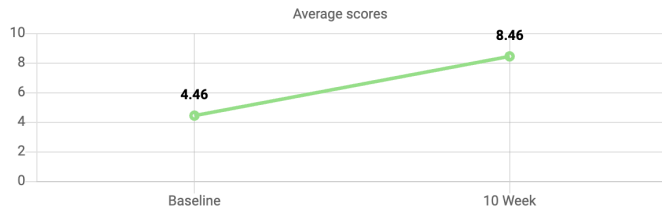
BETTER START LITERACY

January 2023

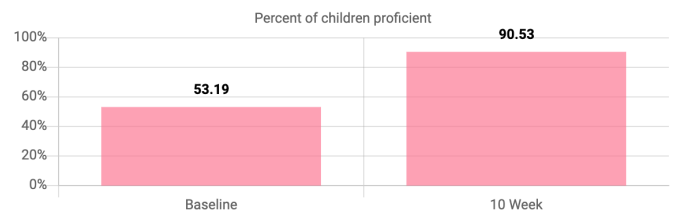


BETTER START LITERACY APPROACH- ACHIEVEMENT TRACKING 2022

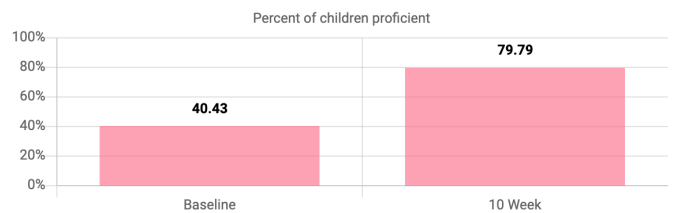
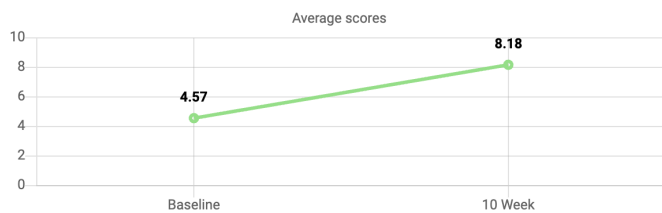
Initial Phoneme Identity School level Score Analysis



Letter-Sound Recognition School level Score Analysis (Set 1 and Set 2)



Phoneme Blending School level Score Analysis



We are pleased to now have data collected on Early Literacy progress of Year 0/1 students, after our Kākano team teachers have completed a full year of training in the Better Start Literacy Approach. Here is an analysis of the Baseline and 10 week data collected in 2022. We can celebrate high percentages of achievement in each of these core Early Literacy areas, and the visible improvement in skill and ability that students have made in a short space of time. These numbers align closely with BSLA's predicted ratios after 10 weeks, and we are confident that we will continue to meet their expected achievement rates as a result of this picture. Further 20 week assessment is taken on students who did not present proficiency during the 10 week assessment.

This year, we have extended this approach into our Tūpu team to continue the Early Literacy pathway through to our Year 2/3 students. Continual monitoring of this assessment, and further Year 2 assessment tools being introduced to us early in Term 1, 2023, will support further analysis of literacy competencies, skills, and progress during Year 0-2 at our school.

DATA TRENDS

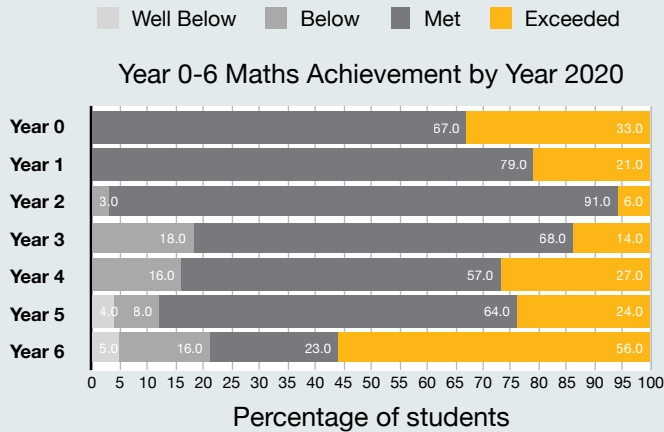
January 2023



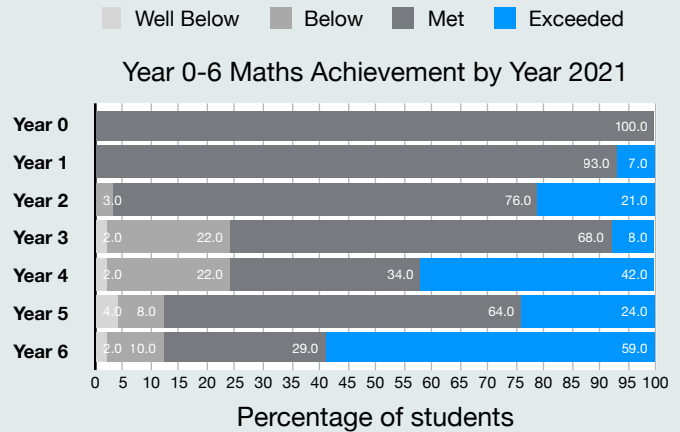
ABOVE ACHIEVEMENT DATA- END OF YEAR 2022

At the end of 2022, we reported a decrease in the amount of students who are exceeding standard and an increase in the amount of students achieving as Below. When we look at this achievement broken down by year group, and viewed over time, we can see a pleasing long term data picture emerging. We can see this picture across curriculum areas; for this example, Mathematics has been used, though, general thinking can be applied to both Reading and Writing.

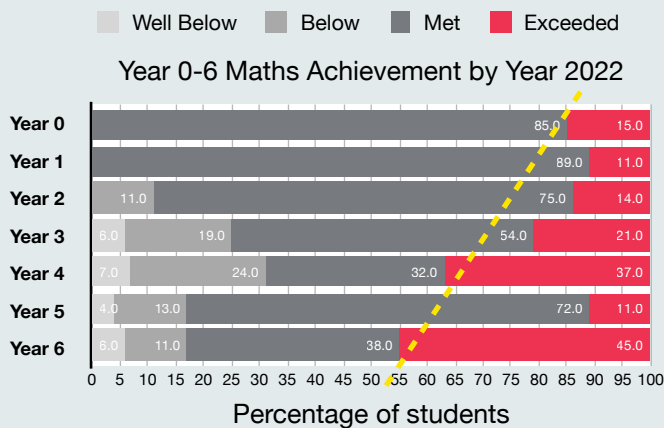
***Figure 1**



***Figure 2**



***Figure 3**



***Figure 4**

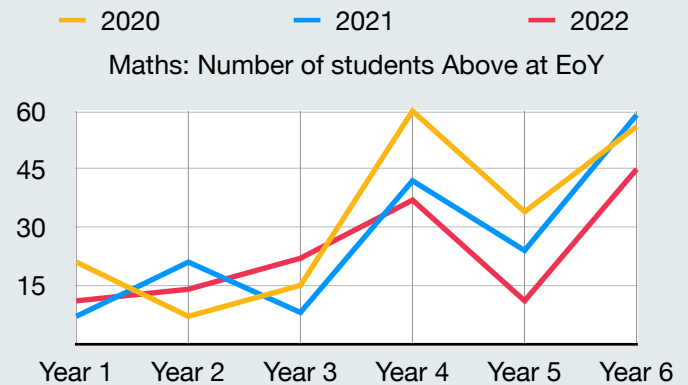


Figure 1 and 2 show the rises and falls of Above achievement data that we have recorded in recent years, and Figure 3 shows our most current data picture which begins to illustrate a pattern of true growth, where we can see Above achievement data increasing at each year level. In our achievement overall, the number of students achieving Above is less than previous years, but in fact, we are seeing a reduction in rises and falls across year groups, which is positive. What we have historically seen is groups of students entering and exiting the Above expectation cohort, and this number overall shifting significantly across year levels. Our aim is to achieve growth of data, where we can see achievement increasing over time, beginning at Year 1, capturing our Above expectation students maintaining their achievement, and the cohort increasing in number each year.

We are hopeful that this is the beginning of a lasting new data picture for our school after a strong focus on enhancing regular conversations about achievement data, assessment, OTJs, and efforts to improve coherence of teaching and learning across our classrooms over the last 3 years.

Cohort Tracking:

In 2022, we reported 38 Year 6 students were achieving Above in Mathematics. Looking at data over time during 2018-2022, we can see that 55% of this cohort maintained Above achievement once attained, and the remainder made positive growth but fell into the At cohort at least once. Most of the time, this occurred in Year 5, between curriculum Level 3 and 4. Our future aim is that this percentage rises.