

# Analysis of Variance Reporting



<b>School Name:</b>	Kamo Primary School	<b>School Number:</b>	1030
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<b>Strategic Aim:</b>	Our 2023 Strategic Aim was that all students will strive to meet personal gains that supports the New Zealand Curriculum levels and expectations for their year level in Mathematics.																																			
<b>Annual Aim:</b>	Our Annual Aim for 2023 was that all students will be engaged in Mathematics and their learning will show the progress they have made to reach their own potential. This will be integrated across the curriculum.																																			
<b>Target:</b>	Our Curriculum Achievement Target in Reading for 2023 was to have at least 85% of our students working At or Above their New Zealand Curriculum levels and expectations for their year level. This target is inclusive of our whole school as we do not exclude our students who have additional learning needs and therefore, their results are included.																																			
<b>Baseline Data:</b>	<p>Our 2023 baseline data showed the following:</p> <table border="1"> <thead> <tr> <th></th> <th>Year 1</th> <th>Year 2</th> <th>Year 3</th> <th>Year 4</th> <th>Year 5</th> <th>Year 6</th> </tr> </thead> <tbody> <tr> <td>Level 1</td> <td>64%</td> <td>17%</td> <td>6%</td> <td>3%</td> <td>2%</td> <td>1%</td> </tr> <tr> <td>Level 2</td> <td>36%</td> <td>82%</td> <td>91%</td> <td>65%</td> <td>13%</td> <td>4%</td> </tr> <tr> <td>Level 3</td> <td>-</td> <td>1%</td> <td>3%</td> <td>32%</td> <td>74%</td> <td>62%</td> </tr> <tr> <td>Level 4</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>11%</td> <td>32%</td> </tr> </tbody> </table>		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Level 1	64%	17%	6%	3%	2%	1%	Level 2	36%	82%	91%	65%	13%	4%	Level 3	-	1%	3%	32%	74%	62%	Level 4	-	-	-	-	11%	32%
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<b>Actions</b> <i>What did we do?</i>	<b>Outcomes</b> <i>What happened?</i>	<b>Reasons for the variance</b> <i>Why did it happen?</i>	<b>Evaluation</b> <i>Where to next?</i>																																			
<p>In 2018 we received a Ministry of Education contract through Cognition Education to deliver Professional Learning and Development in Mathematics. This continued for the 2019 school year and we applied for an extension which saw us receive further support through to July 2021 with the same facilitator.</p> <p>Through this contract, the following actions have continued to be undertaken by all teaching staff and have been identified as making a significant difference to student learning and our Mathematics data for 2023:</p> <ul style="list-style-type: none"> <li>• Mixed-ability groupings across all levels of learning.</li> <li>• Using the problem-solving approach to deliver Mathematics education in all classrooms.</li> <li>• Delivering workshops where teachers work with students around an identified need to enhance their learning.</li> <li>• Collaborative planning within our four teaching teams.</li> <li>• Staff and team meetings which have been dedicated to professional learning and</li> </ul>	<p>Our overall end of year data for 2023 showed the following:</p> <table border="1"> <thead> <tr> <th></th> <th>Year 1</th> <th>Year 2</th> <th>Year 3</th> <th>Year 4</th> <th>Year 5</th> <th>Year 6</th> </tr> </thead> <tbody> <tr> <td>Level 1</td> <td>69%</td> <td>16%</td> <td>3%</td> <td>4%</td> <td>1%</td> <td>-</td> </tr> <tr> <td>Level 2</td> <td>31%</td> <td>76%</td> <td>97%</td> <td>48%</td> <td>7%</td> <td>3%</td> </tr> <tr> <td>Level 3</td> <td>-</td> <td>8%</td> <td>-</td> <td>48%</td> <td>79%</td> <td>61%</td> </tr> <tr> <td>Level 4</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>13%</td> <td>36%</td> </tr> </tbody> </table> <p>We saw significant changes in the following cohorts within our school for 2023:</p> <ul style="list-style-type: none"> <li>• Our overall schoolwide data for Maths is very good. It shows our Year 2 students are doing extremely well with 84% of students working above or well above their end of year expectation. Year 4 is the next cohort doing well with 48% of students working above expectation for this time of year.</li> <li>• Year 3 is the only year group who has no students working above expectation. In saying that though, 97% of students are working at their expected level and just 3% are below expectation in this cohort.</li> <li>• Year 5s have the highest percentage of students working below or well below expectation,</li> </ul>		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Level 1	69%	16%	3%	4%	1%	-	Level 2	31%	76%	97%	48%	7%	3%	Level 3	-	8%	-	48%	79%	61%	Level 4	-	-	-	-	13%	36%	<p>We exceeded our specific aim of having 85% of our students achieving at or above in Mathematics. We reached a very pleasing total of 97% working within or above the expected curriculum level for the end of year.</p> <p>We have identified the following reasons for the positive variance in our data:</p> <ul style="list-style-type: none"> <li>• Teachers became more comfortable with what they were teaching and how to teach it.</li> <li>• Collaborative planning provided opportunities for teachers to scaffold each other in their own professional teaching and learning in Mathematics.</li> <li>• Collaborative planning allowed for opportunities to build capability across the staff as opposed to having a few people holding all the knowledge.</li> <li>• Planning was specifically based around identified student needs and addressed these. It was also important that we did not complete our planning</li> </ul>	<p>We chose to continue with the same practices and pedagogies we learnt during our contract from 2018 – 2021 as this proved to be successful. We are in a position for our staff to independently maintain and continue moving forward in their teaching and analysis of Mathematics.</p> <p>We will continue to follow the same practices we implemented throughout the year with the intention of taking this to the next level in our professional learning and development as a whole staff.</p> <p>We will continue to use the planning template we introduced to all teams as we have had great success with it in supporting our collaborative planning.</p> <p>We will continue to provide extra support for our Provisionally Certified Teachers (PCTs) and for those staff who are changing levels within the school.</p> <p>We aim to have Mathematics at the forefront of our minds to</p>
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<p>development in Mathematics for teachers.</p> <ul style="list-style-type: none"> <li>• Staff meetings which have been focused around raising student achievement.</li> <li>• Professional discussions as part of teacher's Professional Growth Cycles in relation to teaching and learning.</li> <li>• Peer observations amongst staff in Mathematics lessons.</li> <li>• Having a constant awareness amongst all teaching staff about what we are aiming to achieve in our Mathematics data for 2023.</li> <li>• Open discussions with our Board of Trustees around our data – what it's showing, what we are doing to address it and what we see as a result.</li> <li>• Professional learning with our teaching staff around how to measure progress and achievement against the New Zealand Curriculum levels.</li> <li>• Opportunities for student-led learning where the students identify areas of Mathematics they would like to work on. Teachers then provided opportunities for this to happen.</li> </ul>	<p>but this is a combined total of just 8% overall.</p> <ul style="list-style-type: none"> <li>• Analysing the year groups more closely, we have between 29% and 44% who are working in the 0 – 50<sup>th</sup> percentiles at this end of year point. While this seems like a lot, the majority of students working in the 25<sup>th</sup> – 50<sup>th</sup> percentile are on track with their learning.</li> <li>• We also have between 56% and 71% of our students who are working in the 50<sup>th</sup> – 100<sup>th</sup> percentiles, which is fantastic.</li> <li>• Breaking the year levels down further, we have some great results with 33% of our students overall working in the 75<sup>th</sup> – 100<sup>th</sup> percentile across the school. These students are meeting, and in most cases exceeding, the end of year expectation. A more detailed breakdown of the year groups shows the following percentage of students working at this higher percentile: <ul style="list-style-type: none"> <li>- 31% of Year 1</li> <li>- 30% of Year 2</li> <li>- 41% of Year 3</li> <li>- 36% of Year 4</li> <li>- 32% of Year 5</li> <li>- 30% of Year 6</li> </ul> </li> <li>• The data for our genders is not too dissimilar in each of the year levels. Below is a breakdown for the cohorts:</li> </ul>	<p>too far in advance, so we were addressing what our students were showing us.</p> <ul style="list-style-type: none"> <li>• Problem-solving questions and activities were authentic and taught in context rather than as stand-alone or one-off activities.</li> <li>• A growth mindset developed amongst the staff in relation to the teaching of Mathematics.</li> <li>• We had 'buy-in' from staff which helped to create a positive mindset.</li> <li>• Mathematics became less of an area where teachers were unsure of themselves and how to teach it effectively.</li> <li>• Teachers became more confident in what they were looking for in their students and felt more comfortable with the evidence they had for students to make an informed and justified OTJ in PaCT about a student's learning.</li> <li>• We have continued to use language around assessing against curriculum levels and had meetings where we could see what this would look like.</li> <li>• PaCT has given teachers the opportunity to identify</li> </ul>	<p>increase our data even further by the end of the 2023 school year.</p> <p>We will continue to use the Progress and Consistency Tool (PaCT) to help teachers confirm their judgements for student progress and achievement.</p> <p>We will continue to work with staff around their curriculum knowledge and development, as well as the Learning Progressions Framework in Mathematics.</p> <p>Our own local curriculum for Kamo Primary School was introduced in 2019. Changes are made each year in response to students and staff needs, and changes in education. This will continue to guide our teaching and learning.</p> <p>All staff will continue using Iris Connect in 2023 to observe themselves, reflect on their teaching and students' learning and then make changes to their practice and programmes accordingly.</p> <p>As a staff, we will begin looking further at Te Mātaiaho during 2024 and begin implementing it so we develop an understanding</p>
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<ul style="list-style-type: none"> <li>• Introduction of the Progress and Consistency Tool (PaCT) and continuing to use the Learning Progressions Framework (LPF) to help teachers make informed decisions and about their students' learning.</li> <li>• Using Iris Connect for staff to video themselves teaching, observe and reflect on their lessons and make changes accordingly to suit the needs of their students.</li> <li>• Our Maths lead teacher attends the Cognition Education Mathematics Learning Community meetings each term and shares the information with the staff.</li> </ul>	<ul style="list-style-type: none"> <li>- Year 1 has 35% of girls and 26% of boys working above their end of year expectation.</li> <li>- Year 2 students are doing extremely well with 86% of girls and 83% boys achieving above and well above where they are expected to be for this time of year.</li> <li>- Year 3 shows similar results between the genders. All girls are working at their expected level compared with 95% of boys.</li> <li>- Year 4 is the first group where we see any of our girls working below expectation; however, it is only 3% (1 student) of the whole cohort. In comparison, the boys have only 5% working below. For those achieving above their expected level, more of a difference is seen between the genders, but again it is not huge. We have 53% of girls above expectation compared with 44% of boys.</li> <li>- Year 5 once again shows very similar results between the genders. Our girls have 14% achieving above their expected level for the end of year and our boys are only slightly behind at 13%. The percentage of students underachieving in this cohort is</li> </ul>	<p>the specific skills and abilities each child has obtained and allows them to assess them on their positive progress and achievement rather than pointing out any deficits in their learning.</p>	<p>of the Understand, Know, Do model, how the curriculum refresh is changing the way we think of learning and achievement, as well as how we deliver the progress indicators. Alongside this, we will also be looking at and learning about the Common Practice Model.</p> <p>We will continue to have our Maths lead teacher attend the Cognition Education Mathematics Learning Community meetings and share any new learning or information with the staff.</p>
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	<p>the same at 8% for each gender.</p> <ul style="list-style-type: none"> <li>- Year 6 has 35% of girls and 36% of boys who are exceeding their expected level. The girls in this cohort have just 7% working below their expectation while our boys do not have any students underachieving.</li> <li>• Other than our Year 2 and Year 3 students, the rest of our Māori data generally reflects the overall schoolwide data.</li> <li>• In Year 2 we have 78% of our Māori students working in the two quartiles that make up the 50<sup>th</sup> – 100<sup>th</sup> percentiles. This is a tremendous result and significantly different to the overall schoolwide data which has just 58% working within these percentiles.</li> <li>• Our Year 3 students have a 10% difference between the 50<sup>th</sup> – 100<sup>th</sup> percentiles. Unfortunately, it is not the same positive trajectory as our Year 2s but is still pleasing. The overall data has 71% working in these higher quartiles whereas our Māori students have 61%.</li> <li>• The variance between the other year levels is very similar and ranges from a 3% to a 6% difference between the overall data and our Māori data.</li> <li>• Analysing the differences between the genders for our Māori students</li> </ul>		
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shows very similar results for all year levels except Year 5. Below is a breakdown for each cohort:

- Year 1 has the same results for both Māori boys and girls with 20% of both genders working above expectation.
- Year 2 has very similar results. Our girls have 75% working above compared with 73% of boys.
- Year 3 students aren't too dissimilar either as we have 100% of girls and 93% of boys working above where they are expected to be at this time of year.
- Year 4 has 62% of Māori girls and 50% of Māori boys achieving above their expectation. There is a much smaller difference between the percentage of students working below expectation – girls have 12% compared with 10% of boys.
- Year 5 shows the biggest discrepancy in the data for any of the year groups. Girls have 40% working above their expected level while boys have 33%. However, there are no girls who are achieving below their expectation whereas boys have a combined percentage of 34% who are below (17%) or well below (17%).



	<ul style="list-style-type: none"><li>- Year 6 Māori boys are doing extremely well with 50% working above where they are expected to be, and nobody working below. Our girls have 55% above and 9% below.</li><li>• Our Pasifika data is very positive and encouraging and remains the area of strength for these students. As with Reading and Writing, we need to take note of the actual number of students these percentages equate to as this is a very small cohort of just 19 students.</li><li>• The two Pasifika students we have in Year 2 are both working above their expected level. The only area where we have any students who are working below expectation (50%) is in Year 6, and this is just one student. The remaining 16 students in this cohort are all achieving at their expected level.</li></ul> <p>Teachers became more motivated to teach Mathematics at all levels of learning, and as a result there was a positive feel and attitude amongst the staff about Mathematics. This led to a very noticeable change in the engagement our students had in their learning.</p>		
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### Planning for next year:

The Kamo Primary School Board of Trustees will continue to support our principal in the direction she would like to take our school with regard to teaching and learning in Mathematics. All decisions made will be based around what best suits the needs of our students. We are invested in raising student achievement in Mathematics and our Board of Trustees will do anything to support what our Senior Leadership Team and our teaching team feel would be the best approach for our students. The Board of Trustees of Kamo Primary School always has the best interests of our students at the forefront of any decision they make.

They have been informed of our 2023 end of year data and have seen the progress that was made from Term 2 to Term 4 in all Year groups. We have a reasonable number of students with additional learning needs for a school of our size and they agree with the leaders of the school that we will not exclude these student's results from our data. We believe in an inclusive learning environment for all students and therefore they are included in the results we share.