**Waiau Area School – 0402 - Analysis of Variance - 2017**

**Strategic Aim:**

All students are able to access the NZ curriculum as evidenced by achievement in relation to National Standards.

**Annual Objective:**

* To increase the number of students achieving at or above in relation to the National Standard for mathematics (Years 1-8);
* To increase the number of students achieving at or above in Year 9 and 10;
* To improve the students behaviour and management of this throughout the school; and
* To improve student attendance throughout the school.

**Maths Targets: *by the end of the year:***

1. ALiM target groups – 12 students in Years 5-8 will be working at their expected level in relation to National Standard;
2. 78% of students in Year 1-6 will be at or above in relation to their National Standard;
3. 22% of students in Year 1-6 will have moved at least one strategy stage in JAM or GLOSS;
4. 89% of students in Year 7-10 will be at or above in relation to their National Standard and the use of e-asttle and applying teachers OTJ;
5. 11% of students in Year 7-10 will have evidence of improvement in relation to applying teachers OTJ; and
6. 100% of our Year 11-14 students will pass NCEA Level 1, 2 or 3 achievement standards over a two year period.

**Baseline Data = Feb 2017:**

* Analysis of school wide mathematics data identified concern in student achievement and engagement for Years 1-10 in relation to National Standards for Mathematics achievement. 55% of students (22/49) in Year 1-6 are at or above and 38% of students (14/27) are at or above in Year 7-10.
* There is no significant difference between NZM and NZE students achievement.
* There is a need to teach number strategies and use math equipment to support our students development.
* The implementation of ALiM 2 will occur during Term 2&3. Three teachers will be involved in this with the support from the principal.
* 100 hours PLD have been allocated to 2017/18 – Averil Lee will be the maths advisor/mentor.

**Result - End of 2017 in relation to our maths targets:**

1. 7/12 students are working at their expected level. 5/12 are still below and have not met the target.
2. 59% (23/39) of students in Year 1-6 are at or above in relation to the National Standard. The remaining students who did not met the target have moved at least one strategy stage in JAM or GLOSS.
3. 10% (4/39) of these targeted students did not move one strategy stage when reading the final results.
4. 43% (12/28) of our Year 7-10 students are at or above in relation to their National Standard and the use of e-asttle and apply teachers OTJ.
5. 57% (16/28) of our students who are below their National Standard had evidence of improvement in relation to OTJ.
6. Not met – refer to report by Principal’s Nominee.

**Actions (what we did):**

* Classroom teachers who were teaching maths worked together to identify and monitor progress (through discussion and reviewing data and how they were assessing), responded to and reported on student’s progress and how the staff were achieving with their own knowledge in teaching and assessing maths.
* Ensure there was enough professional support provided to staff. Averil Lee (maths advisor) worked throughout the year, in the school, supporting staff in and out of their classrooms.
* Reassess what assessment tools were being used, re-tested students and built on current teachers’ knowledge.
* Developed a Student Progress and Achievement sheet for recording progress in maths.
* Continued to identify learning needs of each individual student and support required to improve progress and achievement.
* Continued to create a healthy home/school partnership – we had a maths parent night.
* Equipment and resources were purchased to support teaching programmes.
* Regular staff meetings and professional development occurred through the year.

**Outcomes (What happened?):**

* 59% of our students in Year 1-6 are at or above the NS in maths.
* 43% of our students in Year 7-10 are at or above the NS in maths.
* 52% of our students in Years 1-10 are at or above in relation to where they should be achieving for their age.

**Reasons for the Variance (Why did it happen?):**

* 2016 results were analysed in 2017 by new management and as a result found differences in where students were achieving.
* In-depth PLD sessions and working together in the classrooms with our maths advisor enabled staff to review their current assessment tools, equipment & resources being used and overall understanding/maths knowledge – this had a huge impact on student achievement outcomes from the beginning of the year to mid year results.
* 38% (24/64) of students were at or above mid year. End of year results were 52% (35/67) of students were at or above. All other students did show progress which is pleasing. However, for some students this isn’t evident when comparing end of 2017 data to the end of year 2016/start of 2017 data which was used to form these targets.
* The 2017 mid year results were valid after further PLD and as a result, the overall results of where students where at, in relation to the National Standard were low. Improvement has occurred.
* There were staff changes in one class and data was inconsistent.
* ALiM (identified groups) occurred and as a result strengthened teacher knowledge.
* Teachers working collaboratively and moderation occurred.
* 14 new students arrived at WAS during the second half of the year – 10/14 students arrived with learning difficulties.

**Evaluation (Where to next?)**

* Continue to use maths advisor (Averil) throughout 2018. Regular (weekly-fortnightly) visits will occur.
* Continue to use equipment and resources within the classrooms and more problem solving approaches to learning.
* Continue to build home/school partnerships – maths nights, clear reporting and so forth.
* Monitor target students and report regularly.
* Enter student achievement data onto SMS and manage and monitor closely.
* ALiM to occur in Term 2&3 – more targeted grouping and accelerated learning opportunities.
* Offer maths nights for parents and caregivers.
* Continue to teach using identified needs from assessment and observations.
* Continue to build on our engaging learning environments and range of cultural contexts during maths sessions.
* Continue to find games/apps (purchase of ipads)/materials that consolidate learning and extend students.
* Continue to collect and analyse data to identify needs of target groups.

**Planning for 2018:**

* More PLD (applied for a further 100 hours) from Averil which will consolidate and strengthen our current teachers’ knowledge in teaching maths in Years 1-10.
* To build on our planning, curriculum and assessment practices across the school.
* To align targeted student achievement to PLD and teacher appraisals to monitor and accelerate progress in student achievement in maths.
* Teacher Inquiry included in the appraisal process and links to be made to charter goals in regards to maths.
* To use maths as a vehicle to enhance other curriculum areas and procedures.
* To work on better attendance (getting to school on time with some of the seniors) with students – more incentives and proactive approaches to getting them to school.
* To continue the ‘team approach’ by working together to make a real positive difference by collecting robust assessment for learning, analysing, planning, reviewing and growing teacher capacity in maths.

**Completed by:**

**Andrew Pardoe-Burnett**

**Principal**

**Waiau Area School NCEA Report for 2017 – Author: Principal Nominee Paul Maloney**

This table show credits gained by students **during the 2017 year** and includes external examinations from the end of 2017. Only students enrolled at the end of the year are included.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Student** | **Year Level in 2017** | **Gain in Credits L1** | **Gain in Credits L2** | **Gain in Credits L3** | **Achievement Standard Count** | **NCEA Level(s)**  **Gained in 2017** | **Numeracy** | **Literacy** |
| A | 11 | 55 | 27 | 8 | 38 out of 90 | L1 | Y | Y |
| B | 11 | 41 | 22 | 4 | 41 out of 67 |  | Y | Y |
| C | 11 | 79 | 28 | 3 | 75 out of 110 | L1 | Y | Y |
| D | 11 | 0 | 0 | 0 | 0 |  | N | N |
| E | 11 | 36 | 13 | 0 | 33 out of 49 |  | N | Y |
| F | 12 | 14 | 19 | 22 | 31 out of 55 | L1 and L2 | Y | Y |
| G | 12 | 10 | 40 | 0 | 17 out of 50 | L1 | Y | Y |
| H | 12 | 17 | 11 | 24 | 24 out of 52 | L2 | Y | Y |
| I | 13 | 0 | 0 | 37 | 16 out of 37 |  | Y | Y |
| J | 13 | 22 | 16 | 10 | 16 out of 48 |  | N | N |
| K | 14 | 0 | 4 | 43 | 4 out of 47 | L3 | Y | Y |

This table show credits gained by students **during all years from all schools attended**. Only students enrolled at the end of the year are included.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Student** | **Year Level in 2017** | **L1 Credits** | **L2 Credits** | **L3 Credits** |
| A | 11 | 55 | 27 | 8 |
| B | 11 | 41 | 22 | 4 |
| C | 11 | 79 | 28 | 3 |
| D | 11 | 10 | 0 | 0 |
| E | 11 | 36 | 13 | 0 |
| F | 12 | 33 | 56 | 22 |
| G | 12 | 39 | 49 | 0 |
| H | 12 | 53 | 62 | 28 |
| I | 13 | 50 | 60 | 44 |
| J | 13 | 35 | 16 | 10 |
| K | 14 | 64 | 61 | 61 |

**Notes:**

1. The performance on external exams (in November) was very positive. In total students attempted 10 standards, and this resulted in 9 grades of achieved or higher with only 1 not achieved grade.
2. Of our 11 students at the end of the Year 6 gained an NCEA Level during 2017. (This is a roll based statistic)
3. Of the 6 students who had the opportunity to gain an NCEA Level based on entries, 5 gained an NCEA Level. (This is a participation based statistic. I believe that this is a realistic statistic as it reflects the abilities, needs and goals of our students)
4. Student D transferred to Waiau during the year, and struggled academically. They were not in a position to gain NCEA credits because of ability and is no longer at Waiau.
5. For Year 11, students A and C gained NCEA Level One quite easily with student C nearly gaining a merit endorsement (which should be gained in 2018).. This is a very positive result. However Student B in particular did not perform at the level expected but communication was maintained with parents throughout the year and they were kept informed of progress. Student E performed a little below what was expected, but we hope that this student can gain Level 1 and make significant progress towards gaining Level 2 in 2018.
6. All 3 Year 12 students gained an NCEA Level. We have been very pleased with the progress of these students. It is hoped that at least two of these students should be able to gain NCEA Level 3 this year.
7. Student I found the transition to Level 3 quite difficult in terms of academic level but has returned to school in a different part of the country. They are quite close to gaining NCEA Level 3.
8. Student J came to Waiau as a Year 13 with no NCEA Levels and 13 credits gained over two years of study. At Waiau this student gained 48 credits in 2017. We see this as a positive achievement even no NCEA Level was gained.
9. Our Year 14 student leaves school with all 3 NCEA Levels. Our staff are very proud of this student’s achievements.