

Witherlea



School

Be Kind • Be Safe • Be Fair

TARGET AREA		Mathematics			
SCHOOL	Witherlea School	DATE	2020	MOE NUMBER	3075

STRATEGIC AIM	<p>Strengthening Teacher and Leadership Capabilities</p> <ul style="list-style-type: none"> • Collaborative and empowered teachers and leaders <p>Monitoring and Evaluating Progress</p> <ul style="list-style-type: none"> • Reflective, responsive and innovative teaching for equity and excellence
ANNUAL AIM	<ul style="list-style-type: none"> • Collaborative 'Spirals of Inquiry' (including whole school) in the area of mathematics utilising WSL/ASL and internal expertise • Whole staff to ongoing review the Mathematics Curriculum and align teaching practices, assessment, current research • Use Witherlea School Learner Impact Plan to monitor, plan, target and evaluate IMPACT in Mathematics
TARGET DETAILS	<ul style="list-style-type: none"> • IMPROVE TEACHING AND LEARNING IN THE AREA OF MATHEMATICS SO WE HAVE 90% AT OR ABOVE • SHIFTING TARGETED LEARNERS 2-4 SUB LEVELS
BASELINE DATA	<ul style="list-style-type: none"> • Across the school we had 91 (35.8%) learners who are below the benchmark for their age in 2019 • We have identified 'efficacy' in Mathematics as one initial indicator/problem • Historical data suggests we have a large cohort at Year 4 (33 in total) that has been underachieving from their early years in Mathematics and some across Reading and Writing. • Witherlea has begun DMIC PLD via our Kahui Ako (Piritahi) to ensure we embed culturally responsive mathematics practices to compliment the differing techniques, styles and philosophies schoolwide

ACTIONS <i>What did we do?</i>	OUTCOMES <i>What happened?</i>	REASONS FOR THE VARIANCE <i>Why did it happen?</i>
<p>Collaborative 'Spirals of Inquiry' (including whole school) in the area of mathematics utilising WSL/ASL and internal expertise;</p> <ul style="list-style-type: none"> • 4 targets per teacher (Piritahi alignment) • integration with 'Appraisal Connector' • Communication and Participation framework in conjunction with Talk Moves to focus Spirals • Teachers videoing their practice (DMIC) 	<p>Mathematics has continued to be a focus for us with Spirals of Inquiry targeting teaching practice and students who are BELOW or on the CUSP (At Risk).</p> <p>There seems to be no disparity between girls and boys like we have experienced in the past however the ABOVE category is tipping towards boys. There is however a disparity between Māori learners and their peers - 8.5% and Pasifika - 27% (very low numbers). We need to focus on these learners so this gap does not grow.</p>	<p>DMIC professional development was a huge passage of work for all teachers in 2020 as it was the first year and centered around specific and timely PLD days and regular mentor visits so teachers could focus their Spirals using the 'new' Framework and Talk Moves. This was hindered considerably by COVID-19 with mentors not being able to come to Blenheim or rollout the PD as intended. Teachers lost trust, confidence and momentum which was hindered furthermore by different mentors and different messages - mixed and inconsistent.</p>
<p>Whole staff review the Mathematics Curriculum and align teaching practices, assessment, current research;</p> <ul style="list-style-type: none"> • learning psychology and Growth Mindset • DMIC (Developing Mathematical Inquiry Communities) PLD (Piritahi) and mentor visit each term • Trial different platforms; <ul style="list-style-type: none"> - Mathematics Challenge Inquiries (Year 5-6) - DMIC problems - ICT platforms; Khan Academy, Maths Whizz, Mathletics (small trial groups) 	<p>78 students out of the 128 (60.9%) are ONE sublevel away from reaching their target. The progress in 'less than a year' (COVID-19) within a subject area like mathematics that really needs to be learned each strand at a time - with more than a term taken away the Year 5-6 students were at a huge disadvantage as the coverage, vocabulary learning and learners who already needed to be accelerated to make the benchmark were harder to reach.</p> <p>We shifted our focus to PROGRESS and put all our energy into creating classroom environments that were; clean, safe and conducive to learning.</p>	<p>The focus following COVID-19 turned to 'Wellbeing' and 'Creativity' as students came back to school and teachers made links to the outside world for mathematics - two Year 5-6 classes began a Project Based Learning Unit(GeoCity) with the central focus of real world mathematics. This went viral; Stuff, Kea Kids, and then finally the EdGazette; link attached.</p>
<p>Use Witherlea School Learner Impact Plan to monitor, plan, target and evaluate IMPACT in Mathematics;</p> <ul style="list-style-type: none"> • Embed 'Data Monitoring' via eTAP • Action Plan 2020 created • new Data Monitoring practices school wide to identify and monitor • BOT analysis/interrogation of 'data' • Teacher TIME to analyse data and understand IMPACT (Friday) • Trial different planning formats (UDL - formative assessment techniques) 	<p>We had a large cohort of New Entrants and 'new students' who couldn't sit down, listen to a story, manage themselves and some were displaying challenging and dangerous behaviours. We brought in the Ministry Behaviour Team, split the class in half, hired two full time Teacher Aides and the Senior Management Team joined the Spiral of Inquiry to modify behaviour. Many other teachers changed their Spiral focus using either; wellbeing, challenging behaviour, and/or wellbeing as a focus. This has severely altered the ability to track within Mathematics.</p>	<p>Mathematics like Writing was difficult to send home during LOCKDOWN with the methods used to teach mathematics parents felt ill-equipped to teach, guide and/or practice (according to our parent survey results). Mathematics is about vocabulary learning, problem-solving techniques and skills that need to be unpacked and connected for each learner. While maintenance type activities were available for each learner from Year 3-6, not all children had access or the 'know-how' to access during this time (digital fluency or had the right/enough devices). Year 3 and Year 5 have been the biggest hit by COVID-19 as they are the year groups that needed to move two sublevels to make the benchmark.</p>

EOY DATA

Whole School Data Breakdown:

- 0% of students are **WELL BELOW**
 - 41.7% of students are **BELOW**
 - 45.9% of students are **At**
 - 12.4% of students are **Above**
- (‘old’ National Standards data)

58.3% (179/307)

At or Above the benchmark

Aggregated Data Analysis:

Aggregated Data Analysis:

- **60.3% (179/267) All students At or Above**
Māori/Pasifika removed
- **51.8% (26/54) Māori students At or Above**
8.5% difference for Māori learners
- **33.3% (2/6) Pasifika students At or Above**
27% difference for Pasifika learners

Ethnicity Data Analysis:

- 58.4% (132/226) European students At or Above
- 91.7% (11/12) Asian students At or Above
- 66.6% (6/9) MELAA students At or Above

BOT Reporting Group

(1) Beg Maths & T4 Maths 2020 For: BOT Reporting Group

Year	Accelerated Progress (more than a step progress)					Sufficient Progress (a step progress)					Insufficient Progress (less than a step progress)					Year Total (Boys+Girls)			
	Boy 46 (29%)	Girl 49 (31%)	Maori 17 (31%)	Pasifika 2 (33%)	NZ European 61 (29%)	Other 15 (38%)	Boy 100 (64%)	Girl 86 (55%)	Maori 31 (57%)	Pasifika 4 (67%)	NZ European 129 (62%)	Other 22 (56%)	Boy 11 (7%)	Girl 15 (10%)	Maori 6 (11%)		Pasifika 0 (0%)	NZ European 18 (9%)	Other 2 (5%)
2	3 (6%)	3 (6%)	1 (2%)		4 (2%)	1 (0%)	17 (33%)	18 (35%)	5 (9%)	1 (17%)	21 (10%)	8 (4%)	4 (8%)	7 (13%)	2 (4%)		8 (4%)	1 (0%)	52
3	14 (22%)	16 (25%)	3 (6%)	1 (17%)	21 (10%)	5 (2%)	13 (21%)	18 (29%)	5 (9%)	1 (17%)	20 (10%)	5 (2%)	1 (2%)	1 (2%)	1 (2%)		1 (0%)		63
4	9 (16%)	15 (27%)	5 (9%)	1 (17%)	12 (6%)	6 (3%)	21 (38%)	9 (16%)	7 (13%)	2 (33%)	18 (9%)	3 (1%)	1 (2%)	1 (2%)			2 (1%)		56
5	13 (19%)	6 (9%)	5 (9%)		13 (6%)	1 (0%)	24 (35%)	21 (31%)	4 (7%)	38 (18%)	3 (1%)	2 (3%)	2 (3%)	2 (4%)			2 (1%)		68
6	7 (10%)	9 (13%)	3 (6%)		11 (5%)	2 (1%)	25 (37%)	20 (29%)	10 (19%)	32 (15%)	3 (1%)	3 (4%)	4 (6%)	1 (2%)			5 (2%)	1 (0%)	68
	95 (31%)						186 (61%)						26 (8%)					307	

The progress results are fantastic; 31% - 95 students accelerated and 61% - 186 students making a year's progress in a year (1 sub-level shift - actually less than a year of you count COVID).

COVID IMPACT

Two weeks prior to Week 7 (Term One) our school was depleted by almost half - families and whānau were self-isolating and we had to start sending Online Learning home. We were, like others, scrambling and then two weeks later we were in LOCKDOWN, scrambling to get devices into the homes. We were not prepared, our teachers were not prepared and our students were not prepared BUT we did relatively well considering. Following LOCKDOWN, students began to come back to school in 'Bubbles' and teachers tried to teach from school and Online.

We virtually lost a term of learning - 3 months and because the first term is setting routines and programmes up and transitioning students into classrooms we had to begin this again for many students, more than we anticipated - these are the students we would have been targeting if they were at school. In some cases, children may have lost 6 months of momentum and learning. This is huge.

We focused as a school on PROGRESS and individual learning journeys. We worked as a team to support learners and their whānau who needed to focus on wellbeing and we made sure all of our students LOVED coming to school.

EVALUATION

Where to next?

- *Consistency of planning and assessment including data monitoring practice continued to be reviewed and improved*
- *Formative Assessment practices, effective teaching and increased content knowledge through Spirals of Inquiry and collaborative sense making*
- *Learning Goals developed for Mathematics using dispositions derived from; Growth Mindset, Key Competencies, Visible Learning, Learning Power, Talk Moves and the DMIC: Communication and Participation Framework (blend of all and created together)*
- *Moderation embedded across teams and the school using external expertise - ASL*
- *DMIC team - small group trial and begin year 1 again*
- *Leadership Team member to take lead for DMIC Team and complete Massey University course - building internal expertise*
- *ASL/WSL embed DMIC practices within school Mathematics programme via Spirals*
- *Clear Mathematics Programme expectations and consistent platforms*