

Analysis of variance reporting - 2015

Parnell District School

School number: 1436

Focus: Mathematics

Strategic aim: *Our intention is that all children achieving below the National Standard (NS) in reading, writing and mathematics, show accelerated progress, reflected in overall teacher judgements. The pace of progress is expressed in the annual school goals.*

Annual aim: *To lift the achievement of all students in mathematics, especially in geometry and measurement, probability and statistics.*

Target: The target for mathematics in 2015 is that by the end of the year we will have accelerated the achievement of all students, but especially:

- the 8% (36) who are below, to achieve at the National Standard by the end of 2015,
- the 3% (12) well below, to achieve at the National Standard by the end of 2016,
- the 1 Pasifika student and 1 Māori student achieving below, to achieve at the National Standard by the end of 2015.

Baseline data:

Our target for mathematic in 2014 was for 80% of all student's to achieve the National Standard or higher.

Student groups who were not achieving at or above the national standard in mathematics in 2014:

- 11% of our 100 week students (3) were performing below or well below the national standard 2014,
- 18% of our Year 5 students (12) were performing below or well below the national standard 2014,
- 17% of our Year 6 students (9) were performing below or well below the national standard EOY 2014,
- 14% of our Year 7 students (6) were performing below or well below the national standard 2014,
- 11% of our Year 8 students (4) were performing below or well below the national standard 2014,
- 11% of our boy students (28) were performing below or well below the national standard 2014,
- One Māori and one Pasifika student were performing below or well below the national standard, 2014.
- 17% of all students (80) are only just achieving the National Standard in mathematics and are at risk of falling below.

Actions: What did we do?

- Identified strand maths – geometry, measurement and statistics as being less strong than number in our student's performance.
- Focused strand based teaching integrating targeted number strategies.
- Used e-AsTTle baseline data to identify student needs in strand maths in years 4-8.
- Encouraged greater use of Mathletics as an independent classroom activity and also for homework.
- Dedicated teacher learning support for those older students who were not achieving the National Standard.
- Dedicated teacher aide support for younger students struggling with basic number concepts.

Outcomes: What happened?

- The 2015 data (417 students) involves 56 fewer students than the 2014 data (473 students).
- An overall upward shift of 4% from 89% to 93% of students achieving at or above the National Standards, between 2014 and 2015, was achieved.
- 4% more males and 2% more females achieved the NS or higher in 2015.
- 2015 cohorts of years 4, 6, 7, 8 show an upward shift in achieving the NS or higher whereas in years 3 and 5 (2015) there is a slight of % increase of students not reaching expectation.
- The most significant improvement is in the Year 6 (2015) cohort where a further 11% (8 students) are now achieving the NS.

The target for mathematics for 2015 was to accelerate the National Standard (NS) achievement of the

- 8% (36) of students who were achieving below, to be achieving at the NS:
 - 33% (12) have left the school,
 - **Of the 24 students who remained enrolled at Parnell in 2015, 58% have reached the target,**
 - 37 % (9) have not improved, and
 - 4% (1) student has dropped to well below,
- 3% (12) of students who were achieving well below, to be achieving below the NS:
 - 33% (4) of the students have left the school,
 - **Of the 8 students who remained enrolled at Parnell during 2015, 50% reached the target, and**
 - 50% (4) have not shifted and are either ESOL or special needs.
- Both the Māori and Pasifika students who were achieving below the NS in maths are now achieving at expected NS level.

- The Parnell mean in the end of year e-AsTTle strand maths test increased by 2 sublevels in years 4, 5, 6 and 8. In year 7 it increased by One sub level, which would be normal progress.
- At the end of 2015 5% of students were achieving below the National Standard, 2% well below and 17% are meeting the requirements Of the standard but need consolidation and monitoring to maintain their gains.

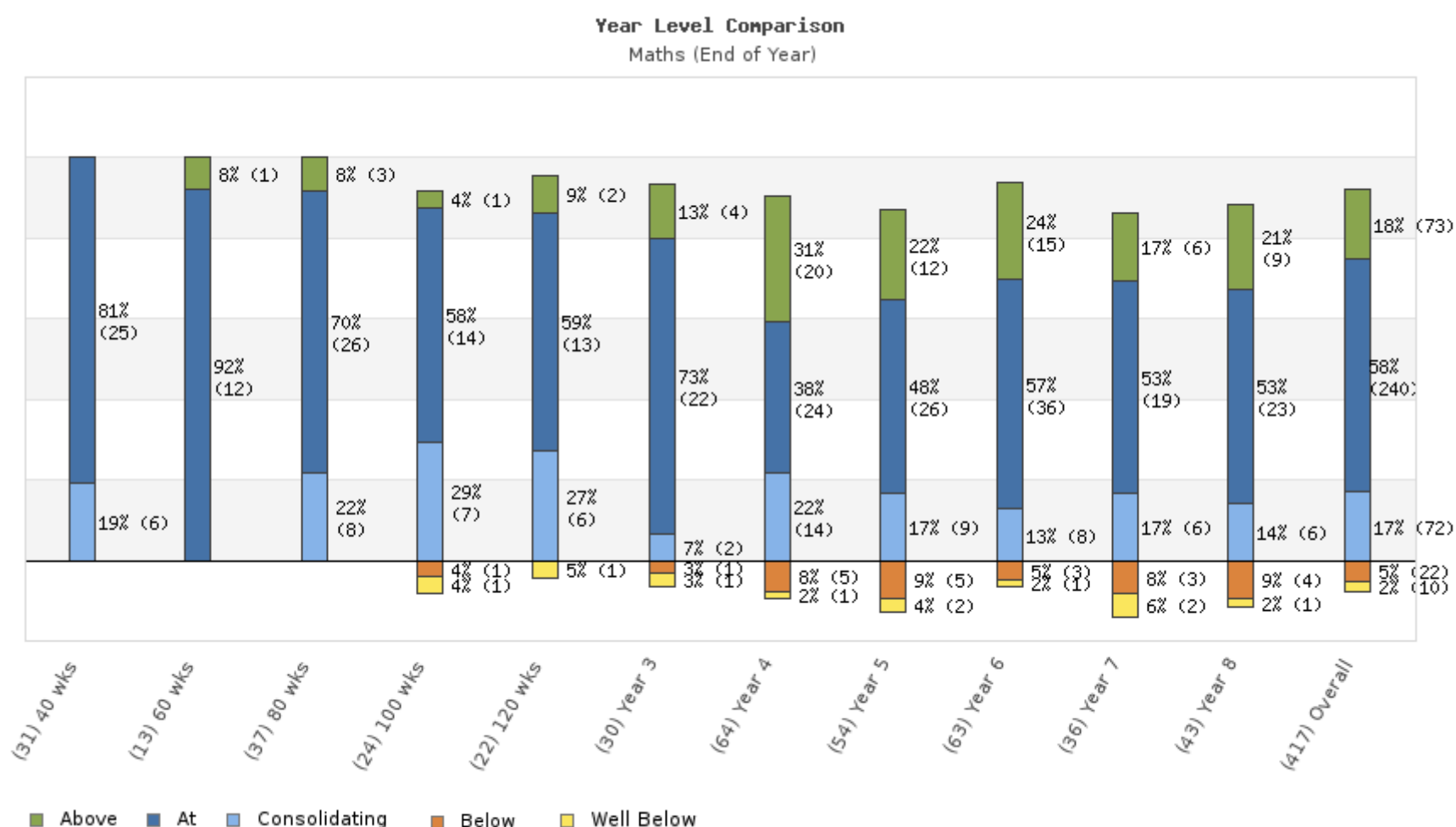
Reasons for the variance: Why did it happen?

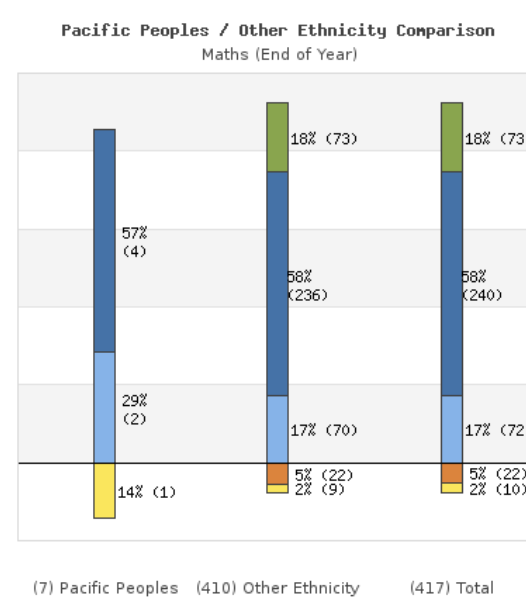
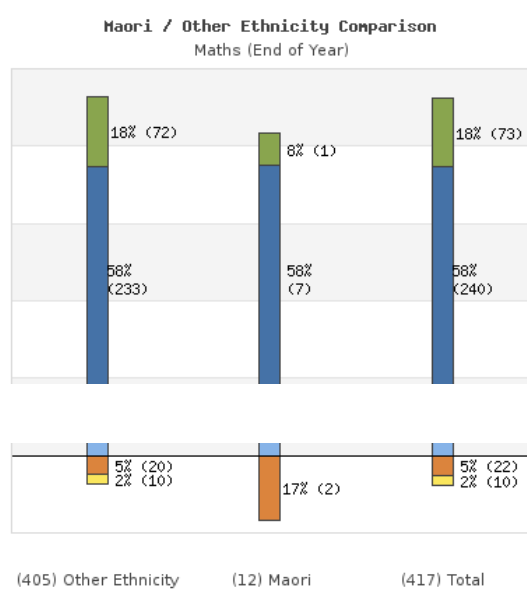
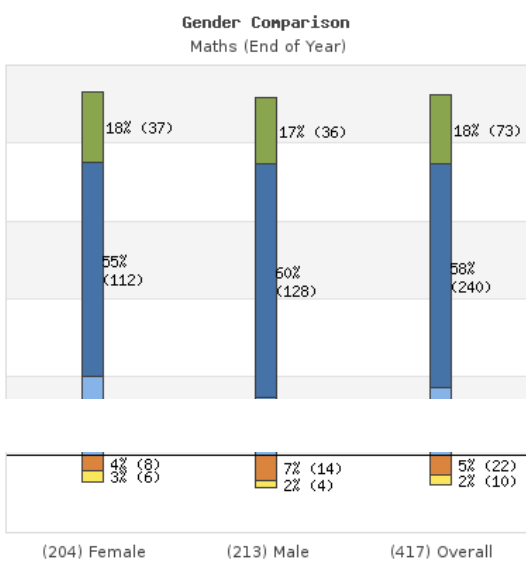
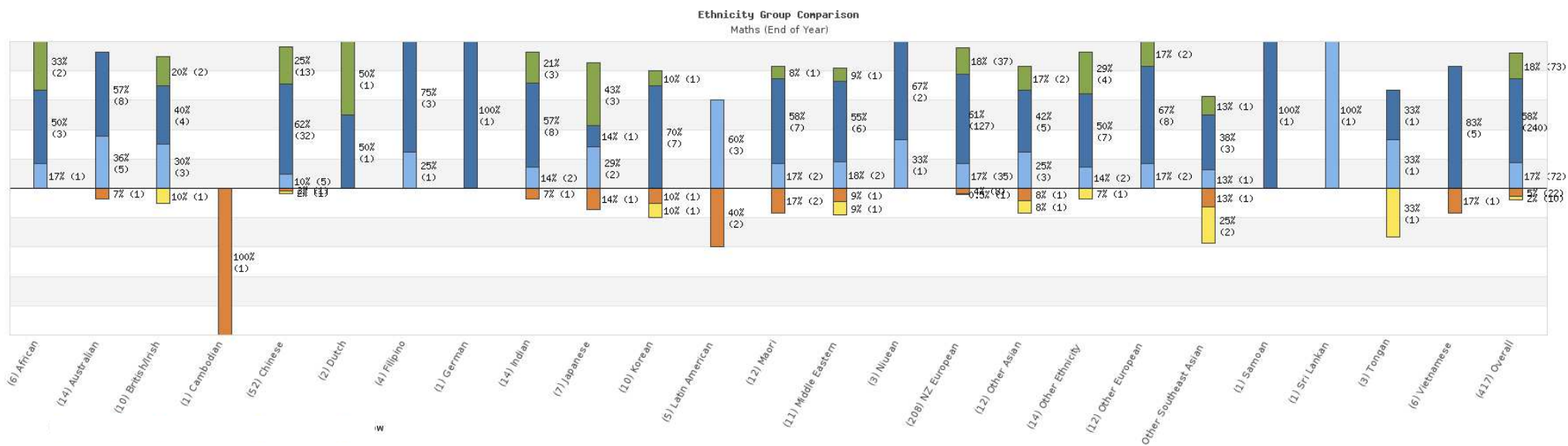
- Not all classes are using Mathletics as a teaching and learning tool. This may mean not all children are receiving sufficient opportunities to practice their basic facts.
- Maths includes a wide range of topic specific vocabulary. This can increase the difficulty of tests for ESOL students.
- The school developed a specific monitoring and inquiry programme to focus teachers on target students.
- There was a high level of transience in the target group with 33% of the students in each target group leaving the school during 2015. 30% of ESOL students in these categories, have left the school during the year.
- 9% of the 32 remaining students, not achieving the targets, are ORRS funded students with IEPs, and 28% are ESOL funded students.
- Students who have not achieved the target have multiple needs such as ESOL and identified special needs with an IEP in place.
- Maths uses specific language across a wide range of topics and ideas. ESOL students find the specific language and associated concepts difficult in many areas of maths e.g. problem solving, AsTTle assessments.

Evaluation: Where to next?

- The school has also applied to be included in a Year 1 Accelerated Learning in Maths (ALiM) contract mid-year.
- Improve staff literacy for maths through sharing sessions.
- The monitoring and reporting of target student progress has been revised and all teachers will be expected to have at least 5 target students across all National Standard subjects. Teachers will regularly monitor and report on progress and use the Spiral of Inquiry approach to maintain a relentless focus on achievement and reflection on effectiveness of programmes in use.
- The school will continue with some extra programmes to target students struggling with maths Y5-8.

Overall teacher Judgements in Mathematics - Nov. 2015





■ Above ■ At ■ Consolidating ■ Well Below ■ Below

■ Above ■ At ■ Consolidating ■ Well Below ■ Below

■ Above ■ At ■ Consolidating ■ Well Below ■ Below

Mathematics Progress – All - 2012-2015

Year	ABOVE		AT				BELOW		WELL BELOW	
	NO:	%age	Total At NS		Lower 1/3 of 'At'-Consolidating		NO:	%age	NO:	%age
Nov 2012 (429)	177	41%	208	48%	56	13%	30	7%	14	3%
Nov 2013 (428)	171	40%	226	52%	70	16%	19	4%	12	4%
Nov 2014 (473)	181	38%	224	52%	80	17%	36	8%	12	3%
Nov 2015 (417)	73	18%	312	75%	72	17%	22	5%	10	2%

Mathematics Progress – Boys 2012-2015

Year	ABOVE		AT				BELOW		WELL BELOW	
	NO:	%age	Total At NS		Lower 1/3 of 'At'-Consolidating		NO:	%age	NO:	%age
Nov 2012 (214)	96	45%	95	44%	28	13%	15	7%	8	4%
Nov 2013 (206)	95	46%	93	46%	28	14%	9	4%	9	4%
Nov 2014 (228)	89	39%	111	49%	45	20%	20	9%	8	4%
Nov 2015 (213)	36	17%	159	75%	31	15%	14	7%	4	2%

Mathematics Progress – Girls 2012-2015

Year	ABOVE		AT				BELOW		WELL BELOW	
	NO:	%age	Total At NS		Lower 1/3 of 'At'-Consolidating		NO:	%age	NO:	%age
Nov 2012 (215)	81	38%	113	53%	28	13%	15	7%	6	3%
Nov 2013 (222)	76	34%	133	60%	42	19%	10	5%	3	1%
Nov 2014 (245)	92	38%	133	54%	35	14%	16	7%	4	2%
Nov 2015 (204)	37	18%	155	75%	41	20%	8	4%	6	3%

