



National Assessment Program – Literacy and Numeracy 2017 Final report

The National Assessment Program – Literacy and Numeracy (NAPLAN) was held in May 2017 for all students in Years 3, 5, 7 and 9.

The *NAPLAN National Report* (National report) was released by the Australian Curriculum, Assessment and Reporting Authority (ACARA) on Wednesday, 13 December 2017. It is now available in PDF format on ACARA's website <https://www.nap.edu.au/>.

The National report presents tables, graphs and commentary providing comparisons of state/territory performance disaggregated by sex, Indigenous status, language background and geolocation. Information is also provided on exemption, withdrawal and participation rates.

The Time Series and Cohort Gain sections of the National report only provide information in relation to Reading and Numeracy.

Full details of the results are also available online, in a searchable format, on the 'NAPLAN results' subsection of the NAP website: <http://reports.acara.edu.au/>. This includes time series and cohort gain data for all domains including subgroup data by State/Territory.

The section on cohort gain includes disaggregation by sex, Indigenous status and language background other than English (LBOTE). Geolocation splits are not included for cohort gain as there is insufficient data for a number of states and territories in the remote and very remote categories.

The Western Australian (WA) performance is based on all WA schools.

From a contextual perspective it should be noted that:

- In 2017 the Persuasive Writing genre was assessed. The 2017 Writing results can only be compared with writing data from 2011 onwards.
- Comparisons of performances over time are made between 2017 and 2008 for Reading, Spelling, Grammar and Punctuation and Numeracy, while Writing is compared to the base year of 2011.

Summary of NAPLAN 2017 Results from WA's perspective

The NAPLAN Report presents results in two main ways – mean scores and percentages at or above the national minimum standards.

'Effect size' is a measure used for quantifying the difference between two groups or the same group over time. Effect size measures are used to complement the statistical tests of significance of differences (likelihood that the difference in results between two groups is due to chance) and focus on the magnitude* of any difference. In the tables, the term 'significance of difference' has been replaced with the term 'nature of the difference,' for comparisons beyond 2013, to reflect that the results indicate both the statistical significance of the difference as well as the effect size of the difference.

The nature of the difference is displayed symbolically in tables using the following key:

▲	Average achievement is substantially above and is statistically significantly different from the base year (or previous year) for this state/territory.
△	Average achievement is above and is statistically significantly different from the base year (or previous year) for this state/territory.
■	Average achievement is close to or not statistically different from the base year (or previous year) for this state/territory.
▽	Average achievement is below and is statistically significantly different from the base year (or previous year) for this state/territory.
▼	Average achievement is substantially below and is statistically significantly different from the base year (or previous year) for this state/territory.

*An effect size is reported as:

- ‘substantially above’ if it is >0.5 SD above the base year mean/percentage; ‘substantially below’ if it is >0.5 SD below the base year mean/percentage
- ‘above’ if it is in the range 0.2–0.5 SD above the base year mean/percentage; ‘below’ if it is in the range 0.2–0.5 SD below the base year mean/percentage
- ‘close to’ if it is in the range 0–0.2 SD above the base year mean/percentage or 0–0.2 SD below the base year mean/percentage.

The nature of the difference is reported as ‘substantially above’ or ‘substantially below’, ‘above’ or ‘below’ or ‘close to’ the comparative mean or percentage of students at or above the national minimum standard. The base year (first year of data collection for the purposes of time series comparisons) for Writing is 2011 and for all other tests is 2008.

The terms ‘higher than’ and ‘lower than’ are used for comparisons within subgroups, e.g. girls’ performance compared with that of boys, and participation categories, where comparative statistical significance information has not been provided.

Means

Tables 1–5 include the mean achievement of WA and Australian students on five NAPLAN measures in 2017, compared with 2008 and 2016 (except for Writing where the comparisons are with 2011 and 2016).

Table 1: Mean achievement – WA and Australia – 2017/08 and 2017/16: Reading

Year	Jurisdiction	Mean score	WA/Aust 2017 comparison	Jurisdiction 2017/08 comparison	Jurisdiction 2017/16 comparison
Year 3	WA	419.8	■	△	■
	Aust	431.3		△	■
Year 5	WA	498.9	■	△	■
	Aust	505.7		△	■
Year 7	WA	538.6	■	■	■
	Aust	544.7		■	■
Year 9	WA	582.5	■	■	■
	Aust	580.9		■	■

Table 2: Mean achievement – WA and Australia – 2017/08 and 2017/16: Spelling

Year	Jurisdiction	Mean score	WA/Aust 2017 comparison	Jurisdiction 2017/08 comparison	Jurisdiction 2017/16 comparison
Year 3	WA	408.4	■	△	■
	Aust	416.1		△	■
Year 5	WA	498.2	■	△	■
	Aust	500.8		△	■
Year 7	WA	546.9	■	△	■
	Aust	549.5		■	■
Year 9	WA	581.4	■	△	■
	Aust	580.3		■	■

Table 3: Mean achievement – WA and Australia – 2017/08 and 2017/16: Grammar and Punctuation

Year	Jurisdiction	Mean score	WA/Aust 2017 comparison	Jurisdiction 2017/08 comparison	Jurisdiction 2017/16 comparison
Year 3	WA	428.3	■	△	■
	Aust	439.2		△	■
Year 5	WA	492.5	■	■	■
	Aust	499.3		■	■
Year 7	WA	537.2	■	△	■
	Aust	541.5		■	■
Year 9	WA	571.4	■	■	■
	Aust	569.3		■	■

Table 4: Mean achievement – WA and Australia – 2017/11 and 2017/16: Writing

Year	Jurisdiction	Mean score	WA/Aust 2017 comparison	Jurisdiction 2017/11 comparison	Jurisdiction 2017/16 comparison
Year 3	WA	409.4	■	■	■
	Aust	413.6		■	■
Year 5	WA	468.6	■	■	■
	Aust	472.5		■	■
Year 7	WA	508.2	■	▽	■
	Aust	512.9		▽	■
Year 9	WA	555.3	■	■	■
	Aust	552.0		■	■

Table 5: Mean achievement – WA and Australia – 2017/08 and 2017/16: Numeracy

Year	Jurisdiction	Mean score	WA/Aust 2017 comparison	Jurisdiction 2017/08 comparison	Jurisdiction 2017/16 comparison
Year 3	WA	402.3	■	△	■
	Aust	409.4		■	■
Year 5	WA	488.6	■	△	■
	Aust	493.8		△	■
Year 7	WA	551.3	■	△	■
	Aust	553.9		■	■
Year 9	WA	595.3	■	△	■
	Aust	591.9		■	■

The Western Australian mean scores in 2017 were close to those for 2016 for all measures and all years (3, 5, 7 and 9).

In 2017, WA's mean achievement was above that of the base year of 2008 (2011 for Writing) in 12 of the 20 assessments, the largest number of improved mean scores of any state. As in 2016, the mean achievement was below 2011 in Year 7 Writing. Areas of improvement are:

- Year 3 – Reading, Spelling, Grammar and Punctuation and Numeracy
- Year 5 – Reading, Spelling and Numeracy
- Year 7 – Spelling, Grammar and Punctuation and Numeracy
- Year 9 – Spelling and Numeracy.

Across Australia for the same period there were six assessments with means **above** the base year and one assessment with a mean **below** the base year (Writing).

In 2017 there were no statistically significant differences between the Australian and WA means.

The following graphs compare WA and Australian mean performances in Reading, Spelling, Grammar and Punctuation, Writing and Numeracy across Years 3, 5, 7 and 9 in 2008 (2011 for Persuasive Writing) and 2017.

Figure 1: WA and Australian mean performances across Years 3, 5, 7 and 9 – 2008 and 2017: Reading

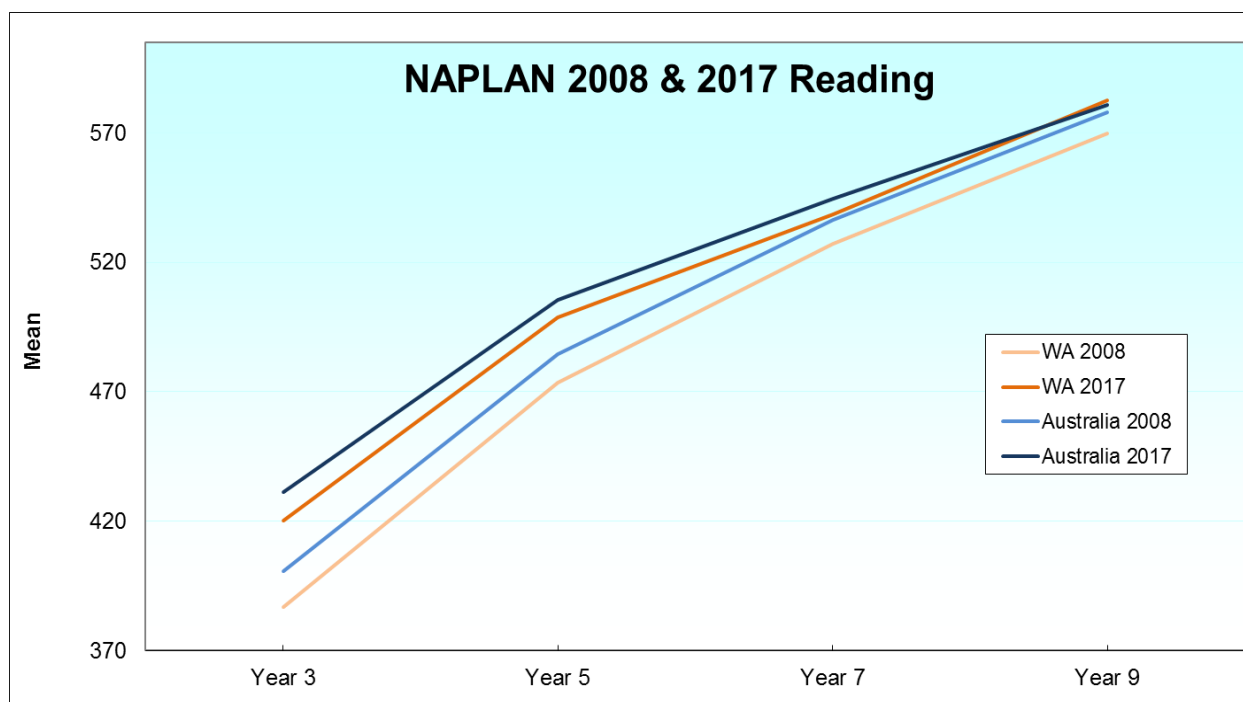


Figure 2: WA and Australian mean performances across Years 3, 5, 7 and 9 – 2011 and 2017: Writing

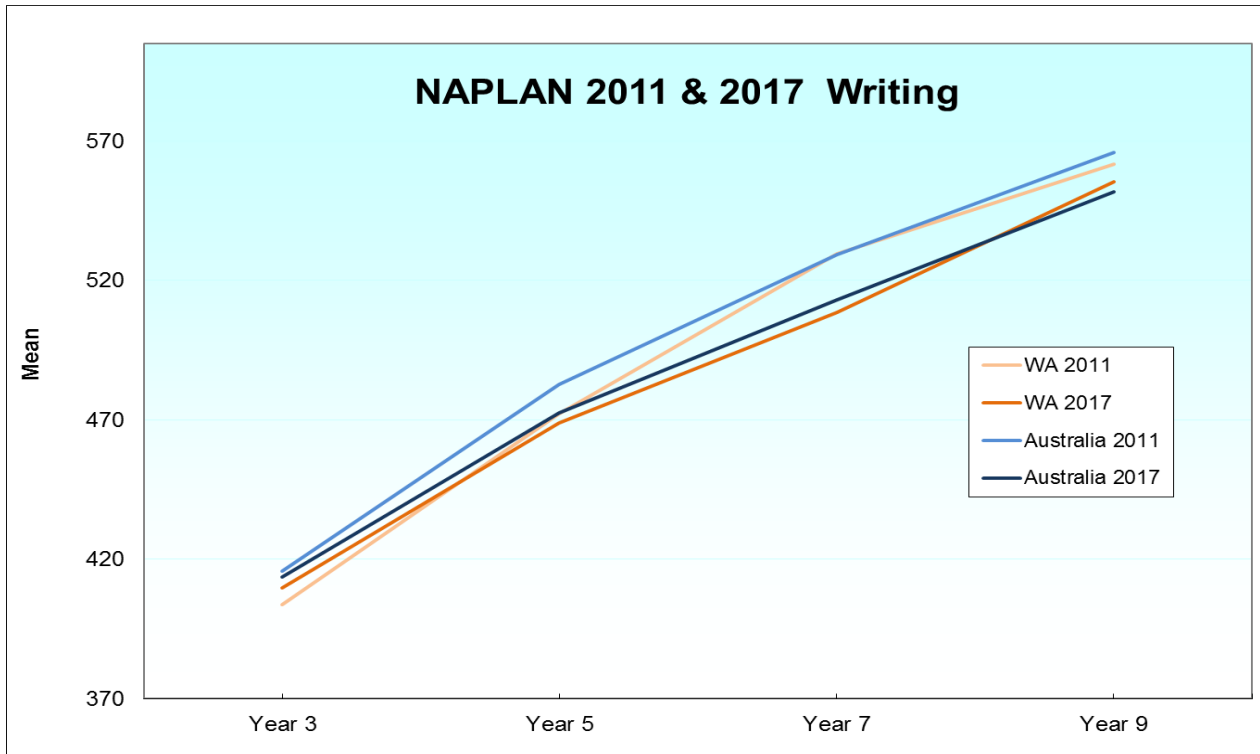


Figure 3: WA and Australian mean performances across Years 3, 5, 7 and 9 – 2008 and 2017: Spelling

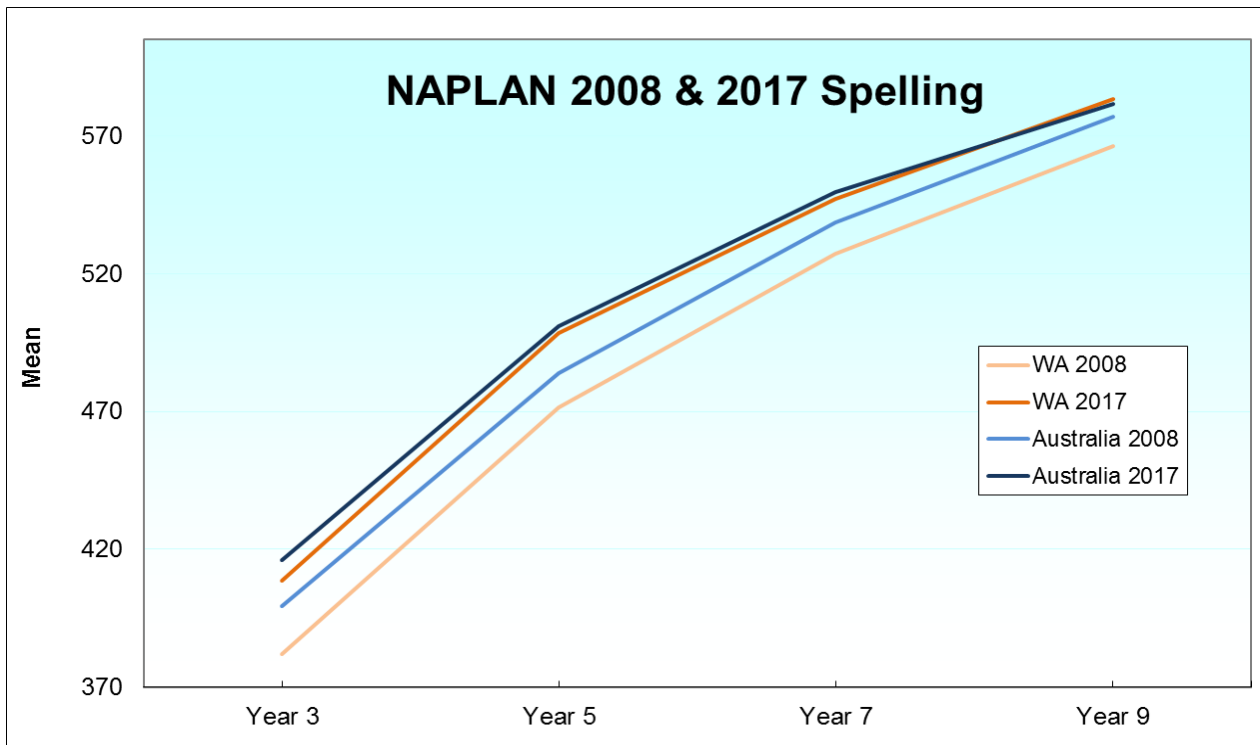


Figure 4: WA and Australian mean performances across Years 3, 5, 7 and 9 – 2008 and 2017: G&P

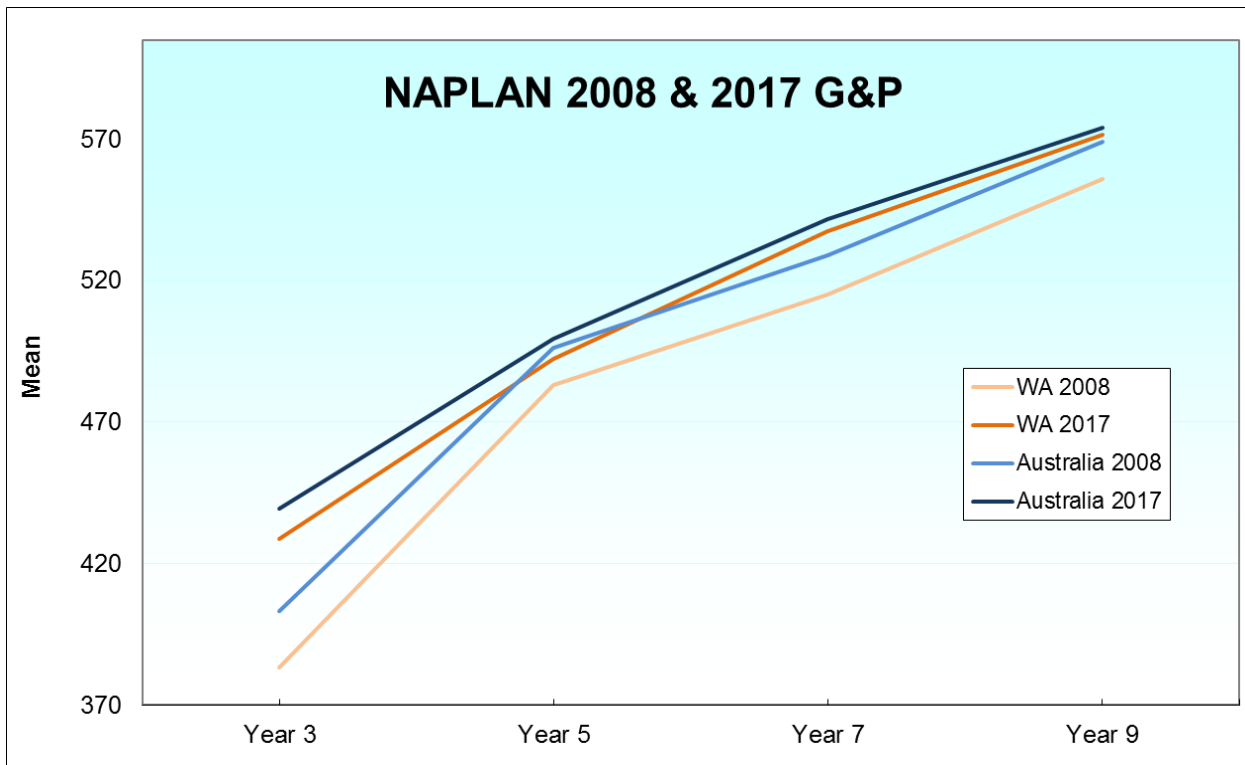
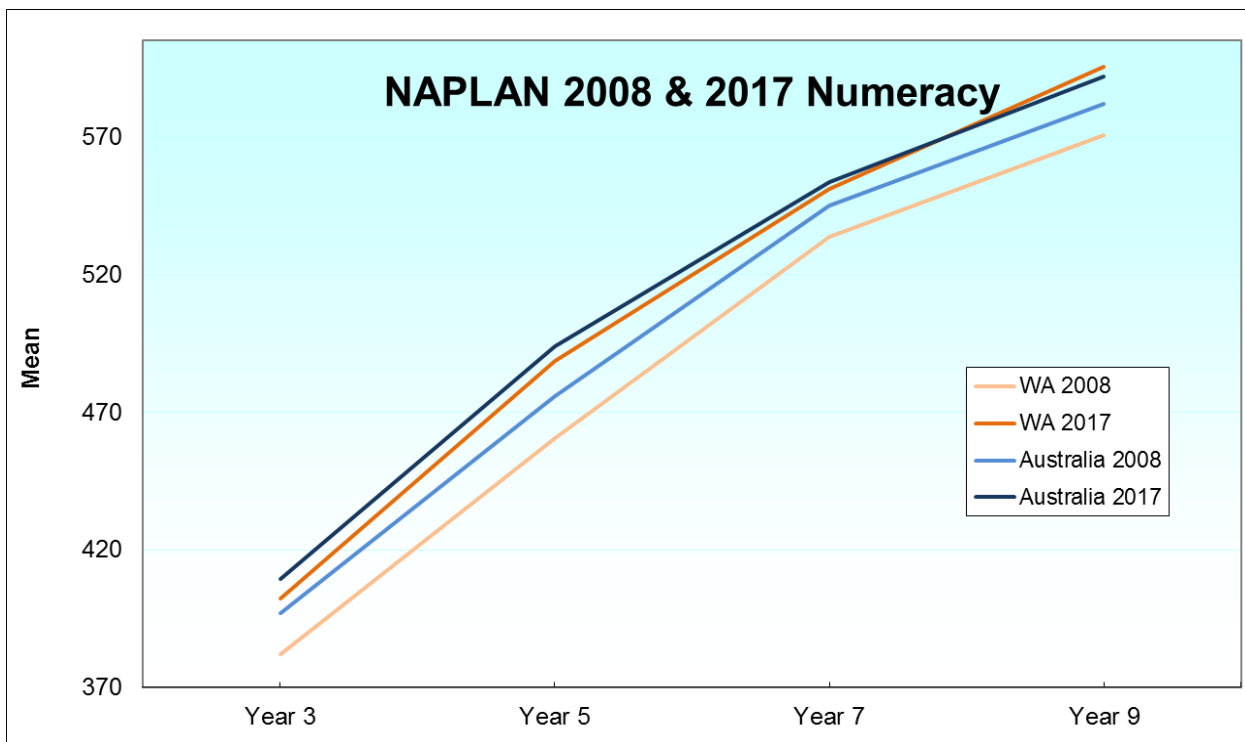


Figure 5: WA and Australian mean performances across Years 3, 5, 7 and 9 – 2008 and 2017 – Numeracy



Percentages at or above the National minimum standards

Tables 6–10 include the percentages of WA and Australian students achieving the national minimum standard in five NAPLAN measures in 2017, compared with 2008 and 2016 (except for Writing where the comparisons are with 2011 and 2016).

Table 6: WA and Australian minimum standard achievement (2017/08 and 2017/16): Reading

Year	Jurisdiction	Percentage at or above the national minimum standard	WA/Aust 2017 comparison	Jurisdiction 2017/08 comparison	Jurisdiction 2017/16 comparison
Year 3	WA	93.9	■	△	■
	Aust	94.9		△	■
Year 5	WA	93.0	■	△	■
	Aust	93.9		△	■
Year 7	WA	92.9	■	■	■
	Aust	94.0		■	■
Year 9	WA	92.7	■	■	■
	Aust	91.7		■	■

Table 7: WA and Australian minimum standard achievement (2017/08 and 2017/16): Spelling

Year	Jurisdiction	Percentage at or above the national minimum standard	WA/Aust 2017 comparison	Jurisdiction 2017/08 comparison	Jurisdiction 2017/16 comparison
Year 3	WA	92.6	■	△	■
	Aust	93.4		■	■
Year 5	WA	93.4	■	△	■
	Aust	93.8		■	■
Year 7	WA	92.4	■	■	■
	Aust	93.1		■	■
Year 9	WA	91.0	■	△	■
	Aust	90.5		■	■

Table 8: WA and Australian minimum standard achievement (2017/08 and 2017/16): Grammar/Punctuation

Year	Jurisdiction	Percentage at or above the national minimum standard	WA/Aust 2017 comparison	Jurisdiction 2017/08 comparison	Jurisdiction 2017/16 comparison
Year 3	WA	92.8	■	△	■
	Aust	94.4		△	■
Year 5	WA	90.7	■	■	■
	Aust	92.3		■	■
Year 7	WA	91.1	■	■	■
	Aust	92.2		■	■
Year 9	WA	89.8	■	■	■
	Aust	89.4		■	■

Table 9: WA and Australian minimum standard achievement (2017/08 and 2017/16): Writing

Year	Jurisdiction	Percentage at or above the national minimum standard	WA/Aust 2017 comparison	Jurisdiction 2017/11 comparison	Jurisdiction 2017/16 comparison
Year 3	WA	94.9	■	■	■
	Aust	95.5		■	■
Year 5	WA	91.4	■	■	■
	Aust	91.7		■	■
Year 7	WA	87.2	■	▽	■
	Aust	87.9		▽	■
Year 9	WA	83.8	■	■	■
	Aust	81.6		■	■

Table 10: WA and Australian minimum standard achievement (2017/08 and 2017/16): Numeracy

Year	Jurisdiction	Percentage at or above the national minimum standard	WA/Aust 2017 comparison	Jurisdiction 2017/08 comparison	Jurisdiction 2017/16 comparison
Year 3	WA	95.1	■	■	■
	Aust	95.4		■	■
Year 5	WA	95.0	■	△	■
	Aust	95.4		△	■
Year 7	WA	94.9	■	■	■
	Aust	95.4		■	■
Year 9	WA	96.4	■	△	■
	Aust	95.8		△	

2017 achievement compared with 2008 (2011 for Writing)

In 2017 the percentages of WA students achieving at or above the national minimum standards were **above** (statistically significant) those in the base year of 2008 in eight assessments: Year 3 Reading, Spelling and Grammar and Punctuation, Year 5 Reading, Spelling and Numeracy and Year 9 Spelling and Numeracy.

2017 achievement compared with 2016

The percentages of WA students in 2017 reaching the national minimum standards remained **close to** those in 2016 in most assessments, with no significant improvements or declines.

In 2017, WA's percentages at or above national minimum standard were **close to** the Australian percentages in all tests.

Sex

Tables 11–13 show the mean scores for males and females in WA and Australia on the Year 3, 5, 7 and 9 Reading, Writing and Numeracy assessments and within sex comparisons of the 2017 mean scores with the base year of 2008 (Writing 2011) and 2016.

Table 11: Achievement of students by Sex in Reading

Year	Jurisdiction and Sex	2017 Mean	Jurisdiction 2017/08 comparison	Jurisdiction 2017/16 comparison
3	WA female	430.4	△	■
	WA male	409.7	△	■
	Aust female	440.9	△	■
	Aust male	422.0	△	■
5	WA female	505.7	△	■
	WA male	492.5	△	■
	Aust female	511.9	△	■
	Aust male	499.8	△	■
7	WA female	545.5	■	■
	WA male	532.0	■	■
	Aust female	551.7	■	■
	Aust male	538.1	■	■
9	WA female	588.3	△	■
	WA male	576.9	■	■
	Aust female	587.6	■	■
	Aust male	574.5	■	■

Table 12: Achievement of students by Sex in Writing

Year	Jurisdiction and Sex	2017 Mean	Jurisdiction 2017/11 comparison	Jurisdiction 2017/16 comparison
3	WA female	422.5	■	▽
	WA male	396.9	■	■
	Aust female	426.4	■	■
	Aust male	401.3	■	■
5	WA female	481.6	■	■
	WA male	456.3	■	■
	Aust female	485.4	■	■
	Aust male	460.1	■	■
7	WA female	525.2	▽	■
	WA male	492.0	▽	■
	Aust female	529.7	▽	■
	Aust male	496.8	▽	■
9	WA female	573.5	■	■
	WA male	537.5	■	■
	Aust female	570.5	■	■
	Aust male	534.2	■	■

Table 13: Achievement of students by Sex in Numeracy

Year	Jurisdiction and Sex	2017 Mean	Jurisdiction 2017/08 comparison	Jurisdiction 2017/16 comparison
3	WA female	400.0	△	■
	WA male	404.5	△	■
	Aust female	406.2	■	■
	Aust male	412.5	■	■
5	WA female	484.4	△	■
	WA male	492.6	△	■
	Aust female	489.6	△	■
	Aust male	497.4	△	■
7	WA female	550.3	△	■
	WA male	552.4	■	■
	Aust female	551.8	△	■
	Aust male	555.8	■	■
9	WA female	591.0	△	■
	WA male	599.4	△	■
	Aust female	588.3	■	■
	Aust male	595.5	■	■

National data

Nationally, the mean scores for female students are **higher than** for male students in Years 3, 5, 7 and 9 for Reading, Spelling, Grammar and Punctuation and Writing.

Nationally, with the exception of the Northern Territory, the mean scores for female students in Numeracy are **lower than** for male students in Years 3, 5, 7 and 9.

For all Literacy tests, the percentages of female students who achieved at or above the national minimum standard were **higher than** for males. In Numeracy, however, the percentage of female students who achieved at or above the national minimum standard was **close to** that achieved by males.

WA data

Consistent with the national data, in WA:

- the mean scores for female students are **higher than** for male students in Years 3, 5, 7 and 9 for Reading and Writing (including Spelling and Grammar and Punctuation)
- the mean scores for female students are **lower than** for male students in Years 3, 5, 7 and 9 for Numeracy.

Reading

The 2016 and 2017 mean scores for WA males and the 2016 and 2017 mean scores for WA females were similar for all year levels.

The 2017 mean scores, compared with the 2008 scores, were:

- **higher** for both males and females in Years 3 and 5
- **higher** for females in Year 9.

Writing

The 2016 and 2017 mean scores for WA males and the 2016 and 2017 mean scores for WA females were similar for all year levels.

The 2017 mean scores, compared with the 2011 scores, were **lower** for both males and females in Year 7 (consistent with the national position).

Numeracy

The 2016 and 2017 mean scores for WA males and the 2016 and 2017 mean scores for WA females were similar for all year levels.

The 2017 mean scores, compared with the 2008 scores, were:

- **higher** for both males and females in Years 3, 5 and 9
- **higher** for females in Year 7.

Indigenous status

Tables 14–16 include the mean scores for Indigenous and non-Indigenous students in WA and Australia on the Year 3, 5, 7 and 9 Reading, Writing and Numeracy assessments and within Indigenous status comparisons of the 2017 mean scores with the base year of 2008 (Writing 2011) and 2016.

Table 14: Achievement of students by Indigenous status in Reading

Year	Jurisdiction and Indigenous status	2017 Mean	Jurisdiction 2017/08 comparison	Jurisdiction 2017/16 comparison
3	WA Indigenous	328.7	△	■
	WA non-Indigenous	427.2	△	■
	Aust Indigenous	352.8	△	■
	Aust non-Indigenous	436.3	△	■
5	WA Indigenous	405.5	△	■
	WA non-Indigenous	506.4	△	■
	Aust Indigenous	432.1	△	■
	Aust non-Indigenous	510.2	△	■
7	WA Indigenous	455.4	■	■
	WA non-Indigenous	545.1	■	■
	Aust Indigenous	476.0	■	■
	Aust non-Indigenous	548.9	■	■
9	WA Indigenous	504.2	■	■
	WA non-Indigenous	588.3	△	■
	Aust Indigenous	516.9	■	■
	Aust non-Indigenous	584.6	■	■

Table 15: Achievement of students by Indigenous status in Writing

Year	Jurisdiction and Indigenous status	2017 Mean	Jurisdiction 2017/08 comparison	Jurisdiction 2017/16 comparison
3	WA Indigenous	326.5	■	■
	WA non-Indigenous	416.3	■	■
	Aust Indigenous	348.4	■	■
	Aust non-Indigenous	417.8	■	■
5	WA Indigenous	383.1	■	■
	WA non-Indigenous	475.5	■	■
	Aust Indigenous	406.8	■	■
	Aust non-Indigenous	476.6	■	■
7	WA Indigenous	411.6	▽	■
	WA non-Indigenous	515.6	▽	■
	Aust Indigenous	435.4	▽	■
	Aust non-Indigenous	517.6	▽	■
9	WA Indigenous	451.6	■	■
	WA non-Indigenous	562.8	■	■
	Aust Indigenous	465.4	■	■
	Aust non-Indigenous	557.0	■	■

Table 16: Achievement of students by Indigenous status in Numeracy

Year	Jurisdiction and Indigenous status	2017 Mean	Jurisdiction 2017/08 comparison	Jurisdiction 2017/16 comparison
3	WA Indigenous	341.5	■	■
	WA non-Indigenous	413.8	△	■
	Aust Indigenous	336.8	■	■
	Aust non-Indigenous	406.1	■	■
5	WA Indigenous	410.5	△	■
	WA non-Indigenous	494.9	△	■
	Aust Indigenous	431.4	△	■
	Aust non-Indigenous	497.7	△	■
7	WA Indigenous	469.2	■	■
	WA non-Indigenous	558.0	△	■
	Aust Indigenous	484.7	■	■
	Aust non-Indigenous	558.0	■	■
9	WA Indigenous	524.3	△	■
	WA non-Indigenous	600.6	△	■
	Aust Indigenous	533.7	△	■
	Aust non-Indigenous	595.3	■	■

Consistent with the national data, in WA the mean scores for Indigenous students are **lower than** for non-Indigenous students in all assessment domains.

Reading

In 2017 the differences between Indigenous and non-Indigenous students in WA are substantial at all year levels. For example, 25 per cent of Indigenous students were below the national minimum standard in Year 3 Reading compared to 4.6 per cent of non-Indigenous students. When considering the geolocation of these Year 3 Indigenous students, this percentage ranged from 16 per cent in the metropolitan area (the highest percentage for this geolocation in Australia) to 46 per cent in the very remote areas.

The 2017 mean scores were for Indigenous students in WA:

- **below** national 2017 mean scores in all years
- **close to** state 2016 mean scores in all years
- **close to** state 2008 mean scores in Year 7 and 9
- **above** state 2008 mean scores in Years 3 and 5.

Writing

The 2017 mean scores were for Indigenous students in WA:

- **below** national 2017 mean scores in all years
- **close to** state 2016 mean scores in Years 3, 5, 7 and 9
- **below** state 2011 mean score in Year 7
- **close to** state 2011 mean scores in Years 3, 5 and 9.

Numeracy

The 2017 mean scores were for Indigenous students in WA:

- **below** national 2017 mean scores in all years
- **close to** state 2016 mean scores in Years 3, 5, 7 and 9
- **close to** state 2008 mean scores in Years 3 and 7
- **above** state 2008 means in Years 5 and 9.

Geolocation

Geolocation is based on the location of schools in relation to the access of the population to services and is used to disaggregate the data into Major Cities, Inner Regional, Outer Regional, Remote and Very Remote.

Across Australia, with only a few exceptions, the percentage of students working at or above the national minimum standards, as well as the mean performance, declines from Major Cities to Very Remote areas across all domains and year levels.

In 2017:

- the WA means and percentages at or above national minimum standards in very remote locations were **higher than** the national means and percentages for this geolocation across all year groups and all tests
- the WA means and percentages at or above the national minimum standard were **close to** those for 2016 in all geolocations across all year levels and test domains.

Figures 6–9 show the percentages of Western Australian students in each geolocation achieving the national minimum standard in each assessment by year group.

Figure 6: Year 3 WA students achieving national minimum standard by assessment domain: geolocation

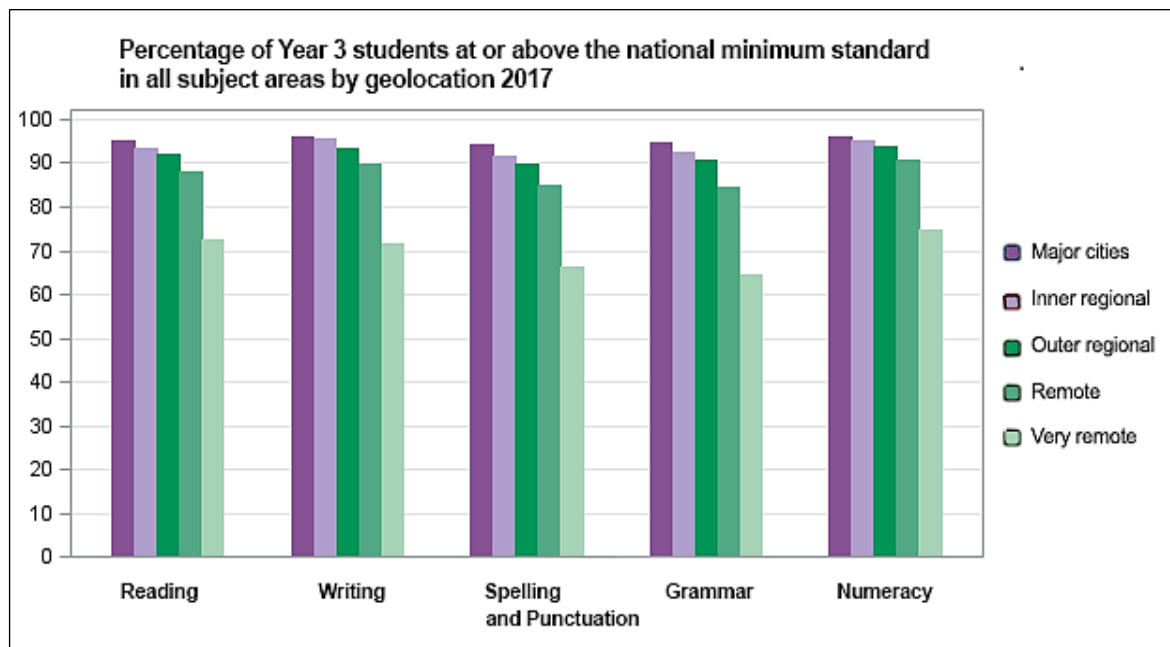


Figure 7: Year 5 WA students achieving national minimum standard by assessment domain: geolocation

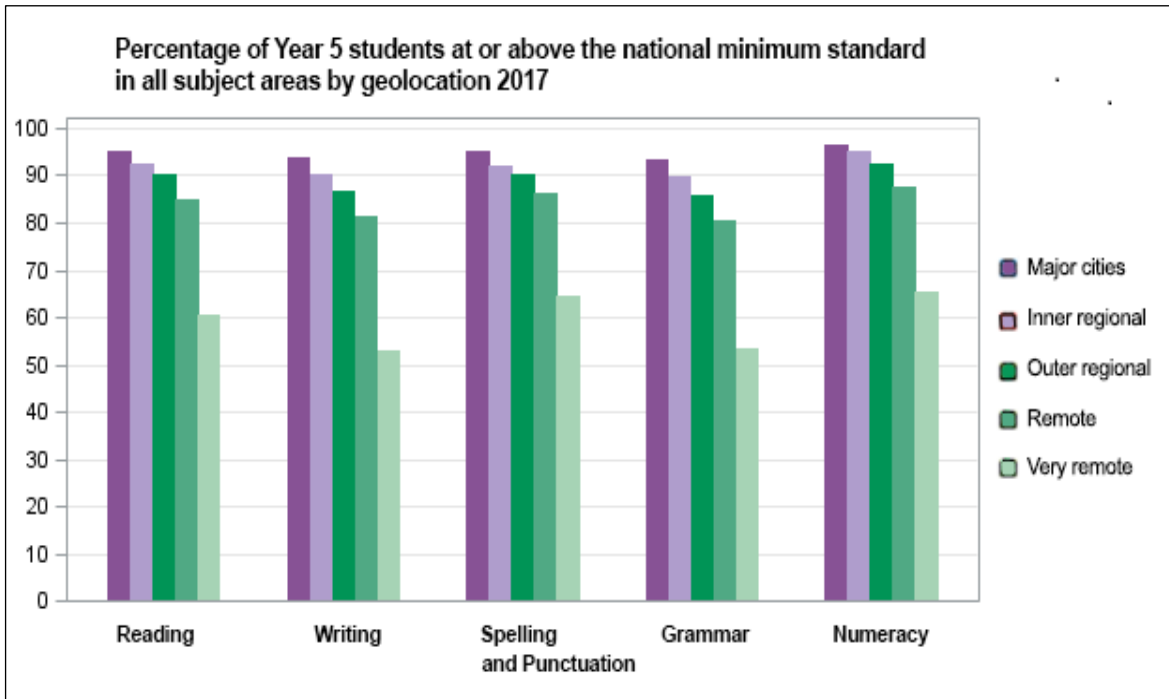


Figure 8: Year 7 WA students achieving national minimum standard by assessment domain: geolocation

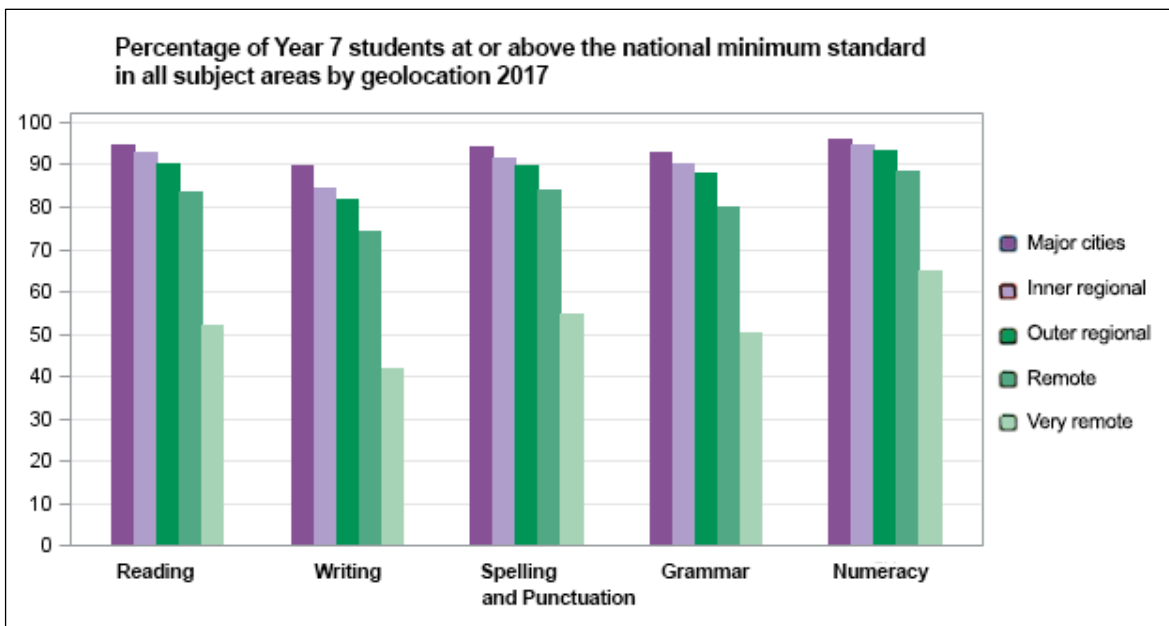
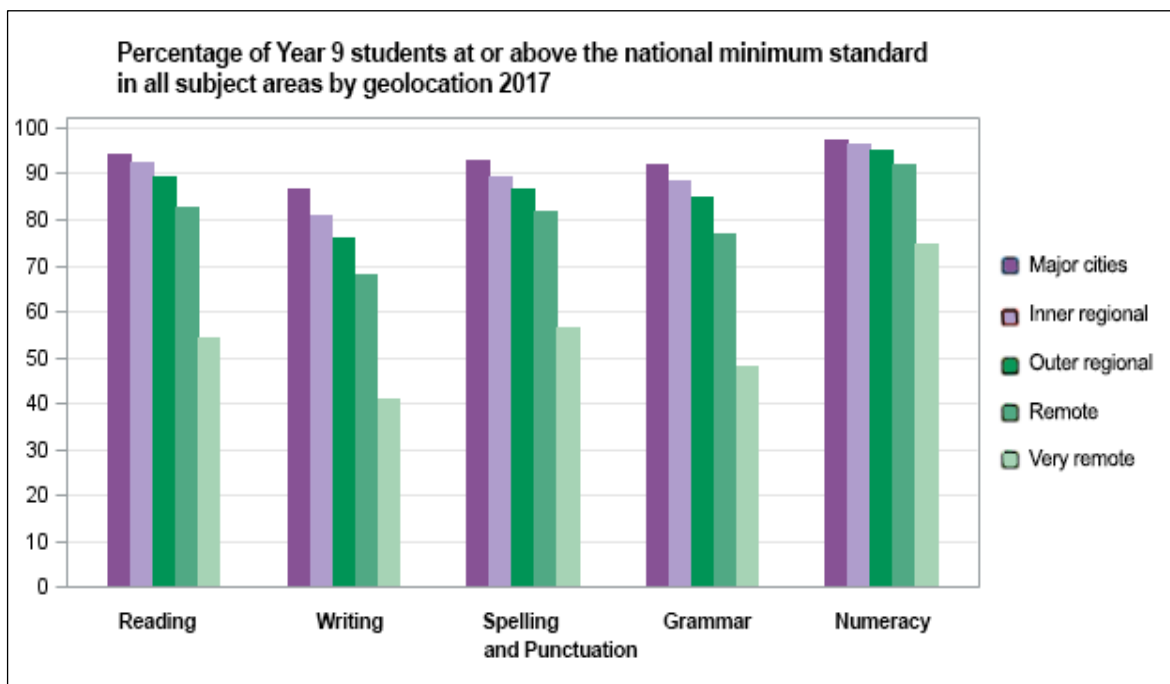


Figure 9: Year 9 WA students achieving national minimum standard by assessment domain: geolocation



When considering Indigenous status and geolocation together, while the same patterns of performance for geolocation alone are evident for both Indigenous and non-Indigenous students, the extent of the differences in achievement are more pronounced for Indigenous students.

WA's Indigenous students in remote and very remote areas in Years 3, 5, 7 and 9 have Reading and Numeracy means higher than the Australian means for Indigenous students in these geolocations, with the exception of Year 5 Reading in remote areas.

Improvements in mean performance over time which were noted for all WA students were also reflected in improvements at the geolocation level.

2008 – 2017 time series graphs

The time series graphs show trends in mean scale scores in Reading and Numeracy from 2008 to 2017 (Writing 2011 to 2017). The purpose of these graphs is to illustrate changes in the mean achievement scores of current Years 3, 5, 7 and 9 students over the testing period (2008–2017). The graphs compare the mean scores of all WA students with those of Indigenous and non-Indigenous students in Reading, Writing and Numeracy.

Discussion regarding changes in the means and percentages at or above the national minimum standards over the testing period was included earlier in this summary report.

Figures 10–13 show Mean scores for all WA Year 3 students and those of Indigenous and non-Indigenous students in Reading, Writing and Numeracy over the period 2008 to 2017 (2011–2017 for Writing)

Figure 10: Mean scores WA Year 3 students by indigenous status: Reading, Writing, Numeracy

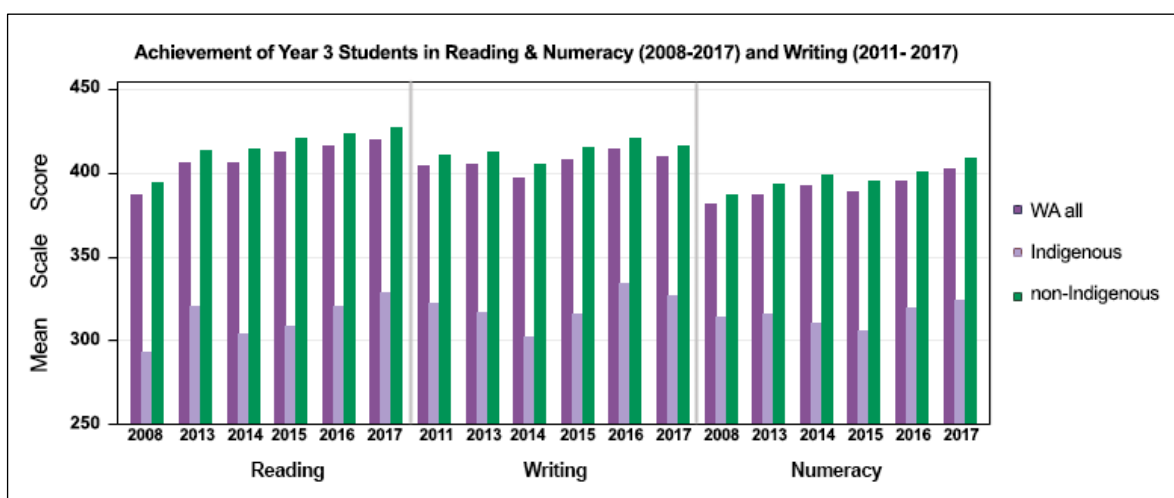


Figure 11: Mean scores WA Year 5 students by indigenous status: Reading, Writing, Numeracy

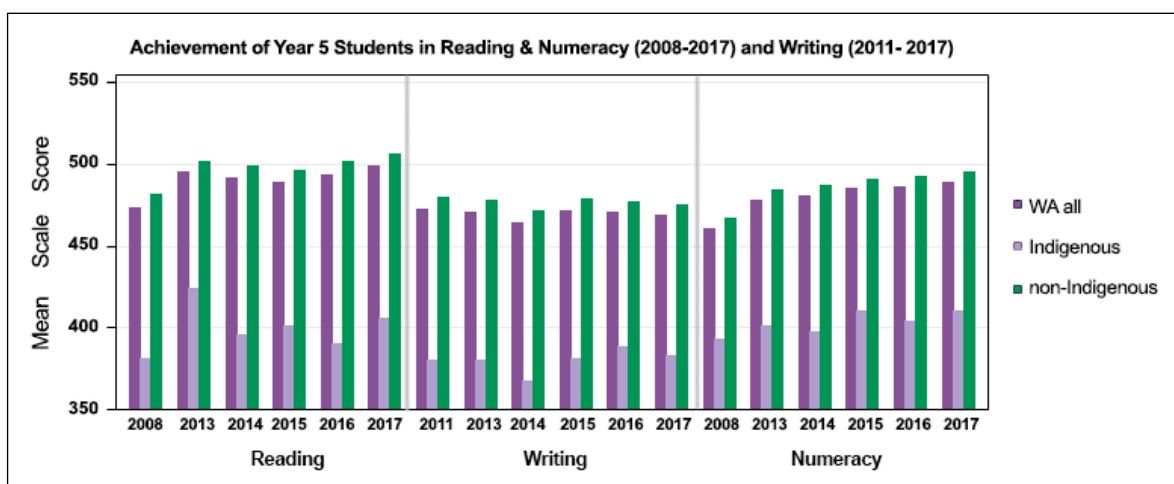


Figure 12: Mean scores WA Year 7 students by indigenous status: Reading, Writing, Numeracy

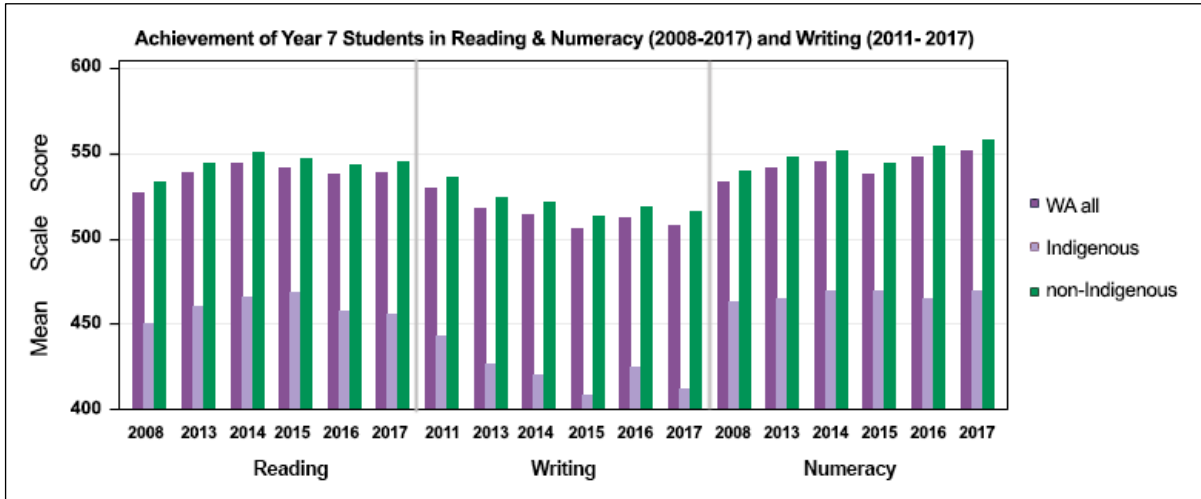
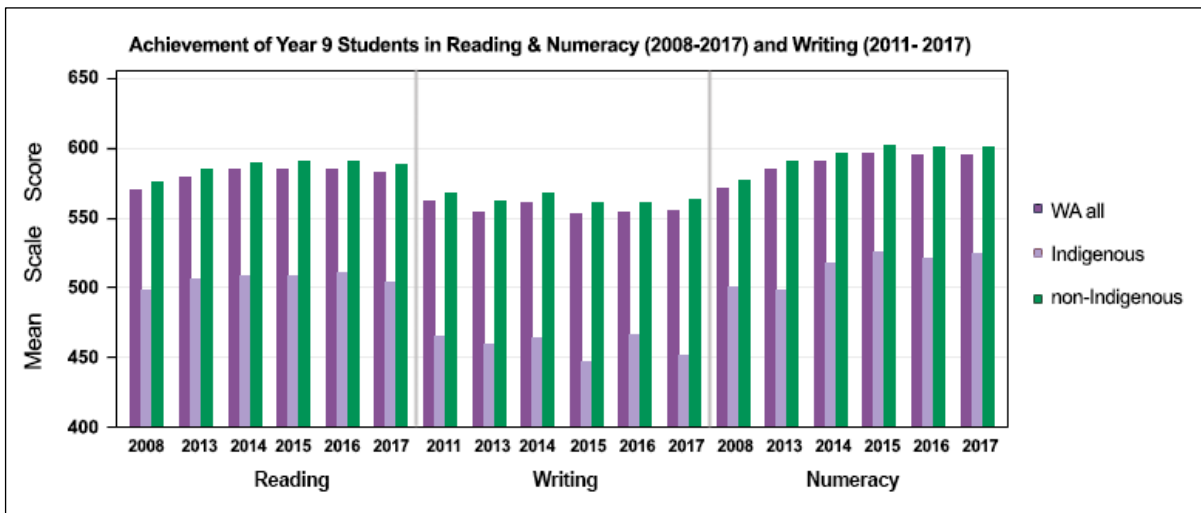


Figure 13: Mean scores WA Year 9 students by indigenous status: Reading, Writing, Numeracy



Cohort gains in reading, writing and numeracy:

Cohort gains are calculated as the difference in mean scores in NAPLAN cycles two years apart, four years apart or six years apart for the same cohort of students.

2017 Year 9 cohort

Table 17a Average cohort gain for 2017 Year 9 students

		WA	Aust
2 year gain 2015–2017	Reading	41.3	34.9
	Writing	49.3	41.4
	Numeracy	57.0	43.0
4 year gain 2013–2017	Reading	87.1	78.6
	Writing	84.9	74.1
	Numeracy	117.7	106.1
6 year gain 2011–2017	Reading	189.3	116.5
	Writing	151.4	136.1
	Numeracy	208.7	193.8

The data indicate that for current Year 9 students:

- The **two-year gains** in Reading, Writing and Numeracy (from Year 7 in 2015 to Year 9 in 2017) for WA students were **higher** than the Australian average.
- The **four-year gains** in Reading, Writing and Numeracy (from Year 5 in 2013 to Year 9 in 2017) for WA students were **higher** than the Australian average.
- The **six-year gains** in Reading, Writing and Numeracy (from Year 3 in 2011 to Year 9 in 2017) for WA students were **higher** than the Australian average.
- In Year 3 (2012), this WA cohort was **15.4** points **lower** than the Australian mean score for Reading, but by Year 9 (2017) the WA mean was **higher** than the Australian mean score by 1.4 points.
- In Year 3 (2013), this WA cohort was **12** points **lower** than the Australian mean score for Writing, but by Year 9 (2017) the WA mean was **higher** than the Australian mean score by 3.3 points.
- In Year 3 (2011), this WA cohort was **11.5** points **lower** than the Australian mean score for Numeracy, but by Year 9 (2017) the WA mean was **higher** than the Australian mean score by 3.4 points.

2017 Year 7 cohort

Table 17b Average gain for 2017 Year 7 students

		WA	Aust
2 year gain 2015–2017	Reading	49.7	46.2
	Writing	37.1	34.8
	Numeracy	66.6	61.4
4 year gain 2013–2017	Reading	132.5	125.6
	Writing	102.9	97.3
	Numeracy	164	157

The data indicate that for current Year 7 students:

- The **two-year gains** in Reading, Writing and Numeracy (from Year 5 in 2015 to Year 7 in 2017) for WA students were **higher** than the Australian average.
- The **four-year gains** in Reading, Writing and Numeracy (from Year 3 in 2013 to Year 7 in 2017) for WA students were **higher** than the Australian average.
- In Year 3 (2013), this WA cohort was 13 points **lower** than the Australian mean score for Reading but by Year 7 (2017) the WA mean was **lower** than the Australian mean score by 6.1 points.
- In Year 3 (2013), this WA cohort was 10.3 points **lower** than the Australian mean score for Writing but by Year 7 (2017) the WA mean was **lower** than the Australian mean score by 4.7 points.
- In Year 3 (2013), this WA cohort was 9.6 points **lower** than the Australian mean score for Numeracy but by Year 7 (2017) the WA mean was **lower** than the Australian mean score by 2.6 points.

2017 Year 5 cohort

Table 17c Average gain for 2017 Year 5 students

		WA	Aust
2 year gain 2015–2017	Reading	86.4	80.2
	Writing	60.5	56.2
	Numeracy	100	96

The data indicate that for current Year 5 students:

- The **two-year gains** in Reading (from Year 3 in 2015 to Year 5 in 2017) for WA students were **higher** than the Australian average in Reading, Writing and Numeracy.
- In Year 3 (2015), this WA cohort was **13** points **lower** than the Australian mean score for Reading, but by Year 5 (2017) the WA mean was **lower** than the Australian mean score by **6.8** points.
- In Year 3 (2015), this WA cohort was **8.2** **lower** points than the Australian mean score for Writing, but by Year 5 (2017) the WA mean was **lower** than the Australian mean score by **3.9** points.
- In Year 3 (2015), this WA cohort was **9.2** points **lower** than the Australian mean score for Numeracy, but by Year 5 (2017) the WA mean was **lower** than the Australian mean score by **5.2** points.

Appendix 1: Participation

Participating students include those who are exempt, who are deemed not to have reached the national minimum standard, together with those who sat the test. Students who are absent or have been withdrawn are considered not to have participated. The national report focuses on participation in Reading and Numeracy.

Across Australia the participation rates have shown a steady decline of about 2 per cent for Years 3, 5, 7 and 9 between 2008 and 2017. Participation rates are similar in Years 3, 5 and 7 and somewhat lower in Year 9. Due to a fall in absences and withdrawals between 2014 and 2016 the participation rates in Western Australia for Year 9 students are now the highest in Australia. In Years 3, 5 and 7, Western Australia has the second highest participation rate.

Participation rates for Indigenous students remain considerably lower than for non-Indigenous students in all years and in all tests. In 2017 this disparity ranged from 11 per cent less in Year 3 to 28 per cent less in Year 9. The participation rate of the non-Indigenous population is similar across all years, averaging around 97 per cent.

The percentages of exempted and withdrawn students in WA were again among the lowest in the country and well below the Australian averages. Withdrawn students contribute about one per cent to non-participation in WA. There is very little difference in the rates of withdrawal or exemption of Indigenous and non-Indigenous students.

Figure 14: Participation rates and percentages WA and Australian students NAPLAN 2017 by Year group

		Year 3				Year 5				Year 7				Year 9			
Reading		P	A	W	E	P	A	W	E	P	A	W	E	P	A	W	E
	WA	95.3	2.9	1.9	1.4	95.9	2.8	1.3	1.2	95.4	4.0	0.5	1.2	94.1	5.6	0.3	1.2
	Aust	94.8	2.3	2.8	1.9	95.4	2.3	2.3	1.9	94.5	3.5	2.1	1.8	91.3	6.0	2.7	2.0
Writing		P	A	W	E	P	A	W	E	P	A	W	E	P	A	W	E
	WA	95.3	2.9	1.9	1.5	95.8	2.9	1.3	1.2	95.5	3.9	0.5	1.2	94.2	5.5	0.3	1.2
	Aust	94.7	2.4	2.9	1.9	95.3	2.4	2.3	1.9	94.6	3.4	2.1	1.8	91.6	5.8	2.6	2.0
Spelling		P	A	W	E	P	A	W	E	P	A	W	E	P	A	W	E
	WA	95.5	2.7	1.8	1.4	96.0	2.7	1.3	1.2	95.8	3.6	0.5	1.2	94.4	5.3	0.3	1.2
	Aust	94.9	2.2	2.8	1.9	95.5	2.2	2.3	1.9	94.8	3.2	2.0	1.8	91.8	5.6	2.6	2.0
G&P		P	A	W	E	P	A	W	E	P	A	W	E	P	A	W	E
	WA	95.5	2.7	1.8	1.4	96.0	2.7	1.3	1.2	95.8	3.6	0.5	1.2	94.4	5.3	0.3	1.2
	Aust	94.9	2.2	2.8	1.9	95.5	2.2	2.3	1.9	94.8	3.2	2.0	1.8	91.8	5.6	2.6	2.0
Numeracy		P	A	W	E	P	A	W	E	P	A	W	E	P	A	W	E
	WA	95.0	3.2	1.7	1.4	95.5	3.3	1.2	1.2	95.1	4.4	0.5	1.2	93.7	6.0	0.3	1.2
	Aust	94.6	2.7	2.7	1.9	95.0	2.8	2.2	1.8	94.0	4.0	2.1	1.7	90.7	6.6	2.7	2.0

Key
P: Participation
A: Absent
W: Withdrawn
E: Exempt

Appendix 2: Glossary

The following definitions of terms used in this report are found at:

http://www.nap.edu.au/resources/2015_NAPLAN_national_report.pdf

Absent students

Absent students are students who did not sit the tests because they were not present at school when the test was administered or were unable to sit the test as a result of an accident or mishap.

Assessed students

Those students for which a NAPLAN result is reported.

Band

The NAPLAN assessment scale is divided into ten bands, used to report student progress through Years 3, 5, 7 and 9. Band 1 is the lowest band and band 10 is the highest band. A band contains a range of scores and is not a specific point.

Cohort

A group of students.

Domain

A domain is the term used to describe a subject or learning area that is the focus of a test. The five learning areas tested in NAPLAN are reading, writing, spelling, grammar and punctuation, and numeracy. These are called test domains. There are three domains for sample assessments: civics and citizenship, information and communications technology literacy and science literacy.

Exempt students

Exempt students are not assessed and are deemed not to have met the national minimum standard. Students with a language background other than English, who arrived from overseas less than a year before the tests, and students with significant intellectual disabilities or co-existing conditions may be exempted from NAP testing.

Gain

Gain refers to the difference in students' achievement levels between two testing years.

Geolocation

The MCEECDYA Schools geographic location classification system is based on the locality of individual schools and is used to disaggregate data according to metropolitan, provincial, remote and very remote.

Mean

The average result in an analysed data set.

NAPLAN

NAPLAN stands for the National Assessment Program — Literacy and Numeracy. NAPLAN is a series of common literacy and numeracy tests conducted annually across Australia for all students in Years 3, 5, 7 and 9.

National minimum standard

The national minimum standards represent minimum performance standards in literacy and numeracy for a given year level, below which students will have difficulty progressing satisfactorily at school.

Participation

In NAP tests, participation rates are calculated as all assessed and exempt students as a percentage of the total number of students in the year level, as reported by schools, which includes those absent and withdrawn.

Statistically significant

The probability that a result may have occurred by chance. It is generally used with data collected from samples. If a difference between two groups is statistically significant, then the observed difference is likely to also occur in the entire populations from which the samples were drawn, and unlikely to have occurred because of some artefact of sampling.

Withdrawn students

Students may be withdrawn from the testing program by their parent/carer. Withdrawals are intended to address issues such as religious beliefs and philosophical objections to testing.