



## **National Assessment Program Literacy and Numeracy 2016 Final Report**

The National Assessment Program – Literacy and Numeracy (NAPLAN) was held in May 2016 for all students in Years 3, 5, 7 and 9.

The *NAPLAN National Report* was released by the Australian Curriculum, Assessment and Reporting Authority (ACARA) on Wednesday, 13 December 2016. It is now available in PDF format on ACARA's website ([www.nap.edu.au](http://www.nap.edu.au)).

The PDF 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 PDF 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 sub-group data by State/Territory.

The section on cohort gain includes disaggregation by gender, 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 performance is based on all WA schools.

From a contextual perspective it should be noted that:

- The Narrative Writing genre was assessed for the first time since 2010. Comparisons with performance in the years before 2011 are not possible.
- Comparisons of performances over time are made between 2016 and 2008 for Reading, Spelling, Grammar and Punctuation and Numeracy, while Writing is compared to the base year of 2011.

### **Summary of NAPLAN 2016 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 <b>substantially above and is statistically significantly different</b> from the base year (or previous year) for this state/territory.
△	Average achievement is <b>above and is statistically significantly different</b> from the base year (or previous year) for this state/territory.
■	Average achievement is <b>close to or not statistically different</b> from the base year (or previous year) for this state/territory.
▽	Average achievement is <b>below and is statistically significantly different</b> from the base year (or previous year) for this state/territory.
▼	Average achievement is <b>substantially below and is statistically significantly different</b> 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 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 sub-groups e.g. girl’s performance compared with that of boys, and participation categories, where comparative statistical significance information has not been provided.

## Means

Table 1 includes the mean achievement of WA and Australian students on five NAPLAN measures in 2016, compared with 2008 and 2015 (except for Writing where the comparisons are with 2011 and 2015).

**Table 1: Mean achievement of WA and Australian students in five NAPLAN measures in 2016, compared with 2008 and 2015 except for Writing where the comparisons are with 2011 and 2015.**

### Reading

Year	Jurisdiction	Mean score	WA/Aust 2015 comparison	Jurisdiction 2015/08 comparison	Jurisdiction 2016/15 comparison
Year 3	WA	415.9	■	△	■
	Aust	425.6		△	■
Year 5	WA	493.7	■	△	■
	Aust	501.5		△	■
Year 7	WA	537.6	■	■	■
	Aust	540.8		■	■
Year 9	WA	584.9	■	△	■
	Aust	580.8		■	■

### Spelling

Year	Jurisdiction	Mean score	WA/Aust 2016 comparison	Jurisdiction 2016/08 comparison	Jurisdiction 2016/15 comparison
Year 3	WA	412.2	■	△	■
	Aust	419.8		△	■
Year 5	WA	488.4	■	△	■
	Aust	492.9		■	■
Year 7	WA	540.3	■	■	■
	Aust	542.9		■	■
Year 9	WA	582.7	■	△	■
	Aust	580.3		■	■

## Grammar and Punctuation

Year	Jurisdiction	Mean score	WA/Aust 2016 comparison	Jurisdiction 2016/08 comparison	Jurisdiction 2016/15 comparison
Year 3	WA	425.2	■	△	■
	Aust	435.8		△	
Year 5	WA	497.8	■	■	■
	Aust	504.9		■	
Year 7	WA	536.8	■	△	■
	Aust	540.0		■	
Year 9	WA	572.2	■	△	■
	Aust	569.3		■	

## Writing

Year	Jurisdiction	Mean score	WA/Aust 2016 comparison	Jurisdiction 2016/08 comparison	Jurisdiction 2016/15 comparison
Year 3	WA	414.7	■	■	■
	Aust	420.7		■	
Year 5	WA	470.3	■	■	■
	Aust	475.6		■	
Year 7	WA	512.3	■	▽	■
	Aust	515.0		■	
Year 9	WA	554.4	■	■	■
	Aust	549.1		▽	

## Numeracy

Year	Jurisdiction	Mean score	WA/Aust 2016 comparison	Jurisdiction 2016/08 comparison	Jurisdiction 2016/15 comparison
Year 3	WA	395.0	■	■	■
	Aust	402.0		■	
Year 5	WA	486.2	■	△	■
	Aust	493.1		△	
Year 7	WA	548.1	■	△	■
	Aust	549.7		■	
Year 9	WA	594.9	■	△	■
	Aust	588.9		■	

The Western Australian mean scores in 2016 were close to those for 2015 for all measures and all years (3, 5, 7 and 9).

In 2016, 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. Mean achievement was below 2011 in Year 7 Writing. Areas of improvement are:

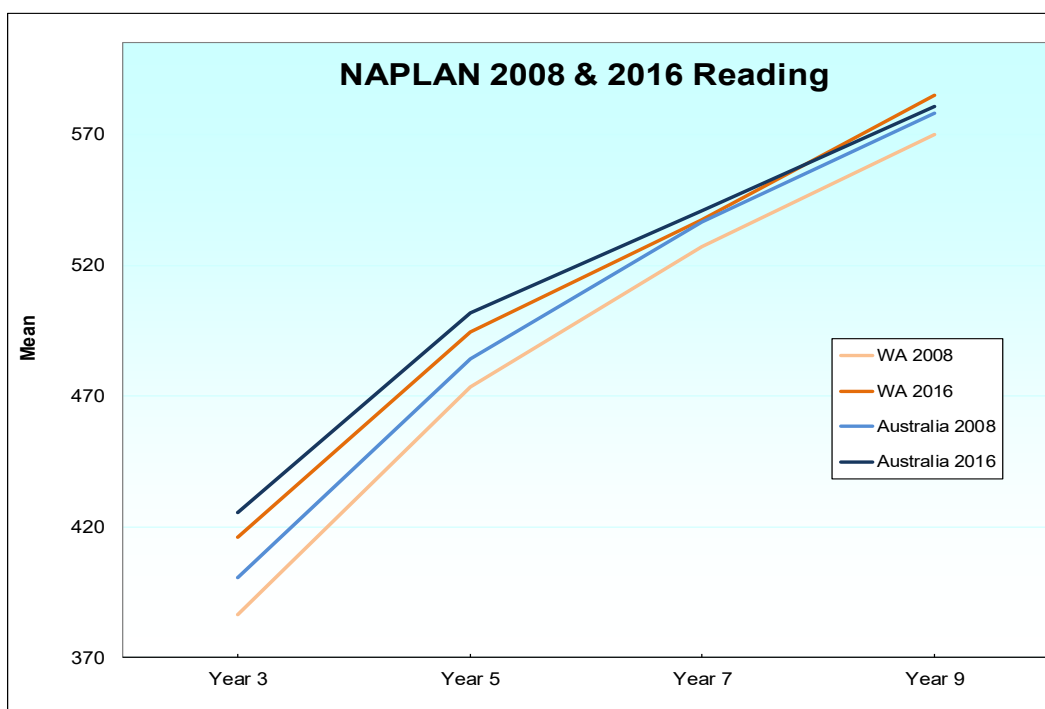
- Year 3 - Reading, Spelling, Grammar and Punctuation;
- Year 5 - Reading, Spelling and Numeracy;
- Year 7 - Grammar and Punctuation and Numeracy;
- Year 9 - Reading, Spelling, Grammar and Punctuation and Numeracy.

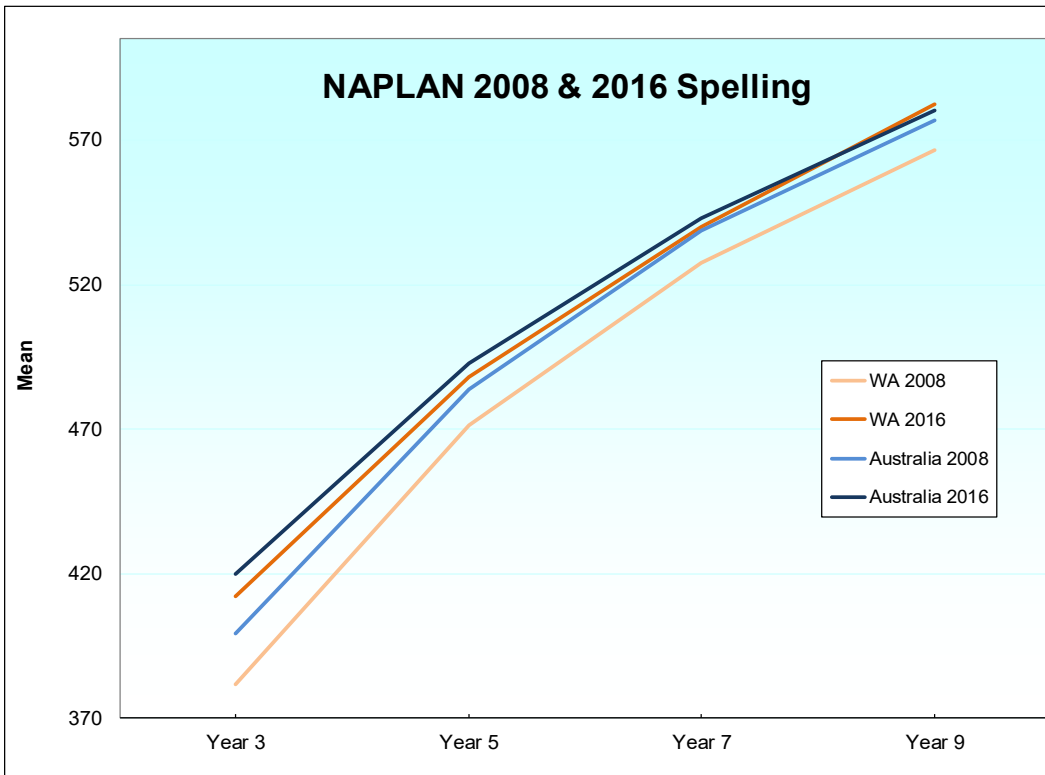
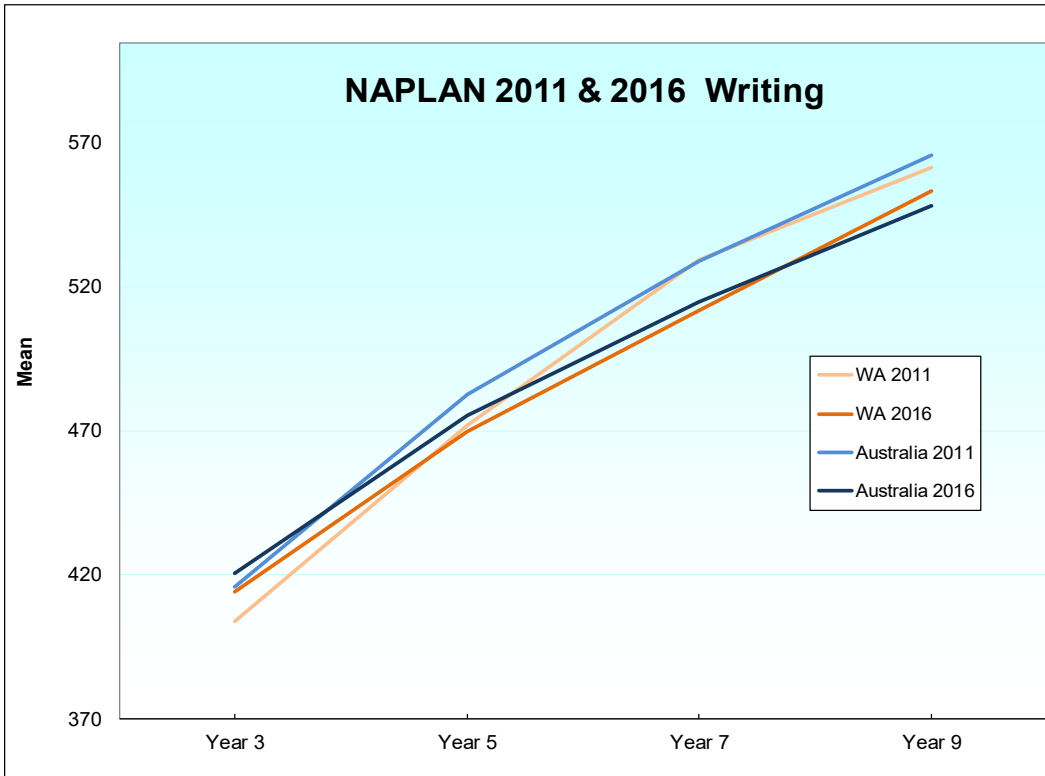
Across Australia for the same period there were five assessments with means **above** the base year and one assessment with a mean **below** the base year.

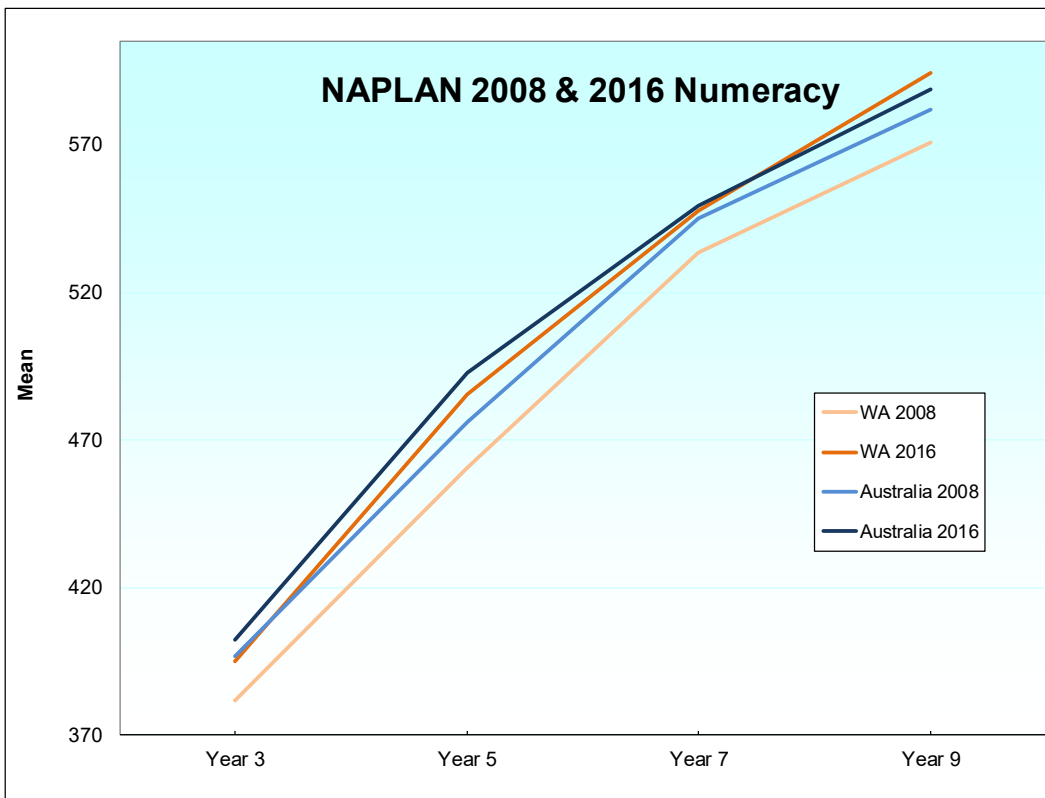
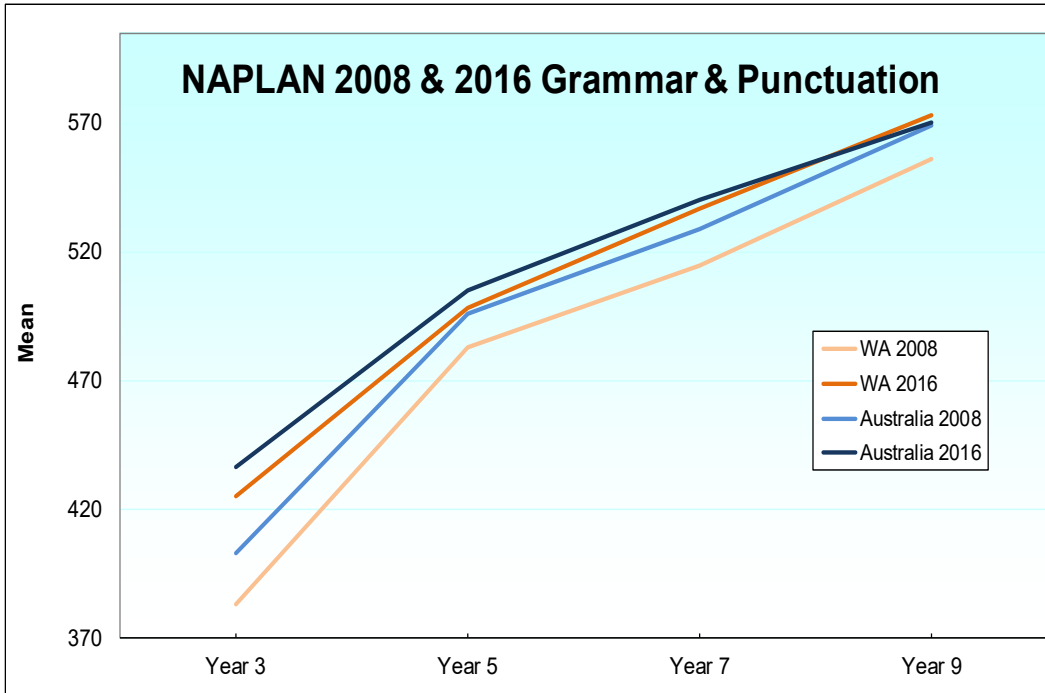
In 2016 there were no statistically significant differences between the Australian and WA means.

The following graphs compare Western Australian 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 2016.

**Figure 1: comparisons of WA and Australian mean performances across Years 3, 5, 7 and 9 in 2008 and 2016**







## Percentages at or above the national minimum standards

Table 2 includes the percentages of WA and Australian students achieving the national minimum standard in five NAPLAN measures in 2016, compared with previous assessments.

**Table 2: Percentages of WA and Australian students achieving the national minimum standard in five NAPLAN measures in 2016, compared with 2008 and 2015 (except for Writing where the comparisons are with 2011 and 2015)**

### Reading

Year	Jurisdiction	Percentage at or above the national minimum standard	WA/Aust 2016 comparison	Jurisdiction 2016/08 comparison	Jurisdiction 2016/15 comparison
Year 3	WA	93.8	■	△	■
	Aust	95.1		△	■
Year 5	WA	91.4	■	△	■
	Aust	93.0		■	■
Year 7	WA	93.8	■	■	■
	Aust	94.6		■	■
Year 9	WA	94.0	■	△	■
	Aust	92.8		■	■

### Spelling

Year	Jurisdiction	Percentage at or above the national minimum standard	WA/Aust 2016 comparison	Jurisdiction 2016/08 comparison	Jurisdiction 2016/15 comparison
Year 3	WA	93.1	■	△	■
	Aust	94.0		■	■
Year 5	WA	92.2	■	■	■
	Aust	92.8		■	■
Year 7	WA	92.2	■	■	■
	Aust	93.1		■	■
Year 9	WA	90.7	■	■	■
	Aust	90.4		■	■



## Grammar and Punctuation

Year	Jurisdiction	Percentage at or above the national minimum standard	WA/Aust 2016 comparison	Jurisdiction 2016/08 comparison	Jurisdiction 2016/15 comparison
Year 3	WA	94.3	■	▲	■
	Aust	95.5		△	■
Year 5	WA	92.5	■	△	■
	Aust	93.7		■	■
Year 7	WA	91.5	■	△	■
	Aust	92.6		■	■
Year 9	WA	91.3	■	△	■
	Aust	90.5		■	■

## Writing

Year	Jurisdiction	Percentage at or above the national minimum standard	WA/Aust 2016 comparison	Jurisdiction 2016/11 comparison	Jurisdiction 2016/15 comparison
Year 3	WA	95.8	■	■	■
	Aust	96.3		■	■
Year 5	WA	92.9	■	■	■
	Aust	93.2		■	■
Year 7	WA	89.1	■	■	■
	Aust	89.7		■	■
Year 9	WA	85.2	■	■	■
	Aust	82.9		▽	■

## Numeracy

Year	Jurisdiction	Percentage at or above the national minimum standard	WA/Aust 2016 comparison	Jurisdiction 2016/08 comparison	Jurisdiction 2016/15 comparison
Year 3	WA	95.0	■	■	■
	Aust	95.5		■	■
Year 5	WA	93.4	■	△	■
	Aust	94.3		■	■
Year 7	WA	95.1	■	■	■
	Aust	95.5		■	■
Year 9	WA	95.9	■	△	■

### 2016 achievement compared with 2008 (2011 for Writing)

In 2016 the percentages of Western Australian students achieving at or above the national minimum standards were **above** (statistically significant) those in the base year of 2008 in nine assessments: Year 3 Reading, Spelling and Grammar and Punctuation, Year 5 Grammar and Punctuation and Numeracy, Year 7 Grammar and Punctuation and Year 9 Reading, Grammar and Punctuation and Numeracy.

### 2016 achievement compared with 2015

The percentages of WA's students in 2016 reaching the national minimum standards remained **close to** those in 2015 in most assessments, with no significant improvements or declines.

In 2016, WA's percentages at or above national minimum standard were **close to** the Australian percentages in all tests.

## Gender

Table 3 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 gender comparisons of the 2016 mean scores with the base year of 2008 (Writing 2011) and 2015.

**Table 3: Achievement of students in Reading, Writing and Numeracy by Gender**

### Reading

Year	Jurisdiction and Gender	2016 Mean	Jurisdiction 2016/08 comparison	Jurisdiction 2016/15 comparison
3	WA female	426.8	△	■
	WA male	402.5	△	■
	Aust female	435.8	△	■
	Aust male	415.8	△	■
5	WA female	501.6	△	■
	WA male	486.1	△	■
	Aust female	508.7	△	■
	Aust male	494.6	△	■
7	WA female	541.9	■	■
	WA male	533.6	■	■
	Aust female	545.5	■	■
	Aust male	536.4	■	■
9	WA female	587.9	△	■
	WA male	582.0	△	■
	Aust female	585.2	■	■
	Aust male	576.6	■	■

## Writing

Year	Jurisdiction and Gender	2016 Mean	Jurisdiction 2016/11 comparison	Jurisdiction 2016/15 comparison
3	WA female	427.7	■	■
	WA male	402.2	■	■
	Aust female	433.3	■	■
	Aust male	408.7	■	■
5	WA female	483.2	■	■
	WA male	457.9	■	■
	Aust female	488.3	■	■
	Aust male	463.5	■	■
7	WA female	529.0	▽	■
	WA male	496.5	▽	■
	Aust female	531.0	▽	■
	Aust male	499.8	■	■
9	WA female	572.0	■	■
	WA male	537.5	■	■
	Aust female	567.1	▽	■
	Aust male	532.0	■	■

## Numeracy

Year	Jurisdiction and Gender	2016 Mean	Jurisdiction 2016/08 comparison	Jurisdiction 2016/15 comparison
3	WA female	391.2	■	■
	WA male	398.7	△	■
	Aust female	396.9	■	■
	Aust male	407.0	■	■
5	WA female	482.5	△	■
	WA male	489.7	△	■
	Aust female	488.6	△	■
	Aust male	497.4	△	■
7	WA female	544.5	△	■
	WA male	555.1	■	■
	Aust female	546.8	■	■
	Aust male	552.4	■	■
9	WA female	590.1	△	■
	WA male	599.5	△	■
	Aust female	585.1	■	■
	Aust male	592.5	■	■

## 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, in Numeracy, the mean scores for female students 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 Persuasive Writing (and 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

In WA the 2015 and 2016 mean scores for males and the 2015 and 2016 mean scores for females were similar for all year levels.

The 2016 mean scores, compared with the 2008 scores, were:

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

## Writing

In WA the 2015 and 2016 mean scores for males and the 2015 and 2016 mean scores for females were similar for all year levels.

The 2016 mean scores, compared with the 2011 scores, were:

- **lower** for both males and females in Year 7 (consistent with the national position).

## Numeracy

In WA the 2015 and 2016 mean scores for males and the 2015 and 2016 mean scores for females were similar for all year levels.

The 2016 mean scores, compared with the 2008 scores, were:

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

## Indigenous status

Table 4 includes 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 2016 mean scores with the base year of 2008 (Writing 2011) and 2015.

**Table 4: Achievement of students by Indigenous status in Reading, Persuasive Writing and Numeracy**

### Reading

Year	Jurisdiction and Indigenous status	2016 Mean	Jurisdiction 2016/08 comparison	Jurisdiction 2016/15 comparison
3	WA Indigenous	319.9	△	■
	WA Non-Indigenous	423.2	△	■
	Aust Indigenous	346.5	△	■
	Aust Non-Indigenous	430.5	△	■
5	WA Indigenous	390.6	■	■
	WA Non-Indigenous	501.7	△	■
	Aust Indigenous	422.1	△	■
	Aust Non-Indigenous	506.2	△	■
7	WA Indigenous	457.4	■	■
	WA Non-Indigenous	543.3	■	■
	Aust Indigenous	476.2	■	■
	Aust Non-Indigenous	544.6	■	■
9	WA Indigenous	510.6	■	■
	WA Non-Indigenous	590.7	△	■
	Aust Indigenous	520.2	■	■
	Aust Non-Indigenous	584.3	■	■

### Writing

Year	Jurisdiction and Indigenous status	2016 Mean	Jurisdiction 2016/08 comparison	Jurisdiction 2016/15 comparison
3	WA Indigenous	334.3	■	△
	WA Non-Indigenous	420.8	■	■
	Aust Indigenous	358.3	■	■
	Aust Non-Indigenous	424.6	■	■
5	WA Indigenous	388.8	■	■
	WA Non-Indigenous	476.7	■	■
	Aust Indigenous	412.4	■	■
	Aust Non-Indigenous	479.5	■	■

7	WA Indigenous	424.3	▽	■
	WA Non-Indigenous	518.6	▽	■
	Aust Indigenous	442.7	■	■
	Aust Non-Indigenous	519.3	▽	■
9	WA Indigenous	465.8	■	△
	WA Non-Indigenous	561.3	■	■
	Aust Indigenous	474.3	■	■
	Aust Non-Indigenous	553.5	▽	■

### Numeracy

Year	Jurisdiction and Indigenous status	2016 Mean	Jurisdiction 2016/08 comparison	Jurisdiction 2016/15 comparison
3	WA Indigenous	319.4	■	△
	WA Non-Indigenous	400.8	△	■
	Aust Indigenous	336.8	■	■
	Aust Non-Indigenous	406.1	■	■
5	WA Indigenous	404.2	■	■
	WA Non-Indigenous	492.6	△	■
	Aust Indigenous	426.0	△	■
	Aust Non-Indigenous	497.1	△	■
7	WA Indigenous	424.3	▽	■
	WA Non-Indigenous	518.6	▽	■
	Aust Indigenous	479.8	■	■
	Aust Non-Indigenous	553.7	■	■
9	WA Indigenous	526.1	△	■
	WA Non-Indigenous	601.5	△	■
	Aust Indigenous	526.6	■	■
	Aust Non-Indigenous	592.5	■	■

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 2016 the differences between Indigenous and non-Indigenous students in WA are substantial at all year levels. For example, in Year 3 Reading 28.7% of Indigenous students were below the national minimum standard compared to 4.5% of non-Indigenous students. When considering the geolocation of these Year 3 Indigenous students, this percentage ranged from 18% in the metropolitan area (the highest percentage for this geolocation in Australia) to 51.2% in the very remote areas.

For Indigenous students in WA the 2016 mean scores were:

- **below** national 2016 mean scores in all years;
- **close to** state 2015 mean scores in all years;
- **close to** state 2008 mean scores in Year 9;
- **higher than** state 2008 mean scores in Years 3, 5 and 7.

## Writing

For Indigenous students in WA the 2016 mean scores were:

- **below** national 2016 mean scores in all years;
- **close to** state 2015 mean scores in Years 5, 7 and 9;
- **above** state 2015 mean scores in Year 3
- **below** state 2011 mean scores in Years 7 and 9
- **close to** state 2011 mean scores in Years 3 and 5.

## Numeracy

For Indigenous students in WA the 2016 mean scores were:

- **below** national 2016 mean scores in all years;
- **close to** state 2015 mean scores in Years 3, 7 and 9;
- **above** state 2015 mean scores in Year 5;
- **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.

The achievement of Western Australia's students in very remote locations was well above the Australian means and percentages at or above national minimum standard for this geolocation across all year groups and all assessments.

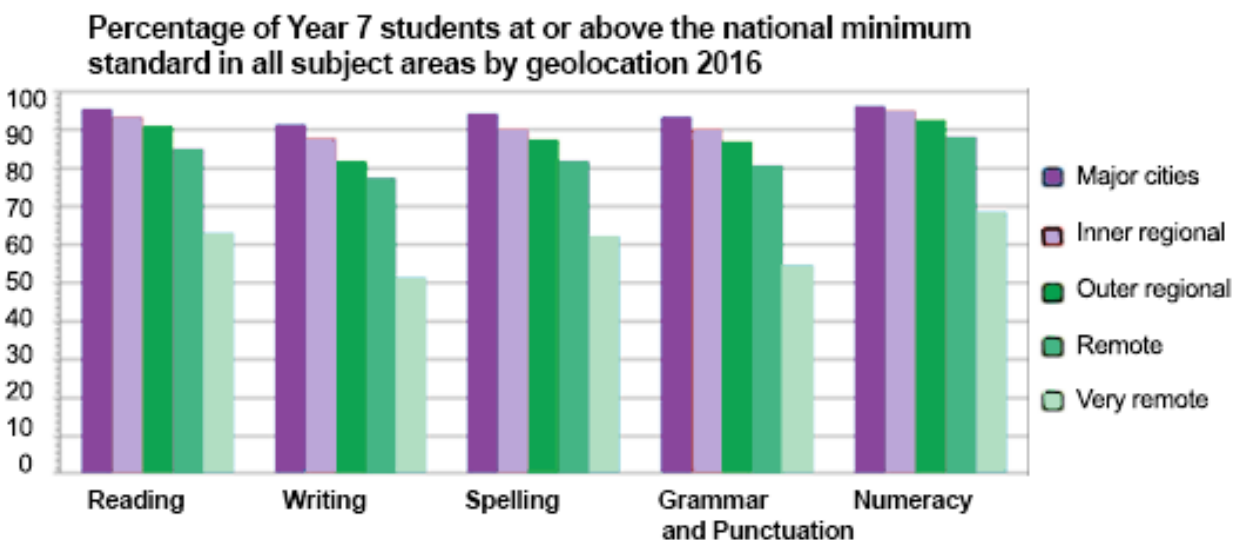
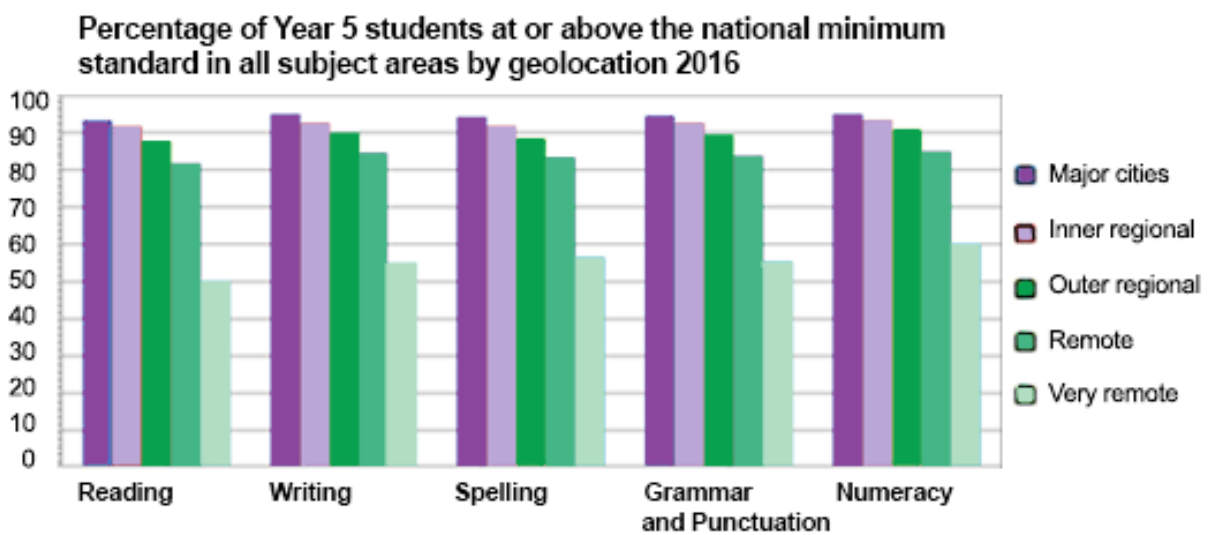
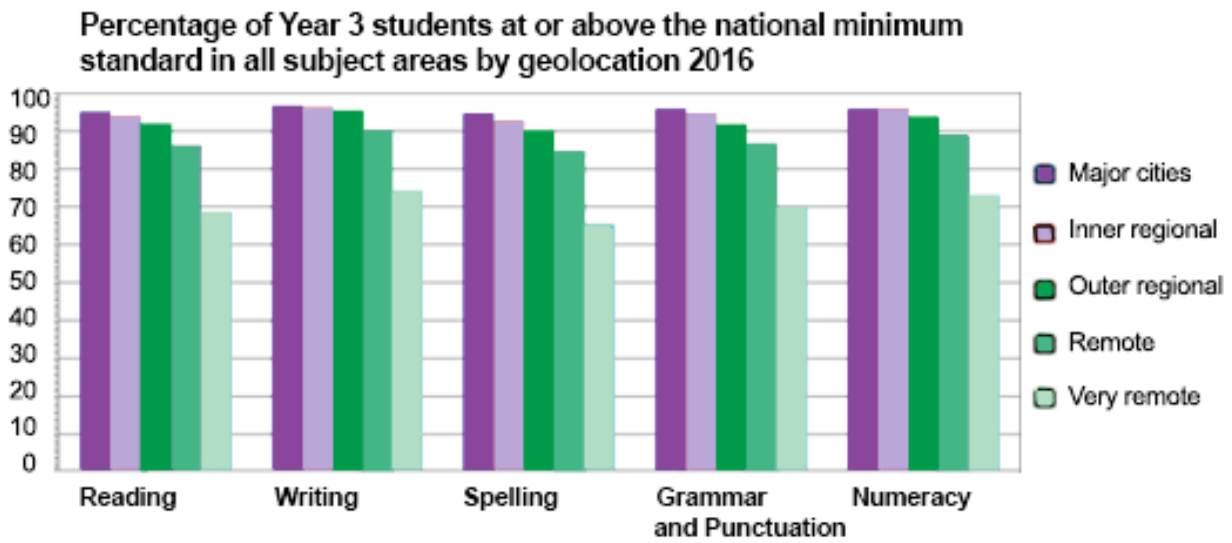
In 2016:

- 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 2015 in all geolocations across all year levels and test domains.

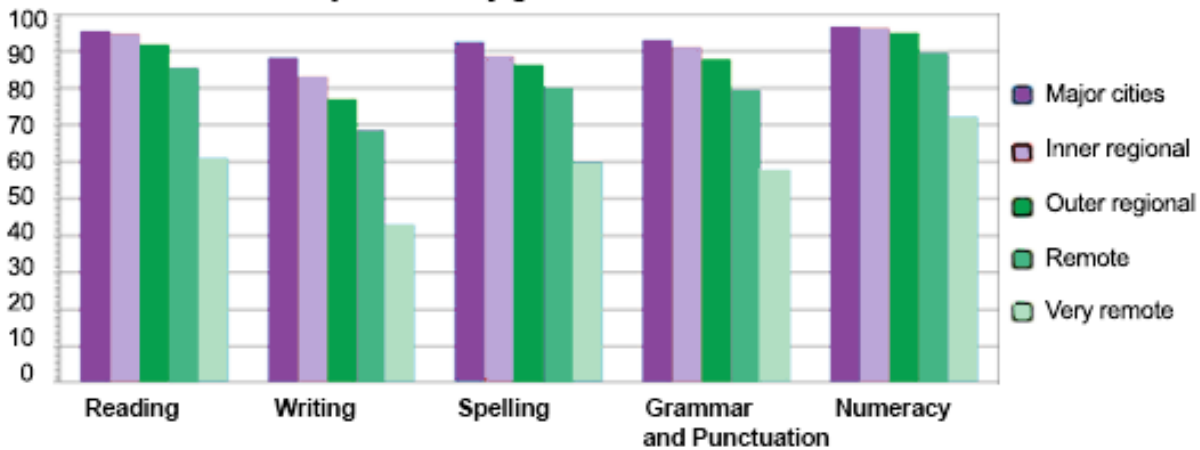
Figure 2 shows the percentages of Western Australian students in each geolocation achieving the national minimum standard in each assessment.



Figure 2: Percentages of Western Australian students in each Year group and geolocation achieving the national minimum standard in each assessment domain.



**Percentage of Year 9 students at or above the national minimum standard in all subject areas by geolocation 2016**



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 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.

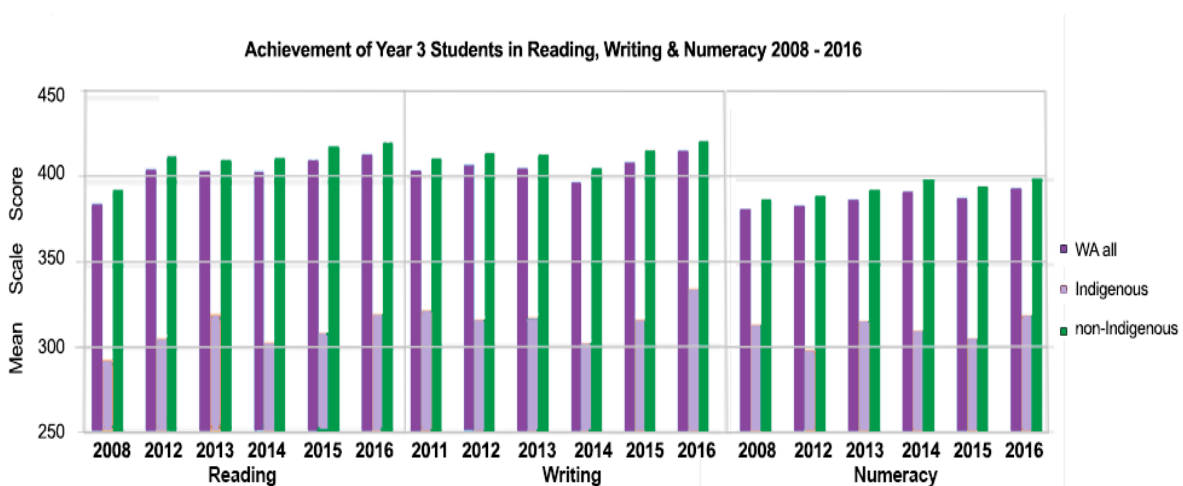
Improvements in mean performance over time which were noted for all WA students were also reflected in improvements at the geolocation level.

### 2008–2016 Time series graphs

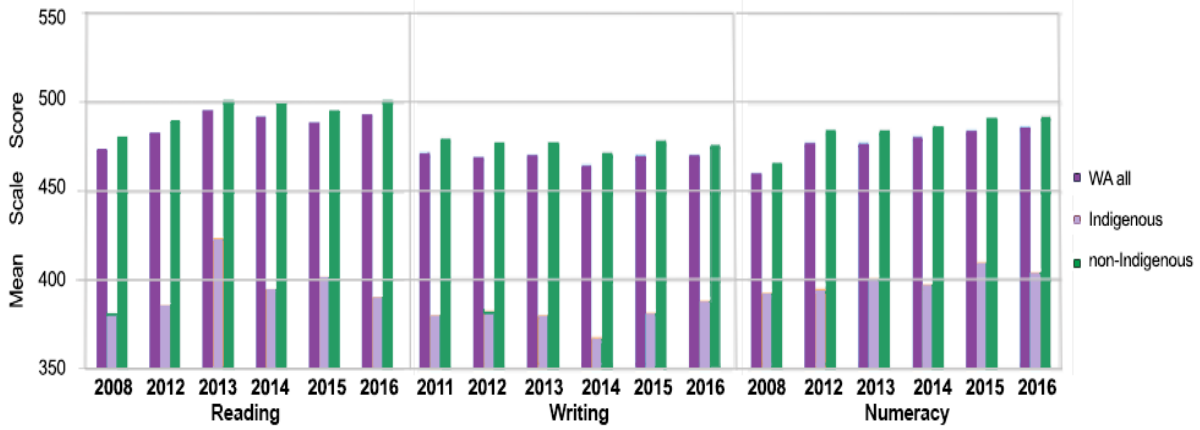
The time series graphs shows trends in mean scale scores in Reading and Numeracy from 2008 to 2016 (Writing 2011 to 2016). The purpose of these graphs is to illustrate changes in the mean achievement scores of current Year 3, 5, 7 and 9 students over the testing period (2008-2016). The graphs compare 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.

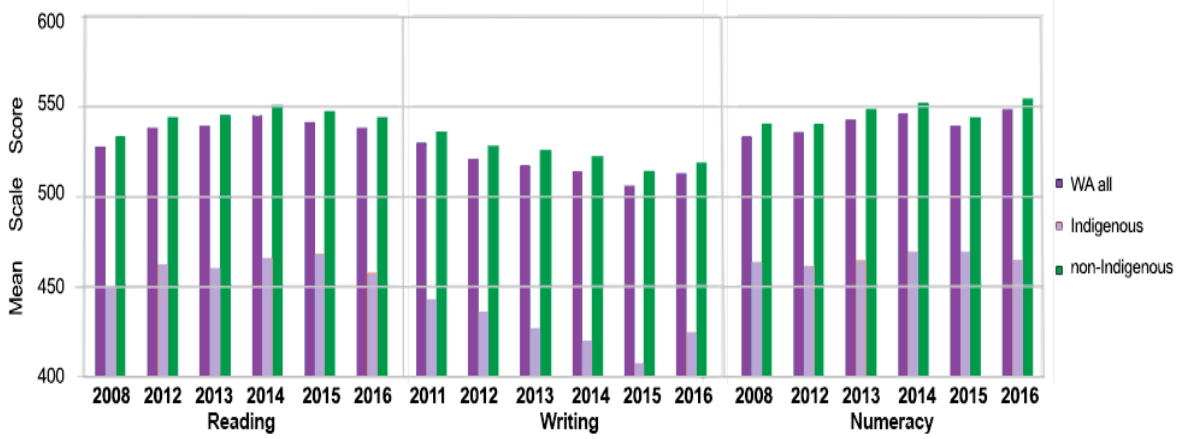
**Figure 3: Mean scores for all WA students and those of Indigenous and non-Indigenous students in Reading, Writing and Numeracy over the period 2008 to 2016(2011-2016 for Writing)**



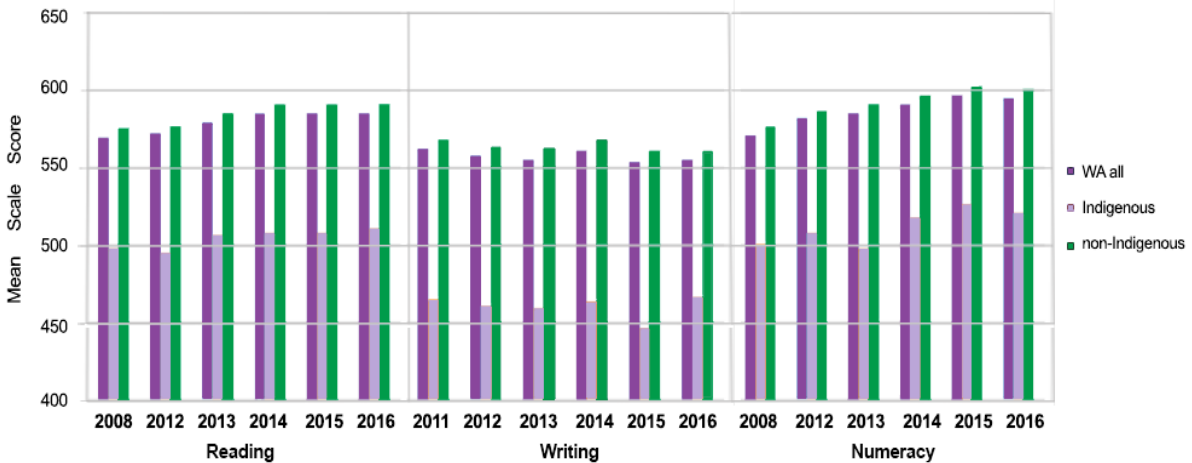
Achievement of Year 5 Students in Reading, Writing & Numeracy 2008 - 2016

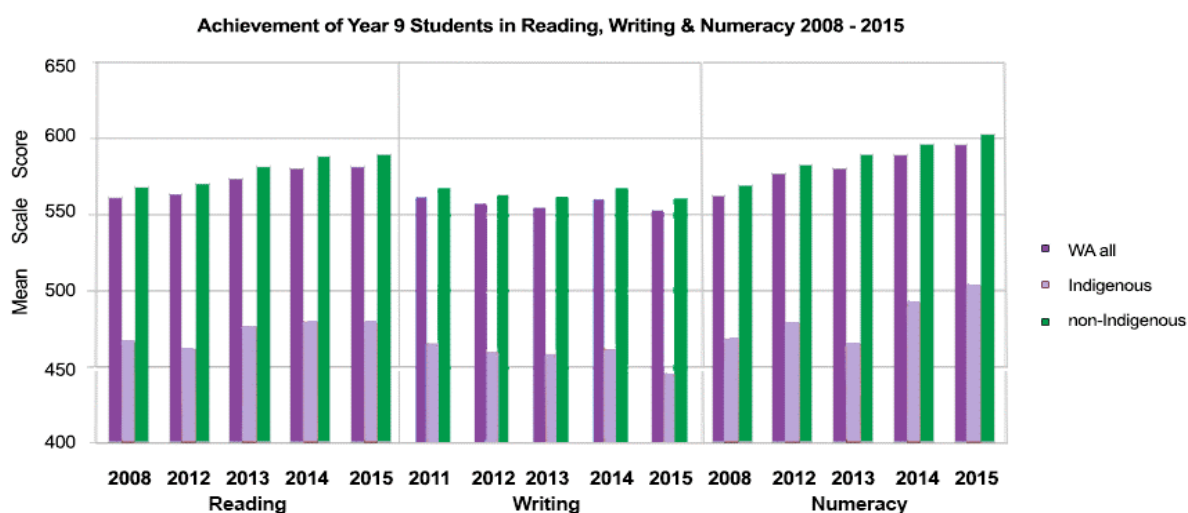


Achievement of Year 7 Students in Reading, Writing & Numeracy 2008 - 2016



Achievement of Year 9 Students in Reading, Writing & Numeracy 2008 - 2016





### 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.

#### 2016 Year 9 cohort

**Table 5a Average cohort gain for 2016 Year 9 students**

		WA	Aust
<b>2 year gain</b> <b>2014–2016</b>	Reading	40.8	34.7
	Writing	40.3	37.5
	Numeracy	49.4	43.0
<b>4 year gain</b> <b>2012–2016</b>	Reading	130.0	121.2
	Writing	105.5	99.2
	Numeracy	186.2	154.3
<b>6 year gain</b> <b>2010–2016</b>	Reading	189.3	116.5
	Writing	n/a	n/a
	Numeracy	216.3	193.5

The data indicate that for current Year 9 students:

- **The two-year gains in** Reading, Writing and Numeracy (from Year 7 in 2014 to Year 9 in 2016) for WA students were **higher** than the Australian average.
- **The four-year gains in** Reading, Writing and Numeracy (from Year 5 in 2012 to Year 9 in 2016) for WA students were **higher** than the Australian average.
- **The six-year gains in** Reading and Numeracy (from Year 3 in 2010 to Year 9 in 2016) for WA students were **higher** than the Australian average for numeracy but not for Reading.
- Reading – In Year 3 (2010), this WA cohort was **12.6** points **lower** than the Australian mean score but by Year 9 (2016) the WA mean was **higher** than the Australian mean score by 4.1 points.
- Writing – In Year 5 (2012), this WA cohort was **9** points **lower** than the Australian mean score but by Year 9 (2015) the WA mean was **higher** than the Australian mean score by 6.3 points.
- Numeracy – In Year 3 (2010), this WA cohort was **12.6** points **lower** than the Australian mean score but by Year 9 (2015) the WA mean was **higher** than the Australian mean score by 6 points.

## 2016 Year 7 cohort

**Table 5b Average gain for 2016 Year 7 students**

		<b>WA</b>	<b>Aust</b>
<b>2 year gain</b> <b>2014-2016</b>	Reading	45.9	40.2
	Writing	47.9	46.7
	Numeracy	67.5	62.1
<b>4 year gain</b> <b>2012-2016</b>	Reading	130	121.2
	Writing	105.5	99.2
	Numeracy	151.7	144.4

The data indicate that for current Year 7 students:

- **The two-year gains in Reading, Writing and Numeracy** (from Year 5 in 2014 to Year 7 in 2016) for WA students were **higher** than the Australian average.
- **The four-year gains in Reading, Writing and Numeracy** (from Year 3 in 2012 to Year 7 in 2016) for WA students were **higher** than the Australian average.
- Reading – In Year 3 (2012), this WA cohort was 12 points **lower** than the Australian mean score but by Year 7 (2016) the WA mean was **lower** than the Australian mean score by 3.2 points
- Writing – In Year 3 (2012), this WA cohort was 12 points **lower** than the Australian mean score but by Year 7 (2016) the WA mean was **lower** than the Australian mean score by 3.2 points.
- Numeracy – In Year 3 (2012), this WA cohort was 11.6 points **lower** than the Australian mean score but by Year 7 (2016) the WA mean was **lower** than the Australian mean score by 1.6 points.

## 2016 Year 5 cohort

**Table 5c Average gain for 2016 Year 5 students**

		<b>WA</b>	<b>Aust</b>
<b>2 year gain</b> <b>2014-2016</b>	Reading	87.4	83.2
	Writing	72.9	73.4
	Numeracy	93.7	91.3

The data indicate that for current Year 5 students:

- **The two-year gains in Reading** (from Year 3 in 2014 to Year 5 in 2016) for WA students were **higher** than the Australian average in Reading and Numeracy and **lower** for Writing.
- Reading – In Year 3 (2014), this WA cohort was **12** points **lower** than the Australian mean score but by Year 5 (2016) the WA mean was **higher** than the Australian mean score by **4.2** points.
- Writing – In Year 3 (2014), this WA cohort was points **4.8** than the Australian mean score but by Year 5 (2016) the WA mean was **lower** than the Australian mean score by **0.5** points.
- Numeracy – In Year 3 (2014), this WA cohort was **9.3** points **lower** than the Australian mean score but by Year 5 (2016) the WA mean was **lower** than the Australian mean score by **0.5** 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 remained relatively constant for Years 3, 5, 7 and 9 between 2008 and 2016. Participation rates are similar in Years 3, 5 and 7 and somewhat lower in Year 9. Due to a fall in absences and withdrawals in 2014 and 2015 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 remains considerably lower than for non-Indigenous students in all years and in all tests. In 2016 this disparity ranged from 12% less in Years 3 and 5, 18% less in Year 7 to 28% less in Year 9. The participation rate of the non-Indigenous population is similar across all years, averaging around 96%.

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

**Table 6: Participation rates and percentages of WA and Australian students absent, withdrawn or exempted from NAPLAN 2016 by Year group**

**Participation rates and percentages of WA and Australian students absent, withdrawn or exempted from NAPLAN 2016**

	Year 3				Year 5				Year 7				Year 9				
	Participation	Absent	Withdrawn	Exempt	Participation	Absent	Withdrawn	Exempt	Participation	Absent	Withdrawn	Exempt	Participation	Absent	Withdrawn	Exempt	
Reading	WA	95.3	3.1	1.6	1.4	95.8	3.0	1.2	1.2	95.5	4.2	0.3	1.3	93.7	6.0	0.3	1.3
	Aust	95.0	2.3	2.7	1.8	95.4	2.4	2.3	1.8	94.5	3.4	2.0	1.7	91.2	6.2	2.5	1.8
Writing	WA	95.4	3.0	1.6	1.4	95.8	3.0	1.2	1.2	95.7	4.0	0.3	1.3	94.0	5.7	0.3	1.3
	Aust	94.9	2.4	2.7	1.9	95.2	2.5	2.3	1.8	94.6	3.3	2.0	1.7	91.5	6.0	2.5	1.8
Spelling	WA	95.7	2.8	1.6	1.3	96.0	2.8	1.1	1.2	95.9	3.7	0.3	1.3	94.2	5.5	0.3	1.3
	Aust	95.1	2.3	2.7	1.8	95.5	2.3	2.2	1.8	94.8	3.2	2.0	1.7	91.7	5.8	2.5	1.8
G&P	WA	95.7	2.8	1.6	1.3	96.0	2.8	1.1	1.2	95.9	3.7	0.3	1.3	94.2	5.5	0.3	1.3
	Aust	95.1	2.3	2.7	1.8	95.5	2.3	2.2	1.8	94.8	3.2	2.0	1.7	91.7	5.8	2.5	1.8
Numeracy	WA	94.9	3.6	1.5	1.3	95.2	3.6	1.1	1.2	95.1	4.6	0.3	1.3	93.4	6.3	0.3	1.3
	Aust	94.7	2.8	2.5	1.8	95.0	2.8	2.2	1.8	94.1	3.8	2.0	1.7	90.7	6.7	2.6	1.8

## 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](http://www.nap.edu.au/resources/2015_NAPLAN_national_report.pdf)

<b>Absent students</b>	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.
<b>Assessed students</b>	Those students for which a NAPLAN result is reported.
<b>Band</b>	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.
<b>Cohort</b>	A group of students.
<b>Domain</b>	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.
<b>Exempt students</b>	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.
<b>Gain</b>	Gain refers to the difference in students' achievement levels between two testing years.
<b>Geo-location</b>	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.
<b>Mean</b>	The average result in an analysed data set.
<b>NAPLAN</b>	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.
<b>National minimum standard</b>	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.
<b>Participation</b>	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.
<b>Statistically significant</b>	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.
<b>Withdrawn students</b>	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.