



Using NAPLAN data diagnostically

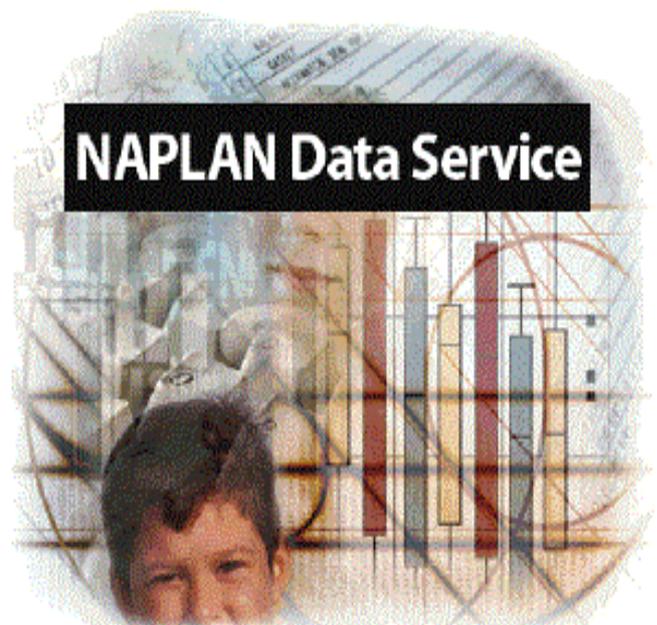
- an introductory guide for classroom teachers

Welcome to the NAPLAN Data Service

The NAPLAN Data Service provides Victorian Schools with a range of online reports for the National Assessment Program - Literacy and Numeracy (NAPLAN).

[NAPLAN Data Service System Login](#)

[NAPLAN Data Service Tutorial and Help](#)



Using NAPLAN data diagnostically

This resource provides information about the ways teachers can use data contained in the **NAPLAN Data Service** to evaluate student performance and plan their teaching and learning programs.

In the following pages, three reports from the **NAPLAN Data Service** are explained in detail and three scenarios are provided to illustrate how NAPLAN data can be used diagnostically.

The NAPLAN Data Service

The **NAPLAN Data Service** contains a number of reports that provide diagnostic information about student performance at school and classroom levels.

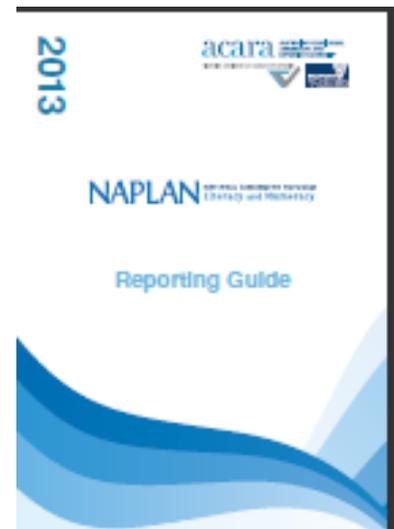
The data service is available online at: <https://naplands.vcaa.vic.edu.au/>

The data service contains the following reports:

- School Summary Report
- Group Summary Report
- Assessment Area Report
- Writing Criteria Report
- Item Analysis Report
- Student Response Report
- Student Achievement Level Report
- Five Year Trend Report

For year 5, 7 and 9

- School Comparison Report
- School - Student Comparison Report
- Relative Growth Report



A brief explanation of each of these reports is contained in the **Reporting Guide** for the National Assessment Program – Literacy and Numeracy, provided by the VCAA to schools each year.

The Reporting Guide is available online at:

<http://www.vcaa.vic.edu.au/Pages/prep10/naplan/schools/publications.aspx#ReportGuide>

Useful reports for the classroom teacher

Reports in the NAPLAN Data Service identify areas of strength or weakness within a school or classroom. At the classroom level, the **Item Analysis Report**, the **Writing Criteria Report** and (for numeracy in particular) the **Assessment Area Report** provide powerful diagnostic information which can be used to complement school assessment and to inform the planning of teaching and learning programs.

Item Analysis Report

The **Item Analysis Report** provides information about each item (question) in the NAPLAN tests, including the percentage of correct responses for each item at the national, state and school levels. It contains a description of the skill assessed for each item and a hyperlink to each item. For multiple choice items, the percentage of students who chose each alternative (distractor) is also given.

Item Number	Answer Key	Dimension	% Correct National	% Correct State	% Correct Group	Response	% Response National	% Response State	% Response Group	Skill Assessed
Q01	A	Reading	93	95	94	A	5	3	6	Identifies the message in two posters.
						B	93	95	94	
						C	1	2	*	
						D	0	0	*	
						M	1	0	*	
Q02	A	Reading	84	88	89	A	8	6	6	Makes an inference from the text in a poster.
						B	2	1	2	
						C	84	88	89	
						D	4	5	2	
						M	2	0	1	

Using the Item Analysis Report

The Item Analysis Report is used by teachers similarly to the way they use their own classroom test results. The Item Analysis Report, however, has the additional benefit of providing comparative data for national and state performance.

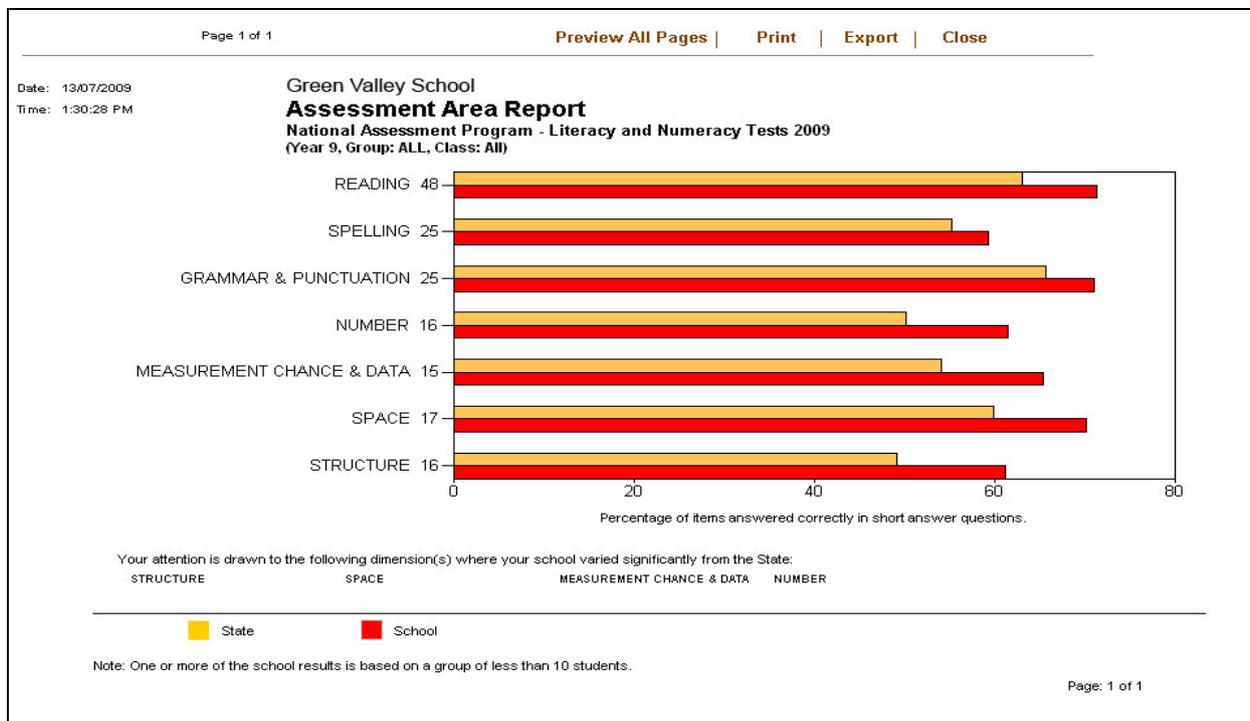
The following strategies are useful when analysing data from the Item Analysis Report.

- Look at the general picture for all items. How do your students' results compare to those of the state or nation as a whole?
- Look for patterns. Are there particular skill areas in which your students tend to do much better or worse than the state or nation?
- Look at the most commonly chosen incorrect responses. Is there an apparent reason why your students have chosen those responses?
- Run the report for different groups and year levels. Is there a specific group or classroom issue, or is the problem evident across the school?
- How does the NAPLAN data compare with school assessment data?
- Does the data point to an area of the AusVELS that had not been taught at the time of NAPLAN testing?

Refer to Scenarios 1 (Year 9 Reading) and 2 (Year 5 Numeracy) on pages 6 and 7 for suggested strategies to determine the learning focus in response to NAPLAN data.

Assessment Area Report

The **Assessment Area Report** groups data by assessment area or dimension, and displays the total percentage of correct responses to items within each assessment area.



Using the Assessment Area Report

This report is particularly useful in identifying issues in specific dimensions of Numeracy.

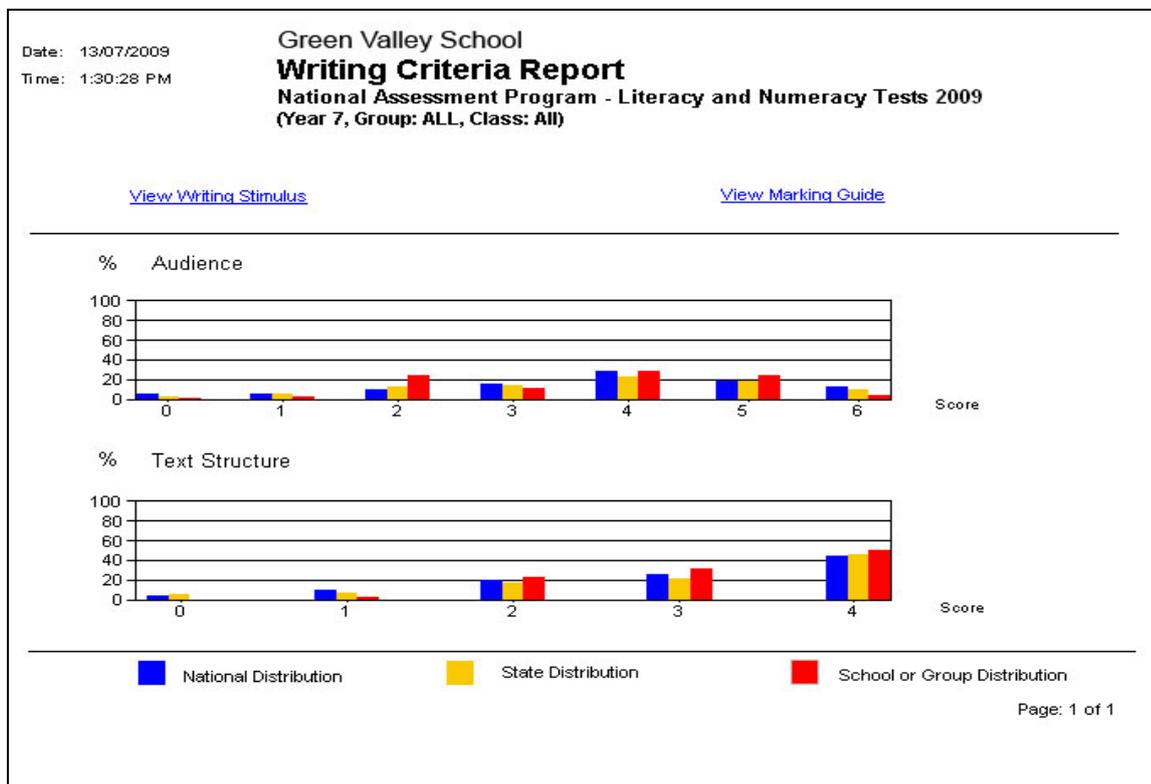
The following strategies are useful when analysing data from the Assessment Area Report.

- Look at the general picture for all assessment areas or dimensions.
- Are there assessment areas or dimensions in which your students tend to do much better or worse than the state?
- Run the report for different groups and year levels. Is there a specific group or classroom issue, or is it noted generally throughout your school?
- How does the NAPLAN data compare with school assessment data?
- Does the data point to an area of the AusVELS that had not been taught at the time of NAPLAN testing?

Refer to Scenario 2, (Year 5 Numeracy), on page 7 for suggested strategies to determine the learning focus in response to NAPLAN data.

Writing Criteria Report

The **Writing Criteria Report** shows the frequency of scores for each of the ten criteria against which the Writing Test was assessed. The report shows national, state and school data, and includes links to both the Writing Stimulus sheet and the Writing Marking Guide. Reports for two of the ten criteria are presented below.



Using the Writing Criteria Report

The following strategies are useful when analysing data from the Writing Criteria Report.

- Look at each criterion. How does the distribution of your students' results compare to that of the state or nation?
- Refer to the Writing Marking Guide. What skills are demonstrated at the achieved score point, and what skills are necessary to move up to the next score point?
- How does the NAPLAN data compare with school assessment data?
- Does the data point to an area of the AusVELS that had not been taught at the time of NAPLAN testing?

Refer to Scenario 3, (Year 3 Writing), on page 8 for suggested strategies to determine a learning focus in response to the NAPLAN data.

Scenario 1 – Year 9 Reading

Review of the **Item Analysis Report** for Year 9 Reading revealed that while most results for this group were similar to those of the state and the nation, there were some items for which the percentage of correct response at this school was comparatively low. Further investigation showed that many of these were **inference** questions.

Item number	Answer Key	Dimension	% Correct National	% Correct State	% Correct Group	Response	% Response National	% Response State	% Response Group	Skill Assessed
Q02	B	READING	80	83	70	A	2	2	7	Make inferences about character's actions
						B	80	83	70	
						C	11	10	14	
						D	6	4	9	
						M	1	1	-	
Q04	A	READING	82	84	68	A	82	84	68	Make inferences about character's actions
						B	3	2	7	
						C	8	7	9	
						D	6	6	16	
						M	1	1	-	
Q18	A	READING	53	54	36	A	54	54	36	Make inferences about character's actions
						B	27	27	48	
						C	14	14	9	
						D	5	5	7	
						M	0	0	-	

To help identify why students were not getting these questions correct, the actual questions, and the most common incorrect responses to them, were studied.

Here, for example, only 36% of students at this school answered Q18 correctly (A) and the most common response was B.

18 What made Isabel cry?

- A She realised that Nina might have been seriously hurt.
- B She was upset at losing Nina's bucket and seeing her cry.
- C She knew she was in trouble for spilling the blackberries.
- D She had hurt herself when she slid after Nina to try and save her.

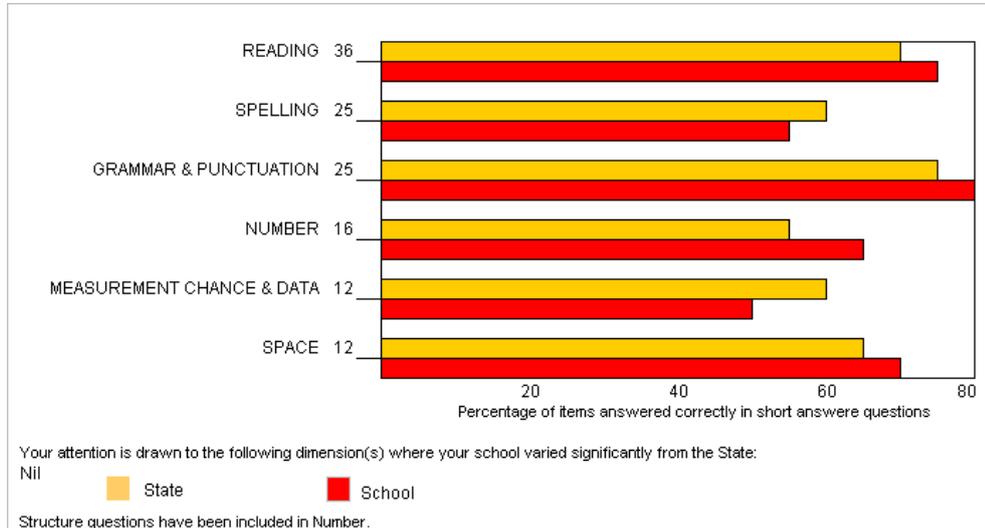
Reference to the reading passage (2008 Year 9 Reading Magazine, page 5 *Blackberry picking*) indicated that these students were unable to make the required inference and responded at a **literal** level. They were likely to have simply matched the words 'upset' and 'cry'.

(For reports between 2008 and 2012) Activities, based on VELS Level 5 and 6 Reading standards and learning focus, may be required to assist these students with deeper understanding of texts.

VELS reference: Reading Level 5: '(Students) infer meanings and messages in texts...'
 Reading Level 6, '... students read, view, analyse, critique, reflect on and discuss contemporary and classical imaginative texts ...'

Scenario 2 – Year 5 Numeracy

The **Assessment Area Report** indicates that while the Numeracy results for this school are generally better than those of the state in Number and in Space, the percentage of items answered correctly in Measurement, chance and data is lower than the state percentage.



The **Item Analysis Report** was then run by dimension order for Numeracy. Analysis of the Measurement, chance and data items in this report showed that there were three particular questions on which students at this school did comparatively poorly. The skills associated with these questions related to **estimation or measurement** of area, perimeter and capacity respectively.

Item Number	Answer Key	Dimension	% Correct National	% Correct State	% Correct Group	Response	% Response National	% Response State	% Response Group	Skill Assessed
Q07	B	MEASUREMENT CHANCE & DATA	78	81	65	A	5	4	1	Measure area using a grid
						B	78	81	65	
						C	14	13	26	
						D	2	2	7	
						M	1	0	1	
Q24	C	MEASUREMENT CHANCE & DATA	37	43	20	A	44	38	53	Estimate and measure perimeter
						B	15	16	20	
						C	37	43	20	
						D	3	2	7	
						M	1	1	1	
Q29	A	MEASUREMENT CHANCE & DATA	38	41	29	A	14	14	8	Estimate and measure capacity
						B	42	40	57	
						C	38	41	29	
						D	5	5	6	
						M	1	1	1	

It is possible that Measurement as a topic had not been covered at the time of testing, and that these results were neither unexpected nor of special concern. However, if this were not the case, it would be worth looking at the particular questions and at the sorts of errors students are making (as indicated by the common incorrect responses), and using this information to develop strategies and activities for the teaching of Measurement.

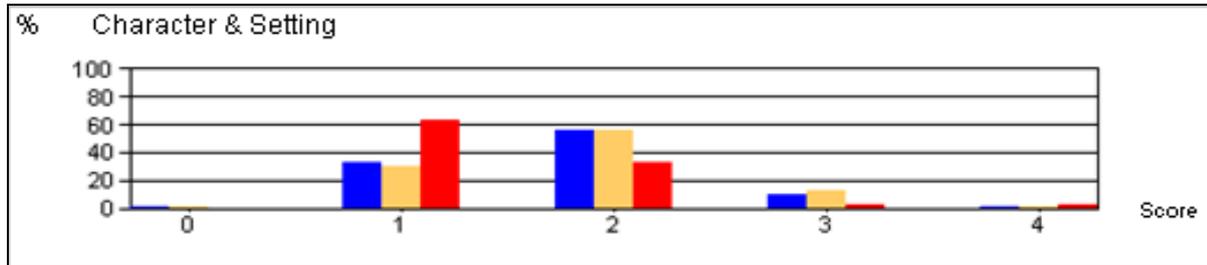
(For reports between 2008 and 2012)

VELS reference: Mathematics, Measurement, chance and data, Level 4: ‘... students ... estimate and measure length, perimeter, area, surface area, mass, volume, capacity, time and temperature.’

Scenario 3 – Year 3 Writing

Analysis of the **Writing Criteria Report** for Year 3 identified several criteria in which students at this school were achieving generally lower scores than Year 3 students across the state or the nation.

The score distribution shown for Character and Setting revealed that the most common score for Year 3 students on this criterion is ‘2’, both nationally and across Victoria. For this school, however, around 60% of students have a score of only ‘1’, and the percentage of ‘2’ scores is relatively low.



Clearly, it would be desirable to move students up from a ‘1’ to a ‘2’ or beyond on this criterion. Work around this criterion is likely to improve the group’s ability to develop character and setting in their narrative writing and help them to move towards higher levels of achievement.

Using the NAPLAN Narrative Marking Guide

- Follow the link to the Writing Marking Guide. Look at the description for scores ‘1’ and ‘2’ for *Character and Setting*.
- Identify parts of the descriptors or additional information which clearly differentiate between the two scores. Note, for example, the key words that have been underlined in the marking guide extract below.

	Category descriptor	Additional information	Sample scripts
0	– no evidence or insufficient evidence	– symbols or drawings	<i>Role play writer (17)</i>
1	– only names characters or gives their roles (e.g. <i>father, the teacher, my friend, dinosaur, we, Jim</i>) AND/OR – only names the setting: (e.g. <i>school, the place we were at</i>) Setting is vague or confused.		<i>Dungaun (19)</i> <i>The casel (23)</i> <i>BMX (25)</i>
2	– suggestion of characterisation through brief descriptions or <u>speech</u> or <u>feelings</u> , but lacks substance or continuity AND/OR – suggestion of setting through very brief and superficial <u>descriptions</u> of place and/or time	– <u>basic dialogue</u> or a few <u>adjectives</u> to describe a character or a place	<i>Living dead (29)</i> <i>October 16, 1981 (37)</i> <i>Space Tour (43)</i> <i>Rugby league cup (85)</i>

Activities to assist some students in these areas may be required. In this instance, the need for extra work on the use of dialogue and descriptive language is indicated for some students. Further work in developing character and setting could involve extended activities aimed at working towards Category Descriptors 3 and possibly 4 for this criterion.

(For reports between 2008 and 2012)

VELS reference: English, Writing Level 3: ‘(Students) write narratives which include characters, setting and plot.’

General points to remember when using your data diagnostically

NAPLAN data should be used in conjunction with school assessment and teacher knowledge. When analysing your data look at the actual questions and at the skills being assessed.

Is the same problem apparent in questions testing the same skill?

Do the results match with information from your own classroom assessments?

Do these questions test a skill which you have not yet covered?

For Writing, look for skill areas in the criteria Category Descriptors and Additional Information columns of the Marking Guide that indicate areas in your teaching and learning program that may require additional attention.

Again, do the results match information gathered from your own classroom assessments?

Some strategies to use when an area of concern is identified

- Try to identify why students are not getting the correct answer. Look at the most common incorrect response (from the Item Analysis Report), and try to understand why students may have chosen it.
- Refer to the AusVELS documentation to see what is expected at the appropriate level for the skill or skills where the issue has arisen.
- Talk to colleagues. Are they seeing the same issue amongst their students? Share possible strategies and teaching plans to help overcome the problem.
- For further advice and resources, speak to curriculum advisors or consultants from your school, region or other school support agencies.