

**NAPLAN 2012
Assessment Guidelines**

Reading

Contract No. 2011/02A

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1 Purpose of this document

These Assessment Guidelines are intended to guide the construction of the 2012 Reading Tests.

2. Overview of assessment content

2.1 Reading across the curriculum

The NAPLAN Reading test is part of a suite of assessments that measures literacy proficiency across the curriculum. Students develop tools of language and literacy learning in the English learning area, and then apply and refine those skills across the curriculum. In that context, skills, knowledge and understandings that underpin item development are drawn from the *Statements of Learning for English* (MCEETYA 2005).

2.2 Links with other modes of English

The test focuses on the reading of written English. Knowledge and interpretation of language conventions in context are an integral part of reading and will be drawn upon implicitly in many reading questions.

Elements of visual literacy (illustrations, photographs, layout elements) may be assessed as part of an authentic written text. However, visual literacy or viewing, without words, is not the focus of this assessment.

2.3 Content

2.3.1 Text types

The Reading assessment will include three broad categories of texts: imaginative texts, information texts and argument texts.

- **Imaginative texts:**
texts that involve the use of language to represent, recreate, shape and explore human experiences in real and imagined worlds. They include, for example, fairytales, anecdotes, novels, plays, poetry, personal letters and illustrated books.
- **Information texts:**
texts that involve the use of language to represent ideas and information related to people, places, events, things, concepts and issues. They include, for example, recounts, reports, descriptions, biographies, explanations, transactional texts, news articles and features.
- **Argument texts:**
texts that systematically present a point of view or seek to persuade an audience. They include, for example, arguments, formal essays, letters to the editor, advertisements, documentaries, interviews and reviews. (*Statements of Learning for English*, page 3).

It is recognized that authentic texts typically contain elements of different text types.

The following table lists some examples of texts at each year level. This table is drawn from the *Statements of Learning for English* and may be used as a guide.

Table 1. Text types

	Imaginative texts	Information and argument texts
Y3	Children's stories, rhymed verses, fairytales, fables	School newsletters, local newspapers, children's magazines, advertisements
Y5	Children's and young adolescent stories, myths, legends, Dreaming stories, ballads, lyrics	Reports, news articles, features and arguments
Y7	Young adolescent fiction, adventure stories, fantasy stories, short stories, long narrative poems	Articles, features, letters to the editor, documentaries, interviews
Y9	Adolescent, contemporary and classical texts	Current affairs and news articles, features, editorials, documentaries and reviews

The 2012 Tests may include texts from all genres for all year levels, guided by the proportions in the following table. Two shorter texts could be considered for a single page, if appropriate.

Table 2. Approximate number of text types

Text types	Year 3 test	Year 5 test	Year 7 test	Year 9 test
Imaginative	2	2	3	3
Informational	3	3	3	3
Argument	1	1	2	2

2.3.2 Sub-strands

Understandings, skills and knowledge have been organized in the following three sub-strands: Contextual understanding (CU), Text location and interpretation (TLI), and Text and language knowledge (TLK):

- Contextual understanding:
This sub-strand deals with the text in its context: cultural purpose, audience, backgrounds of writer and readers, writer's intentions and reader's responses.
- Text location and interpretation:
This sub-strand deals with the meaning of the text itself: content, ideas, information, relationships and threads, development of arguments and plots.
- Text and language knowledge:
This sub-strand deals with the way elements of the text's construction contribute to its meaning: the effect of the generic structure, layout; language, grammar, visual elements etc.

Items reflecting the three sub-strands will be included at all year levels, with the majority of items addressing the Text location and interpretation sub-strand.

Table 3. Sub-strand coverage

	Year 3 test	Year 5 test	Year 7 test	Year 9 test
CU	10–20%	10–20%	20–30%	20–30%
TLI	60–80%	60–80%	60–70%	60–70%
TLK	10–20%	10–20%	10–20%	10–20%

2.4 Contexts

The assessment aims to provide a measure of reading performance that reflects students' typical reading experiences. Contexts should be:

- drawn from a range of curriculum areas
- relevant to students
- age appropriate.

2.5 Sensitivity and social balance

Cultural and social considerations should underpin text/context selection. Diversity of representations should be included in visual images, names, family situations, locations, etc. Representations of individuals and groups should be positive and constructive.

Reasonable effort should be made to avoid offence. Topics selected should not cause offence or be likely to upset students, e.g. reference to a recent natural disaster. Subjects such as witches, magic, ghosts, death, religion and toilets are to be avoided, as are social issues such as gambling and substance abuse. Swearing should not be included.

The reading assessment should allow equity of access for students of both genders and from different cultures and language backgrounds. Texts should be self-contained and should not depend on knowledge of other texts, though it cannot be expected that every text or context will be equally familiar to every student. Contexts should be relevant and accessible, but need not be restricted to those experienced personally by students.

3. Item development

3.1 Overview

In 2012, the Reading assessment will be given on one test day, in one block of time. At each year level, the Reading test will include two booklets: one with reading materials and the other with reading questions.

Table 4. Test sessions and number of booklets, texts and items

	Year 3 test	Year 5 test	Year 7 test	Year 9 test
Number of test sessions	1	1	1	1
Test time (excl. administration time)	45 mins	50 mins	65 mins	65 mins
Number of reading magazines	1	1	1	1
Number of reading magazine pages (incl. cover and contents page)	8	8	12	12
Stimulus texts	6 -7*	6-7*	7–8	7–8
Number of test booklets	1	1	1	1
Number of test booklet pages (including cover)	12	12	16	16
Item quantity	35–40	35–40	45–50	45–50

* if two units are used on one page

3.2 Spread of item difficulty

The aim is to achieve a distribution of item difficulties of 20%, 30%, 30% and 20% on the equal logit quarters scale across each test

Easy items typically focus on short, simple texts, require literal understanding and draw on a familiar context. Easy items should relate to a variety of text types and be drawn from each of the sub-strands. Items should not be unintentionally easy, for example as a result of implausible distractors, dependencies on other items or inadvertent matching of the key and a text element.

Difficult items typically focus on more complex texts that are lexically dense, deal with unfamiliar or challenging topics, have an unusual form, or include figurative language. They require more sophisticated reading practices such as multi-thread tracking, inferring the writer's perspectives, construing nuances of language and using inter-textual understanding and knowledge. Items should relate to a variety of text types and be drawn from each of the sub-strands. Items should not be unintentionally difficult, for example as a result of:

- inappropriate language (e.g. confusing or lengthy stem; unnecessarily obscure or technical vocabulary; incorrect terminology)
- an emphasis on meta language
- ambiguity of item purpose
- a requirement for privileged, obscure or specialized prior knowledge
- incorrect, incomplete or narrow key in multiple-choice items.

Tricky or deliberately misleading items must be avoided. Question sets should focus on all aspects of the text.

3.3 Order of items

As a general principle, the items should be arranged within the test in a logical order, ie sequence within the text from easiest to most difficult. Since items appear in sets associated with a stimulus text, the item sets must also have some internal coherence.

3.4 Link items

The vertical links (common items between two year levels) should relate to understandings, skills and knowledge familiar to students in both year levels. The order of the link items within a set will be the same in the two test forms, but the set will appear in different positions in each form: towards the end of the test in the lower level and towards the beginning of the test in the higher level. Sets of link items should not be placed at the very beginning or very end of the forms.

Table 5. Vertical links

	Year 3 test	Year 5 test	Year 7 test	Year 9 test
Vertical links: item sets	Year 3/5: 2 item sets, each with 5–7 items	Year 3/5: 2 item sets, each with 5–7 items Year 5/7: 2 item sets, each with 5–7 items	Year 5/7: 2 item sets, each with 5–7 items Year 7/9: 2 item sets, each with 5–7 items	Year 7/9: 2 item sets, each with 5–7 items

4 Test specifications

4.1 Overview

Texts should be:

- appropriate in content for the age of students at the target year level/s
 - varied in the challenges they offer to accommodate the range of abilities at each year level
 - authentic, in that they do not appear to be artificial, or contrived for misreading traps
 - self-contained (for example, an extract from a longer piece of fiction should require no prior knowledge from the reader as to what has occurred before or what will occur later in the book)
 - similar to those that would be encountered in a classroom
 - material that students are not likely to have encountered; for example, it should not come from a widely used reading resource
 - factually accurate and should not contain information that is oversimplified to the point of being incomplete, misleading or incorrect
 - grammatically correct
 - laid out in a readable way with regard to font size and type, heading styles, text/column width, wrapped text, text boxes, captions and labels as described in the style guide
 - presented so that verbal and graphic elements are integrated
 - designed to minimize disadvantage for students with vision impairment.
-

Ideally, texts should be intact. They should require no change or only minor changes if they are from a reputable published source. If graphic elements are used, they should support or extend meaning.

4.2 Graphics

Illustrations and photographs may be used as part of a stimulus (e.g. for labelling) or to help students understand the item or the context of an item. If a graphic or illustration was not part of the original text, any new material must complement the text, and not detract from the meaning.

4.3 Length and layout of texts

While reading texts will vary in length within each magazine, the following word counts may be used as a guideline for average word counts:

Year 3: about 180 words

Year 5: about 220 words

Year 7: about 270 words

Year 9: about 350 words

Typically each text will be presented in a one-page portrait format where possible. However, two shorter texts on a single page, or a text with a double-page spread may be included if considered worthy.

Within these parameters, professional judgment is required to assess the suitability of a text for an age group in terms of number of words and layout, as well as the whole reading load of the test. Review of overall word counts for each magazine, along with analysis of trialling missed items in previous tests, will inform final text selection.

The length of each text will influence the number of items associated with it.

5 Item specifications

5.1 Item types

The Reading Tests contain two types of items: multiple-choice and constructed response.

Table 6. Item types

	Year 3 test	Year 5 test	Year 7 test	Year 9 test
Item types:				
multiple choice	90–100%	90–100%	90–100%	90–100%
constructed response	Up to 10%	Up to 10%	Up to 10%	Up to 10%

The following principles should be applied to all items:

- Items must refer to the stimulus text.
 - Items should address different parts of the stimulus and not cluster around one part of the text.
 - Suites of items should be relevant to the particular text type. It would not be expected that the same types of items would be presented for a narrative and an exposition, for example.
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- Items should test reading strategies relevant to the broad range of abilities in each of the year levels.
- While there will be a range of difficulties within the set of items that relate to each text, there should be a general congruence of difficulty between each stimulus and its set of items.

5.1.1 Multiple-choice items

The following principles should be applied to all items:

- Each multiple-choice item must clearly target an aspect of the domain.
- The stem should scaffold the skill focus without highlighting the answer.
- Both sentence completion and direct question stems may be used. Direct questions are preferred but sentence completion can be used if it allows simpler language to be used.
- In general, four alternatives should be provided.
- Alternatives within each item should be consistent in style.
- The key should be indisputable in all multiple-choice questions.
- Distractors must be plausible.
- Distractors that link to known, likely errors will add to the value of the item as a diagnostic tool.
- Dependencies between distractors and between items must be avoided.

5.1.2 Constructed response items

This format should be used when the skill, knowledge or understanding – such as providing an explanation or evidence to support an answer – cannot be assessed in multiple-choice format. Constructed response items may also be used when there are insufficient plausible distractors in the text.

It must be clear in the wording of the item that students must not answer by quoting directly from the text. Constructed response items that allow students to demonstrate thinking at different levels may be considered for partial credit response format. It would be expected that items of this type be developed for all year levels.

5.2 Language

While language demands of texts will vary within each test, every attempt should be made to ensure that the language of the test items is as clear and simple as possible and accessible to ESL students. Importantly, the language level of the item should not exceed the level of difficulty of the skill that is being tested.

- Questions should not contain unnecessary descriptions or wordiness.
 - Sentences and stems of questions should be brief and cohesive.
 - Present tense and active voice should be used where possible. However, tense must be appropriate to the text.
 - Obscure vocabulary should be avoided.
 - Colloquialisms, particularly those that are region specific, should be avoided unless specifically relevant to the text.
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5.3 Item descriptors

The item descriptors will be aligned with the range of understandings, skills and knowledge in the Statements of Learning for English. Where possible, the language of the Statements of Learning should be used for the descriptors. The item descriptor encapsulates the essence of what the item is asking of the students. It is a key component in decisions about balance in the progress of test construction.

Table 7. Item descriptors: Reading

Process	Feature	Location (optional)	Text and its complexity
Infers	the mood of a character	from an illustration	in a short simple narrative
Locates	directly stated information	at the beginning	of a report
Identifies	the main purpose		of an argument in an editorial

6 NAPLAN Style Guide

The NAPLAN Style Guide contains specifications and production information for all NAPLAN tests.

7 Practice questions

Each item type that appears in the test should be represented by a practice question. The practice question enables the student to practise the response type but it should not replicate the skill being tested. The items should be age appropriate; for example, different sets for Years 3 and 5, and another for Years 7 and 9.

8 Test administration handbooks

The contractor will also be responsible for producing the test administration handbooks to be used for the administration of the trial materials and the final tests.

Appendix 1: NAPLAN 2012 Reading Test Specifications

NAPLAN 2008 TEST SPECIFICATIONS				
READING				
Specification	Year 3	Year 5	Year 7	Year 9
Number of test booklets	1	1	1	1
Number of reading stimuli	1	1	1	1
Number of test sessions	1	1	1	1
Test time ¹ (excluding administration time)	45 minutes	50 minutes	65 minutes	65 minutes
Item quantity (maximum)	35–40	35–40	45–50	45–50
Number of test booklet pages (including cover)	12 pp	12 pp	16 pp	16 pp
Number of reading stimulus booklets (including cover and contents page)	8 pp full colour	8 pp full colour	12 pp full colour	12 pp full colour
Stimulus texts	6-7	6-7	7–8	7–8
Item types	90–100% multiple choice Up to 10% constructed response	90–100% multiple choice Up to 10% constructed response	90–100% multiple choice Up to 10% constructed response	90–100% multiple choice Up to 10% constructed response
Text types	Imaginative Informational Argumentative	Imaginative Informational Argumentative	Imaginative Informational Argumentative	Imaginative Informational Argumentative

¹ The test times indicated in this table are the *published* test times; that is, the time allowed to complete the test excluding administration time.

- i) The published test time is the *maximum* time allowed for test completion excluding administration time.
- ii) It is expected that a large majority of students will complete the tests well within the published test time.

Coverage	Contextual understandings 10–20% Text location and interpretation skills 60–80% Text and language knowledge 10–20%	Contextual understandings 10–20% Text location and interpretation skills 60–80% Text and language knowledge 10–20%	Contextual understandings 20–30% Text location and interpretation skills 60–70% Text and language knowledge 10–20%	Contextual understandings 20–30% Text location and interpretation skills 60–70% Text and language knowledge 10–20%
Spread of item difficulty	Targeted distribution of: 20%, 30%, 30%, 20% on the equal logit quarters scale across the test	Targeted distribution of: 20%, 30%, 30%, 20% on the equal logit quarters scale across the test.	Targeted distribution of: 20%, 30%, 30%, 20% on the equal logit quarters scale across the test	Targeted distribution of: 20%, 30%, 30%, 20% on the equal logit quarters scale across the test
Vertical links	Year 3/5 links: 2 item sets, each with 5-7 items with a range of item difficulty	Year 3/5 links: 2 item sets, each with 5-7 items Year 5/7 links: 2 item sets, each with 5-7 items with a range of item difficulty	Year 5/7 links: 2 item sets, each with 5-7 items Year 7/9 links: 2 item sets, each with 5-7 items with a range of item difficulty	Year 7/9 links: 2 item sets, each with 5-7 items with a range of item difficulty

NAPLAN 2012
Assessment Guidelines

Writing

Contract No. 2011/02B

Date: 27/01/2011

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1 Purpose of this document

This guideline is intended to guide the development of trial tasks and the selection of the writing task for the 2012 Writing Test.

2 Overview of assessment content

The knowledge, skills and understandings relating to students' writing have been drawn from the *Statements of Learning for English* (MCEETYA 2005). The NAPLAN Writing test measures the ability of students in Years 3, 5, 7 and 9 to write continuous prose in response to a persuasive writing prompt.

3 Content and context

The Writing assessment is given on one test day, in one block of time, and consists of one writing prompt. All students will respond to the same prompt and write a persuasive text.

Table 1. Test sessions and booklets

	Year 3 test	Year 5 test	Year 7 test	Year 9 test
Number of test sessions	1	1	1	1
Test time (excl. administration time)	40 mins (5 mins planning; 30 mins writing time; 5 mins editing time)			
Number of test booklets	One flip test booklet for Writing (and Language Conventions)	One flip test booklet for Writing (and Language Conventions)	One flip test booklet for Writing (and Language Conventions)	One flip test booklet for Writing (and Language Conventions)
Number of test booklet pages (including cover)	16 pp (Writing 4 pp + Language Conventions 12 pp)			
Item quantity	1 writing prompt used across all years: one page in full colour			
Item quantity (maximum)	Persuasive text: all students respond to the same prompt			

4 Criteria for writing prompt

4.1 Content considerations

The writing prompt should elicit writing across age, gender and cultural backgrounds. The following guidelines should be followed during prompt development:

- Language used in the prompt should state the task for the student and be straightforward, concise and clear, both for reading and listening.
 - The prompt should target the full range of student abilities expected of students in Years 3 to 9, but avoid overwhelming the student with possibilities.
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- The writing prompt should allow for literal and metaphorical interpretation, and permit students to explore more complex and abstract ideas.

The writing prompt wording is presented to students as follows:

What do you think? Do you agree or disagree?

Perhaps you can think of ideas for both sides of this topic.

Write to convince a reader of your opinions.

Start with an introduction. An introduction lets a reader know about what you are going to write about.

Write your opinions on this topic.

Give reasons for your opinions. Explain your reasons for your opinions.

Finish with a conclusion. A conclusion sums up your reasons so that a reader is convinced of your opinions.

Teachers use the following text for the administration of the task:

Today, when you do your writing, you will need to convince someone of your opinions on the topic. To do this, you will need to give reasons for your opinions. Reasons are ideas that will help to convince, or persuade, a reader to accept your opinions.

You have to write your opinions and reasons about the topic — *(read heading on topic-sheet)*

Use the pictures and the words on the sheet to help you with your ideas.

You can use the ideas from the sheet OR you can use your own ideas about this topic.

Before you write, there will be some time to do some planning. People might like to plan in different ways. You might like to write down your main ideas or key words, or draw a mind map. You could plan by thinking about the topic.

Use the dot points on the topic sheet to help you.

Choose the kind of planning that helps you to organize your ideas.

Use your blank sheet of paper for planning. The planning page will not be marked but it will be collected. Do not write in your book yet. It should still be closed.

4.2 Image considerations

The following criteria should be noted:

- Images should be engaging, accessible, culturally diverse and unambiguous. They should also offer a range of imaginative and metaphorical possibilities.
- The images should be discrete and the layout should not suggest unintentional relationships between images.
- Consideration should also be given to the size of each image, so that different sizes do not unintentionally suggest relative importance or an inappropriate scale.
- Copyright requirements as detailed in the contract must be strictly complied with, and material that is non-compliant will not be accepted by ACARA.

While the writing prompt should contain the specified wording, the layout does not have to mimic that of previous years.

4.3 Sensitivity and social balance

The following cultural and social considerations should underpin writing prompt selection:

- A writing prompt should allow equity of access for students of different genders, cultures and language backgrounds, so that particular groups are not immediately disengaged or disadvantaged.
- A writing prompt should not assume culturally specific knowledge.
- Representations of individuals and groups should be positive and constructive. Images of students of different ages as well as ethnic backgrounds should be included.
- Diversity of representations should be included in visual images, locations, etc.
- Topics must be engaging and generally accepted by the wider community.
- A writing prompt needs to be of interest to all four year levels, not just the upper or lower levels. This includes the writing topic and the images that are used.

4.4 Marking considerations

Table 2 shows marking criteria for the persuasive text.

Table 2. Marking criteria for Writing

Criterion	
Audience	The writer's capacity to orient, engage and persuade the reader
Text structure	The organization of the structural components of a persuasive text (introduction, body and conclusion into an appropriate and effective text structure)
Ideas	The creation, selection and crafting of ideas for a narrative
Persuasive devices	The use of a range of persuasive devices to enhance to e writer's position and persuade the writer.
Vocabulary	The range and precision of contextually appropriate language choices
Cohesion	The control of multiple threads and relationships over the whole text, achieved through the use of grammatical elements (referring words, text connectives, conjunctions) and lexical elements (substitutions, repetitions, word associations)
Paragraphing	The segmenting of text into paragraphs that assists the reader to follow the line of the argument
Sentence structure	The production of grammatically correct, structurally sound and meaningful sentences
Punctuation	The use of correct and appropriate punctuation to aid the reading of the text
Spelling	The accuracy of spelling and the difficulty of the words used

5 Development of quality control materials for marker training and marking

The contractor is required to develop a suite of annotated scripts that will be used for marker training, 'warm-up' scripts and quality control purposes. ACARA will assist with access to and the selection process of suitable scripts from the pool of trial test scripts. The suite of scripts will exemplify key features of the criteria of the marking rubric that markers need to be aware of in both training and during actual marking.

Approximately 75 scripts will be needed.

6 NAPLAN Style Guide

The NAPLAN Style Guide contains specifications and production information for all NAPLAN tests.

7 Test administration handbooks

The contractor will also be responsible for producing the test administration handbooks to be used for the administration of the trial writing tasks and for the test administration.

Appendix 1: NAPLAN 2012 Writing Test Specifications

NAPLAN 2012 TEST SPECIFICATIONS				
WRITING				
Specification	Year 3	Year 5	Year 7	Year 9
Number of test booklets	One flip test booklet ¹ for Writing (and Language Conventions)	One flip test booklet for Writing (and Language Conventions)	One flip test booklet for Writing (and Language Conventions)	One flip test booklet for Writing (and Language Conventions)
Number of writing prompts	1	1	1	1
Test sessions	1	1	1	1
Test time (excluding administration time)	40 minutes, including: 5 minutes planning time 30 minutes writing time 5 minutes editing time	40 minutes, including: 5 minutes planning time 30 minutes writing time 5 minutes editing time	40 minutes, including: 5 minutes planning time 30 minutes writing time 5 minutes editing time	40 minutes, including: 5 minutes planning time 30 minutes writing time 5 minutes editing time
Item quantity (maximum)	Persuasive text – all students respond to the same prompt	Persuasive text – all students respond to the same prompt	Persuasive text – all students respond to the same prompt	Persuasive text – all students respond to the same prompt
Number of test booklet pages (including front cover and 3 writing pages)	16 pp (Writing 4 pp + Language Conventions 12 pp)	16 pp (Writing 4 pp + Language Conventions 12 pp)	16 pp (Writing 4 pp + Language Conventions 12 pp)	16 pp (Writing 4 pp + Language Conventions 12 pp)
Writing prompt	1pg full colour	1pg full colour	1pg full colour	1pg full colour

¹ Flip booklet: tests commence on the front and back page of the same test booklet with one test printed so that students are required to turn the book upside down

**NAPLAN 2012
Assessment Guidelines**

Language Conventions

Contract No. 2011/02C

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1 Purpose of this document

These Assessment Guidelines are intended to guide the construction of the 2012 Language Conventions tests.

2 Overview of assessment content

2.1 Links across the curriculum

The NAPLAN Language Conventions test is part of a suite of assessments that measures literacy proficiency across the curriculum. The tools of language and literacy learning are applied and refined across the curriculum; they are explicitly developed in the English learning area. In that context, while the knowledge, skills and understandings addressed in the literacy assessments are situated in texts from a range of learning areas, they are underpinned by the *Statements of Learning for English* (MCEETYA 2005).

The NAPLAN Language Conventions test measures the achievement of students in Years 3, 5, 7 and 9 in spelling, grammar and punctuation. Although spelling, grammar and punctuation are not described separately in the *Statements of Learning for English*, the following extracts articulate the essential role of language conventions in students' language and literacy learning in English: "English curriculums ... seek that students develop:

- the capacity to speak, listen, read, view and write to make meaning with purpose, effect and confidence in a wide range of contexts ...
- a sound grasp of language forms and features and textual structures, and the capacity to apply these to the interpretation and construction of texts" (SoLfe, page 2).

2.3 Links with other strands of literacy

The test focuses on use and knowledge of language conventions in written Standard Australian English. These skills are essential to the development of reading and writing. The content of the Language Conventions test complements the Writing assessment, in particular, where spelling, grammar and punctuation are explicitly assessed in context. However, students' understanding of language conventions is also necessary for Reading.

2.4 Content

2.4.1 Spelling

The following list catalogues word features and may assist in ascertaining that a range of spelling features is being considered in construction of the assessments and at the review stages. The list is not exhaustive and should be used in conjunction with other documents to facilitate recording and justifying item choices. Other considerations should include:

- etymology and morphology of words
- frequency at pattern level (phonemes and syllables)
- frequency of use and familiarity of lexical item (eg subject- specific words)
- spelling strategies
- developmental spelling stages.

Table 1. Aspects of spelling

Word features	Examples
Consonant sounds	/s/: sat, science, acquiesce
Short vowel sounds	/u/: but, couple, mother
Long vowel sounds	/ee/: meet, bean, extreme
Diphthongs	/ay/: way, main, reins, reign
Schwa (unstressed/elided syllables)	tiger, surprise, benevolent
Digraphs	duck, phone, Christmas, rhyme
Double letters and doubling	doll, parallel, skipped
Endings	baby, table, adventure, solace
Inflections (plurals, verb forms, comparatives, superlatives)	dogs, licked, bigger, smallest
Affixes	undo, dislike, agreeable
Syllables	top, butterfly, effervescent
Silent letters	knee, signpost, pneumatic
Homophones	pear/pair, feint/faint

2.4.2 Grammar

Coverage of the following aspects should be considered. Not all grammar features can be assessed in one test but a range and balance should be sought.

Table 2. Aspects of grammar

Grammatical focus	Examples
textual cohesion	ellipsis and substitution conjunctions and conjunctive adjuncts reference (pronouns, synonyms,onyms, comparison) initial position clauses and phrases
sentence structure	simple, compound and complex sentences (clause structure and pattern, problems, faulty parallelism) direct and indirect speech conditionals relative clauses non-finite clauses
sentence type	questions statements commands exclamations
clause structure	active/passive subject-verb agreement noun clauses grammatical metaphor pronouns: subject, object, possessive, reflexive, relative

group composition	verb group noun group adjective group adverb group prepositions
word structure	derivational morphology inflectional morphology prefixes compounds

While knowledge of grammatical terms is not mandated in all state curriculums, some knowledge of grammatical terms is implied in the *Statements of Learning for English*. This can be addressed adequately with suitable scaffolding in cases where such knowledge explicitly contributes to making meaning, for example by asking, *Why is the passage written in the future tense?*

2.4.3 Punctuation

Coverage of the following aspects should be considered. Not all punctuation features can be assessed in one test but a range and balance should be sought.

Table 3. Aspects of punctuation

Punctuation feature
full stops question marks exclamation marks
Capitalization: sentence proper nouns titles
commas: in a sequence following initial introducing elements in a sentence dependent clauses between two dependent clauses non-defining relative clauses in direct and indirect speech
apostrophes: possession (singular and plural) contraction
semi-colons
colons and dashes
quotation marks: direct speech quoted material scare quotes (quotation marks used for purposes other than to identify a direct quotation e.g. to distance the writer or to highlight a questionable word or phrase in some way)

quote within a quote
parentheses

2.5 Contexts

The NAPLAN Language Conventions test assesses aspects of Standard Australian English in its written form. Contexts should be:

- drawn from a range of curriculum areas
- relevant to students
- age appropriate.

As far as possible, they should be appealing to students.

2.6 Sensitivity and social balance

Cultural and social considerations should underpin text and context selection. Diversity of representations should be included in visual images, names, family situations, locations, etc. Representations of individuals and groups should be positive and constructive.

Reasonable effort should be made to avoid offence. Topics must be unlikely to upset students. Subjects such as witches, magic, ghosts, death, religion and toilets are to be avoided, as are social issues such as gambling and substance abuse. Swearing should not be included.

The assessment should allow equity of access for students of both genders and from different cultures and language backgrounds. Contexts should be self-contained, though it cannot be expected that every context will be equally familiar to every student. Contexts should be relevant and accessible, but need not be restricted to those experienced personally by students.

3. Test construction

3.1 Overview

In 2012, the Language Conventions assessment will be given on one test day, in one block of time. The test will comprise spelling, grammar and punctuation items in specified proportions.

Table 4. Test sessions, components and coverage

	Year 3 test	Year 5 test	Year 7 test	Year 9 test
Number of test sessions	1	1	1	1
Test time (excl. administration time)	40 mins	40 mins	45 mins	45 mins
Number of test booklets	One flip test booklet for Language Conventions (and Writing)	One flip test booklet for Language Conventions (and Writing)	One flip test booklet for Language Conventions (and Writing)	One flip test booklet for Language Conventions (and Writing)
Number of test booklet pages (including cover)	16 pp (Language Conventions 12 pp + Writing 4 pp)	16 pp (Language Conventions 12 pp + Writing 4 pp)	16 pp (Language Conventions 12 pp + Writing 4 pp)	16 pp (Language Conventions 12 pp + Writing 4 pp)

Item quantity	50 (25 spelling; 25 grammar and punctuation)	50 (25 spelling; 25 grammar and punctuation)	50–60 (25–30 spelling; 25–30 grammar and punctuation)	50–60 (25–30 spelling; 25–30 grammar and punctuation)
Coverage	Spelling 50% Grammar 35% Punctuation 15%	Spelling 50% Grammar 35% Punctuation 15%	Spelling 50% Grammar 35% Punctuation 15%	Spelling 50% Grammar 35% Punctuation 15%

3.2 Spread of item difficulty

The aim is to achieve a distribution of item difficulties of 20%, 30%, 30% and 20% on the equal logit quarters scale across each test.

Easy items typically focus on short, simple texts, require literal understanding and draw on a familiar context. Easy items should relate to a variety of text types and be drawn from each of the sub-strands. Items should not be unintentionally easy, for example as a result of implausible distractors, dependencies on other items or inadvertent matching of the key and a text element.

Difficult items typically focus on more complex texts that are lexically dense, deal with unfamiliar or challenging topics, have an unusual form, or include figurative language. They require more sophisticated reading practices such as multi-thread tracking, inferring the writer's perspectives, construing nuances of language and using inter-textual understanding and knowledge. Items should relate to a variety of text types and be drawn from each of the sub-strands. Items should not be unintentionally difficult, for example as a result of:

- inappropriate language (e.g. confusing or lengthy stem; unnecessarily obscure or technical vocabulary; incorrect terminology)
- an emphasis on meta language
- ambiguity of item purpose
- a requirement for privileged, obscure or specialised prior knowledge
- incorrect, incomplete or narrow key in multiple-choice items.

Tricky or deliberately misleading items must be avoided.

3.3 Order of items

The Spelling items are completed first in relation to the set of Grammar/Punctuation items within each test. As a general principle, items within each set should be arranged within the test from easiest to most difficult.

3.4 Link items

The vertical links (common items between two year levels) should relate to understandings, skills and knowledge familiar to students in both year levels. The order of the link items within a set will be the same in the two test forms, but the set will appear in different positions in each form: towards the end of the test in the lower level and towards the beginning of the test in the higher level. Sets of link items should not be placed at the very beginning or very end of the forms.

Table 5. Vertical links

	Year 3 test	Year 5 test	Year 7 test	Year 9 test
Vertical links	Year 3/5 links: 20–25%	Year 3/5 links: 20–25% Year 5/7 links: 20–25%	Year 5/7 links: 20–25% Year 7/9 links:20– 25%	Year 7/9 links: 20–25%

4 Item specifications

4.1 Item types

4.1.1 Constructed response items

The Spelling test will consist of constructed response items; that is, students write the correct spelling of the words.

Table 6. Item types

	Year 3 test	Year 5 test	Year 7 test	Year 9 test
Spelling	Constructed response 100%	Constructed response 100%	Constructed response 100%	Constructed response 100%

Within this framework, items may demonstrate a variety of question structures, such as:

- independent questions, in which there is no relationship between the individual items, and contexts/sentences do not relate to each other
- a set of questions based on a text or visual stimulus, e.g. labels for a picture
- grouped questions, such as items based on a sequence of sentences that forms a narrative.

If sets of questions are developed, consideration must be given to the availability of sufficient items to be remaining in the set after trial. It is desirable that a balance of question structures be available for trial, and then for test construction. The number of different question types should be fewer for the younger year levels than for older students.

Table 7. Suggested structures for spelling assessment

	Year 3 test	Year 5 test	Year 7 test	Year 9 test
Item structures	Independent (stand alone) 40–80% Stimulus based (visual or text) or Grouped questions (cloze) 20–60%			
Question task:	Mistake identified (flagged) 50% Mistake unidentified (unflagged) 50%			

Spelling errors may be flagged (error identified) or unflagged (error not identified). **Errors to be detected and corrected should be plausible, unambiguous and relevant to the skill being assessed.** It is expected that errors that link to common spelling misconceptions are included. The representation of a spelling approximation may include more than one error per word (e.g. accommodation / accommodation, but they must be those that students actually use in their writing).

A homophone must not be used as an incorrect spelling unless it is flagged (error identified). Items must not include words that have alternative spellings (including American spelling), and must not allow alternative correct answers to be generated (such as plurals, inflections, tense).

Contexts used for the presentation of words with spelling errors must be accessible for students, and assist with the identification of the targeted word. The vocabulary and level of language used in the question should not exceed the level of the skill being tested.

An additional requirement of the trialling process will be to trial the proposed spelling items using a 'dictation' format; ie students hear the word they are required to spell. This will be in addition to the requirements to meet the specifications for the current test format.

4.1.2 Multiple-choice items

Grammar and Punctuation items will be in multiple-choice format.

Table 8. Item types

	Year 3 test	Year 5 test	Year 7 test	Year 9 test
Grammar and punctuation	Multiple choice 100%	Multiple choice 100%	Multiple choice 100%	Multiple choice 100%

The following principles should inform the development of all items:

- Each multiple-choice question must clearly target an aspect of the domain.
- The stem should scaffold the skill focus without highlighting the answer.
- Both sentence completion and direct question stems may be used. Direct questions are preferred but sentence completion can be used if it allows for simpler language to be used.
- In general, four alternatives should be provided.
- Alternatives within each item should be consistent in style and length.
- The key should be indisputable.
- Distractors must be plausible.
- Distractors that link to known, likely errors should be used.
- Dependencies between distractors and between items must be avoided.
- Items should not be text heavy, particularly for Years 3 and 5.

The Grammar and Punctuation instrument will comprise a variety of question structures, including:

- independent questions, in which there is no relationship between the individual items, and contexts/sentences do not relate to each other
- sets of questions based on a text or visual stimulus
- grouped questions, such as a cloze or sequence of sentences that form a narrative.

Table 9. Structures for grammar and punctuation assessment

	Year 3 test	Year 5 test	Year 7 test	Year 9 test
Item structures	Independent (stand alone) 40–80% Stimulus based (visual or text) or Grouped questions (cloze) 20–60%			

In cloze passages there should be no more than one gap per line and an item (gap) should not be based on the first word in a sentence.

4.2 Language

The complexity of the language used in Language Conventions items should reflect the intrinsic complexity of the skills, knowledge and understandings being assessed. Importantly, the level of language used in the question should not exceed the level of the skill being tested.

Every attempt should be made to ensure that extrinsic linguistic difficulty is not introduced in the test items, for example by unnecessary descriptions or wordiness, difficult or obscure vocabulary, usages perceived to be linked with class, or colloquialisms, particularly those that are region-specific.

4.3 Graphics

Illustrations and photographs can be used as part of a stimulus (e. g. for labeling a clearly identifiable image) or to help students understand the item or the context of an item.

The nature of the graphic should be appropriate to the year level. A realistic style of illustration should be used where possible and relevant details, particularly as they relate to labels, should be clear and unambiguous.

4.4 Item descriptors

The item descriptors will be aligned with the range of knowledge, skills and understandings in the *Statements of Learning for English*. Where possible, the language of the Statements of Learning should be used for the descriptors. The item descriptor encapsulates the essence of what the item is asking of the students. It is a key component in decisions about balance in the progress of test construction.

Table 10. Item descriptors: Spelling

Type of item	Feature of word's context or usage that conditions difficulty (optional)	Number of syllables	Feature of word's phonemic structure that conditions difficulty
Correctly spells		a two-syllable word	containing the –le pattern
Identifies an error, then correctly spells		a five-syllable word	containing a silent letter
Correctly spells	a subject-specific	a two-syllable word	containing the diphthong ou
Identifies an error, then correctly spells	a high frequency	a three-syllable word	containing the suffix –ment and the digraph –ie

Table 11. Item descriptors: Grammar and punctuation

Process	Grammatical or punctuation feature	Context (optional)
Identifies	the correct conjunction	in a sentence
Identifies	that an adverb is needed	to complete a sentence
Locates	a full stop	at the end of a sentence
Identifies	the correct use of apostrophe for possession	

5 NAPLAN Style Guide

The NAPLAN Style Guide contains specifications and production information for all NAPLAN tests.

6 Practice questions

Each item type that appears in the test should be represented by a practice question. The aim of the practice question is to enable the student to practise the response type, but it must not replicate the skill being tested. The items should be age appropriate; for example, there might be different sets for Years 3 and 5, and another for Years 7 and 9. A wider variety of item types would be expected for Years 7 and 9.

7 Test administration handbooks

The contractor will also be responsible for producing the test administration handbooks to be used for the administration of the trial materials and the final tests.

Appendix 1: NAPLAN 2012 Language Conventions Test Specifications

NAPLAN 2012 TEST SPECIFICATIONS LANGUAGE CONVENTIONS				
Specification	Year 3	Year 5	Year 7	Year 9
Number of test booklets	One flip test booklet ¹ for Language Conventions (and Writing)	One flip test booklet for Language Conventions (and Writing)	One flip test booklet for Language Conventions (and Writing)	One flip test booklet for Language Conventions (and Writing)
Number of test sessions	1	1	1	1
Test time (excluding administration time)	40 minutes	40 minutes	45 minutes	45 minutes
Item quantity (maximum)	50 (25 spelling and 25 grammar and punctuation)	50 (25 spelling and 25 grammar and punctuation)	50–60 (25–30 spelling and 25–30 grammar and punctuation)	50–60 (25–30 spelling and 25–30 grammar and punctuation)
Number of test booklet pages (including cover)	16 pp (Language Conventions 12 pp + Writing 4 pp)	16 pp (Language Conventions 12 pp + Writing 4 pp)	16 pp (Language Conventions 12 pp + Writing 4 pp)	16 pp (Language Conventions 12 pp + Writing 4 pp)
Item types	Multiple choice – 100% for Grammar and punctuation Constructed response – 100% for spelling	Multiple choice – 100% for Grammar and punctuation Constructed response – 100% for spelling	Multiple choice – 100% for Grammar and punctuation Constructed response – 100% for spelling	Multiple choice – 100% for Grammar and punctuation Constructed response – 100% for spelling
Coverage	Spelling 50% Grammar 35% Punctuation 15%	Spelling 50% Grammar 35% Punctuation 15%	Spelling 50% Grammar 35% Punctuation 15%	Spelling 50% Grammar 35% Punctuation 15%

¹ Flip booklet: tests commence on the front and back page of the same test booklet with one test printed so that students are required to turn the book upside down

² The test times indicated in this table are the published test times; that is, the time allowed to complete the test excluding administration time.

The published test time is the maximum time allowed for test completion excluding administration time. It is expected that a large majority of students will complete the tests well within the published test time.

Spread of item difficulty	Targeted distribution of: 20%, 30%, 30%, 20% on the equal logit quarters scale across the test	Targeted distribution of: 20%, 30%, 30%, 20% on the equal logit quarters scale across the test.	Targeted distribution of: 20%, 30%, 30%, 20% on the equal logit quarters scale across the test	Targeted distribution of: 20%, 30%, 30%, 20% on the equal logit quarters scale across the test
Vertical links	Year 3/5 links: 20–25%	Year 3/5 links: 20–25% Year 5/7 links: 20–25%	Year 5/7 links: 20–25% Year 7/9 links: 20– 25%	Year 7/9 links: 20–25%

**NAPLAN 2012
Assessment Guidelines**

Numeracy

Contract No. 2011/02D

Date: 27/01/2011

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1 Purpose of this document

These Assessment Guidelines are intended to guide the construction of the 2012 Numeracy tests.

2. Assessment content

2.1 Statements of Learning for Mathematics

The NAPLAN Numeracy test measures the achievement of students in Years 3, 5, 7 and 9 in numeracy. The main reference for “mathematical knowledge, skills and understandings” is the *Statements of Learning for Mathematics* (SoL_{FM}) (MCEETYA 2006). These identify “five broadly defined and inter-related aspects of Mathematics curriculums that are considered essential and common” (SoL_{FM}, p 3): Number; Algebra, Function & Pattern; Measurement, Chance & Data; Space; and Working Mathematically.

Number; Algebra, Function & Pattern; Measurement, Chance & Data; and Space may be considered the content aspects. The descriptors for Working Mathematically, in combination with the descriptors of the other, more content-focused aspects of mathematics, describe the mathematical process aspects. In broad terms these can be classified as knowing, applying and reasoning.

It is recognised that, while the Statements of Learning are a useful basis for identifying skills to be assessed, not all students will have had the opportunity to learn everything described in the documents. The Statements can thus inform but other issues must also be considered.

2.2 Content

2.2.1 Content aspects of mathematics

The 2012 test specification requires the following spread of items against the content-focused aspects of mathematics.

Table 1. Coverage of content

	Year 3	Year 5	Year 7	Year 9
Number	35–45%	35–45%	40–50%	20–30%
Algebra, Function & Pattern				20–30%
Space	25–35%	25–35%	20–30%	20–30%
Measurement, Chance & Data	25–35%	25–35%	20–30%	20–30%

2.2.2 Working mathematically: the process aspect of mathematics

Three broadly defined processes can be used to categorise the Working Mathematically demands placed on students by an item. In increasing level of demand, these are knowing, applying and reasoning – a categorisation derived from the structures used in international assessments (TIMSS and PISA).

- **Knowing:** Items involve providing habitual responses such as recalling number facts; recognizing an example of a concept (e.g. identify the triangle); simple direct measurement or comparison; retrieving a single piece of information from a simple graph, table or diagram.
- **Applying:** Items require students to apply known facts and skills to solve problems involving both mathematical and contextual knowledge; interpreting information provided in a context; comparing and contrasting figures, objects and statements; interpreting visual information; retrieving information from a graph, table or diagram and using it to solve a problem.
- **Reasoning:** Items require students to analyse, explain and justify; compare and contrast.

The process required is often identified or suggested by the language used in the item.

For the 2012 tests, it is recommended that there is a spread of items across these processes.

Table 2. Proposed percentages of items in process levels

	Year 3	Year 5	Year 7	Year 9
Knowing	40%	40%	35%	35%
Applying	40%	40%	40%	40%
Reasoning	20%	20%	25%	25%

Explanatory notes:

- The nature of the demand is broadly age-related: what is “knowing” for an older child may well require “reasoning” for a younger one.
- The somewhat greater emphasis on reasoning in Years 7 and 9 reflects the shift in emphasis in mathematics from the primary into the secondary years.
- The proportions for Years 7 and 9 are across the two test forms (calculator and non-calculator). It is likely that the calculator test will include a greater proportion of items that involve applying and reasoning rather than knowing.

2.3 Contexts

Contextual information includes problem scenarios, explanations, instructions and background text. Contexts should be:

- accessible
- meaningful to the mathematics being assessed
- realistic and appropriate for the year level assessed
- the minimum necessary to set up the problem.

2.4 Sensitivity and social balance

Diversity of representations should be included in visual images, names, family situations, locations, etc. The names used for people should be short, easy to read and pronounce, and approximately equally distributed across common cultural groups. Representations of individuals and groups should be positive and constructive.

Contexts that are potentially offensive, contentious or controversial must not be used. Social issues such as gambling, smoking and consuming or purchasing alcohol should be avoided as should reference to the weight/mass difference of individuals.

Contexts that are commonly reported in the media may be appropriate, as are “real-world” tables and graphs that come (or appear to come) from the media. However, information relating to

illness, accidents or mortality rates must be avoided. Every attempt should be made to ensure that the contextual information does not interfere with the mathematics being assessed or become a barrier to the students' ability to demonstrate their mathematical knowledge.

3 Test construction

3.1 Overview

The assessment is given on one day, in one session (Y3 & 5) and two sessions (Y7 & 9).

Table 3. Test sessions, times, booklets and quantity of items

	Year 3	Year 5	Year 7	Year 9
Number of test sessions	1	1	2	2
Test time (excl. administration time)	45 minutes	50 minutes	40 minutes x 2 (80 minutes total)	40 minutes x 2 (80 minutes total)
Calculator availability	No	No	Session 1: No Session 2: Yes	Session 1: No Session 2: Yes
Number of test booklets	1	1	1 flip booklet	1 flip booklet
Number of test booklet pages (including cover)	16	16	24 pp (Calculator 12 pp + Non-calculator 12 pp)	24 pp (Calculator 12 pp + Non-calculator 12 pp)
Item quantity	35	40	64 (32 items x 2 sessions)	64 (32 items x 2 sessions)

3.2 Spread of item difficulty

The aim is to achieve a distribution of item difficulties of 20%, 30%, 30% and 20% on the equal logit quarters scale across each test. If the post-trial analysis of the 2009 trial tests indicates a need to achieve a closer alignment to the targeted distribution of item difficulties, the item pool may be increased in two ways. Items that have been trialled at other year levels may be considered for inclusion and new items may also be developed. In both cases, curriculum requirements need to be satisfied and the items need to be trialled at the proposed year level.

3.3 Order of items

Items should generally be ordered by item difficulty, from easiest to most difficult. The items should not be presented in groups related to a particular content or process aspect but should be arranged randomly.

3.4 Link items

Table 4. Vertical links

	Year 3 test	Year 5 test	Year 7 test	Year 9 test
Vertical links: item sets	20–25% items across year levels Year 3/5 links: Minimum 8, maximum 11	20–25% items across year levels Year 3/5 links: Minimum 8, maximum 11 Year5/7 links: Minimum 8, maximum 11	Year5/7 links: 20–25% Year 7/9 links: 20–25% 50% split calculator/non- calculator tests	Year 7/9: 20–25% 50% split calculator/non- calculator tests
Links across strands	Proportional to strand coverage	Proportional to strand coverage	Proportional to strand coverage	Proportional to strand coverage

The order and approximate position of the link items will be the same in the two test forms. Link items should not be placed at the very beginning or very end of the forms.

4 Item specifications

4.1 Item types

The Numeracy tests contain two types of items: multiple-choice and constructed response.

Table 5. Item types

	Year 3 test	Year 5 test	Year 7 test in each test form	Year 9 test in each test form
Item types: multiple-choice	about 75%	about 75%	about 75%	about 75%
constructed response	about 25%	about 25%	about 25%	about 25%

4.1.1 Multiple-choice items

A multiple-choice question requires students to select the best answer. This format should be used when there is an expectation that most students are still developing a particular skill or understanding. It should be used when an alternative item type would require students to draw a graph or construct a figure that would be complicated or time-consuming.

The quality of the distractors contributes significantly to the overall quality of a multiple-choice item. Distractors contribute particularly to the usefulness of the item for diagnostic purposes. Distractors provide information on both student knowledge and understanding, as well as their choice of strategies in ways that point to possible underlying misconceptions. It is therefore recommended that:

- item developers be required to include diagnostic information related to the options
- panelists should consider and edit the distractors
- the test development and, ultimately, the reporting process should maintain the information about distractors and the diagnostic information they provide.

In addition, multiple-choice items should:

- most commonly include four options, although for particular reasons an item may provide three or five options
- have a single correct answer as one of the options
- list choices in order — increasing or decreasing order of numerical value, alphanumeric, length of option
- keep choices homogeneous in content (e.g. do not have three decimal numbers and a vulgar fraction as the options)
- not use all of the above or none of the above as options
- avoid giving clues to the right answer
- ensure there is a balance in the position of the correct answer across the test papers, i.e. an equal distribution of A, B, C and D keys.

4.1.2 Constructed response items

Constructed response items require a short answer; students produce a response that can be easily judged to be either correct or incorrect. This format is used when it is important to see that the student can produce the answer to the question on his or her own or when the question provides an opportunity to demonstrate “working mathematically” skills.

Items should state explicitly what the student needs to do in responding and should allow a limited range of correct responses. In the case of measures, the requirement of a unit of measurement as a part of the scoring rubrics should be stated explicitly.

Polytomous items

An additional requirement of the specifications in 2012 is for the contractor to develop a sample set of polytomous items (for trial) which require students to show their working or reasoning. The development of these items is requested *in addition* to the specifications outlined in this document. It would be expected that these items focus on the assessment of higher-order thinking mathematical skills or multi-step problems. Items are requested for all year levels.

The marking keys should list the acceptable responses for each score point.

4.2 Item descriptors

The item descriptors will be aligned with the range of knowledge, skills and understandings in the Statements of Learning for Mathematics. Where possible, the language of the Statements of Learning should be used for the descriptors. The item descriptor encapsulates the essence of what the item is asking of the students. It is a key component in decisions about balance in the process of test construction.

Table 6. Item descriptors: Numeracy examples

Process / Complexity / Feature
Evaluates and compares one-digit positive integers raised to simple powers
Calculates the perimeter of a composite rectangular shape
Solves a problem involving addition and subtraction of decimal numbers
Visualises a folded shape to identify line symmetry

4.3 Language

Standard Australian English should be used. Every attempt should be made to ensure that the language of the test items is accessible to all students, including ESL students. Importantly, the language level of the item should not exceed the level of difficulty of the skill that is being tested.

Items should not add unnecessary literacy demands on the students. Items should:

- include the mathematics content in the stem
- contain only short sentences
- contain simple language and avoid the use of unnecessary information
- have a positively worded stem, avoiding negatives
- use present tense and active voice where possible
- use high-frequency words and avoid colloquialisms
- where appropriate, use similar key words in the stem and distractors.

Both sentence completion and direct question stems may be used. Direct questions are preferred but sentence completion can be used if it allows for simpler language to be used.

In general, embedding the mathematics content in tables, diagrams, photographs or pictures can reduce the complexity of the language required.

4.4 Graphics

Graphics such as pictures, charts, and diagrams can be used to help students understand the item. Graphics should be used only if they support text or reduce the reading load for students, illustrating mathematical concepts in the text, and increasing item access.

The nature of the graphic should be appropriate to the year level. Complex images should be shown as photographs at the lower year levels.

Item writers should ensure that graphics:

- serve a key purpose (e.g. to provide a general example to guide interpretation, or as a key aspect of the information needed)
- mirror and parallel words and expectations of the text
- illustrate only necessary information
- do not separate the stem sentences.

Graphics must be able to be easily interpreted by students who are vision impaired.

5 NAPLAN Style Guide

The NAPLAN Style Guide contains specifications and production information for all NAPLAN tests.

6 Use of calculators and other manual aids

6.1 Calculators

At present Years 3 and 5 students may not use calculators. Calculators are allowed in one of the two test papers at Years 7 and 9. During the test students are allowed to use the calculator with which they are most familiar, including graphics calculators.

The NAEP categorises usefulness of a calculator in responding to an item in the following ways:

- a calculator inactive item – the solution neither requires nor suggests the use of a calculator
- a calculator neutral item – a calculator is not necessary for solving, however, given the option, some students might choose to use one
- a calculator active item – a calculator is necessary or very helpful in solving; a student would find it very difficult to solve the problem without the aid of a calculator.

All three types of item are suitable for the calculator section, but the percentage of calculator inactive items in this section should be kept to a minimum. Calculator active items must not be included in the non-calculator section.

In the calculator section, it is recommended that:

- items that allow students to check which answer is correct as their strategy should generally not be included
- the nature of the calculator does not affect the quality of students' responses
- attention is given to requiring students to demonstrate a sense of the reasonableness of an expected answer.

No items designed for the non-calculator section should be constructed so that their solution is dependent on the use of a calculator. However, items in the non-calculator section may refer to calculators, effectively using them as a “context”. For example, requiring students to identify the arithmetic operation necessary to solve a problem by having them identify the required calculator button is a way of testing mathematical understanding.

No item used in the Year 7 calculator test should be used as a link to the Year 5 test, regardless of its calculator (active, neutral or inactive) status.

6.2 Additional materials

In mathematics classrooms, the learning of mathematics is often supported with the use of measuring instruments and other materials, such as rulers, protractors, blocks etc. The 2010 Numeracy Tests do not require the use of such materials.

7 Practice questions

Each item type that appears in the test should be represented by a practice question. The practice question enables the student to practise the response type but it should not replicate the skill being tested. The items should be age appropriate; for example, there should be different sets for Years 3 and 5, and another for Years 7 and 9

8 Test administration handbooks

The contractor will also be responsible for producing the test administration handbooks to be used for the administration of the trial materials and for the final tests.

Appendix 1: NAPLAN 2012 Numeracy Test Specifications

NAPLAN 2012 TEST SPECIFICATIONS NUMERACY				
Specification	Year 3	Year 5	Year 7	Year 9
Number of test booklets	1	1	1 flip booklet ¹ for calculator and non- calculator tests	1 flip booklet for calculator and non- calculator tests
Number of test sessions	1	1	2	2
Calculator availability	No	No	Session 1 – Yes Session 2 – No	Session 1 – yes Session 2 – No
Test time ² (excluding administration time)	45 minutes	50 minutes	40 minutes x 2 (80 minutes total)	40 minutes x 2 (80 minutes total)
Item quantity (maximum)	35	40	64 (32 items x 2 sessions)	64 (32 items x 2 sessions)
Number of test booklet pages (including cover)	16 pp	16 pp	24 pp (Calculator 12 pp + Non- calculator 12 pp)	24 pp (Calculator 12 pp + Non- calculator 12 pp)
Item types ³	75% multiple choice 25% constructed response	75% multiple choice 25% constructed response	75% multiple choice 25% constructed response	75% multiple choice 25% constructed response

¹ Flip booklet: tests commence on the front and back page of the same test booklet with one test printed so that students are required to turn the book upside down

² The test times indicated in this table are the *published* test times; that is, the time allowed to complete the test excluding administration time.

The published test time is the *maximum* time allowed for test completion excluding administration time.

It is expected that a large majority of students will complete the tests well within the published test time.

³ *Constructed responses* will be marked by editors.

Coverage	Number, Algebra ⁴ , Function and Pattern 35–45% Space 25–35% Measurement, Chance & Data 25–35%	Number, Algebra, Function and Pattern 35–45% Space 25–35% Measurement, Chance & Data 25–35%	Number, Algebra, Function & Pattern 40–50% Space 20–30% Measurement, Chance & Data 20–30%	Number 20–30% Space 20–30% Measurement, Chance & Data 20–30% Algebra, Function & Pattern 20–30%
Spread of item difficulty	Targeted distribution of: 20%, 30%, 30%, 20% on the equal logit quarters scale across the test	Targeted distribution of: 20%, 30%, 30%, 20% on the equal logit quarters scale across the test.	Targeted distribution of: 20%, 30%, 30%, 20% on the equal logit quarters scale across the test	Targeted distribution of: 20%, 30%, 30%, 20% on the equal logit quarters scale across the test
Vertical links	20–25% items across year levels Year 3/5 links: Minimum 8 – Maximum 11	20–25% items across year levels Year 3/5 links: Minimum 8 – Maximum 11 Year 5/7 links: 20–25%	Year 5/7 links: 20–25% Year 7/9 links: 20–25% 50% split calculator/ non calculator tests	Year 7/9 links: 20–25% 50% split calculator/ non calculator tests
Links across strands	Proportional to strand coverage	Proportional to strand coverage	Proportional to strand coverage	Proportional to strand coverage
Measurement instruments	No requirement for use of measurement instruments e.g. protractor	No requirement for use of measurement instruments e.g. protractor	No requirement for use of measurement instruments e.g. protractor	No requirement for use of measurement instruments e.g. protractor

⁴ Algebra is not formally tested until Year 9.

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ACARA - NAPLAN TEST DEVELOPMENT PROCESS

The following chart maps the NAPLAN item and test development process.

Activity / Stage	Deliverables	Notes
1. Item Specification - ACARA ↓	ACARA provides detailed specifications for item development.	Specifications include number of items, item types, strand and sub-strand coverage, qualities of effective items, item difficulty spread etc.
2. Item development - Contractor ↓	Contractor develops items in accordance with specifications and best practice.	Contractors must have a detailed process for item development that aligns with ACARA's requirements. <i>Note:</i> "Contractor" applies to any one or more contractors.
3. Item submission - Contractor ↓	Progress batch (or complete batch) of items provided by contractor to ACARA via online item collection system (OICS). All items to have complete meta data and a batch submission checklist also to be provided.	Contractor uploads item images (PDF, JPEG, or Word image) into OICS, uploads all requisite meta data and, where appropriate, native images for later use in DTP. Transaction via secure FTP site. A batch checklist will also be included with the upload – which details how the batch conforms to the overall requirements for the items.
4. Item receipt - ACARA ↓	ACARA receives items via the OICS and stores securely.	All items will be contained within one of the standard template formats, carry meta data and will have a unique ID.
5. Item Audit 1 - ACARA ↓	ACARA conducts the first item review using ACARA officers and an expert review team.	This audit will review items against the specifications and features of high quality items. The panel will include ACARA officers and other experts. The audit will be conducted online through the online item review system (OIRS)
6. Assignment of status to items received - ACARA ↓	As a result of Audit 1 items will be flagged as: Approved (G) Requires Modification (A) Not Approved (R)	A traffic light system will be included for all review purposes – for clarity and efficiency. Approved = Green / Requires Modification = Amber / Not Approved = Red.
7. Response to Audit 1 - ACARA ↓	Approved items are stored securely for later trial test form development. Items requiring modification are returned to contractor for modification. Not Approved items are archived.	Contractors will be advised of the outcome of the item review. Where items require modification ACARA will provide advice on the reasons for modification. If an item has not been approved it will need to be replaced by the contractor.
8. Item Audit 2 – States and Territories ↓	ACARA manages review of approved and modified items with representatives from the states and territories.	This audit is principally to determine if each item (a) aligns with the relevant curriculum. It also audits items against (b) ACARA's item development and quality specifications. Items will only be subject to discussion if they fail or appear to fail to meet (a) or (b). The audit will be undertaken online.
9. Response to Audit 2 - ACARA	ACARA officers review advice received from the states and territories and determines item status (G,A,R). Items requiring	Audit 1, 2 and the responses to those audits will be undertaken against ACARA's specifications. Audit undertaken online.

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↓	modification are returned to the contractor for modification. If items are not approved they need to be replaced by the contractor with a substitute item.	
↓	10. Item Audit 3 - ACARA	ACARA undertakes an audit of replacement items (if required) as per Audit 1.
		<i>Item status will be assigned (G,A,R) Audit undertaken online.</i>
↓	11. Item Audit 4 – States and Territories	ACARA manages review of approved replacement items with state and territory representatives as per stage 8 above.
		<i>Item status will be assigned (G,A,R) Audit undertaken online.</i>
↓	12. Confirmation of Approved items - ACARA	ACARA confirms to contractor which items have been approved for inclusion in the trial test forms.
		<i>Approval is confirmed and approved items securely returned to contractor.</i>
↓	13. Trial test form construction - Contractor	Contractor develops requisite number of trial test forms in accordance with ACARA's specifications. Contractor to DTP trial forms to print ready format.
		<i>Contractor has images of all items submitted. Contractor to use these images to construct the trial test forms in accordance with ACARA's specifications – both measurement and layout / design.</i>
↓	14. Trial Test Administration	ACARA manages the administration of the trial through separate contract.
		<i>The trial process will provide vital item performance data to inform subsequent test construction.</i>
↓	15. Item Audit 5 - ACARA	ACARA officers undertake audit on item performance data from trialling. ACARA removes all items determined to have not performed satisfactorily at trial.
		<i>ACARA's audit of item performance will be undertaken against rigorous and clearly articulated performance criteria.</i>
↓	16. Trial test data provision -	Following the in-house analysis of item performance at trialling, the contractor will receive data relevant to their items, and confirmation of items to be used for draft final test form construction.
		<i>Items returned to contractor will be used for the construction of the draft final test forms.</i>
↓	17. Draft final test form construction	Contractor develops draft final test forms in accordance with ACARA's specifications.
		<i>Final test forms must comply strictly with ACARA's specifications and quality criteria.</i>
↓	18. Draft test final form Audit 6 - ACARA	ACARA officers and expert review team undertake first audit of draft final test form against specifications and quality standards.
		<i>This audit determines the alignment of draft final test forms to the required specifications and quality standards.</i>
↓	19. Draft test final forms Audit 7 – States and	ACARA manages review of draft (proposed) final test forms
		<i>This audit will be undertaken initially through an online format with limited capacity to produce print versions of the</i>

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<p>Territories</p>	<p>with state and territory representatives (2 stages)</p>	<p><i>draft forms. The second stage will be undertaken by way of a face-to-face meeting of ACARA - State and Territory representatives – Contractors (as required). The face-to-face meeting will be conducted through a combination of online and paper based formats.</i></p>
↓		
<p>20. Confirmation of final test forms (pre-modification) - ACARA</p>	<p>As a result of Audit 7, final test forms will be agreed (which may include agreed modifications).</p>	<p><i>Audit 7 meeting will record in detail the review of all forms. Any modifications agreed to will be recorded and advised to the contractor. Modifications will only occur if they comply with agreed criteria for modification at this stage.</i></p>
↓		
<p>21. Contractor modification of final test forms (if required)</p>	<p>Contractor to undertake any modifications to final test forms agreed to as a result of Audit 7.</p>	<p><i>If modifications are minor these may be modified by ACARA officers or DTP contractors.</i></p>
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<p>22. Confirmation of final test forms (post modification) Audit 8 – ACARA / States and Territories</p>	<p>ACARA manages a one day review of final test forms with state and territory representatives to ensure modifications agreed to during Audit 7 have been accurately completed.</p>	<p><i>This audit is only required if modifications to the final test forms have been agreed.</i></p>
↓		
<p>23. Desktop publishing of final test forms- ACARA</p>	<p>ACARA completes the desktop publishing of the NAPLAN final test forms in readiness for approval and provision to states and territories for printing.</p>	<p><i>Desktop publishing of final test forms undertaken in-house by ACARA. Final forms produced in In-Design 5 file format.</i></p>
↓		
<p>24. Final test forms approved by ACARA</p>	<p>Tests approved by ACARA in accordance with its agreed processes.</p>	
↓		
<p>25. Provision of final forms to states and territories – ACARA</p>	<p>Print ready files of tests provided to states and territories.</p>	<p><i>Via highly secure ftp site.</i></p>