Retrospective
2010 Queensland Core Skills Test
Foreword

The *Retrospective* is a yearly publication that provides detailed and wide-ranging feedback on the Queensland Core Skills (QCS) Test and the responses of students.

The core skills are the threads or common curriculum elements that are within the curriculum experience of at least 95% of students. The level of sophistication demanded by the test is appropriate for Year 12 students. It is a cross-curriculum test, which means that it does not test the content of specific subjects. Rather it tests the skills learnt from the combination of subjects in a balanced curriculum.

The QCS Test consists of four testpapers — a Writing Task, a Short Response paper and two Multiple Choice papers. Students experience a variety of stimulus material such as prose passages, poetry, graphs, tables, maps, mathematical and scientific data, cartoons, and reproductions of works of art.

The *Retrospective* is a definitive and descriptive report on the integration of the test specifications, the expectations of the testsetters, and the performance characteristics of the students. It also provides information on the relative worth of items on the test, data that allow the determination of student achievement on the test.

*The Retrospective* does not include copies of the testpapers. All schools receive copies of the testpapers during the administration of the QCS Test. Any individual or organisation requiring copies may buy these from the Queensland Studies Authority.

In addition to having value at school level, this publication should appeal to a wider audience. In fact, anyone interested in cross-curriculum testing is sure to find it informative.

Peter Luxton
*Acting Director*
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>i</td>
</tr>
<tr>
<td>Multiple Choice (MC) I &amp; II</td>
<td>2</td>
</tr>
<tr>
<td>Common Curriculum Elements (CCEs) and the MC format</td>
<td>4</td>
</tr>
<tr>
<td>MC I &amp; II 2010 summary</td>
<td>5</td>
</tr>
<tr>
<td>Short Response (SR)</td>
<td>8</td>
</tr>
<tr>
<td>SR 2010 summary</td>
<td>9</td>
</tr>
<tr>
<td>Unit One</td>
<td>10</td>
</tr>
<tr>
<td>Unit Two</td>
<td>16</td>
</tr>
<tr>
<td>Unit Three</td>
<td>20</td>
</tr>
<tr>
<td>Unit Four</td>
<td>26</td>
</tr>
<tr>
<td>Unit Five</td>
<td>31</td>
</tr>
<tr>
<td>Unit Six</td>
<td>38</td>
</tr>
<tr>
<td>Unit Seven</td>
<td>50</td>
</tr>
<tr>
<td>Unit Eight</td>
<td>62</td>
</tr>
<tr>
<td>Writing Task (WT)</td>
<td>69</td>
</tr>
<tr>
<td>Overall concept: <em>Flight</em></td>
<td>69</td>
</tr>
<tr>
<td>Diagram of the testpaper</td>
<td>70</td>
</tr>
<tr>
<td>Stimulus pieces: visual, written or combination?</td>
<td>73</td>
</tr>
<tr>
<td>Choice of text type</td>
<td>73</td>
</tr>
<tr>
<td>Choice of genre</td>
<td>74</td>
</tr>
<tr>
<td>Criteria and standards</td>
<td>77</td>
</tr>
<tr>
<td>Distribution of raw grades in each criterion</td>
<td>81</td>
</tr>
<tr>
<td>Selected student responses</td>
<td>82</td>
</tr>
<tr>
<td>Relative worth of each subtest</td>
<td>96</td>
</tr>
<tr>
<td>Relative worth of parts of the QCS Test</td>
<td>96</td>
</tr>
<tr>
<td>Deemed CCEs and QCS Test items</td>
<td>97</td>
</tr>
<tr>
<td>Balance of the QCS Test in terms of CCEs</td>
<td>97</td>
</tr>
<tr>
<td><strong>Appendixes</strong></td>
<td>98</td>
</tr>
<tr>
<td>Appendix 1: The 49 Common Curriculum Elements</td>
<td>98</td>
</tr>
<tr>
<td>Appendix 2: CCEs grouped by baskets</td>
<td>102</td>
</tr>
<tr>
<td>Appendix 3: Glossary of terms used in relation to the QCS Test</td>
<td>103</td>
</tr>
</tbody>
</table>
Multiple Choice (MC) I & II

Commentary
In 2010 the MC subtest consisted of 100 items divided evenly across two testpapers, with 9 units on MC I and 10 units on MC II (overall there were 10 verbal units and 9 quantitative units, but equal numbers of verbal and quantitative items on both testpapers and overall). A range of common curriculum elements (CCEs) was tested again this year.

The table on pages 4–6 gives the name of each multiple choice unit on the MC subtest, the keyed response for each item, the basket to which the item is assigned, the facilities (as percentages rounded to the nearest whole number) for each item and for each unit, the average facility for the MC subtest as a whole and the CCEs tested in each unit. For an item, the facility (F) is the proportion of students who gave the correct response. For a unit, the average facility (AF) is the average of the facilities of all items in that unit. The higher the facility, the “easier” the item.

A variety of stimulus materials was included this year, covering literature (Chess, Architect) and language use (Metaphors), civics and society (Identity, Swampy, Two Donkeys), history (Secret Cults) and historiography (Historians), art (Rockwell), popular culture (Professional Sports), pure mathematics (Triaxial Graph, Szabo Sequences, Spherical Geometry, Colourmap), applied mathematics (Scale & Distance, Coins, Ukuleles & Guitars), and the sciences (Flower Model, Midnight Sun). A variety of text forms was represented as well, including short, medium and long verbal texts, tables, diagrams, paintings, illustrations, graphs and maps.

This year’s MC subtest had an average facility of 0.50, compared with an average facility of 0.52 in 2009. This year, Paper 4 proved somewhat easier than Paper 2 (0.53 vs 0.48). The average facility of verbal items was approximately the same as last year (0.50 vs 0.49), while the average facility of quantitative items was slightly lower than for last year (0.50 vs 0.55). Students found none of the verbal units to be extremely challenging, with most units yielding average facilities between 0.47 and 0.65; the easiest were the two cartoons (Swampy and Two Donkeys) and Metaphors; the hardest were the prose non-fiction texts Historians and Professional Sports. Quantitative units had mean facilities between 0.34 and 0.59, the easiest unit being Coins; the most challenging, Spherical Geometry.

Paper 2
The testpaper opened with a unit based on a cartoon from the Swamp series by Gary Clark. The single item here required students to infer the character’s mindset from the way he approached the test task.

Unit 2 tested students' understanding of map scales. The items in this unit proved somewhat difficult, especially the first item in the unit, the facility of which was extremely low (0.26).

Unit 3 was based on an extract from a Spanish novel, featuring an episode in which the main character, a famous matador now well past his prime, confronts the hard realities of his life. Students handled this unit quite well, with most item facilities in the range 0.5 to 0.6.

Unit 4 was based on a graph that showed the varying amounts of daylight, twilight and darkness at Mawson Research Base in Antarctica. The graph may have taken students some time to understand. This unit proved moderately challenging (F=0.49), though with a broad range of item facilities, from about 0.3 to 0.6.

Unit 5 dealt with mystery cults in the ancient world, and the notion of secrecy as a sustaining force in such cults. This unit offered a significant conceptual and linguistic challenge to students, while the subject matter would have been new to most. Nevertheless, students handled this unit better than most other verbal units on this testpaper (F=0.55), with several items having facilities above 0.6, and only one below 0.4.

Unit 6 was based on a game called Colourmap, the rules of which required two players to take turns colouring sections of a “map” using a limited number of colours and following prescribed rules. Students handled this unit quite well (F=0.54), with a broad range of item facilities, from 0.4 to above 0.7.

Unit 7 presented a well-known painting by American artist Norman Rockwell, showing a schoolgirl who had been in a playground fight waiting to be interviewed by the school principal. Students had to look at such factors as the organisation of the composition, and the expressions on the faces of the schoolgirl and
principal, to make a judgment about the artist’s intent. Though students readily decoded the meaning of the schoolgirl’s facial expression and her dishevelled clothing (Item 35, $F=0.7$), they had a great deal of trouble interpreting an overall meaning of the painting (Item 36, $F=0.24$; this was the most difficult verbal item on the subtest).

From trialling data, it was predicted that Unit 8 would be a challenging quantitative unit, and indeed it was, with a mean facility of only 0.34 and an item facility range from 0.23 to 0.55. The subject matter — spherical geometry — may have taken some effort to understand. The CCEs tested in this unit included 32 Deducing and 16 Calculating, and 50 Visualising was critical. The last item in this unit (Item 42) proved to be the most difficult quantitative item on the subtest as a whole ($F=0.23$).

Paper 2 concluded with a verbal unit (Unit 9) that offered two different opinions on how historians should deal with moral judgment in their work. The two passages in this unit represent academic styles of writing, with high lexical and conceptual loading. Consequently, Historians proved to be the most challenging verbal unit on Paper 2 and on the subtest as a whole ($F=0.39$).

**Paper 4**

Paper 4 also opened with a unit based on a cartoon, this one about two donkeys tethered to each other yet pulling in opposite directions in order to reach food sources. Students found the single item on this cartoon quite easy ($F=0.71$).

The first quantitative unit on this testpaper ($F=0.59$), Unit 11 was, in fact, the easiest quantitative unit on the subtest as a whole. Basically, this unit was an exercise in arithmetic applied to various aspects of alloyed coins: mass, proportions of alloyed metals, diameter, and values.

Unit 12 offered two passages dealing with the use of metaphors, especially in political discourse. Linguistically and conceptually, these passages were fairly accessible, and students handled the items with relative ease ($F=0.6$, range 0.52 to 0.77).

Unit 13 presented students with a graph, which was reproduced at a large scale across two pages. The graph compared sales of ukuleles and acoustic guitars on a year-by-year basis over a period of more than fifty years. Students were asked to do basic graph-reading, perform calculations (including percentages, which seem to be problem for many students), identify patterns and trends, and extrapolate beyond the data. The moderate mean facility on this unit (0.55) belied the very broad spread of item facilities, with some items proving very challenging, and others quite easy (range from 0.29 to 0.76).

The stimulus for Unit 14, The Architect, was a prose poem by young Queensland poet Luke Beesley. In this piece of writing, one entered the turbulent inner world of a successful architect now jaded with his life. Though seemingly simple in language style, the writing is rich in metaphor and offered a substantive challenge to students. The unit was handled reasonably well, with a mean facility of 0.5 and an item difficulty range from 0.35 to 0.63.

Unit 15 took students into the world of plant genetics, presenting students with an explanatory model for the abnormal development of flowers. The emphasis in this unit was on spatial analysis and perceiving patterns, and to a lesser extent making use of information presented in verbal form. Students found this unit to have some challenge ($F=0.56$), though none of the items were overly taxing (the hardest was Item 77 at 0.46).

Unit 16 was based on an extract from a book about Australian identity, and focused on issues of ‘tribalism’ and barriers to achieving a “national” identity. Though quite long, this extract was linguistically and conceptually straightforward, and students found only a couple of the items particularly challenging (Items 85 and 86).

Szabo Sequences (unit 17) required students to use information about a particular kind of number sequence. Much of the relevant information was couched in verbal terms. Students handled this unit with relative ease ($F=0.52$, range 0.41 to 0.72).

Unit 18, a verbal unit, focused on changing attitudes to professionalism in Australian sports, especially the question of whether sportspeople should be paid. Though written in a fairly accessible style, students found this unit quite challenging. This was the most difficult verbal unit on paper 4, and the second most difficult verbal unit on the subtest as a whole.
The final unit on Paper 4, Unit 19, was based on a triaxial graph used to classify alloys according to their relative proportions of three metals. The low mean facility on this unit (0.5) and the very narrow range of item facilities (from 0.44 to 0.57) suggests that students may not have been confident about reading this graph. Students preparing to sit the QCS Test should make sure they are able to apply mathematical skills that they would have acquired by Year 10. Interpretation of different types of graphs and calculations involving percentages seem to cause problems for some students. It is important that students bring all required equipment — including an approved calculator and a ruler that can be easily read — to the test session and are proficient in using the equipment.

**Common Curriculum Elements (CCEs) and the MC format**

Of the 49 CCEs, the following cannot be tested directly in MC format, though a few—such as graphing, summarising and manipulating equipment—may be tested at “second order” (i.e. indirectly):

- 11 **Summarising/condensing written text**
- 12 **Compiling lists/statistics**
- 13 **Recording/noting data**
- 14 **Compiling results in a tabular form**
- 15 **Graphing**
- 20 **Setting out/presenting/arranging/displaying**
- 21 **Structuring/organising extended written text**
- 22 **Structuring/organising a mathematical argument**
- 26 **Explaining to others**
- 27 **Expounding a viewpoint**
- 46 **Creating/composing/devising**
- 53 **Observing systematically**
- 55 **Gesturing**
- 57 **Manipulating/operating/using equipment**
- 60 **Sketching/drawing**.

These CCEs can be validly tested in Short Response (SR) format.
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<td>31 Interrelating ideas/themes/issues</td>
</tr>
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<td>43 Analysing</td>
</tr>
<tr>
<td></td>
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<td>43</td>
<td></td>
<td>45 Judging and evaluating</td>
</tr>
<tr>
<td></td>
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<td>D</td>
<td>θ</td>
<td>68</td>
<td></td>
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<tr>
<td></td>
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<td>A</td>
<td>β</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Midnight Sun</td>
<td>13</td>
<td>C</td>
<td>α</td>
<td>58</td>
<td></td>
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</tr>
<tr>
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<td>62</td>
<td></td>
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<td>C</td>
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<td>37</td>
<td></td>
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<td>φ</td>
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<td></td>
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<td>β</td>
<td>47</td>
<td></td>
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<td>C</td>
<td>θ</td>
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<td>B</td>
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<td>φ</td>
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<td>π</td>
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<td></td>
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<td>β</td>
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<td></td>
<td>73</td>
<td>D</td>
<td>θ</td>
<td></td>
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</table>
## Notes
The order of the CCEs tested for each unit does not reflect the order of the items, nor does it imply a cognitive hierarchy.
The dominant CCEs that are tested in a unit are listed.
The baskets into which CCEs are grouped are shown in Appendix 2.
For an item, the facility (F) is the proportion of students who gave the correct response. For a unit, the average facility (AF) is the average of the facilities of all items in that unit.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Item</th>
<th>Key</th>
<th>Basket</th>
<th>F</th>
<th>AF (%)</th>
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<td>π</td>
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</table>

**Average facility on subtest 50.3**
Short Response (SR)

Commentary
This year’s SR subtest comprised 18 items across eight units. As students worked through each unit, they interacted with challenging and engaging stimulus material. Test developers paid careful attention to framing each item in a way that made it accessible to most students. The SR testpaper comprised units with stimulus material selected from fields as diverse as mathematics, logic, astronomy, literature, physical and social sciences and visual arts.

This year’s paper was again varied in its content, covering a broad range of CCEs. The different tasks included showing how to fold a simple envelope by drawing a diagram and composing step-by-step instructions, writing a formal apology, following an intricate mathematical method accurately, ruling lines on a map, determining percentages, drawing a page imitating an alphabet book, drawing a line graph, crafting a description. These tasks aimed to interest students and impart knowledge while assessing student achievement.

Model responses and commentaries on student performance
What follows is an item-by-item discussion that includes model responses and marking schemes, tables and graphs of the distributions of grades and commentaries that discuss how students handled the tasks and that give suggestions which might help. At times, references to specific student responses are included to exemplify observations. As much as possible model responses are actual student responses. Model responses are those that demonstrate a high level of performance and would have been awarded the highest grade, A.

For some items, especially the more open-ended items, responses were extremely varied. For these it is not possible to provide examples of the many ways in which students responded. The detailed, item-specific marking schemes indicate the scope of acceptable responses for different grades. Even for the more closed items the marking schemes demonstrate that different ways of perceiving “the solution” were able to gain credit.

Marking schemes
The marking schemes used during the marking operation and included in this section of the Retrospective are not designed to be read in isolation. They are but one element of the marking prescription. During the marking operation markers undergo rigorous training in how to apply the marking schemes to student responses of one marking unit. The training involves careful consideration and application of the material presented by immersers.

For organisational purposes during the marking operation, the testpaper units were grouped into five marking units. In 2010, Marking Unit 1 contained testpaper units One and Eight, Marking Unit 2 contained testpaper units Two and Five, Marking Unit 3 contained testpaper units Three and Four, Marking Unit 6 contained testpaper unit Six and Marking Unit 7 contained testpaper unit Seven.

Since all short response items are double marked, this means that a student’s response booklet was marked by at least 10 different independent markers — more, if any response(s) required referee marking.
## SR 2010 summary

<table>
<thead>
<tr>
<th>Unit</th>
<th>Item</th>
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<th>Common Curriculum Elements</th>
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<tbody>
<tr>
<td>One</td>
<td>Alex &amp; Tom</td>
<td>1 α</td>
<td>28 Empathising 31 Interrelating ideas/themes/issues 33 Reaching a conclusion which is consistent with a given set of assumptions 38 Generalising from information</td>
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<tr>
<td></td>
<td></td>
<td>2 θ</td>
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</tr>
<tr>
<td>Two</td>
<td>Sleeve</td>
<td>3 β</td>
<td>26 Explaining to others 44 Synthesising 50 Visualising</td>
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<tr>
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<td>Style Guide</td>
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<td>2 Finding material in an indexed collection 4 Interpreting the meaning of words ... 10 Using vocabulary appropriate to a context 26 Explaining to others</td>
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<td>5 θ Interrelating ideas/themes/issues 44 Synthesising</td>
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<td>Four</td>
<td>Large Numbers</td>
<td>6 α</td>
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<tr>
<td>Five</td>
<td>Tordesillas</td>
<td>8 φ</td>
<td>6 Interpreting the meaning of ... maps ... 16 Calculating with or without calculators 17 Estimating numerical magnitude 50 Visualising 57 Manipulating/operating/using equipment</td>
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<tr>
<td></td>
<td></td>
<td>9 φ</td>
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<tr>
<td>Six</td>
<td>Alphabet Books</td>
<td>10 π</td>
<td>4 Interpreting the meaning of words ... 9 Using correct spelling, punctuation, grammar 10 Using vocabulary appropriate to a context 29 Comparing, contrasting</td>
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<tr>
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<td></td>
<td>11 β</td>
<td>31 Interrelating ideas/themes/issues 34 Inserting an intermediate between members of a series 43 Analysing 46 Creating/composing/devising 48 Justifying</td>
</tr>
<tr>
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<td></td>
<td>12 θ</td>
<td>49 Perceiving patterns</td>
</tr>
<tr>
<td>Seven</td>
<td>Ice-cream</td>
<td>13 φ</td>
<td>6 Interpreting the meaning of ... graphs 15 Graphing 19 Substituting in formulae 22 Structuring/organising a mathematical argument</td>
</tr>
<tr>
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<td>14 φ</td>
<td>16 Calculating with or without calculators 37 Applying a progression of steps to achieve the required answer 48 Justifying</td>
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<td></td>
<td>15 π</td>
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</tr>
<tr>
<td></td>
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<td>16 β</td>
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<tr>
<td>Eight</td>
<td>Thunderbird Inn</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>31 Interrelating ideas/themes/issues 43 Analysing 46 Creating/composing/devising</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18 π</td>
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</tr>
</tbody>
</table>

Note: CCEs specific to an item are listed on the item’s marking scheme. The baskets into which CCEs are grouped are shown in Appendix 2.
Unit One

This unit was based on a short extract from James Patterson’s detective novel *Jack and Jill*. The extract records the meeting between President Thomas Byrne and Alex Cross.

The following table shows the percentage of responses awarded the various grades for the items in this unit.

<table>
<thead>
<tr>
<th>Item</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
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<td></td>
<td>11.7</td>
<td>2.7</td>
</tr>
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</table>

A shaded box indicates that the grade was not available for that item.

Item 1

*Model response*

In the first half of the extract, Alex Cross goes through a process of deciding how he wants to be addressed by the President.

Describe a likely train of thought that led him to his decision.

*Alex has a choice of using Doctor or Detective. He’s quite aware that many at the White House would attach a certain status to anyone called ‘Doctor’—but Alex is not after status. If he used ‘Detective’, the President may become very wary of what he says (‘What you say may be used in evidence against you’). He wants to create an atmosphere without pretensions or defensiveness—one of open communication. So, he rejects both titles, and chooses to be addressed as Alex, because it’s more friendly.*

*Commentary*

Item 1 is a two-star item which tested achievement in CCEs 28 *Empathising*, and 31 *Interrelating ideas/themes/issues*.

In the extract Alex Cross is deciding how he will introduce himself to the President. Students were asked to describe a likely train of thought that led to his decision. Alex’s train of thought had four elements. He rejected the use of the title “Detective” (this was to be inferred as it was not articulated in the text). He perceived the use of the title “Doctor” would indicate some status, reputation or formality so he rejected this title. He decided that he wanted to be addressed by his given name. Students had to ensure that their response was consistent with the text. A creditable reason for Alex choosing to be addressed by his given name had to go beyond mere personal preference.

Responses that were awarded an A-grade covered the four elements by clearly articulating a plausible train of thought which provided a reason for rejecting the use of “Detective”, indicating the perceived status/
reputation/formality of the title “Doctor”, providing a reason for rejecting the use of the title “Doctor” and providing a reason for Alex choosing to be addressed by his given name.

Many students had difficulty identifying all four elements. Some failed to indicate why Alex rejected the use of the title “Detective” or, while some recognised the status/reputation/formality associated with the title “Doctor”, they failed to provide a clear reason for rejecting it.

One way a response could be awarded a B-grade was to provide a reason for Alex Cross rejecting the use of the title “Detective” and showing (or, by default, indicating) that he chose to be addressed by his given name. Defaulting meant that the student made it clear that they were addressing the two elements together by providing clear grammatical signals such as the comparative (e.g. “less intrusive”, “more approachable”) or a connector like “on the other hand” or “on second thought”. A second way was to focus on the title “Doctor” or to consider the two titles together as professional titles. The student needed to indicate the perceived status/reputation/formality of the title “Doctor” or the professional title and then provide a reason for rejecting that title. As well, the response needed to show (or, by default, indicate) that Alex Cross chose to be addressed by his given name. It was also acceptable for students to reverse this defaulting process; that is, provide a reason for Alex Cross choosing to be addressed by his given name and show (or, by default, indicate) that Alex rejected being addressed as “Doctor” or using a professional title. This latter category of the B-grade response was very common.

Students need to be attentive to the wording of stems. The stem required students to consider Alex’s “train of thought” and to articulate each step of his thought process not to answer the question why he chose to be addressed by his given name. Responses that ignored this instruction and merely provided a creditable reason for Alex choosing to be addressed by his given name/rejecting the other titles could, at best, be given a C-grade. Stems are carefully constructed and need to be carefully considered when devising a high quality response.
**UNIT ONE ITEM 1**

**PERFORMANCE DOMAIN**

<table>
<thead>
<tr>
<th>Performance Domain</th>
<th>28 Empathising</th>
<th>31 Interrelating ideas/themes/issues</th>
</tr>
</thead>
</table>

### A

The response steps through a plausible train of thought which
- provides a reason for Alex Cross rejecting the use of “Detective”
- indicates a perceived status/reputation/formality of the title of “Doctor”
- provides a reason for Alex Cross rejecting the use of “Doctor”
- provides a reason for Alex Cross choosing to be addressed by his given name.

### B

The response outlines a plausible train of thought which
- provides a reason for Alex Cross rejecting the use of “Detective”
- shows (or, by default, indicates) that Alex Cross chooses to be addressed by his given name.

### C

The response provides a reason for Alex Cross rejecting the use of “Doctor”/“Detective”/a professional title.

### N

Response is unintelligible or does not satisfy the requirements for any other grade.

### O

No response has been made at any time.

---

**Notes:**

1. To be creditable, the response must not be inconsistent with the extract.
2. A creditable reason for Alex Cross choosing to be addressed by his given name must go beyond a mere personal preference for his given name.

---

**Model Response:**

Alex has a choice of using Doctor or Detective. He’s quite aware that many at the White House would attach a certain status to anyone called ‘Doctor’ — but Alex is not after status. If he used ‘Detective’, the President may become very wary of what he says (‘What you say may be used in evidence against you’). He wants to create an atmosphere without pretensions or defensiveness — one of open communication. So, he rejects both titles, and chooses to be addressed as Alex, because it’s more friendly.
Item 2

Model response 1

What does the extract suggest about Alex Cross’s impression of the President just after he has met him?

Give reasons to support your conclusion.

1. Alex thinks that the President is a man who is not bound by formalities—this can be seen from the President asking Alex to call him by his first name, Tom, resulting in them ‘shaking off their surnames’. Further, he sees the President as honest, with strength of character because of his firm handshake.

Model response 2

What does the extract suggest about Alex Cross’s impression of the President just after he has met him?

Give reasons to support your conclusion.

2. He thinks that the President is a practised performer, a chameleon. He gives Alex a practised ‘broad smile’ designed to appeal to the public because it is charming. He also repeats the actual words of Alex by introducing himself with ‘And I prefer Tom’. He is reflecting what people want to hear and see.

Commentary

Item 2 is a two-star item which tested achievement in the CCEs 33 Reaching a conclusion which is consistent with a given set of assumptions and 38 Generalising from information.

Students were asked what the extract suggested about Alex Cross’s impression of the President just after he had met him. The cue indicated that the students had to give reasons to support their conclusions regarding Alex’s impression of the President. Two model responses are provided on the marking scheme as students may have interpreted the extract in two different but equally valid ways. One interpretation was that the President presented himself in a friendly, helpful way because that was part of his character. Another interpretation was that the President was a studied politician who used his charming manner as a political “bag of tricks” to befriend Alex and therefore Alex could not trust him.

An A-grade response provided a credible and specific impression by describing one or more characteristics of the President and giving clear reason(s) linked to the characteristic(s) and based on the extract for forming this impression. This characteristic might have been described with one or two adjectives, as in “friendly and genuine” or with a phrase or clause. It was important that the reasons were clearly matched to the
characteristic(s) given. A mismatch between these two was a common error, e.g. “He is genuine because he had a ‘charismatic’ smile.”

Some responses detailed Alex going through an intricate thought process, perhaps a reflection of Item 1. As long as students came to a definite conclusion about an impression or why, the response could be awarded an A-grade. The reasons proffered had to match the steps in Alex’s thinking.

The marking scheme specifies two important notes when determining a grade. The first note says that the impression must be formed by Alex Cross and that it must be an impression of the President. Some students gave their impression of Alex’s emotions and reactions on meeting the President instead of focusing on Alex’s impression of the President. Others gave The President’s impression of Alex. Such responses gained no credit.

Students should read the stem (and any cues) carefully and respond to what is asked of them, not a variation. The second note demanded that the response demonstrated that the student understood the meaning of “charismatic” (a word in the stimulus material) if it was used or was the supporting evidence for a reason. Simply saying that the President was “charismatic” was not sufficient to be creditable. It had to be clear from the response that the meaning of “charismatic” was understood.

To be awarded a B-grade, the response provided a credible and specific impression by describing a characteristic of the President and a reason, linked to the characteristic and based on the extract, for forming this impression. Many responses fell into this category because one of the pieces of evidence matched the characteristic but a second piece of evidence was either absent, mismatched or simply cited “charismatic”.

There were two ways for a response to be awarded a C-grade. The first way was to identify one characteristic of the President that can be inferred from the text, e.g. “He is casual and laid-back.” The second was to provide evidence from the text to support either a broadly positive or negative impression of the President.

Students did this in different ways. If they used broad general descriptors such as he is average, OK, a good bloke, a real person, they were awarded a C-grade as long as they provided evidence from the text. The requirement for “evidence” rather than “reasons” allowed for responses that simply provided positive or negative observations about the encounter, e.g. “His impression of the President was very positive because they seemed to like each other and they used their first names.”

The cue instructs students to give reasons (plural).
### UNIT ONE ITEM 2

**PERFORMANCE DOMAIN**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>Reaching a conclusion which is consistent with a given set of assumptions</td>
</tr>
<tr>
<td>38</td>
<td>Generalising from information</td>
</tr>
</tbody>
</table>

**MARKING SCHEME**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| A | The response provides  
   - a credible and specific impression by describing one or more characteristics of the President  
   - clear reasons — linked to the characteristic(s) and based on the extract — for forming this impression. |
| B | The response provides  
   - a credible and specific impression by describing a characteristic of the President  
   - a reason — linked to the characteristic and based on the extract — for forming this impression. |
| C | The response identifies one characteristic of the President that can be inferred from the text.  
   OR  
   The response provides evidence from the text to support either a broad positive or broad negative impression of the President. |
| N | Response is unintelligible or does not satisfy the requirements for any other grade. |
| O | No response has been made at any time. |

**Notes:**

1. The impression is the impression formed by Alex Cross.
2. The response must show that the candidate knows the meaning of “charismatic” for “charismatic” to be included as a characteristic or as supporting evidence in a reason. Simply saying that the President is charismatic is insufficient to gain credit.

**Model Response:**

1. Alex thinks that the President is a man who is not bound by formalities—this can be seen from the President asking Alex to call him by his first name, Tom, resulting in them ‘shaking off their surnames’. Further, he sees the President as honest, with strength of character because of his firm handshake.

2. He thinks the President is a practised performer, a chameleon. He gives Alex a practised ‘broad smile’ designed to appeal to the public because it is charming. He also repeats the actual words of Alex by introducing himself with ‘And I prefer Tom’. He is reflecting what people want to hear and see.
Unit Two

The item in this unit was based on the folding of a decorative paper sleeve (a simple envelope). The stimulus material was a photograph showing two different views of such a design. Students were told that the sleeve was folded from a single square sheet of paper that had not been cut or torn.

The following table shows the percentage of responses awarded the various grades for the item in this unit.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 3</td>
<td>7.8</td>
<td>24.3</td>
<td>31.1</td>
<td>15.7</td>
<td>10.0</td>
<td>8.9</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Item 3

Model response

Show only the crease lines. Do not include labels or other markings.

Present written instructions that are not supplemented with any diagrams and do not rely on reference to the square above for clarity.

1. Fold the paper into equal thirds from top to bottom.
2. Unfold.
3. Fold the top right hand corner down until the right hand edge of the top third lies along the top fold line.
4. Repeat step 3. for the bottom right hand corner.
5. Fold the bottom third of the paper up to cover the middle third.
6. Fold the top third down to cover the other two thirds.
7. Fold in half from left to right.
Commentary

Item 3 is a three-star item which tested achievement in CCEs 50 Visualising, 44 Synthesising and 26 Explaining to others.

Students were asked to show how to fold the pictured decorative sleeve by ruling lines of dashes within the square provided to show the crease lines. They were also asked to write step-by-step instructions to explain how to fold the sleeve. The response area included the square and a lined area for the written instructions. One cue directed students to show only the crease lines within the square and not to include labels or other markings. The other cue asked them to present written instructions that were not supplemented by any diagrams and that did not rely on reference to the square for clarity.

To be awarded an A-grade, the response had to show the three sets of crease lines (the thirds, the half and the triangles) ruled and correctly positioned within the square. No incorrect information was to be shown or given. The written instructions had to be clear, stand-alone instructions (as defined in the notes on the marking scheme).

Grades other than an A-grade hinged on how many ambiguities (as classified in note 9, on the marking scheme), omissions or incorrect instructions were made throughout the response. The most common ambiguities were related to: the orientation of the square (which could alter where the corners would be folded or how the thirds and half were aligned); how to fold the corners (if the instruction was simply to fold to the crease line, the fold may not have been in the correct position); and the omission of an instruction to unfold (which indicated that the corners were folded while the paper was still folded in thirds).

It is worth noting that a large number of students confused the definitions of basic concepts such as halves, quarters, thirds, triangles, squares.

This item highlights the importance of presenting to do the QCS Test with all the essential equipment as listed on the front of the testpaper. Some crease lines appeared to have been drawn without using a ruler.
## UNIT TWO ITEM 3

<table>
<thead>
<tr>
<th>PERFORMANCE DOMAIN</th>
<th>50 Visualising</th>
<th>44 Synthesising</th>
<th>26 Explaining to others</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. The response provides • clear stand-alone instructions that would form the sleeve • the square with the three sets of crease lines ruled and all correctly positioned. The square does not include labels or other markings. No incorrect information is shown or given.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. The response provides • stand-alone instructions that, except for no more than one ambiguity, would form the sleeve • the square with the three sets of crease lines ruled and reasonably positioned.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. The response provides instructions that, when clarified by the diagram if necessary, would form a sleeve.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. The response provides instructions that, when clarified by the diagram if necessary, would form two sets of crease lines reasonably positioned.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. The response provides the square with the three sets of crease lines reasonably positioned.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N. Response is unintelligible or does not satisfy the requirements for any other grade.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O. No response has been made at any time.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### MARKING SCHEME

**Notes:**

1. “Clear” instructions are instructions that can be performed in only one way.
2. “Stand-alone” instructions do not rely on any diagram, label or reference to the square.
3. “a sleeve” has folded-down corners, folded-in sides and is folded in half to form a pocket. *The sleeve is a sleeve that if unfolded would produce the three sets of crease lines reasonably positioned.*
4. The sets of crease lines are: the “thirds”, the “half” and the “triangles”.
5. Correctly positioned triangle crease lines join the end of the thirds crease line to a point two-thirds of the distance between the corner and the half crease line.
6. Reasonably positioned triangle crease lines join the end of the thirds crease line to a point that lies between one sixth and almost a half way down the side of the square.
7. Unless otherwise stated, assume the corners are folded in the same direction and the final fold-in-half instruction is across, not along, the rectangle and places the triangle on the inside.
8. The sleeve can have the “thirds” folded in either order, i.e. left over right or right over left.
9. An ambiguity is:
   - an instruction that can be performed in more than one way, one of which will form the sleeve
   - an unstated but implied instruction (such as unfolding).
10. If the instruction to unfold is missing it may be assumed for C-, D- or E- grades.
UNIT TWO ITEM 3

Model Response:

1. Fold the paper into equal thirds from top to bottom.
2. Unfold.
3. Fold the top right hand corner down until the right hand edge of the top third lies along the top fold line.
4. Repeat step 3 for the bottom right hand corner.
5. Fold the bottom third of the paper up to cover the middle third.
6. Fold the top third down to cover the other two thirds.
7. Fold in half from left to right.
Unit Three

The two items in this unit were based on an adapted extract from a style guide. Students were told the purpose of a style guide is to make document writing clear, correct and unambiguous. The following table shows the percentage of responses awarded the various grades for the items in this unit.

<table>
<thead>
<tr>
<th></th>
<th>A (%)</th>
<th>B (%)</th>
<th>C (%)</th>
<th>D (%)</th>
<th>E (%)</th>
<th>N (%)</th>
<th>O (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 4</td>
<td>0.5</td>
<td>25.5</td>
<td>34.0</td>
<td>28.3</td>
<td>10.6</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>Item 5</td>
<td>18.1</td>
<td>22.8</td>
<td>26.2</td>
<td>26.7</td>
<td>2.9</td>
<td>3.4</td>
<td></td>
</tr>
</tbody>
</table>

A shaded box indicates that the grade was not available for that item.

Item 4

Model response

Due to all the reminders about mutual respect, we are now better able to cooperate.

Owing to all the reminders about mutual respect, we are now better able to cooperate.

It’s a shame the amount of unforced errors he makes affects how well the team does.

It’s number of unforced errors he makes affects how well the team does.

The gift she gave me was a rather unique acknowledgement of all my efforts on her behalf.

The gift she gave me was a rather unique acknowledgement of all my efforts on her behalf.

Neither of them were happy that the true facts about the crime had been misused in the trial.

Neither of them were happy that the true facts about the crime had been misused in the trial.
Commentary

Item 4 is a three-star item which tested achievement in CCEs 2 Finding material in an indexed collection and 4 Interpreting the meaning of words or other symbols. Students were required to find and then to correct errors in the four given sentences, based on the conventions listed in a style guide extract. In the stem they were told that each sentence had more than one error. Corrections required in this item included replacing words, deleting words or correcting the spelling of words. Only the nine errors and corrections shown in the model response were allowed and markers were instructed not to credit other corrections. The cue instructed students to make corrections based on the style guide information only. The purpose of a style guide is to ensure all users adopt the same language conventions, especially where common usage may allow different uses of a word.

The errors in the sentences were:

for sentence one,
• according to the style guide, “due to” is not to be used to start a sentence. Therefore it is incorrect as given and the appropriate correction would be to change it to “owing to”.
• “co-operate” should not have a hyphen. The word should be spelled “cooperate”.

for sentence two,
• “Its” is incorrect and should be written as “It’s” or as “It is”.
• “amount” refers to a quantity of something that cannot be counted. Therefore in this context, it needs to be replaced with “number”.
• “effects” is identified as a noun in the style guide, so in this context needs to be replaced with the verb “affects”.

for sentence three,
• the style guide indicates the word “unique” cannot be modified, so “rather” must be deleted.
• “acknowledgement” is misspelled according to the style guide. The corrected word does not contain the second “e”.

for sentence four,
• the subject/verb agreement is incorrect. “Neither” is singular; therefore, it requires a singular verb. The word “were” should be changed to “was”. This is deemed to be the only acceptable correction for this error because any other correction would have to be based on information not specified in the extract of the style guide.
• the style guide indicates that the word “facts” cannot be modified by the word “true” or “false” so “true” needs to be deleted.

The A-grade response had to indicate only the nine errors and make the appropriate corrections for each. Students found this item very accessible with omits accounting for just slightly more than 1% of responses. The number of A-grade responses was not high. The correction that presented the most challenge for students was correcting the subject/verb agreement in the last sentence. Students also did not always adhere to the direction: “according to information in the style guide extract”.

The stimulus for this item could be considered quite lengthy if it had to be read in its entirety. The instruction to “Read the words in bold…. Return to the extract as needed” is important to follow to make the most efficient use of time.
## MARKING SCHEME

### UNIT THREE ITEM 4

<table>
<thead>
<tr>
<th>PERFORMANCE DOMAIN</th>
<th>2 Finding material in an indexed collection</th>
<th>4 Interpreting the meaning of words …</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>The response</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• indicates ONLY the 9 errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• makes ONLY the 9 appropriate corrections.</td>
<td></td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>The response</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• indicates at least 7 of the errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• makes at least 7 of the appropriate corrections</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• may include at most two unnecessary corrections.</td>
<td></td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>The response</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• indicates at least 5 of the errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• makes at least 5 of the appropriate corrections</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• may include at most three unnecessary corrections.</td>
<td></td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>The response</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• indicates at least 3 of the errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• makes at least 3 of the appropriate corrections</td>
<td></td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
<td></td>
</tr>
<tr>
<td><strong>O</strong></td>
<td>No response has been made at any time.</td>
<td></td>
</tr>
</tbody>
</table>

### Model Response:

1. To all the reminders about mutual respect, we are now better able to cooperate.

2. Neither of them were happy that the true facts about the crime had been misused in the trial.

3. Due to all the reminders about mutual respect, we are now better able to cooperate.

4. It's number affects how well the team does.

5. Rather acknowledgment of all my efforts on her behalf.

6. Neither of them was happy that the true facts about the crime had been misused in the trial.

### Notes:

1. The method of indicating and correcting must be clearly shown and unambiguous.
2. An “unnecessary correction” occurs when a correction is made to something that is not one of the 9 errors.
3. No penalty for lower case “o” for Owing nor “i” for It’s is to be applied.
4. Spelling throughout the response must be consistent with the style guide.

**Marking Unit 3**
Item 5

Model response

Queensland Rail wishes to apologise for the delayed Ipswich service.

Trains are delayed until further notice due to a track fault. We assure you this kind of disruption is rare and unpredictable. Qld Rail will ensure the problem will be cleared up in the next hour. As an alternative, buses will be provided at all affected stations.

Commentary

Item 5 is a three-star item which tested achievement in CCEs 26 Explaining to others, 10 Using vocabulary appropriate to a context, 44 Synthesising and 31 Interrelating ideas/themes/issues.

Students were required to choose one disruption from one of a list of three possible disruptions to public transport. They were instructed to write a formal apology related to their choice, to structure the apology to include a reason for the disruption and provide an undertaking that steps were being taken to overcome any problems associated with the disruption. They were also told their apology would be posted on public notice boards and on relevant websites. Finally, students were asked to include three (from a list of nine) seed words. These words, together with their meanings, were included in the style guide extract. The first cue reminded students to give a plausible explanation for the disruption and to use an appropriate tone. The second cue asked them to underline their three chosen words.

To be awarded an A-grade, responses needed to: appropriately use three of the seed words as they were given; include an apology; “fully attend to” an explanation for the disruption and an undertaking to fix the problem or a reassurance that some action was being taken; have an apt tone for a public notice. Of special note is the requirement to use the seed words appropriately.

Many responses fell short of meeting these requirements. Most commonly students either did not use the seed words as given, or appropriately, or in sufficient number. Explanations that were implausible or unconvincing were credited as only “referencing” (rather than “fully attending to”), as was an undertaking that was inadequate. Some responses failed to give an explanation for the disruption and/or to give any undertaking. Very few responses did not maintain an apt tone.

Students should check to make sure all instructions in the stem and the cues have been followed to have the best opportunity of attaining the highest grade.
## MARKING SCHEME

### UNIT THREE  ITEM 5

<table>
<thead>
<tr>
<th>PERFORMANCE DOMAIN</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>26 Explaining to others</td>
<td>10 Using vocabulary appropriate to a context</td>
</tr>
<tr>
<td></td>
<td>44 Synthesising</td>
<td>31 Interrelating ideas/themes/issues</td>
</tr>
</tbody>
</table>

### Notes:

1. An apology is a sorry or regretful acknowledgment of fault or failure. Use of “unfortunately” is not sufficient to be considered an apology.
2. The two essential elements are
   - an explanation which gives a reason for the disruption or the difficulty
   - an undertaking which is a promise to fix or a reassurance that some action is being taken.
3. An explanation that “fully attends” is plausible and convincing.
4. An undertaking that “fully attends” would specify how the situation will be remedied or what alternative action can be taken. “This will not happen again” (or equivalent) “references” an undertaking.
5. There is no penalty if the seed words are not underlined in the response.
6. If more than three seed words are included, grade the response on the first three only.
UNIT THREE ITEM 5

Model Responses:

I. Queensland Rail wishes to apologise for the delayed Ipswich service. Trains are delayed until further notice due to a track fault. We assure you this kind of disruption is rare and unpredictable. Qld Rail will ensure the problem will be cleared up in the next hour. As an alternative, buses will be provided at all affected stations.

OR

II. On behalf of Metlink Bus Services, I apologise for the regional bus running ten hours late. The late arrival is due to icy conditions between Wellington and Hamilton. Alternative transport will be provided to ensure that you get to where you would like to be on time. I assure you, valued customers, that replacement buses will stop at all of the normal stops.

Ian Smith
Manager
Metlink Bus Services

ABC

alternate/alternative: alternate means to do things by turns; alternative means a choice

assure/ensure/insure: assure means promise; ensure means make certain; insure: reserve for legal situations

continual/continuous: continual is constantly or frequently recurring; continuous is unbroken or uninterrupted

convince/persuade: You convince someone that what you’re saying is true; you persuade someone to act
Unit Four

The two items in this unit were based on the Conway-Wechsler system naming exceedingly large numbers. The stimulus material outlined the method for doing this. The mathematics involved was basic arithmetic. The following table shows the percentage of responses awarded the various grades for the items in this unit.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 6</td>
<td>6.4</td>
<td>15.1</td>
<td>22.1</td>
<td>26.0</td>
<td>19.6</td>
<td>10.7</td>
<td></td>
</tr>
<tr>
<td>Item 7</td>
<td>13.7</td>
<td>13.1</td>
<td>15.6</td>
<td>35.9</td>
<td></td>
<td>8.3</td>
<td>13.4</td>
</tr>
</tbody>
</table>

A shaded box indicates that the grade was not available for that item.

Item 6

Model response

Name 10 to the power of 2272 \( (10^{2272}) \) using the Conway-Wechsler system.

Show all steps.

Translate carefully.

\[ 2272 = 2272 - 3 = 2269 \]

\[ 2269 \div 3 = 756 \text{ remainder 1, so use ten in front} \]

\[ 6 = \text{sexagintillion} \]

\[ 5 = \text{nquinquagintillion} \]

\[ 7 = \text{septingentillion} \]

Write the name here.

........................................septingentillion........................................

Commentary

Item 6 is a two-star item which tested achievement in CCEs 37 Applying a progression of steps to achieve the required answer and 7 Translating from one form to another.

Students were required to translate \( 10^{2272} \) into words using the Conway-Wechsler system and show all steps.

Following the method, students had to subtract three from 2272 and then divide the result by three, giving the answer 756 remainder one. The translation process began with conversion of the remainder into the word “ten” as directed by the stimulus. The quotient digits then needed to be
translated from the table — the units digit 6 gave “se”, then the tens digit 5 translated to “quinquaginta” and the hundreds digit 7 became “septingenti”.

The name had to be assembled from these components with the “ten” standing alone as the first word of the name. The three name segments then had to be strung together in the order units, tens, hundreds using the connective letters stipulated by the stimulus. This meant an “s” was added after the “se” to form “sesquinquagintaseptingenti”. The final step was to remove the last “i” of “septingenti” and add “illion” to complete the second word as, “sesquinquagintaseptingentillion”.

A response which showed the correct answer “ten sesquinquagintaseptingentillion” with evidence of the application of the method shown was awarded an A-grade.

A B-grade was awarded to responses that evidenced all three stages of the method but made a minor error. An error was defined as minor if the student made an arithmetic mistake in the calculations stage, a transcription error in the translation stage or if the connective letter between “se” and “quinquaginta” was other than “s” and/or if an “n” was unnecessarily added after “quinquaginta”. The resulting answer needed to be consequentially correct for the B-grade to be awarded.

C-grade responses made at most three errors with at most one of them being a major error. Major errors involved: leaving out steps like subtracting the three; not assembling the name-segments in the right order to form the second word; mistranslating the remainder into a first word other than “ten” and not completing the second word by adding “illion”. The name again needed to be consequentially correct to be awarded a C-grade. One of the more frequently observed answers awarded a C-grade was “ten septenquinquagintasescentillion”. This answer showed the student had forgotten to reverse the quotient digits before translating them. Other students struggled to convert the .3333… shown on their calculator after the division into a remainder of one and translate it successfully into “ten” at the start of the name.
# UNIT FOUR ITEM 6

## PERFORMANCE DOMAIN

<table>
<thead>
<tr>
<th>Marking Unit 3</th>
<th>Marking Unit 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>37 Applying a progression of steps to achieve the required answer</td>
<td>7 Translating from one form to another</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>The response provides</td>
<td>The response provides</td>
<td>The response provides</td>
<td>The response shows</td>
</tr>
<tr>
<td>• evidence of the application of the method</td>
<td>• evidence of the application of the method allowing for at most one minor error</td>
<td>• evidence of the application of the method allowing for at most three errors, only one of which can be a major error</td>
<td>• 2269</td>
</tr>
<tr>
<td>• the correct name given as two separate words.</td>
<td>• a name that is consequentially correct.</td>
<td>• a name that is consequentially correct.</td>
<td>• 756</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• r 1 (or its equivalent).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
<td>No response has been made at any time.</td>
</tr>
</tbody>
</table>

### Model Response:

1. **2272**
   
   \[ 2272 - 3 = 2269 \]
   \[ 2269 \div 3 = 756 \text{ remainder } 1 \]
   so use ten in front

   \[ 6 = s(s)x \]
   \[ 5 = (n)quinquaginta \]
   \[ 7 = (n)septingenti \]

   ten sesquinquagintaseptingentillion

### Notes:

1. **The method involves the three multistep stages:**

<table>
<thead>
<tr>
<th>Calculations</th>
<th>Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>the subtraction, i.e. ( 2272 - 3 = 2269 )</td>
<td>the division to give the quotient and remainder, i.e. ( 2269 \div 3 = 756 \text{ remainder } 1 ) or equivalent</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Use of table and stimulus to translate</th>
<th>Remainder to give the first word</th>
</tr>
</thead>
<tbody>
<tr>
<td>the use of table and stimulus to translate the remainder to give the first word</td>
<td>the quotient to give the three segments of the second word</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name assembly</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>the first word to stand alone (see note 4)</td>
<td>the three segments in correct order to form the second word the correct amending of letters in parentheses to form the second word the deletion of the final vowel and addition of “illion”</td>
</tr>
</tbody>
</table>

2. A minor error is either a single arithmetic error OR a single transcription error OR errors amending letters in parentheses to form the second word.

3. A major error is where one of the steps of the method is missing or incorrectly applied except for amending of letters in parentheses to form the second word.

4. Giving the correct name as two separate words is a requirement for the A-grade only.
Item 7

Model response

Determine the power of 10 for the number that has the name:

one hundred novemvigintioctingentillion.

Show your working here.

one hundred means a remainder of 2
novem → 9 units, viginti → 2 tens, octingenti → 8 hundreds
829 \times 3 = 2487
2487 + 2 = 2489
2489 + 3 = 2492

Write the power in the box.

10 2492

Commentary

Item 7 is a three-star item which tested achievement in CCEs 44 Synthesising and 16 Calculating with or without calculators.

Students were given the name of a very large number: “one hundred novemvigintioctingentillion”. The item required them to use the Conway-Wechsler system in reverse to determine the power of ten for this number. As shown in the marking scheme, there were six stages that students needed to go through to get the correct answer.

For an A-grade, the response had to provide 2492 as the answer and there had to be no incorrect working; that is, if working was shown, it could not contain errors. Most responses that were awarded an A-grade showed clear working.

It is advisable to show working even when it is not required as parts of it could contribute to the awarding of a creditable grade.

The majority of responses showed some working. Errors generally involved leaving out one or more of the stages required. Most students were able to translate the segments of the name into at least some of the correct digits.
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>N</td>
</tr>
<tr>
<td>The response</td>
<td>The response provides 2492 as the answer.</td>
<td>The response shows</td>
<td>The response shows</td>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
</tr>
<tr>
<td>• provides 2492 as the answer</td>
<td>• correct execution of two of Stages I, II and III</td>
<td>• correct execution of one of Stages IV, V and VI.</td>
<td>• correct execution of Stage I</td>
<td></td>
</tr>
<tr>
<td>• shows no incorrect working.</td>
<td></td>
<td></td>
<td>• a correct translation of one segment to digits in Stage II.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OR</td>
</tr>
<tr>
<td>The response shows</td>
<td>The response shows</td>
<td>The response shows</td>
<td>The response shows</td>
<td></td>
</tr>
<tr>
<td>• correct execution of Stages I and II</td>
<td>• correct execution of three of the other four stages, resulting in an answer that is one of [2789, 834, 2490 or 2489].</td>
<td>• all six stages have been executed</td>
<td>• an answer that would have been correct except for, at most either</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>– one translation or transcription error in one of Stages I, II, or III OR – one calculation error in one of Stages IV, V or VI.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Model Response:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>one hundred means a remainder of 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>novem → 9 units, viginti → 2 tens, octingenti → 8 hundreds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$829 \times 3 = 2487$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$2487 + 2 = 2489$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$2489 + 3 = 2492$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>2492</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:
1. The six stages in the method are:
   1. translation of first word of the name to the remainder digit from the stimulus
   2. translation of name segments to digits from the table
   3. reverse order of digits to give quotient
   4. multiplication of quotient by 3
   5. addition of remainder digit
   6. addition of 3.
Unit Five

This unit was based on historical information about the Treaties of Tordesillas and Zaragoza. Students were required to convert units which they may have been unfamiliar with.

The following table shows the percentage of responses awarded the various grades for the items in this unit.

<table>
<thead>
<tr>
<th>Item</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 8</td>
<td>25.6</td>
<td>13.2</td>
<td>11.4</td>
<td>8.0</td>
<td></td>
<td>29.1</td>
<td>12.8</td>
</tr>
<tr>
<td>Item 9</td>
<td>6.0</td>
<td>1.8</td>
<td>6.0</td>
<td>7.8</td>
<td>11.2</td>
<td>22.2</td>
<td>45.0</td>
</tr>
</tbody>
</table>

A shaded box indicates that the grade was not available for that item.

Item 8

Model response

I. Calculate the distances in kilometres from the westernmost point of the Cape Verde Islands to the Tordesillas Line as defined by the treaty of 1494, first using Spanish leagues and then Portuguese leagues.

Using Spanish leagues

\[ 370 \times 4.179 \text{ km} = 1546.23 \text{ km} \]

Using Portuguese leagues

\[ 370 \times 6.174 \text{ km} = 2284.38 \text{ km} \]

II. On the map, where 1 mm represents 50 km, rule and label lines to show clearly where each of Spain and Portugal believed the Tordesillas Line to be.

Working space.

Spanish line \[ 1546.23/50 = 30.9 \approx 31 \text{ mm} \]

Portuguese line \[ 2284.38/50 = 45.7 \approx 46 \text{ mm} \]
Item 8 is a three-star item which tested achievement in CCEs 16 Calculating with or without calculators, 6 Interpreting the meaning of ...maps... and 57 Manipulating/operating/using equipment.

The stimulus material provided historical information regarding the two differing interpretations of a line of demarcation, known as the Tordesillas Line, which was used by Portugal and Spain to settle territorial disputes in the 1400s. Students were told that the line was 370 leagues to the west of the Cape Verde Islands which was identified on the map provided. The Spanish located the line in one place because they defined a league as being 4179 metres. The Portuguese located it in another as they defined a league as being 6174 metres.

Part I instructed students to convert 370 leagues to kilometres using each of the two definitions. The cue instructed them to show all steps required to calculate each distance. To be awarded an A- or B-grade,
evidence of this working was mandatory. The stem instructed students to calculate the distances to the Tordesillas Line in kilometres.

Part II of this item provided students with a map of the North Atlantic Ocean on which they were required to locate, rule and label the Portuguese and the Spanish versions of the Tordesillas Line.

Showing working was not mandated in Part II; however, most students did use the space provided to perform the scaling calculations needed to locate the lines on the map to the degree of accuracy required. Working provided may be used to award creditable grades.

For an A-grade, the response had to calculate the correct distances in Part I and then use these distances to accurately locate and label the corresponding Tordesillas Lines on the map.

A common error was the incorrect positioning of both map lines to the east (rather than the west) of the Cape Verde Islands. Also a lack of skill in measuring map distances with a ruler was evident in responses.

As part of their early preparation for the QCS Test students should be encouraged to collect the necessary equipment, keep it in good order and become proficient at using it. A ruler that can be used to accurately measure millimetres and centimetres and that has a straight edge is an important piece of equipment every year.
### Marking Scheme

#### Unit Five Item 8

<table>
<thead>
<tr>
<th>Performance Domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Calculating with or without calculators</td>
</tr>
<tr>
<td>6 Interpreting the meaning of... maps...</td>
</tr>
<tr>
<td>57 Manipulating/operating/using equipment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marking Unit 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
<tr>
<td>For part I the response shows</td>
</tr>
<tr>
<td>• sufficient working</td>
</tr>
<tr>
<td>• the correct distance in kilometres using Spanish leagues</td>
</tr>
<tr>
<td>• the correct distance in kilometres using Portuguese leagues</td>
</tr>
<tr>
<td>For part II the response shows, on the map, only the two Tordesillas lines correctly positioned and labelled.</td>
</tr>
</tbody>
</table>

| B |
| For part I the response shows |
| • sufficient working |
| • the correct distance using Spanish leagues |
| • the correct distance using Portuguese leagues |
| For part II the response shows, on the map, no more than two Tordesillas lines with either |
| • one line reasonably positioned and correctly labelled |
| or |
| • both lines reasonably positioned. |

| C |
| The response shows at least two of the following |
| • one correct distance using leagues |
| • one correct calculation of a map distance using the scale |
| • a Tordesillas line drawn and reasonably positioned on the map. |

| D |
| The response shows one of the following |
| • one correct distance using leagues |
| • one correct calculation of a map distance using the scale |
| • a Tordesillas line drawn and reasonably positioned on the map. |

| N |
| Response is unintelligible or does not satisfy the requirements for any other grade. |

| O |
| No response has been made at any time. |

#### Notes:

1. The correct distance from the westernmost point of the Cape Verde Islands to the Tordesillas Line for Spanish leagues is 1546.23 km and the correct distance for Portuguese leagues is 2284.38 km. Those distances correctly rounded to the first decimal place or to a whole number are to be considered correct.

2. The Spanish line, if correctly positioned, should pass through the A of OCEAN and the A at the end of AMERICA. The Portuguese line, if correctly positioned, passes through the second T in ATLANTIC and the T in SOUTH.

3. A Tordesillas line that is “reasonably positioned” is located to the west of the Cape Verde Islands and is either |
| • in the absence of working, within 2mm of the correct position |
| or |
| • within 2mm of the position that the working in the response indicates the line should be. |
UNIT FIVE ITEM 8

Model Response:

Using Spanish leagues
370 x 4.179 km = 1546.23 km

Using Portuguese leagues
370 x 6.174 km = 2284.38 km

Working space.
Spanish line 1546.23/50 = 30.9 ≈ 31 mm
Portuguese line 2284.38/50 = 45.7 ≈ 46 mm

optional
Item 9

Model response

Show all steps.

<table>
<thead>
<tr>
<th>Longitude of Tordesillas Line</th>
<th>Longitude of Zaragoza Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>$370/17.5 = 21.14^\circ \text{ west of } 25.35^\circ \text{ W.}$</td>
<td>$297.5/17.5 = 17^\circ \text{ east of } 129.38^\circ \text{ E.}$</td>
</tr>
<tr>
<td>$21.14 + 25.35 = 46.49^\circ \text{ W.}$</td>
<td>$17 + 129.38 = 146.38^\circ \text{ E.}$</td>
</tr>
</tbody>
</table>

Portuguese section

| $46.49 + 146.38 = 192.87^\circ$ |
| As a percentage of $360^\circ$ this is $192.87/360 = 0.53575 \times 100$ |
| Or approximately 54% |

Commentary

Item 9 is a four-star item which tested achievement in CCEs 17 Estimating numerical magnitude, 50 Visualising and 16 Calculating with or without calculators.

The stimulus for this item introduced more information about a second demarcation line, called the Zaragoza Line. The two lines of demarcation basically divided the world into two parts, one for Portugal and one for Spain. Students were asked to determine the percentage of the world that was attributed to Portugal. It was a challenging item requiring good visualisation skills.

To arrive at the required answer, it was necessary to visualise the Portuguese section of the world divided into four regions by their longitude. Two regions were to the west of the prime meridian and two to the east. The widths of these four regions needed to be added to find the total width. Most students receiving A- or B-grades worked in degrees of longitude and converted the two widths given in leagues into degrees. Fewer chose to work in leagues. Generally the working shown was clear and easy to follow. A minor error in the working was allowable for a B-grade.

The C-grade was awarded to responses which contained a visualisation error that led to the addition of only three widths instead of four. Another type of visualisation error existed where students added three widths and subtracted the fourth due to confusion with widths being east or west of given longitudes. A C-grade response showed evidence of finding the total width for Portugal in leagues or degrees of longitude but then either forgetting to work this out as a percentage or by giving an incorrect percentage.

D-grades were awarded to responses that contained at least one conversion from degrees of longitude to leagues (or vice versa) and also demonstrated the adding of two widths. At least one conversion was necessary in order to arrive at the correct answer so conversions were required for A- through to D-grades.

Responses containing at least one correct conversion or the addition of two widths or the determination of a fraction of the world that was attributed to Portugal were awarded an E-grade.
## MARKING SCHEME

### UNIT FIVE ITEM 9

<table>
<thead>
<tr>
<th>PERFORMANCE DOMAIN</th>
<th>17 Estimating numerical magnitude</th>
<th>50 Visualising</th>
<th>16 Calculating with or without calculators</th>
</tr>
</thead>
</table>

### Model Response:

Longitude of Tordesillas Line
370/17.5 = 21.14° west of 25.35° W.
21.14 + 25.35 = 46.49° W.

Longitude of Zaragoza Line
297.5/17.5 = 17° east of 129.38° E.
17 + 129.38 = 146.38° E.

Portuguese section
46.49 + 146.38 = 192.87°
As a percentage of 360° this is 192.87/360 x 100
Or approximately 54%

### Notes:

1. Conversions include degrees to leagues, leagues to degrees.
2. A width is the distance along the equator and can be measured in degrees of longitude or leagues. Widths when added must be in the same unit.
3. The four widths are: the Tordesillas Line to the Cape Verde Islands, the Cape Verde Islands to the prime meridian, the prime meridian to the Moluccas and the Moluccas to the Zaragoza Line.
4. Minor errors include:
   - arithmetic and transcription errors that result in an answer that could reasonably be Portugal’s proportion of the world
   - reversing sections assigned to the two countries.
5. A fraction may be written with a vinculum, as a decimal or as a percentage.

### MARKING UNIT 2
Unit Six

A selection of colourful plates from a children’s alphabet book together with an explanatory text about such books formed the stimulus for this unit.

The following table shows the percentage of responses awarded the various grades for the items in this unit.

<table>
<thead>
<tr>
<th>Item</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 10</td>
<td>13.0</td>
<td>18.3</td>
<td>30.2</td>
<td>15.4</td>
<td>20.7</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Item 11</td>
<td>6.8</td>
<td>16.6</td>
<td>30.5</td>
<td>37.3</td>
<td>7.2</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>Item 12</td>
<td>4.0</td>
<td>12.9</td>
<td>33.5</td>
<td>26.4</td>
<td>14.6</td>
<td>4.4</td>
<td>4.1</td>
</tr>
</tbody>
</table>

A shaded box indicates that the grade was not available for that item.

Item 10

**Model response**

I. Explain the problem — discussed in the first paragraph — that writers of alphabet books must be aware of when choosing a suitable object, animal or person to illustrate any letter.

Refer to examples from the first paragraph.

*Some words don’t sound the way they look. For example you don’t hear the p in ‘pterodactyl’ so pterodactyl sounds like a t word.*

*Some combinations of letters can sound like another letter,*

*e.g. ph in ‘phantom’ sounds like f in fan.*

II. For each of the letters, g and k, provide an example of an object, animal or person that would, if illustrated in an alphabet book, have the problem discussed in the first paragraph.

| g | gnome | k | knife |

**Commentary**

Item 10 is a three-star item which tested achievement in CCEs 4 *Interpreting the meaning of words*, 10 *Using vocabulary appropriate to a context* and 9 *Using correct spelling, punctuation, grammar.*

Part I required students to explain the problem that writers of alphabet books have when choosing a suitable object, animal or person to illustrate any letter. The cue instructed them to refer to examples from the first paragraph. The first paragraph of the stimulus material warns that the letter p should not be illustrated with “phantom” or “pterodactyl”. Both these words begin with the letter p but neither sounds as though it starts with the letter p. In other words, they do not
behave as if they begin with their initial letter. It was expected that students would explain in some way that the word chosen for each letter in an alphabet book should behave as if it begins with its initial letter. To support the explanation, the examples of “phantom” and “pterodactyl” had to be provided in the response, as required by the cue. In Part II of the item, students were required to give an example of an object, animal or person that would exemplify the same problem already discussed for the letters g and k.

In responding to Part I, most students recognised why the ph and pt letter combinations in “phantom” and “pterodactyl” would not be suitable in an alphabet book page for the letter p. Most responses included both the required examples of “phantom” and “pterodactyl” but some did not pay sufficient attention to the cue and gave only one example.

In Part II students had to supply two suitable correctly spelled words that demonstrated the problem identified in the text. Some overlooked the requirement to supply an example of an object, animal or person and instead gave examples that were adjectives, verbs, adverbs or abstract words like concepts or qualities. Some students failed to read the stem thoroughly and consequently provided words such as “golf” and “kitten” which do not demonstrate the problem.
### UNIT SIX  ITEM 10

**PERFORMANCE DOMAIN**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Interpreting the meaning of words ...</td>
<td>10 Using vocabulary appropriate to a context</td>
<td>9 Using correct spelling, punctuation, grammar</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### MARKING SCHEME

- **A**
  - The response: for I
    - explains that the words do not behave as if they begin with their initial letter
    - refers to “phantom” OR “pterodactyl”
    - provides two suitable, correctly spelled examples.

- **B**
  - The response: for I
    - explains that the word does not behave as if it begins with its initial letter
    - refers to “phantom” OR “pterodactyl”
    - provides two suitable examples, at least one of which is correctly spelled.

- **C**
  - The response: for I
    - explains that the words do not behave as if they begin with their initial letter
    - refers to “phantom” OR “pterodactyl”
    - provides one suitable example.

- **D**
  - The response: for I
    - explains that some words do not behave as if they begin with their initial letter
    - refers to “phantom” OR “pterodactyl”
  - The response: for II
    - provides one suitable example.

- **N**
  - Response is unintelligible or does not satisfy the requirements for any other grade.

- **O**
  - No response has been made at any time.

#### Model Response:

Some words don’t sound the way they look. For example you don’t hear the p in ‘pterodactyl’ so pterodactyl sounds like a t word. Some combinations of letters can sound like another letter, e.g. ph in ‘phantom’ sounds like f in fan.

<table>
<thead>
<tr>
<th>g</th>
<th>gnome</th>
<th>k</th>
<th>knife</th>
</tr>
</thead>
</table>
UNIT SIX   ITEM 10

Notes:

1. Credit is given where reference only to “ph” and/or “pt” (as per grade requirement) is made and it is clear it is used to exemplify the problem.

2. Part II examples — words that start with g or k but do not behave as if they do:
   • Suitable
     words for objects, animals or persons such as — gnome, gnu, gem, giraffe, gneiss, gnomon, gaol, gym, knight, knee, knitting.
   • Conceded
     abstract words, adjectives, verbs, adverbs, concepts or qualities such as — gnaw, gnostic, genrom, knowledge, knocking.
   • No credit
     proper nouns or acronyms such as — Geneva, George, Geoff, Gheerulla, Geelong, GNOR, Knanapur, Knoxville.

3. Where correct spelling is not a requirement the word must be a recognisable version of the supposed word, e.g. gnochi instead of gnocchi.

4. A suitable example can be credited as a conceded example if necessary, e.g. “provides at least one suitable and one conceded example, at least one of which is correctly spelled” would be satisfied by two suitable examples where one is spelled correctly and one incorrectly.

5. No credit is given for repeating the stimulus.
Item 11

Model response

I. Referring to the illustrations on the opposite page, identify three different ways in which continuity and predictability have been used to create interest and promote the learning of letters and their sounds. Give an example for each of the ways.

You may use point form.

The illustration that will appear on the letter page is always in the preceding page in a smaller way, for example: the owl is flying in the background in the n page and then is the major illustration in the “o is for owl” page.

In each page there is either the man or the woman as a minor character, for example: in the n page the woman is writing a note.

There are often illustrations from previous letters on a page, for example: the o page has the moon and the nest in its page.

II. Give one example of how incongruity has been used in these illustrations.

An example of incongruity is how the feature animal/object is depicted doing human things such as wearing glasses (owl), smiling (moon) or wearing a napkin (panda).

Commentary

Item 11 is a three-star item which tested achievement in CCEs 49 Perceiving patterns, 43 Analysing and 29 Comparing and contrasting.

Part I required students to look closely at four illustrations taken from the alphabet book, compare and contrast the images in order to perceive patterns and provide three different ways in which continuity and predictability were used. Students were also required to supply an example for each of the ways they provided. In responding to Part I, most students were able to identify how continuity and predictability had been used but some students did not provide examples from the illustrations for each of the ways identified and so did not respond fully to the stem and could not gain the highest grade.

Part II required students to give one example of how incongruity was used in the illustrations. To respond correctly students needed to understand the meaning of incongruity. This word had been glossed when first used in the stimulus material. Students should keep in mind all information given in a unit when responding to individual items within the unit.
A-grade responses provided three different ways in which continuity and predictability were used and an example from the illustrations for each way. They also provided one example of the use of incongruity in the illustrations.
### UNIT SIX ITEM 11

#### PERFORMANCE DOMAIN

<table>
<thead>
<tr>
<th></th>
<th>MARKING SCHEME</th>
</tr>
</thead>
<tbody>
<tr>
<td>49</td>
<td>Perceiving patterns</td>
</tr>
<tr>
<td>29</td>
<td>Comparing, contrasting</td>
</tr>
</tbody>
</table>

<p>| | | | | | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>The response provides:</td>
<td>B</td>
<td>The response provides:</td>
<td>C</td>
<td>The response provides:</td>
</tr>
<tr>
<td></td>
<td>• three different ways</td>
<td></td>
<td>• two different ways</td>
<td></td>
<td>• at least two different ways</td>
</tr>
<tr>
<td></td>
<td>• an example from the illustrations for each way.</td>
<td></td>
<td>• an example from the illustrations for each way.</td>
<td></td>
<td>• an example from the illustrations for one of the ways.</td>
</tr>
<tr>
<td></td>
<td>One example of the use of incongruity in the illustrations is given.</td>
<td></td>
<td>One example of the use of incongruity in the illustrations is given.</td>
<td></td>
<td>One example of the use of incongruity in the illustrations is given.</td>
</tr>
<tr>
<td></td>
<td>_______ OR _______</td>
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<td>_______ OR _______</td>
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<td>_______ OR _______</td>
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<td>The response provides:</td>
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<td>The response provides:</td>
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<td>The response provides:</td>
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<tr>
<td></td>
<td>• three different ways</td>
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<td>• two different ways</td>
<td></td>
<td>• one way</td>
</tr>
<tr>
<td></td>
<td>• an example from the illustrations for each way.</td>
<td></td>
<td>• an example from the illustrations for each way.</td>
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<td>• an example from the illustrations for that way.</td>
</tr>
<tr>
<td></td>
<td>_______ OR _______</td>
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<td>_______ OR _______</td>
<td></td>
<td>_______ OR _______</td>
</tr>
<tr>
<td></td>
<td>The response provides three different ways.</td>
<td></td>
<td>The response provides two different ways.</td>
<td></td>
<td>The response provides one way.</td>
</tr>
<tr>
<td></td>
<td>One example of the use of incongruity in the illustrations is given.</td>
<td></td>
<td>One example of the use of incongruity in the illustrations is given.</td>
<td></td>
<td>One example of the use of incongruity in the illustrations is given.</td>
</tr>
</tbody>
</table>

#### Model Response:

The illustration that will appear on the letter page is always in the preceding page in a smaller way, for example: the owl is flying in the background in the n page and then is the major illustration in the “o is for owl” page.

In each page there is either the man or the woman as a minor character, for example: in the n page the woman is writing a note.

There are often illustrations from previous letters on a page, for example: the o page has the moon and the nest in its page.

An example of incongruity is how the feature animal/object is depicted doing human things such as wearing glasses (owl), smiling (moon) or wearing a napkin (panda).
UNIT SIX  ITEM 11

Notes:

1. “Ways” are instances from the illustrations that have links to creating interest and promoting the learning of letters and their sounds through continuity and predictability.
2. An “example” is an explicit reference to one or more components in one or more of the pages.
3. The following table gives a selection of ways, with examples, showing how they work together.

<table>
<thead>
<tr>
<th>WAYS</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>The illustration of THE word for the page is bigger than the other objects.</td>
<td>For the letter M the moon is the largest object on the page.</td>
</tr>
<tr>
<td>The preceding page contains a smaller version of THE word’s illustration.</td>
<td>The owl appears much smaller on the N page and then it is the central focus of the O page.</td>
</tr>
<tr>
<td>Either the man or woman is on every page.</td>
<td>A small man is holding a map on the M page.</td>
</tr>
<tr>
<td>Landscapes have a pattern in the pages.</td>
<td>N and O pages have a farm scene; others have mountains.</td>
</tr>
<tr>
<td>On most pages at least one other illustration for THE letter appears.</td>
<td>There are pictures of a pie, pears and a pumpkin on the P page.</td>
</tr>
<tr>
<td>Repetition of some of the already visited objects in a variety of pages.</td>
<td>The moon appears on the M and O page.</td>
</tr>
<tr>
<td>The colour palette is similar in all pictures.</td>
<td>Bright blue is repeated on all four pages.</td>
</tr>
<tr>
<td>The repetition of a similar style of drawing.</td>
<td>Use of the crazed background on each page.</td>
</tr>
</tbody>
</table>

4. Examples of incongruity may include:
   - animals or people are often distorted in shape or size
   - animals and objects are treated like people — anthropomorphised (glasses and napkins, smiling face of the moon)
   - people and objects sometimes slip outside the frames
   - scale is often ignored, e.g. map is huge and people look distorted.
Item 12

Model response

I. In the page space below create a rough sketch for an illustration for the letter q. Be careful to follow the design elements already established in the other pages.

Use pencil.

Colour is not required.

Complete this statement: \[ q \text{ is for } \text{quilt} \]

II. Provide a rationale for what you have included in your sketch.

Refer to design elements.

The reason I chose 'quilt' is because it is the item evidenced in 'p is for panda' that begins with the letter 'Q'. It also represents the most common phonetic sound of the letter. I included the female person, as the images alternate between male and female in each image randomly, but remain fair in doing so. I included the rabbit, as each image so far has shown the next item/animal in the background of the image.
Commentary

Item 12 is a four-star item which tested achievement in CCEs 34 Inserting an intermediate between members of a series, 46 Creating/composing/devising, 48 Justifying, and 31 Interrelating ideas/themes/issues.

In this item, students were shown the coloured plates of the pages for the letters m to r. The page for the letter q was left blank. Students were instructed to study progression in the illustrations and note common features of the design and content of the illustrations. Students were provided with a blank template for the q page as part of the response area.

Part I required students to create a rough sketch for an illustration for the letter q page, following the design elements already established by the other pages. Cues advised students to use pencil, that colour was not required and that they may write in the white space, using arrows to clarify the contents of the sketch. Beneath the template, students were required to complete the statement “q is for .........” in keeping with their illustration. Part II required students to provide a rationale for what was sketched, referring to design elements.

The most notable elements of design in the progression of pages in the alphabet book were the foreshadowing of an image (in smaller form) on the page preceding the one in which it is featured and the man or the woman being included on every other page. Other examples of elements of design used in the progression of pages included: the object featured being the focal point and larger than other objects; a number of words beginning with the featured letter being included; backgrounds (nature, mountains, grass, trees) on all the pages being similar; and some objects being repeated on multiple pages.

From an examination of the illustrations, and recognition that the featured illustration for a letter must appear smaller on the preceding page, either “quilt”, “quince” or “question mark” could be the featured word for the q page.

For an A-grade response, the students were required to complete the statement “q is for .........” with one of these words: quilt, quince, or question mark. Their visual response had to contain a sketch of the word chosen and show it as the focal point, a rabbit (foreshadowing the r page feature) and the man or the woman. A rationale was required for each of the mandatory (required for that grade) elements. The rationale had to identify the design elements which justified the inclusion of each element. The rationale for each required that: the featured object (quilt, quince, or question mark) appeared on the previous page and hence was the preferred object for the q page; the small illustration of the rabbit prepared readers for its appearance as the focal point for the r page; the man or the woman appeared on every page. It was expected that the contents of the sketch made effective use of the page space as had been the case in all the other pages. There was no penalty for the misspelling of words, nor was there any extra credit or penalty for the use of colour.

It was surprising that a number of students recognised the backward referencing and provided “quilt”, “quince” or “question mark” as the q word, but did not acknowledge the forward referencing; that is, the rabbit.
## MARKING SCHEME

**UNIT SIX**

### PERFORMANCE DOMAIN

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PERFORMANCE DOMAIN</strong></td>
<td><strong>34 Inserting an intermediate between members of a series</strong></td>
<td><strong>46 Creating/composing/devising</strong></td>
<td><strong>31 Interrelating ideas/themes/ issues</strong></td>
<td><strong>34 Inserting an intermediate between members of a series</strong></td>
<td><strong>46 Creating/composing/devising</strong></td>
<td><strong>31 Interrelating ideas/themes/ issues</strong></td>
</tr>
<tr>
<td>The response completes the statement, “q is for ...” with one of quilt, quince or question mark. The visual response must contain sketches of: • the word as the focal point • a rabbit • the man or the woman. A rationale is provided for each of the mandatory contents. The contents make effective use of the page space.</td>
<td>The response supplies one of quilt, quince, question mark, question/s or quiche. The visual response must contain sketches of: • the word as the focal point • a rabbit AND at least one of • the man or the woman • an element in keeping with the progression of pages. A rationale is provided for two of the mandatory contents.</td>
<td>The response supplies one of quilt, quince, question mark, question/s or quiche. The visual response must contain sketches of: • the word AND at least one of • rabbit, rowboat, rainbow, rose/s • the man or the woman • an element in keeping with the progression of pages. An explanation is provided for two of the mandatory contents.</td>
<td>The response supplies an approved q word. The visual response contains a believable sketch of that word. OR The visual response contains a sketch of a rabbit. A rationale is provided for the rabbit.</td>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
<td>No response has been made at any time.</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
1. The response supplies “the” word in a grade descriptor when it is used to complete the statement “q is for ...” or is mentioned in the rationale and is obviously the intended word.
2. If “the” word is the focal point, it follows that any other content is less obvious.
3. An “approved q word” is a word — for an object, animal or person — starting with q and may include such words as queen, quail, quokka.
4. “Any q word” is a word — that may be a concept, sound, verb, etc. — starting with q and may include such words as quarrel, quiet, quack, Queensland, QANTAS.
UNIT SIX ITEM 12

Model Response:

The reason I chose ‘quilt’ is because it is the item evidenced in ‘p is for panda’ that begins with the letter ‘Q’. It also represents the most common phonetic sound of the letter. I included the female person, as the images alternate between male and female in each image randomly, but remain fair in doing so. I included the rabbit, as each image so far has shown the next item/animal in the background of the image.
Unit Seven

This unit was based around the popularity of ice-cream and the process of manufacturing ice-cream.

The following table shows the percentage of responses awarded the various grades for the items in this unit.

<table>
<thead>
<tr>
<th>Item</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 13</td>
<td>37.2</td>
<td>19.3</td>
<td>27.2</td>
<td>10.3</td>
<td>6.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 14</td>
<td>11.8</td>
<td>15.9</td>
<td>17.2</td>
<td>21.2</td>
<td>17.5</td>
<td>16.4</td>
<td></td>
</tr>
<tr>
<td>Item 15</td>
<td>18.3</td>
<td>14.7</td>
<td>22.7</td>
<td>24.0</td>
<td>8.3</td>
<td>12.0</td>
<td></td>
</tr>
<tr>
<td>Item 16</td>
<td>1.1</td>
<td>0.6</td>
<td>3.2</td>
<td>15.8</td>
<td>14.8</td>
<td>31.5</td>
<td>33.0</td>
</tr>
</tbody>
</table>

A shaded box indicates that the grade was not available for that item.

Item 13

Model response

Suppose an average scoop of ice-cream is a solid sphere 6 centimetres (cm) in diameter. Find how many scoops of ice-cream an Australian eats on average per year.

Reminder: Volume of a sphere = \( \frac{4\pi r^3}{3} \) 1 litre = 1000 cm³

Show all steps.

\[
\text{volume of one scoop} = \frac{4\pi r^3}{3} = 113.1
\]

Round your answer to the nearest whole number of scoops.

\[
\text{number of scoops} = \frac{18000}{113.1} = 159.15
\]

\[
= 159
\]

Commentary

Item 13 is a two-star item which tested achievement in the CCEs 19 Substituting in formulae and 37 Applying a progression of steps to achieve the required answer.

This item required students to find how many scoops of ice-cream an Australian eats on average per year. The stem reminded students about the formula for the volume of a sphere and indicated that one litre equals 1000 cm³. The first cue instructed students to show all steps. The second cue indicated that they should round their answer to the nearest whole number of scoops.

An A-grade response needed to provide evidence of correct substitution into the formula, i.e. students needed to show the formula rewritten with the “r” replaced by the value of the radius. Next the calculation had to be done correctly making sure that radius cubed was performed as radius x radius x radius, not radius cubed.
x3 and that when finding the number of scoops, the units used for the yearly intake and the volume of one scoop were consistent. Finally, correct rounding had to give the whole number of scoops.

The majority of students were able to substitute into the given formula for the volume of a sphere. However some students substituted the diameter (6 cm) rather than the radius (3 cm). This could still be awarded a B-grade if subsequent calculations were correct. Other students, after substitution, made calculation errors by either failing to divide by the 3 in the denominator or failing to find $3^3$ correctly. Again, correct subsequent calculations could lead to a B-grade. After finding the correct volume of one scoop, students needed to divide this figure into the volume of the yearly intake to arrive at the nearest number of scoops per year.

Use of mathematical formulae including substitution is important. Students should become more proficient at this.
**UNIT SEVEN ITEM 13**

**FIRST PERFORMANCE DOMAIN**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>19 Substituting in formulae</strong></td>
<td><strong>37 Applying a progression of steps to achieve the required answer</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
</table>
| The response shows  
• correct substitution into the formula  
• correct calculation for the number of scoops  
• correct rounding to give final number of scoops  
No errors were made in arriving at the number of scoops. | The response shows  
• substitution into the formula  
• calculation of the number of scoops  
At most one mechanical error is allowed. 
A consequently correct number of scoops is given.  
OR | The response provides 159 or equivalent as the number of scoops. |

<table>
<thead>
<tr>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
<td>No response has been made at any time.</td>
</tr>
</tbody>
</table>

**Notes:**

1. "correct substitution into formula" shows the r replaced by 3 or \( \frac{6}{3} \). "correct calculation for the number of scoops" shows dividing volume of yearly intake by volume of one scoop — it must be evident that consistent units have been used. "correct rounding to give final number of scoops" may result in 159, 158 (18 \( \times \) 8.8) or 162 (18 \( \times \) 9).

2. Rounding to the nearest whole number of scoops is only a requirement at the A-grade.

3. At the B-grade, mechanical errors are:
   • transcription or calculating mistakes
   • using \( r = 6 \) (not 3) which yields \( V = 904.7... \) and 20 scoops or equivalent
   • using \( \frac{4\pi r^2}{3} \) which yields \( V = 37.6... \) and 477 scoops or equivalent
   • using \( 4\pi r^3 \) which yields \( V = 339.2... \) and 53 scoops or equivalent
   • 18 L = 1800 cm\(^3\) which yields 16 scoops or equivalent.

4. At the C-grade, the equivalent of \( \frac{4\pi r^3}{3} \) could be 113, 113.1... or equivalent or any of the following simplifications: \( 4\pi r^2 \), \( 36\pi \).

5. At the C-grade, the equivalent of 904.7... could be (using 7): 905, 904.8, 904.78, 904.779... or (using 3.14): 904, 904.3, 904.32.

6. At the C-grade, "what is indicated to be the volume of one scoop" could be words to that effect or a number previously acknowledged as the volume of one scoop.

**Model Response:**

\[
\begin{align*}
\text{volume of one scoop} &= \frac{4\pi r^3}{3} = 113.1 \\
\text{number of scoops} &= \frac{18000}{113.1} = 159.15 \\
&= 159
\end{align*}
\]
**Item 14**

**Model response**

To make one type of ice-cream mixture, milk is first brought to a temperature of 50°C. Then, to each litre of milk, 70 grams (g) of skim milk powder, 100 g of butter and 220 g of sugar are added. Next, 8 g of gelatin and 6 g of glycerol monostearate are combined and added to the milk mixture along with 15 g of vanilla. One litre of milk has a mass of 1033 g.

Determine how many kilograms of ice-cream mixture can be made from 1500 litres of milk if 0.2 per cent of the mass of all the ingredients is lost while making the ice-cream mixture.

Show all steps. \[
1033 + 70 + 100 + 220 + 8 + 6 + 15 = 1452 \text{ g}
\]

% loss = \[
\frac{1452 \times 2}{1000} = 2.9 \text{ g}
\]

Remainder = 1452 - 2.9 = 1449.1

In 1500 L = 1449.1 x 1500 = 2173650 g

= 2173.65 kg

= 2174 kg

**Commentary**

Item 14 is a three-star item which tested achievement in the CCEs 37 *Applying a progression of steps to achieve the required answer* and 16 *Calculating with or without calculators*.

Students were given a recipe for making a type of ice-cream mixture based on one litre of milk. They were then asked to determine how many kilograms of ice-cream mixture could be made from 1500 litres of milk if 0.2 per cent of the mass of all the recipe ingredients was lost while making the ice-cream mixture. The cue indicated that students should show all steps.

The A-grade response needed to show correct execution of the four steps: multiple, % loss, conversion, summation, indicated in the marking scheme. The result 2174 or equivalent had to be provided as the answer and no inaccuracies could be included in the response.

With respect to “indicates steps have been executed correctly” (see note 1) the response had to contain a statement acknowledging the nature of a step or appropriate maths symbols for the step in question.

Students chose to perform the four steps in many ways. While some took the more direct path, summing the ingredients for one litre of milk first and then performing the multiple (i.e. changing to 1500 litres), percentage loss and conversion (grams to kilograms) step on the total, others chose to perform each of these steps on each of the seven ingredients! Although correct, this was certainly a much more time consuming way to perform the calculations. There was also a greater chance of errors occurring than in the more direct method. The response area provided may not have been sufficient if the longer method was used and this should have pointed students to a more succinct method. The amount of response area given is a good indication of the space that would be required to correctly and efficiently provide a response to an item.

Students found the percentage loss step the most difficult. Some multiplied their total by 0.998 and others multiplied by 0.002 and then subtracted this result from the original number either way being correct. However, some mistakenly used 0.98 (as in 2%) or 0.8 (as in 20%) or only found the amount lost and not what was left. Careful reading of the stimulus and stem is important.
UNIT SEVEN  ITEM 14

PERFORMANCE DOMAIN

37  Applying a progression of steps to achieve the required answer
16  Calculating with or without calculators

A
Response indicates the 4 steps:
• multiple
• % loss
• conversion
• summation
have been executed correctly.
The result 2174 or equivalent is provided as the answer.
No inaccuracies are included.

B
Response indicates that 3 of the steps:
• multiple
• % loss
• conversion
• summation
have been executed correctly.
A result, based on the steps, has been provided as the answer.

C
Response indicates that an attempt has been made to execute at least 3 of the steps:
• multiple
• % loss
• conversion
• summation.
The result 2173.644 or equivalent is provided.

D
Response indicates that an attempt has been made to execute 2 of the steps:
• multiple
• % loss
• conversion
• summation.

N
Response is unintelligible or does not satisfy the requirements for any other grade.

O
No response has been made at any time.

Model Response 1:

mass = 1452
1452 x 1500 = 2178000 g
2178000 x 0.998 = 2173644
= 2173.644

Model Response 2:

1.033 x 1500 x 0.998 = 1546.4 kg
0.07 x 1500 x 0.998 = 104.8 kg
0.1 x 1500 x 0.998 = 149.7 kg
0.22 x 1500 x 0.998 = 329.3 kg
0.08 x 1500 x 0.998 = 11.98 kg
0.06 x 1500 x 0.998 = 8.98 kg
0.015 x 1500 x 0.998 = 22.46 kg
\( \therefore \) Total = 2173.6 kg

Model Response 3:

1033 + 70 + 100 + 220 + 8 + 6 + 15 = 1452 g

\% loss = 1452 \times \frac{2}{1000} = 2.9 g

Remainder = 1452 - 2.9 = 1449.1

In 1500 L = 1449.1 x 1500 = 2173650 g

= 2173.65 kg

\approx 2174 kg

Marking Unit 7
UNIT SEVEN ITEM 14

Notes:
1. For the A-grade requirement of “indicates steps have been executed correctly”, the response must contain a statement acknowledging the nature of the step or appropriate mathematical symbols for the step in question.
   Correct execution of the 4 steps (order may vary) are:
   - summation step/s — (milk + all ingredients) which leads to the correct answer
   - % loss step/s — (each/total x 0.998) or (each/total – 0.002 x each/total) which leads to the correct answer/s
   - multiple step/s — (each/total x 1500) which leads to the correct answer/s
   - conversion step/s — (each/total + 1000) which leads to the correct answer/s.
2. The omission of units or the inclusion of incorrect units in the working or in the final result does not attract a penalty.
3. “2174 or equivalent” means 2174, 2173.6, 2173.64 or 2173.644.
4. At the C- and D-grades, the requirement “indicates that an attempt has been made to execute … the steps” means:
   - summation step/s — observe at least 3 of the ingredients have been added correctly
   - % loss step/s — observe (at least one value x [one of 0.98, 0.998 or 0.8]) or (at least one value – [one of 0.02, 0.002 or 0.2] x the value) has been done correctly
   - multiple step/s — observe (at least one value x 1500) has been done correctly
   - conversion step/s — observe the result of at least one conversion is correct.
5. “2173644 or equivalent” means 2173500 or 2173650.
Item 15

Model response

On the axes below draw a line graph to show the temperature throughout the process from the time the milk is 50°C at the beginning until the time the ice-cream is ready for transportation. Assume each change of temperature mentioned in the process takes 10 minutes.

Use a ruler.

Commentary

Item 15 is a three-star item which tested achievement in the CCEs 15 Graphing and 6 Interpreting the meaning of graphs.

This item required students to draw a line graph to show the temperature throughout the ice-cream making process from the time the milk was at 50°C at the beginning until the time the ice-cream was ready for transportation. Students were told to assume each change of temperature mentioned in the process took 10 minutes. The stimulus dot-pointed the six stages in the process.

The A-grade response showed a line graph consisting of the starting point at (0, 50), the five appropriate horizontals (showing how long the mixture was at certain temperatures), the five required connecting diagonals (showing the 10 minutes taken to change temperatures) and an end point at −20°C.

The cue instructed students to use a ruler. Unfortunately a number of responses showed that some students did not have this piece of essential equipment.
### Marking Scheme

#### UNIT SEVEN  ITEM 15

<table>
<thead>
<tr>
<th>PERFORMANCE DOMAIN</th>
<th>15 Graphing</th>
<th>6 Interpreting the meaning of … graphs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The response shows a line graph consisting of:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• the starting point at ((0, 50))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• the 5 appropriate horizontals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• the 5 required connecting diagonals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• an end point at (-20^\circ) C.</td>
<td></td>
<td></td>
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<tr>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The response shows a line graph consisting of:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• the starting point at ((0, 50))</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AND</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at most one plotting error in one of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• the 5 horizontals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• the 5 connecting diagonals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• the end point.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OR</strong></td>
<td></td>
<td></td>
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<tr>
<td>The response shows a line graph consisting of:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• at least 4 appropriate horizontals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• at least 3 required connecting diagonals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• an end point at (-20^\circ) C.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The response shows a line graph consisting of:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• the starting point at ((0, 50))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• at least 3 appropriate horizontals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• an end point at (-20^\circ) C.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The response shows a line graph indicating, in correct order, all 6 of the different required temperatures.</td>
<td></td>
<td></td>
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<tr>
<td><strong>OR</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>OR</strong></td>
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<tr>
<td>The response shows a line graph consisting of:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• at least 4 appropriate horizontals</td>
<td></td>
<td></td>
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<tr>
<td>• at least 3 required connecting diagonals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• an end point at (-20^\circ) C.</td>
<td></td>
<td></td>
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<tr>
<td>D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The response shows, in correct order, at least 4 of the different required temperatures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>{correct order, left to right, is:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50, 70, 4, -4, -7, -20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No response has been made at any time.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Notes:

1. For the graph to be regarded as a line graph the points must be connected in a “forwards-time” manner.
2. “appropriate horizontals” have the correct height and the correct length.
3. “required connecting diagonals” join the end of a horizontal to the beginning of the next horizontal and show time elapsed is 10 minutes (1 square).
4. A plotting error is one of:
   • incorrect height of one horizontal
   • incorrect length of one horizontal
   • incorrect slope of one diagonal
   • incorrect end point
   • the graph, with no errors to that point, finishing at \(-7\).
5. To credit a “temperature” an intentional mark or a change in direction of drawn lines must be observed at that temperature (the x coordinate does not have to be correct).
UNIT SEVEN ITEM 15

Model Responses:

1. 

![Graph showing temperature changes over time]
Item 16

Model response

The air that is whipped into the ice-cream mixture during the manufacturing process makes the texture of the resulting ice-cream softer. The volume of air incorporated into the mixture can vary, affecting what is referred to by ice-cream manufacturers as the ‘overrun figure’. Ice-cream with an overrun figure of 0 per cent would have no air in it and would essentially be just frozen ice-cream mixture. A 100 per cent overrun figure doubles the volume of ice-cream that can be made from a given volume of ice-cream mixture.

A particular ice-cream mixture has a density of 1125 g/litre and the mass of the resulting ice-cream in a three-litre tub is 1900 g.

Calculate the overrun figure for this ice-cream and then clearly explain your reasoning.

Show all steps of your calculations here.

\[
\text{volume of solid in the 3 L tub} = \frac{1900}{1125} = 1.689 \text{ L}
\]

\[
\text{increase in volume} = 3 - 1.689 = 1.311 \text{ L}
\]

\[
\% \text{ increase} = \frac{1.311}{1.689} \times 100 = 77.6
\]

\[
\text{overrun figure} = 77.6
\]

Write your explanation here.

The resulting ice-cream is ice-cream mix + air and since air has no mass the 1900 g is ice-cream mix.

The volume that the ice-cream mix takes up in the 3 L tub is only 1.689 L

so there is 1.311 L of space for expansion.

The overrun figure is the % of air contained in the final mixture. Hence to determine the overrun figure find the % increase for 1.689 L of ice-cream mix to produce 3 L of ice-cream.
Commentary

Item 16 is a four-star item which tested achievement in the CCEs 48 Justifying and CCE 22 Structuring/organising a mathematical argument.

This item required students to calculate the overrun figure, as a percentage of air added to ice-cream mixture during the whipping process in manufacturing a particular batch of ice-cream. The stimulus provided the information that an ice-cream mixture has air whipped into it for improved texture. A mixture with no air in it had an overrun figure of zero percent and a mixture that doubled in volume due to air added in the whipping process had an overrun figure of 100 per cent.

The first cue instructed students to show all steps of the calculations. The second instructed students to write a clear explanation. The stimulus stated that a particular ice-cream mixture prior to whipping had a density of 1125 g/litre. A batch of this mixture had air whipped into it and three litres of the resulting ice-cream had a mass of 1900g.

Grades were awarded based on the combination of the calculations and the explanation. It was possible for the explanation to either enhance or detract from the grade suggested by the calculations alone.

Responses were awarded an A-grade if they showed an overrun figure of 77.6 and it had been arrived at via a sequence of clear, creditable steps, accompanied by a legitimate explanation with no inconsistencies. To be awarded an A-grade the overall response had to have volume as the context. A response that showed a sequence of calculations primarily based on mass or density could, if the explanation clearly showed how the mass or density was linked to volume, be awarded an A-grade.

Some of the explanations contained poor articulation of the thought processes behind the solution while others had an explanation that merely verbalised steps carried out in the calculations. Unfortunately, many responses had little or no explanation which meant that they could be awarded a C-grade. The separation of the response area into the calculation part and the explanation part guides students to do both and thus have the greatest opportunity to achieve a high grade.
## UNIT SEVEN  ITEM 16

### PERFORMANCE DOMAIN

<table>
<thead>
<tr>
<th>Grade</th>
<th>Details</th>
</tr>
</thead>
</table>
| **A** | The response provides:  
- a logical and correct sequence of steps that leads to the correct overrun figure  
- a legitimate explanation with no inconsistencies. |
| **B** | The response provides:  
- a logical and correct sequence of steps  
- at most one error  
- a legitimate explanation.  
The steps — if the error had not been made — would lead to the correct overrun figure. |
| **C** | The response provides:  
- a logical and correct sequence of steps  
- at most one error.  
The steps — if the error had not been made — could have been used in a correct sequence of steps to find the overrun figure. |
| **D** | The response provides  
- at least two steps  
- at most one error.  
The steps — if the error had not been made — could have been used in a correct sequence of steps to find the overrun figure. |
| **E** | The response provides  
- one step  
- at most one error.  
The step — if the error had not been made — could have been used in a correct sequence of steps to find the overrun figure. |
| **N** | Response is unintelligible or does not satisfy the requirements for any other grade. |
| **O** | No response has been made at any time. |

### Model Response:

```
volume of solid in the 3 L tub = (1900 + 1125) = 1.689 L  
increase in volume = 3 - 1.689 = 1.311 L  
% increase = \frac{1.311}{1.689} \times 100 = 77.6  
overrun figure = 77.6  
```

**Explanation:**

The resulting ice-cream is ice-cream mix + air and since air has no mass the 1900 g is ice-cream mix. The volume that the ice-cream mix takes up in the 3 L tub is only 1.689 L so there is 1.311 L of space for expansion. The overrun figure is the % of air contained in the final mixture. Hence to determine the overrun figure find the % increase for 1.689 L of ice-cream mix to produce 3 L of ice-cream.

### Notes:

1. For the A- and B-grades, it must be clear from the calculations and/or the explanation that volume/space is the context.
2. An error may be a mechanical or transcription error or may occur in presenting the overrun figure as values such as 177.6, 1.77, 0.77, …
3. An explanation is not required at the C-, D- or E-grades. However, if an explanation is provided in a response that appears eligible for a C-grade, the explanation should be considered carefully, as it may enhance or detract from the grade suggested by the calculations only.
Unit Eight

This unit was based on an extract from Don Watson’s *American Journeys*, where he gave an account of some accommodation he encountered in America. Students were told hyperbole is a language technique that employs exaggerated or extravagant statements to produce a strong impression and that hyperboles are not meant to be taken literally.

The following table shows the percentage of responses awarded the various grades for the items in this unit.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 17</td>
<td>3.4</td>
<td>15.9</td>
<td>39.2</td>
<td>25.5</td>
<td></td>
<td>5.4</td>
<td>10.6</td>
</tr>
<tr>
<td>Item 18</td>
<td>2.4</td>
<td>11.9</td>
<td>31.5</td>
<td>19.7</td>
<td>7.0</td>
<td>7.3</td>
<td>20.2</td>
</tr>
</tbody>
</table>

A shaded box indicates that the grade was not available for that item.

**Item 17**

*Model response*

Don Watson’s descriptions are intensified by imagery and figurative language such as simile, metaphor and personification. Quote two examples of his descriptions that are especially vivid. Explain what each conveys and why each is effective.

Use at most one simile in your response.

“*penetrated the sinuses like a bamboo skewer*” is used to convey the message that the room smelt extremely revolting and so strong that it shot up his nose and made him feel like he was being stabbed in the nostrils. It allows the reader to grasp an understanding of just how dirty and revolting the Thunderbird Inn is.

“In the manner of classic motels, you spit on the road from the door of your room”. This is a vivid image as it conveys the closeness of the roadway and also the type of neighbourhood — somebody spitting from the doorway does not conjure up thoughts of an upmarket motel. The author is giving us a clue about the usual coarse clientele.
Item 17 is a three-star item which tested achievement in the CCEs 4 Interpreting the meaning of words, 43 Analysing and 26 Explaining to others.

In the stem, students were told that Don Watson’s descriptions are intensified by the use of imagery and figurative language such as simile, metaphor and personification. Students were required to quote two examples of descriptions that were especially vivid, explain what each conveyed, and explain why each was effective. The cue demanded that at most one simile should be used.

A-grade responses identified two vivid images, explained what each conveyed and explained why each was effective. There were two issues that arose with the choice of a vivid image. Some extracts did not meet the criteria for what constituted a vivid image, for example, the first sentence of the extract and the two questions within the extract. It was acceptable for students to select two vivid images from a single sentence (i.e. “a roach as big as a small mouse …sitting on its hind legs like a kangaroo defending its territory”).

It was important for students to realise the difference between what an image conveyed and why it was effective. Convey refers to what the image imparts or makes known, e.g. what is made known about the smell, the cockroach, the girl, and so on. This information dealt with the specific piece of text. Effective refers to how the image puts into effect the purpose of the author. He was deliberately showing the reader that the motel was misrepresented or “dodgy” through mockery, distortion, exaggeration, etc. Thus effectiveness could be addressed in three ways: the response could link to subject matter (e.g. to give an account of the state of the accommodation) or to the author’s intention or the reader’s response.

Some responses addressed the “big picture” of the author’s intention and the reader’s response too generally and received no credit for explaining effectiveness. Sometimes the students cued convey and effectiveness incorrectly but they were not penalised for this as long as they addressed the text specifically (in convey) and the “big picture” specifically (for effectiveness).

The image could be identified variously. Generally, students identified the quotation accurately using quotation marks. However, identifying key words from the quotation, making a line reference or paraphrasing the image were acceptable methods of identifying the image.

Some students focused on defining figures of speech and failed to obey the stem, presumably a carryover from the previous items.
## UNIT EIGHT ITEM 17

### PERFORMANCE DOMAIN

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
</table>
| The response  
• identifies two vivid images  
• explains what each conveys  
• explains why each is effective. | The response  
• identifies two vivid images and for one of the images,  
• explains what it conveys  
• explains why it is effective and for the other image,  
• explains why each is effective. | The response  
• identifies one vivid image  
• explains what it conveys  
• explains why it is effective.  
——— OR ———— | The response  
• identifies two vivid images  
• explains what each image conveys.  
——— OR ———— | No response  
Response is unintelligible or does not satisfy the requirements for any other grade. |

### Notes:

1. If a figure of speech has been miscategorised, no penalty applies. [Note 3 applies to actual similes, not what a student may have categorised as simile.]
2. If a response cites more than two vivid images, grade the response on the basis of the vivid image(s) that would yield the highest grade.
3. If more than one simile is used, the cue has been over-ridden. Where the grade is based on two similes [including the application of Note 2], the response is not eligible for an A-grade, but can be awarded B-, C-, D- or N-grade.
4. To be creditable, the response must not be inconsistent with the extract.

### Model Response:

- “penetrated the sinuses like a bamboo skewer” is used to convey the message that the room smelt extremely revolting and so strong that it shot up his nose and made him feel like he was being stabbed in the nostrils. It allows the reader to grasp an understanding of just how dirty and revolting the Thunderbird Inn is.

- “In the manner of classic motels, you spit on the road from the door of your room”. This is a vivid image as it conveys the closeness of the roadway and also the type of neighbourhood — somebody spitting from the doorway does not conjure up thoughts of an upmarket motel. The author is giving us a clue about the usual coarse clientele.
In a style consistent with the author’s, continue the account of the motel, introducing two additional features of the Thunderbird Inn.

Craft your response using vivid descriptions that differ from those in the extract.

1. The bald lightbulb that hung above my narrow mouldering bed was glowing only dimly; the last effort of a terminal firefly. It had a crack down its centre, a crack that entranced me as surely as any hypnotist, for it was artfully done, splintered just so, to provide the bulb with a sense of poverty and shattered dreams. It even swung slightly back and forth — just enough to give the impression that as soon as I lay down on my equally unsteady bed, the wires that suspended it in space like the tether that connects an astronaut to his spacecraft would snap and split open my poor head like a melon. It did not, however, do so. As I settled down for the night, I gave the appropriate credit to my host: Even the bed was perfect. The slats were unevenly spaced so my spine sagged down as if an anvil had been rested upon my stomach.

   The blanket was thinner than paper and crawled with countless tiny insects that danced the tarentella over my cold and shivering body. Overhead, the bulb broke free of its restraints, showering me with glass.

2. Having refreshed myself, I headed for the hotel diner for a bite to eat. As it turned out, the Thunderbird Inn’s idea of a bite would have fed a small country and their drinks were almost big enough to come with their own rowing boat. I waddled back to my room and flopped onto the bed like a hippopotamus into mud - dry mud! The next thing I knew I was enveloped by 50 years of dust particles arising from the bedspread like a desert storm. Did I dare turn on the huge cube of a TV sitting ponderously on the dresser opposite the bed?
Item 18 is a four-star item which tests achievements in the CCEs 46 Creating/composing/devising, 10 Using vocabulary appropriate to a context and 31 Interrelating ideas/themes/issues.

The stem asked the students to continue the account of the motel in a style consistent with the author’s, introducing two additional features of the Thunderbird Inn. The cue reminded the students to craft their response using vivid descriptions that differed from those in the extract.

To be awarded an A-grade the response was required to continue the description in a manner consistent with the style and intent of the author. This meant that the response had an element of linkage to the extract or that it felt a part of a single piece. This might have been recognised through a mocking or ironic tone that described the additional features as malfunctioning or unsavoury or through an entertaining or humorous tone “to raise a smile”. To be consistent with the style of the extract, the response had to be in the past tense. Some responses failed to focus on description and instead transformed into an exciting narrative.

The response had to evoke the time and place of the extract. The time might have been recognised through references to 50 years of dust, outdated technology, aged equipment, furniture or décor clearly associated with the past. The place might have been recognised through references to a retro hotel, run-down features or an overall sense of disappointment. Many students achieved this with great subtlety and cleverness.

The response was also required to introduce two additional features. The note on the marking scheme indicated that for an additional feature to be creditable, it had to be in keeping with the Thunderbird Inn as described in the extract and be located at the motel or within its surroundings. The features of the motel identified in the extract were the office, neon sign, girl, Coke machine, shower, smell, cockroach and the proximity to road. It should be noted that these features could be mentioned in students’ writing to establish a sense of continuity. Some commonly used additional features were the bed, ceiling, diner, television and other staff.

A-grade responses were required to build and sustain vivid descriptions that differed from those in the extract. Vivid descriptions are those that appeal to the senses, use figurative language and powerful imagery, and/or use creative diction (powerful verbs, adverbs and interesting adjectives and/or provide specific details). The quality of the description had to be sustained throughout the response.

A-grade responses had to use vocabulary appropriately and to effect. Responses that had a wide and interesting vocabulary were able to build the atmosphere and entertain the reader with their witty/funny/colourful writing. A-grade responses were required to use hyperbole “to raise a smile”. The intention of the hyperbole was to support the mocking tone and not to deviate into moods or genres that weren’t consistent with the style of the original extract. Therefore, it was deemed not acceptable for responses to use hyperbole to generate excessive violence, distaste or fear which would not have been found in a travelogue such as American Journeys. The phrase “to raise a smile” was deemed to mean anything on a continuum from obvious delight (laugh out loud) to quite subtle amusement (gentle or wry observations). Also, for an A-grade response, any lapses in the use of spelling, punctuation and grammar could not detract from the readability of the response.

This item required students to analyse the style of the passage so that they could write in a similar style. They had to be able to control their creative ideas so that the response was in the style of the original extract, mocking but not gross. Some responses tried to achieve hyperbole by making their writing as distasteful as possible rather than by exaggerating in keeping with the style of the author. Students with control over a wide vocabulary achieved outstanding results in this item.
# Performance Domain

<table>
<thead>
<tr>
<th>Marking Scheme</th>
<th>UNIT EIGHT ITEM 18</th>
</tr>
</thead>
</table>

## Creating/composing/devising
- **A**: The response continues the description of the motel in a manner consistent with the style and intent of the author. It evokes the time and place of the extract. It introduces TWO additional features of the motel. The response builds and sustains the use of vivid descriptions of the features that differ from those used in the extract. The response uses vocabulary appropriately and to effect. The response uses hyperbole to "raise a smile". Any lapses in the use of grammar, punctuation or spelling do not detract from the readability of the response.

## Using vocabulary appropriate to a context
- **B**: The response continues the description of the motel in a manner that is largely consistent with the style and intent of the author. It suggests the time or place of the extract. It introduces TWO additional features of the motel. It builds and sustains the use of vivid descriptions of the features that differ from those used in the extract. The response uses vocabulary appropriately and to effect. The response uses hyperbole to "raise a smile". In the main, any lapses in the use of grammar, punctuation or spelling do not detract from the readability of the response.

## Interrelating ideas/themes/issues
- **C**: The response continues the description of the motel in a manner that shows some recognition of the style and intent of the author. It introduces ONE additional feature of the motel, or builds vivid descriptions (of the features) that differ from those used in the extract. The response uses vocabulary appropriately and to effect. The response uses hyperbole to "raise a smile". In the main, any lapses in the use of grammar, punctuation or spelling do not detract from the readability of the response.

- **D**: The response adds to the description of the motel. It uses some descriptive vocabulary or hyperbole to focus on negative aspect(s) of feature(s) of the motel. In the main, uses vocabulary appropriately.

- **E**: The response adds to the description of the motel. It reinforces a negative aspect of a feature of the motel. In the main, uses vocabulary appropriately.

- **N**: Response is unintelligible or does not satisfy the requirements for any other grade.

### Note:
For an additional feature to be creditable it must be in keeping with the Thunderbird Inn as described in the extract and be located at the motel or within its surroundings.

---

**Model Response:**

1. The bald lightbulb that hung above my narrow mouldering bed was glowing only dimly; the last effort of a terminal firefly. It had a crack down its centre, a crack that entranced me as surely as any hypnotist, for it was artfully done, splintered just so, to provide the bulb with a sense of poverty and shattered dreams. It even swung slightly back and forth — just enough to give the impression that as soon as I lay down on my equally unsteady bed, the wires that suspended it in space like the tether that connects an astronaut to his spacecraft would snap and split open my poor head like a melon. It did not, however, do so. As I settled down for the night, I gave the appropriate credit to my host: Even the bed was perfect. The slats were unevenly spaced so my spine sagged down as if an anvil had been rested upon my stomach. The blanket was thinner than paper and crawled with countless tiny insects that danced the tarentella over my cold and shivering body. Overhead, the bulb broke free of its restraints, showering me with glass.

2. Having refreshed myself, I headed for the hotel diner for a bite to eat. As it turned out, the Thunderbird Inn’s idea of a bite would have fed a small country and their drinks were almost big enough to come with their own rowing boat. I waddled back to my room and flopped onto the bed like a hippopotamus into mud — dry mud! The next thing I knew I was enveloped by 50 years of dust particles arising from the bedspread like a desert storm. Did I dare turn on the huge cube of a TV sitting ponderously on the dresser opposite the bed?
Model Response:

1. The bald lightbulb that hung above my narrow mouldering bed was glowing only dimly; the last effort of a terminal firefly. It had a crack down its centre, a crack that entranced me as surely as any hypnotist, for it was artfully done, splintered just so, to provide the bulb with a sense of poverty and shattered dreams. It even swung slightly back and forth — just enough to give the impression that as soon as I lay down on my equally unsteady bed, the wires that suspended it in space like the tether that connects an astronaut to his spacecraft would snap and split open my poor head like a melon. It did not, however, do so. As I settled down for the night, I gave the appropriate credit to my host: Even the bed was perfect. The slats were unevenly spaced so my spine sagged down as if an anvil had been rested upon my stomach.

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2. Having refreshed myself, I headed for the hotel diner for a bite to eat. As it turned out, the Thunderbird Inn’s idea of a bite would have fed a small country and their drinks were almost big enough to come with their own rowing boat. I waddled back to my room and flopped onto the bed like a hippopotamus into mud - dry mud! The next thing I knew I was enveloped by 50 years of dust particles arising from the bedspread like a desert storm. Did I dare turn on the huge cube of a TV sitting ponderously on the dresser opposite the bed?
Writing Task (WT)

The Writing Task complements the other subtests by testing students’ abilities to produce a piece of continuous English prose about 600 words in length. Students write in response to written and visual stimulus material on an overall concept or theme. Each piece of stimulus material evokes a different aspect of the overall concept. Students respond in any form or style other than poetry to this concept and to as many stimulus pieces as they wish.

This section describes the 2010 testpaper and provides comments on the writing that students produced in response. The comments are based on an analysis of a statistically significant random sample of students’ responses.

The marking guide showing the criteria and standards used to grade responses is included here, together with graphs showing the distribution of grades awarded in each of the five substantive criteria and indicating the breakdown of student responses according to stimulus pieces selected and genres of responses. Finally, a selection of student responses has been included to exemplify successful writing as defined by the task criteria.

Overall concept: Flight

The overall concept linking the stimulus pieces on the 2010 testpaper was Flight. This concept was thought likely to engage young people, many of whom are considering their options for the future. The concept could represent their imminent departure from familiar things or their first journey from home. It could refer to the experience of launching themselves or their ideas into the unknown, of starting a new adventure or endeavour, or of escaping from some kind of control or threat. It could suggest the range of inventions, successful or completely impractical, that humans have devised to assist us to achieve the dream of flight.

Students interested in mathematics, physics and practical subjects may deal with the technical aspects of the concept. Some wrote about the design of flying machines and about the technology of aviation. Students more interested in the natural world wrote about the flight of birds or insects or about the power of the wind. Many focused on the aesthetic aspects of flight or described the beauty of flying creatures or of man-made creations in flight. Some explored the physical action and sensations involved in flying. Others wrote accounts or stories about someone leaving the security of home, making a start on a journey or beginning a new adventure.
Diagram of the testpaper

The diagram below represents the 2010 testpaper. The 14 stimulus pieces are numbered for reference. All pieces relate to the overall concept of the testpaper.

Stimulus pieces

Overview

The following diagram shows the percentage of students who indicated that they selected a particular stimulus piece (or pieces) as the starting point or prompt for their writing. In reality, most students used a combination of two or more stimulus pieces in developing a response to the concept, thus opening up a greater variety of possibilities for their writing than indicated here. For this reason, the percentages shown in this diagram add to more than 100%.
Specific stimulus pieces and their response patterns

1. Socrates
Socrates’ words reflect his belief in the potential of humans to reach new heights and in the power of the universe as a system. This inspired students to respond with discussions about human potential to achieve and the desire to understand the world. The image of the astronaut offered further opportunities to examine technological advances in space exploration, as well as providing the basis for stories set in the future.

2. Leaping
This piece refers to a form of street athletics called parkour. Many students used their background knowledge of this to write expositional texts, however, it was not necessary to know the specifics of parkour to use the ideas from this piece. Accounts of a time where they felt like they were flying, ways in which we can use both mind and body to overcome obstacles as well as discussions about “what makes a superhero” (drawing specifically from the written text) all featured in student responses to this stimulus piece.

3. Taking off
One of the most popular stimulus pieces, this piece deals with plane flight, especially the stage of taking off. Many students wrote about experiences of plane travel, as well as about rising above the difficulties in their lives.

4. Eagle
This stimulus piece consisted of a simple written description of an eagle taking flight and an accompanying image. Prompted by this, students produced a wide variety of responses, ranging from factual reports on the physics of flight through to short stories about parent-eagles teaching their young to take their first flight.

5. Wings
The written text of this stimulus piece presented the view that, as a species, humans are disadvantaged by being “grounded”. The incongruity of the penguins — flightless birds — in the accompanying image was something that some students picked up on and incorporated into their writing, especially on a metaphorical level. This stimulus piece prompted many stories about scientific experiments that had resulted in the creation of human-bird hybrids, as well as expository and persuasive responses commenting on the social and environmental advantages and disadvantages of humans developing the ability to fly.

6. Snowboarder
The image of a lone snowboarder with the simple statement, “And then I was flying” was used by students both literally and conceptually. There were many short stories about trips to the snow and snowboarding competitions where comparisons were made with the action of flying.

7. Sayings
These well-known sayings and phrases could be used alone or in conjunction with other pieces. It was not necessary to incorporate all of these sayings into a response in order for it to be responsive to this stimulus piece. Indeed, responses usually suffered when too many sayings were used. The most successful responses wove the sayings into the writing, rather than writing to foreground the sayings that were being used. Many of the responses to this stimulus piece were short stories, where students used one or more of the sayings as the moral or message.
8. **Flying carpet**
This stimulus piece was the least popular of all pieces on the testpaper. The stanza from the poem “High Flight”, written by a young trainee pilot during WWII, captures some of the emotions aroused by flying. The familiar image of a flying carpet that accompanies the written text prompted students to write accounts of flying adventures, descriptions of flight with the kind of wonder and exultation that originally gave rise to the writing of the poem and procedural texts outlining the steps for creating magical flying carpets.

9. **Kite**
The image of the child with a kite and the description of the kite aloft should have brought back memories for many students of flying a kite or watching kites. The accompanying text would likely have resulted in students considering their personal hopes for the future and the possible challenges to be faced as they leave school and home. Many reflective and imaginative pieces were written in response to this stimulus piece, particularly with a focus on parent-child bonding, including responses written from the parent's perspective as they outlined their hopes — and fears — for their child’s future.

10. **Skydivers**
The image of skydivers floating from an aircraft should have allowed students to imagine such an event and to describe the physical and emotional effects of leaving an aircraft in free fall, then floating down with the assistance of a parachute. Some students interpreted the image very literally and used the image of the out-of-formation skydiver as the basis of “disaster” stories and feature articles not only about the dangers but also about the appeal of skydiving and other extreme sports. Most students who responded to this stimulus piece, which was one of the least popular, used it in conjunction with other pieces on the testpaper.

11. **Fight-or-flight**
This written text provides a very short explanation of the fight-or-flight response to stressful situations. Students could have experienced any number of past situations of danger or stress in which they reacted in either of these ways. This notion gave rise to personal accounts, expositional discussions of the phenomenon as well as narrative pieces with wide-ranging situations prompting a fight-or-flight response.

12. **Wind**
The balloons in this piece could suggest accounts or stories of journeys or flights in which the wind is important. The text, from an air force advertisement, suggests that there is no limit to where the wind can take us. In response, many students used this idea metaphorically to explore the notion of whether there are limits to possible success, often using the medium of a motivational or persuasive speech.

13. **Books and movies**
The text, referring to the game of Quidditch as described in the *Harry Potter* series, should have suggested books or movies that have been exciting, uplifting or memorable to students. Students choosing this stimulus piece wrote critiques or reviews of texts (not necessarily *Harry Potter*), personal reflections about times when their imagination took flight during or after the reading or viewing of a powerful text and expositions about the power of literature to inspire and transform lives.

14. **Conquest**
The variety of material here would have enabled students to consider a range of different approaches to this stimulus. Perhaps as a result, this was the most popular of all stimulus pieces on the testpaper. Many students wrote expository and persuasive pieces commenting on the effects of the aviation industry on today’s world. A further reason for the popularity of this piece was likely to have been the ease with which students were able to connect the ideas presented here with those of other stimulus pieces, particularly stimulus piece five.
Stimulus pieces: visual, written or combination?

In 2010, it was decided to examine more closely the use students made of the stimulus material on the testpaper. Students have the option of responding to the visual images, the written texts, or a combination of both. Stimulus pieces for the Writing Task are selected to maximise appeal for the wide cross-section of the Year 12 population. The material chosen is designed to excite students and prompt ideas for writing. When considering what to write and selecting a stimulus piece (or pieces), students should feel reassured that, by the time they reach Year 12, they have a considerable wealth of personal and subject-based knowledge and experience that they should not overlook.

From the sample scripts, it was apparent that 39% of students drew their ideas from the written text on the testpaper, while 38% chose to respond to a combination of written and visual stimulus material. Of the remaining students, 22% chose to respond to the visual images, while for the remaining 1% of students, it was difficult to determine due to their lack of responsiveness. Of the scripts that were identified as responding to both visual and written texts, almost two-thirds of students indicated that they had responded to more than one stimulus piece, thereby also drawing ideas from a wider variety of pieces.

When students draw their inspiration from the written pieces of text, there can be a danger in quoting large portions of text directly. This notably impacted on judgments on Length (words from the stimulus pieces are not counted) and Central idea (the ideas being presented are not the student’s own). Direct quoting can also detract from a response when the language style of the quoted material differs from that of the student, and when quotations are used out of context or incorrectly (affecting Structuring & sequencing, Vocabulary, and Grammar, punctuation, spelling).

Choice of text type

In 2010, the most popular response was the imaginative, with 37% of students writing in this form. This was closely followed by expository pieces, written by 32% of students. Reflective responses accounted for 20% of scripts and 11% of responses were persuasive. When determining which text type to employ, students need to consider the ultimate purpose of their writing. Do they wish to entertain their audience (imaginative)? Do they want to convey information (expository)? Would they like to recall, contemplate or share experiences (reflective)? Is it their intent to convince their audience of a particular viewpoint (persuasive)? Understanding this can help students to plan effectively and give focus to their writing.

Within these broader categories, students need to make decisions about the specific genre in which they wish to write and to keep in mind (as they plan their response) that some genres, for example, the speech, can have a variety of purposes, such as expository or persuasive.
Choice of genre

Students may write in whatever genre they wish, with the exception of poetry. This enables them to draw on their knowledge and strengths, and to match their ideas from the stimulus with a suitable style of response. Eleven clear categories were identified.

In 2010, the most popular genre — by a considerable margin — was the short story. This was followed by the essay, the speech and the media article. Least popular this year were the interview, the letter and the drama script. It is worthwhile noting that, while genre conventions are not assessed specifically (although they may affect Structuring & sequencing), students should aim to make use of, and indeed exploit, these conventions for effect. This certainly supports the recommendation that students write “what they know” — giving their writing authority and authenticity.

Student achievement and genre

The diagrams below indicate the genres used in higher, middle and lower achieving responses. Note that the percentages shown are rounded and therefore may not add up to 100%.
Short story — The short story was the most popular genre by a significant margin. Not surprisingly, stories covered a wide variety of topics. Mid-air disasters, war stories involving fighter pilots, science-fiction experiments gone wrong, children growing up and beginning a new stage of life, overcoming the grief of losing a loved one and journeys of self-discovery are just some examples. In 2010, the most successful short stories were those that drew on students’ own knowledge and experiences and made effective, yet economical, language choices such as varied sentence length and use of description (including metaphor and personification). Also, successful stories tended to be written with a goal in mind from the outset — that is, there was an effective establishment and development of ideas, a resolution and a conclusion.

Students should be wary of some strategies that are likely to have a negative impact on achievement. An example is the story that ends with the narrator waking to find it was all a dream. This can impact significantly on Central idea and Structuring & sequencing as many of these stories indicated a lack of planning and, consequently, a lack of direction. Other common problems (perhaps due to the number of stories that ended in planes crashing) were inconsistencies and inaccuracies in using tense and narrative perspective. This was especially noted in stories written in the first person (and often past tense) where the narrator wrote about the events leading up to their own death.

Essay — A very popular form of writing in 2010, the essay was chosen by students in all ability levels. This is perhaps because essay writing lends itself to a range of different topics, is a writing style that students encounter across the majority of subject areas and has elements that are similar to several other genres. The most successful of these responses were very clearly focused on purpose and audience and developed a clear thesis. Essays that were well written followed a clear structure, consisting of an introduction (including a thesis statement), the body of writing containing development and explanation of main points, and a concluding paragraph which presented a summary.

Speech — The speech was a popular genre and the purpose of speeches ranged from persuasive to informative to motivational. Having a clear understanding of the purpose and audience of the speech is crucial for success. Also, students need to ensure that their topic is suitable for this genre, that is, a topic that is not contrived and that would interest the audience.

Media article — Consisting of texts such as feature articles, editorials and journal articles, this genre was quite popular with students. Predominantly expositional in nature, media articles require students to have reasonable knowledge of their topic. Therefore, students should carefully consider their own background knowledge and expertise when selecting this approach to responding to their chosen stimulus piece(s).

Biography — Biographical writing included specific texts such as memoirs, personal reflections and obituaries. This was a reasonably popular type of response in 2010, with students often writing as “characters” reflecting on their experiences of flight and flying. The most successful scripts focused on a specific event or recollection rather than on a broad range of information or topics.

Report — A small percentage of students chose to write a report. Many of these reports were scientific in nature, perhaps suggesting that students are aware of the genres best suited to their knowledge and experience. As previously stated, while conventions of genre are not assessed specifically, reports should make use of features such as subheadings as well as sections including, for example, objectives, conclusions and recommendations to add to the authenticity of the writing and, consequently, the authority of the writer.

Critique — While this was not a very popular form of writing, many of the students who wrote in this genre chose to write reviews — usually prompted by stimulus piece 13 — about books or films that have had an impact on their lives. Another trend noted was students offering a comment about the positive and/or negative effect of technological advances on humanity.

Journal — Journal writing included texts such as a diary entry or a flight log and were usually reflective in style. This genre is often problematic for students because writing “as themselves” may limit opportunities for selecting and demonstrating a wide or discriminating vocabulary. Also, they tend to lose focus as they are writing, which can affect Structuring & sequencing.
Drama script — Despite there being only a small percentage this year, the majority of drama scripts were among the higher achieving responses. It is possible to infer from this that students who wrote in this form had background knowledge about the specific conventions of the genre, and were able to utilise these to effect. Conversely, the lower achieving responses commonly fell short of length requirements; this impacts across the other criteria.

Letter — As with journal writing, letters can often provide challenges in Vocabulary and Structuring & sequencing. To be successful, students should ensure that the purpose and, consequently, the content of the letter is substantive enough to justify the choice of genre and also meet length requirements. In 2010 there was a noticeable absence of letters being written by students who produced lower achieving responses. This is perhaps an indication that these students recognised the difficulty of writing letters successfully.

Interview — Interview was the least popular identified genre, with the smallest percentage of students choosing to write this type of response. For a number of these scripts, Central idea was the criterion that contributed least to overall achievement, perhaps suggesting that students need to have a clear understanding of exactly what it is they want their interview to convey, and how to develop this throughout the response.
Criteria and standards

The most successful responses are those that demonstrate higher achievement in the criteria identified in the marking guide (page 80). The criteria are Central idea (CI); Vocabulary (V); Responsiveness (R); Grammar, punctuation, spelling (GPS); and Structuring & sequencing (SS) plus Length (L).

Each response is marked by three markers. Each marker assigns either four criteria-based standards or three criteria-based standards plus a judgment about Length. Different combinations of judgments are required of the three primary markers (referee marking occurs as required). Markers consider the contribution of each of the criteria they are marking to the holistic worth of the response. On the marksheet they record each of these as a standard (from 1 to 6) with a qualifier (+, 0, –) for each standard and, if required, make a decision about the length of the response.

The following table shows the percentage of students who achieved the various standards for each of the criteria (for a breakdown of the distribution of raw scores for each criteria, refer to the graphs on page 81).

<table>
<thead>
<tr>
<th>Criterion</th>
<th>higher achieving</th>
<th>middle achieving</th>
<th>lower achieving</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>CI</td>
<td>0.7</td>
<td>13.6</td>
<td>51.6</td>
</tr>
<tr>
<td>V</td>
<td>0.5</td>
<td>12</td>
<td>65.9</td>
</tr>
<tr>
<td>R</td>
<td>0.7</td>
<td>12.5</td>
<td>54.5</td>
</tr>
<tr>
<td>GPS</td>
<td>0.4</td>
<td>10</td>
<td>53.1</td>
</tr>
<tr>
<td>SS</td>
<td>0.5</td>
<td>10.6</td>
<td>50.7</td>
</tr>
</tbody>
</table>

For the responses sampled, the data from the standards awarded were analysed, first for the total sample and then for each of the higher achieving, middle achieving and lower achieving samples. The diagram below shows, for each criterion, the percentage of responses for which that criterion represented the highest achievement, that is, the criterion on which students did best. Because many students are awarded identical grades across several criteria, the percentages shown in the graph add to more than 100%.

Best performing criteria: total sample

For the total sample, Responsiveness was the criterion in which the greatest percentage of responses (37%) demonstrated highest achievement. Grammar, punctuation, spelling and Structure and sequencing were the two criteria in which students were least successful. This applied whether the overall quality of the responses was higher, middle or lower achieving. This phenomenon was also observed in 2009.

Students who wrote responses that were lower or middle achieving did best on Responsiveness and Vocabulary. For the higher achieving responses, Central idea was the most successful criterion, followed by Responsiveness.
Achievement in specific criteria

Central idea
When assessing this criterion, markers are essentially asking: what is the response about. That is, what is the key idea behind the piece of writing, and then, how well has the student deliberately and clearly developed this idea? The most successful scripts will demonstrate direction — whether explicit or implicit — and resolution. Scripts suffer in this criterion when the central idea is unevenly developed or where there are several, usually vague, ideas present. A lack of resolution often results from lack of direction and consequently has a negative impact on this criterion.

It is perhaps no coincidence that Central idea was the best criterion for 37% of students who produced higher achieving scripts, better than all other criteria. This emphasises for students the importance of having a carefully and deliberately formulated idea and plan.

Vocabulary
Many people believe that “the bigger the word, the better”. In this criterion however, this is not necessarily the case. Success in Vocabulary is determined by word choices: words that have been deliberately selected for effect and exactly fit their location within the text. While students should aim to demonstrate a command and range of vocabulary, their control of language is also crucial. Incorrect and/or inappropriate word choice, lack of variety and language that gets in the way of meaning will all influence a student's success in this criterion.

Making use of language devices such as metaphor and personification, as well as using “technical” language suited to the context, proved to be very effective for many students. Less effective was the often jarring use of exaggeration and hyperbole, tautology and sweeping generalisations. Maintaining an awareness of the purpose and audience of the writing is essential for success in this criterion.

Responsiveness
The piece of writing that a student produces for the Writing Task must clearly be a response to the testpaper on the day, showing connectedness to both the concept AND stimulus piece(s). Therefore, Responsiveness is weighted most heavily of all criteria. The highest achieving scripts in this criterion will exhibit strong and sustained connectedness to both. Achievement will suffer where connectedness shows weaknesses, or where students respond to either the concept or stimulus, but not to both. It is important to be aware that simply repeating the concept word, for example “flight”, several times is not demonstrating connectedness.

Evidence also suggests that responding to too many stimulus pieces (referred to as “touring the testpaper”) reduces a student's likelihood of achieving well in this criterion. This is largely because these scripts tend to make only passing or glancing reference to the concept or stimulus.

Across the entire sample, Responsiveness was the most successful criterion for the largest percentage of students (37%). There was a marked increase from 2009 in the number of students who were most successful in this criterion, perhaps an indication of increasing testwiseness: that the students of 2010 had greater awareness of the necessity to connect their writing to both the concept and stimulus of the paper and, consequently, produced responses that were successful in doing so.

Grammar, punctuation, spelling
Within this criterion, Grammar is deemed more important than Punctuation which, in turn, is more important than Spelling. This is because each one of these can affect meaning more than the next if not done well. To achieve a high standard, students must consistently demonstrate precise and effective use, with few (if any) errors. This includes exploiting the conventions of writing for specific purposes and effects. Student performance on this criterion will be affected by the degree to which errors detract from meaning.

For the entire sample, regardless of achievement level, this is the criterion in which students performed most poorly. Some of the most frequent problems evident in responses were

- inconsistencies with tense
- the omission or incorrect use of punctuation, for example failing to end questions with question marks
- the absence of apostrophes to identify possession, and
• antecedent agreement (particularly with singular, plural and indefinite pronouns).

Some problems are more identifiable by achievement level. Rhetorical questions tended to be used to great effect by more successful writers, whereas less successful writers overused them. More successful writers were more likely to use varied sentence length and to use punctuation to create a particular effect (such as rising tension). Less successful writers wrote overly long sentences packed with too much (often irrelevant) detail and description.

**Structuring & sequencing**

This criterion requires markers to consider the architecture of the piece, that is, the way in which the ideas in the response are arranged. To be successful, the writing must demonstrate controlled structuring and deliberate sequencing of ideas. The writing needs to be fluent, logical and flexible. Achievement is hampered where there are weaknesses evident, such as gaps in logic, poor paragraphing and/or randomness in the arrangement of ideas.

Some of the problems with Structuring & sequencing arose when students didn’t clearly establish the context of their writing and, consequently, the development of ideas was less sequential. Also, poor proofreading and editing can have a negative impact on writing, particularly where students include information that is superfluous to the purpose, therefore weakening the response. In short stories, this often results from including too much unnecessary description. Of course, one thing that students can do to contribute to a well-structured response is to formulate a clear planning strategy that is best suited to their individual writing abilities.

**Length**

The Writing Task subtest requires students to produce a piece of continuous prose approximately 600 words in length. Penalties are applied for short, far too short, long, and far too long responses. While each of the criteria is considered and assessed independently, Length has the potential to have the greatest impact on achievement in other criteria. For example, Structuring & sequencing was the lowest performing criterion for approximately 50% of sample scripts judged either far too short or far too long. In terms of overall performance, those scripts that are far too short are the most likely to be amongst the lowest achieving scripts.

**Overall achievement**

The table below shows the percentages of students who achieved the various standards overall.

<table>
<thead>
<tr>
<th>Grade</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.1</td>
<td>7.7</td>
<td>56.4</td>
<td>33.5</td>
<td>2.1</td>
<td>0.2</td>
</tr>
</tbody>
</table>
Writing Task marking guide:
Criteria and standards

Grading a script
- Read the script as a whole.
- Think about the worth of the script holistically.
- Make a judgment about the contribution to the holistic worth of the script of each criterion you are considering (CI, V, R, GPS, SS).
- Assign a grade and a qualifier, then record each judgment.

<table>
<thead>
<tr>
<th>CENTRAL IDEA</th>
<th>VOCABULARY</th>
<th>RESPONSIVENESS</th>
<th>GRAMMAR, PUNCTUATION, SPELLING</th>
<th>STRUCTURING &amp; SEQUENCING</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>For a 1+</td>
<td>For a 1+</td>
<td>For a 1+</td>
<td>For a 1+</td>
<td>For a 1+</td>
<td></td>
</tr>
<tr>
<td>the writing demonstrates the deliberate, focused development of a clear central idea (explicit or implicit).</td>
<td>the writing demonstrates the use of words selected for their effect and exactly fitted to their location (the right words in the right places).</td>
<td>the writing demonstrates sensitivities to nuances of the concept and stimulus material.</td>
<td>the writing consistently demonstrates a command of: • the conventions of writing (subject/verb agreement, participle use, antecedent agreement, pronoun choice, tense, etc.) • correct punctuation • correct spelling.</td>
<td>the writing demonstrates coherence and cohesion through: • controlled structuring; and • deliberate sequencing of ideas and images.</td>
<td>about right 500–750 words</td>
</tr>
<tr>
<td>identifiable for intended audience; direction and resolution revealed</td>
<td>controlled (discriminating, imaginative)</td>
<td>strong (immediate or subtle) and sustained connectedness to both the concept and stimulus material</td>
<td>precise and effective use</td>
<td>fluent, logical and flexible</td>
<td>too long 750–1000 words</td>
</tr>
<tr>
<td>identifiable but unevenly developed</td>
<td>appropriate</td>
<td>connectedness to the concept and stimulus material</td>
<td>lapses intrude but do not detract from meaning</td>
<td>weaknesses are evident</td>
<td>too short 400–500 words</td>
</tr>
<tr>
<td>identifiable but poorly developed or not readily identifiable but some development evident</td>
<td>inappropriate, interfering with meaning at times</td>
<td>connectedness to either the concept or stimulus material; or weak connectedness to both the concept and stimulus material</td>
<td>lapses obtrude and detract from meaning</td>
<td>weaknesses detract</td>
<td>far too long &gt; 1000 words</td>
</tr>
<tr>
<td>not identifiable</td>
<td>limited</td>
<td>no connectedness to the concept or stimulus material</td>
<td>inept</td>
<td>incoherent</td>
<td>far too short &lt; 400 words</td>
</tr>
</tbody>
</table>
Distribution of raw grades in each criterion

Central idea

Vocabulary

Responsiveness

Grammar, punctuation, spelling

Structuring and sequencing
Selected student responses

The responses to the 2010 Writing Task that follow were selected from those that met the standards for successful writing as defined by the criteria and standards for judging responses.

These complete responses appear in their original handwritten form. They may contain errors in expression and factual inaccuracies but, for the sake of authenticity, they have been published as they were written. The selection of these examples does not indicate a preference for any particular form of writing, nor are the sentiments expressed in these responses necessarily endorsed by the QSA. Before publication, the QSA attempted to establish, but cannot guarantee, the originality of the writing in the responses.

Response 1

The Kite is an account of a girl's visit to her grandfather's home after his death. She is there to clean the old house and wanders through it, reminiscing, describing familiar smells and objects and noting the unfamiliar silence. When she enters the shed she finds her grandfather's old red kite. In the process of launching, flying and finally releasing the kite, she recalls his words about kite flying and reflects on his philosophy of life.

This deceptively simple response uses sensitive selection and sequencing of evocative images and effective vocabulary to establish and develop a clear central idea which is only completely revealed at the end of the piece.

Response 2

The Plight and Flight of Wizards is an exposition that explains that the overriding reason for the phenomenal success of J K Rowling's Harry Potter novels is their focus on flight. We are told how the author gave Harry certain powers, among them the ability to fly. Harry discovers that he has a talent for Quidditch, a sport that requires the players to fly on broomsticks. Possible reasons for the human fascination with flight are explored and this is identified as the key to the popularity of the novels.

The writer of this response has clearly responded both to the overall concept of the testpaper and to aspects of the stimulus pieces by taking ideas from the stimulus material and developing them to create a well-structured, cohesive and convincing discussion.

Response 3

The King of the Skies is a descriptive piece in which the writer recalls a bird-watching experience from long ago. The focus of attention was an eagle, nesting and caring for her chick. The watcher observed the mother over time as she hunted for prey and fed her offspring. Finally, the chick reached adulthood and left the nest, and his mother. His flight signified his entry into the "kingdom of the sky".

The drama of the birds' lives is captured in an account that employs precise and discriminating vocabulary and a simple but effective structure to convey the beauty and majesty of these creatures.

Response 4

The Fairy Who Couldn't Fly is a children's story about a fairy who lives with her mother in a pepper pot. She has been teased since childhood by other fairies because she is unable to fly. One day, the wind fairy brings a bottle containing a magic potion to her. When she drinks this, she is thrilled by a newly discovered ability to fly. The fairies who had previously mocked her are amazed. When she returns from her first flight, she discovers that the wind fairy has disappeared and that she will now take the wind fairy's place.

This response shows sophistication in the selection of images, effective use of vocabulary and a clear command of the conventions of language.
The kite.

She opened the front door to the old weatherboard house. She recognised the smell first. Old tobacco mingled with wood polish and toast. Even when there was no toast cooking, the smell still lingered in the wood panelled hallway. Not surprising, she considered, as toast was really all her grandfather ate. As she stepped over the threshold she was struck by a wave of familiarity. Everything was as she remembered it; the mat scrubber by the door, the ashtray beside the sofa, the biscuit jar on the kitchen counter. The photographs were lined up on the mantle as they had always been, stills of Christmases, Easeters and birthdays gone by. She had never before realised that the photographs spanned such a long period of time. Wrinkles appeared on once smooth faces, gap toothed gums became orthodontically perfected smiles, fashions came and went. What unnerved her the most, however, was the absence of sound. The record player lay unused in the corner, a thin film of dust lay over the deck. She had grown accustomed to Patsy Cline’s crooning as her grandfather tinkered away on his latest project, his off key humming accompanying her honeyed tones.

It had been a week since the funeral however and she had been sent here by her mother.
to clean rather than reminisce. She decided to begin with the shed, as it was the biggest job. Making her way towards the old wooden structure, she tried to picture its contents in her mind. The door handle felt heavy in her hands as she pulled it open. Slowly she wandered inside, and there it was, hanging above the workbench, the old red kite.

Her grandfather loved kites. He loved making them, flying them, boring his grandchildren talking about them. She was the only one who shared his enthusiasm though, and it was this which made her his favourite, so she liked to think anyway. She reached up and felt its wooden crossbar, the red fabric across it. Her grandfather always said that flying a kite was a lesson in control. For even though you were holding on, steering it along, its path was determined by the wind. Ultimately, it was this external force, over which you had no power, that held the fate of the kite in its invisible hands. He said it was the closest thing to flying one could experience with both feet on the ground, as the force of the wind travelled down the string, through your arms and into your core. The biggest mistake, he oft repeated, was to try and fight the wind, instead of allowing yourself to fly with it. She could see that when he flew the kite, his mind became
the wood and fabric, ducking and weaving
in the endless expanse of blue; higher, further,
free from limitations. She wondered when the last time she tried to remember the last time she had flown a kite. She had been so busy with university that she hadn't even seen her grandfather in over six months, let alone flown a kite. The lightness of the materials and the perfectly balanced composition of the kite made the red one her grandad's favourite. She picked it up and made her way outside, the cool breeze dancing on her skin.

Unravelling the string, she began to run, launching the kite in the air. It flew, climbing higher, becoming a red beacon in the sea of blue, her hands being the anchor. She worked with the wind, allowing it to guide her arms and the direction of the kite. She remembered about the freedom and limitless possibilities that her grandfather often spoke about. So she let go. As she watched the red speck grow smaller and smaller, she let both their paths be determined by the wind.
## The Plight and Flight of Wizards

When Londoner Joanne Kathleen Rowling reclined in an armchair by the window of a city cafe on a dreary day, pen and paper in hand, she unknowingly brought the minds of millions back to life. Using ink and a slip of parchment, Ms. Rowling gave the world Harry Potter, and in doing so, blessed him with skills of which we mere muggles know not. On this day, she gave Harry the levitation spells - *wingardium leviosa* and *levicorpus*; she also wrote a *Hippogriff* into Harry's life, along with an *Axminster flying carpet* (to seat twelve), a *Nimbus 2000 broomstick*, and the *cremâ de la cremé of the Quidditch world* - a *Firebolt*. As her now-famous novel developed, and the boy Harry Potter evolved from a child with strange abilities to a talented wizard fighting the ever-elusive ‘He Who Must Not Be Named’, J.K. Rowling discovered she had given her character a power that every mortal seeks; Joanne Rowling had gifted Harry with flight.

We first meet our hero when he is merely a boy living in the cupboard under the stairs. As Harry’s journey’s closer to his destiny, he unwittingly discovers a burgeoning talent for the sport of broomsticks - *Quidditch*. Harry’s broomstick plays an integral role in his adventures, helping him capture a winged key in his first year, meet a gaggle of *Dementors* in his third, and escape *Amortia* - the cursed fire - in the final installment of J.K.’s literary masterpiece. His broomstick is inevitably the wind on which Harry soars through his years at Hogwarts School, and into the hearts and minds of so many. Had Ms. Rowling not crafted a bewitched broom on which her lead character could fly,  

1. *Hippogriff* - winged creature invisible to those who have not seen death.  
2. *Dementors* - evil entities which suck happiness out of the air.
the Harry Potter series would most likely not be the smashing
success it is today.

Yet one does wonder, what is it about the notion of flight -
a game of Quidditch and the Golden Snitch - which captivates
and enchants us, leading our minds into the realm of boundless
possibility? One may rule out the notion of flying itself, for
as the human race has developed, so too has our ability... to
think up ever more imaginative means of reaching the stars.
The golden thread which links our world and the enchanted
lands of Harry Potter, could be the feeling of infinity and
impossibility that magical folk and muggles alike seek. In
the sky, whether on a broomstick, aeroplane, hot-air balloon,
or on the feathered wings of a Hippogriff, one has no
tangible connection to the Earth. A new world is opened up,
one in which there is a sense that dreams of lands
undiscovered and tales untold may blossom into reality.
When Harry feels the rush of wind against his face, he
discovers a sense of belonging and of joy, which saves our
hero when he is faced with everything from the deliciously
tricky 'Devil's Snare' to the rancid kiss of the Dementors.

For centuries, children have wished and dreamed to fly
through the clouds, to reach into places where reality is
re-defined. The fun and frivolity of soaring through the
sky in a Ford Anglia - as Harry and Ron do in their
second year at Hogwarts - is a dream which has captivated
all those who ever wished to escape the conformity and
reality of our earthly world, and immerse their soul
in places where the impossible can be realised, and
magic exists. This is the key notion which attracts so
many to the tales of Harry and his friends. J.K. Rowling

3 - Golden Snitch - a ball which flies & must be captured in Quidditch.
has told the story of a beloved hero who finds hope, joy, and magic amongst the clouds, thus planting the seed in the minds of muggles, that an enchanted world may be realised, if only they can break away from the normalcies of Earth, fetch a broomstick from Diagon Alley, and fly.

4 Diagon Alley - A place which only magical folk can visit.
**The King of the Skies**

I can recall, even all these years later, that day I stood on the sheltered beach surrounded by trees and saw her for the first time. I was just about to replace my binoculars in their holster when I discerned the cry, the “caw” of the baby.

The binoculars were raised to my eyes once more. I adjusted their focus with a surgeon’s precision, then relocated her abode, now also the home of a young one.

She sat proudly atop her waverly leafy castle, guarding her pink and naked offspring. Though it was a windy day at the beach she did not teeter, and the minute chick took his cue from her. The eagles were breathtaking.

So began my love affair with this proud mother and her noisy child. I soon learned her idiosyncracies, like the way her coal-coloured feathers would be ablaze with copper fire when her back caught the sun. Her exultant cry when she plummeted down onto her prey. I learnt also that she had been fogged many years before, and now wore her details clipped onto her ankle like a human war veteran. I should have been outraged by mankind’s interference with this queen of the skies, but she paid it no heed. I soon adopted her attitude.

Over the months of keen observance, I watched her child quiver, too. The delicate, membranous skin soon toughened and sprouted the downy stuff of a child. He had none of his mother’s dignity yet, but I saw in the incline of his head and glint of his eyes that one day he would.
As his mother brought more sustenance for her ward, adult feathers speared through his dense, ticklish fuzz. I have always likened this stage to human adolescence, with its outbreaks of pimples and awkward, not-quite-adult bodies. In that time he began to salute the sun with her each morning, but he was not ready to take flight yet.

But then there came a day when he was. The sky was the intense blue of a Romanticist landscape, speared with wispy clouds high in the atmosphere. Waves broke only gently and barely a breeze disturbed the greenish water. The coarse sand crunched under my boots as I made my way to my usual vantage point.

I saw the young one in his fresh adult feathers, perched in his nest with beak in the air. An eagle’s beak is analogous to a person’s Roman nose — protuberant, distinguished and hooked. What we humans lack, however, is the fierce countenance and hunched, muscular shoulders of this young bird and his mother. Almost too casually this queen of the other took wing, casting in the high-pitched way eagles have for her offspring to join her.

I followed her through the sky and then directed the binoculars back to the young one. I watched in exquisite anxiety for his next move. The blood roaring in my ears provided a deafening crescendo for the pivotal moment. He flexed, feeling the delicious movement of bulging muscle where once there had been only fragile newborn sinew. He must have been bigger than the queen by half, an attribute only exaggerated by his outstretched wingspan.
He inched onto the edge of his bed of sticks, flapping. Then, by some unknown mechanism of time, he judged when to launch. In just two beats of his glorious chocolate-brown wings he was away, into his kingdom.

I never saw the newly-crowned king of the sky again, but I will always remember.
"The Fairy Who Couldn't Fly"

They lived in cookie jars and honey pots, played catch with<br>snack cubes, and lounged in milk and meringue. Their<br>lives were frivolous and filled with fun, for they were not<br>bound by duties or the limits. The other fairies were<br>free to prattle as they pleased, right under the noses of<br>the unsuspecting humans: the student man, moody<br>nurses, and naive children. They were not discarded<br>like I was... Not only was I unable to fly, I was<br>paralyzed by my envy.

Since I was young, they teased me - provoking me until<br>I'd weep. I was known as "the fairy who couldn't fly",<br>and at times I was likened to Rudolph the red nosed<br>reindeer (although I had never been given a special duty<br>as a result of my difference). I didn't attend fairy<br>school, or play sports, because they wouldn't include<br>me; instead, I spent my days at home in a state of inertia as I watched the others dance in merriment.

One dewy morning, as I sat by the window on the sill<br>beneath the plant pot, I gazed at the orange leaves<br>falling gracefully from the trees. I felt jealousy while<br>they fluttered to the ground; I was consumed by my<br>emptiness and helplessness. My mother had left to<br>work early that day - as the pumpkin fairy, she<br>had to sow double the seeds in Autumn. Before she<br>left, she kissed my forehead and smiled. Mother's<br>impish smile remained an image on the back of<br>my eyelids that day; the magical curve of her<br>velvety lips was present every time I blinked.
"I'm home, sweet pea!" she called as she fluttered through the opening hole to our pepper pot abode. "I have a surprise for you..." I skipped towards her voice to find her standing with another fairy. In an instant, my face lit up as I recognized the second character; she was the wind fairy.

"Hello poppet," she beamed. "I see there is no need for me to introduce myself..." I shook my head playfully. The wind fairy had golden hair that shimmered in the afternoon sun. Her emerald eyes were warm and bright, and her crimson lips contrasted against her porcelain complexion. "I have a present for you."

I smiled and hopped a little closer. "Are you going to teach me how to fly?" I asked, becoming rather excited. I could feel the beating of my delicate heart behind my ribs.

Without uttering another word, the fairy pursed her lips and reached into the pocket of her dress. She presented a blue bottle, which was dotted with sequins. Inside, I observed a crystal liquid that swirled like a trapped tornado. I knew immediately that it wasn't a flying elixir, for if such a thing had existed, I surely would have tried it by now. Whilst my heart sank in slight disappointment, I remained intrigued. This time, it was my mother who spoke.
"This, Mia, is a very potent concoction." The words leaving her mouth were shrill and Serious. "You will use it sparingly, and with great caution... Do I make myself understood?" I nodded. A dry lump was forming in my throat. It was hard, it didn't dissolve when I tried to swallow.

The wind fairy then proceeded to open the bottle, releasing the scents of cinnamon and nutmeg into the air. The stench of pepper from our home was soon overcome by the sweet smell of the potion. I stepped forward cautiously, curious to taste the mixture.

I pressed my lips against the bottle's mouth, took a sip and inhaled. I closed my eyes. What happened next was a blur. Before I knew it, my wings tingled and I felt as light as a feather. I took a dive off the top of the pepper pot and began to float. In a state of awe and amazement, I climbed higher than the bookshelf, flew faster than the study down the hall and travelled faster than I ever thought possible.

As I passed the cookie jars and honey pots, the spice racks and the utensil drawers, I observed the disbelief on the faces of the other fairies, who were grounded by their shack. I beamed brilliantly as I experienced flight for the first time. I laughed, cried, lived, died and went to heaven in that moment.
The wind fairy had cured me - she had taken me higher and further than I had thought possible. My world was now complete, for I was not bound by limits...

When I finally returned home, there was my mother. Ever so proud, she embraced me. The wind fairy was nowhere to be found, though. Mother sighed as she told me that the potion exhausted the wind fairy’s power. It was at that point I realised that I was still bound, but this time not by disability. I could fly, and now, I was the wind fairy. I was no longer inert.
Relative worth of each subtest

Relative worth of parts of the QCS Test

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<td>50 items of equal worth</td>
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<td>MC II 50</td>
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Worth SR paper

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\[ \sum \left( \frac{A}{2} \right) = 68.5 \]
Deemed CCEs and QCS Test items

Tables showing CCEs tested within the MC and SR subtests are presented earlier in this document. There appears next to each item (or unit) one or more CCEs. What does this mean?

The QCS Test assesses students in terms of the common elements of the Queensland senior curriculum: analysing and synthesising, evaluating, comparing, interrelating ideas, graphing, estimating, compiling statistics, and so on. There is not, however, a simplistic match of CCEs and individual items in the QCS Test, meaning there is not exactly one item for each CCE or exactly one CCE for each item. By their nature, some CCEs are obviously widely present — interpreting words and symbols, analysing, interpreting the meaning of diagrams, justifying; others such as graphing may be obviously absent from all but one or two specific items.

The CCE given for an item is not, therefore, a claim that this is the only skill required to complete this item successfully. Nor is it a claim that the CCE should be understood as meaning only the skills apparently required by the item. There may even seem to be ways of completing the item successfully that do not appear to involve the given CCE/s.

The listing of CCEs against items provides information about how the test constructors view each item in the context of the particular QCS Test in which it occurs.

Balance of the QCS Test in terms of CCEs

The listing of CCEs against items may suggest that the balance of a particular QCS Test or a series of QCS Tests can be assessed by tallying the number of times each CCE is listed.

It is wrong to expect such a tally to show an equal number of items for each of the 49 CCEs because they are not, and were not developed to be, either equal or equivalent, or in any other sense, interchangeable.

A reasonable assessment of the balance of the QCS Test will take into account that

• the 49 CCEs are not equal
• no CCE is trivial
• some CCEs are more substantial than others
• no single CCE fails to occur in the Queensland senior curriculum
• some CCEs are diffused generally across a wide range of items (and are therefore not listed frequently)
• some CCEs can only be tested through particular kinds of items which require a substantial proportion of the total test item (and hence these CCEs will not occur very often).
Appendixes

Appendix 1: The 49 Common Curriculum Elements

Descriptors and Notes

Note: The numbering system given for the testable Common Curriculum Elements is that used within the Testing Unit. Readers should not be perturbed to find that, while the list is in numerical order, there are numbers missing. All 49 elements appear in the list.

1  Recognising letters, words and other symbols

2  Finding material in an indexed collection:
   Note: Examples of an indexed collection: a dictionary, an encyclopaedia, a library catalogue, a road map, an art catalogue, an instruction booklet, a share register, a classified advertisement column.

3  Recalling/remembering:
   Note: Consult Test Specifications Section 2.3 to establish what might reasonably be regarded as assumed knowledge, i.e. “an elementary level of ‘general knowledge’, and a knowledge of vocabulary and mathematical operations at a level of sophistication consistent with a sound general Year 10 education ... basic arithmetic operations involved in calculation, also include fundamental mathematical concepts such as simple algebra, percentage, ratio, area, angle, and power of ten notation.”

4  Interpreting the meaning of words or other symbols

5  Interpreting the meaning of pictures/illustrations

6  Interpreting the meaning of tables or diagrams or maps or graphs

7  Translating from one form to another:
   Expressing information in a different form.
   Note: Translation could involve the following forms:
   verbal information (in English)
   algebraic symbols
   graphs
   mathematical material given in words
   symbolic codes (e.g. Morse code, other number systems)
   pictures
   diagrams
   maps.

9  Using correct spelling, punctuation, grammar

10  Using vocabulary appropriate to a context

11  Summarising/condensing written text:
   Presenting essential ideas and information in fewer words and in a logical sequence.
   Note: Simply listing the main points in note form is not acceptable, nor is “lifting” verbatim from the given passage.

12  Compiling lists/statistics:
   Systematically collecting and counting numerical facts or data.
13 **Recording/noting data:**
Identifying relevant information and then accurately and methodically writing it down in one or more predetermined categories.

*Note: Examples of predetermined categories are: female/male; odd/even; mass/acceleration.*

14 **Compiling results in a tabular form:**
Devising appropriate headings and presenting information using rows and/or columns.

15 **Graphing:**
*Note: Students will be required to construct graphs as well as to interpret them (see CCE 6).*

16 **Calculating with or without calculators**

17 **Estimating numerical magnitude:**
Employing a rational process (such as applying an algorithm or comparing by experience with known quantities or numbers) to arrive at a quantity or number that is sufficiently accurate to be useful for a given purpose.

18 **Approximating a numerical value:**
Employing a rational process (such as measuring or rounding) to arrive at a quantity or number that is accurate to a specified degree.

19 **Substituting in formulae**

20 **Setting out/presenting/arranging/displaying**

21 **Structuring/organising extended written text**

22 **Structuring/organising a mathematical argument:**
Generating and sequencing the steps that can lead to a required solution to a given mathematical task.

26 **Explaining to others:**
Presenting a meaning with clarity, precision, completeness, and with due regard to the order of statements in the explanation.

27 **Expounding a viewpoint:**
Presenting a clear convincing argument for a definite and detailed opinion.

28 **Empathising:**
Appreciating the views, emotions and reactions of others by identifying with the personalities or characteristics of other people in given situations.

29 **Comparing, contrasting:**
Comparing: displaying recognition of similarities and differences and recognising the significance of these similarities and differences.
Contrasting: displaying recognition of differences by deliberate juxtaposition of contrary elements.

30 **Classifying:**
Systematically distributing information/data into categories which may be either presented to, or created by, the student.
31 **Interrelating ideas/themes/issues**

32 **Reaching a conclusion which is necessarily true provided a given set of assumptions is true:**
Deducing

33 **Reaching a conclusion which is consistent with a given set of assumptions:**
Inferring

34 **Inserting an intermediate between members of a series:**
Interpolating

35 **Extrapolating:**
Logically extending trends or tendencies beyond the information/data given.

36 **Applying strategies to trial and test ideas and procedures**

37 **Applying a progression of steps to achieve the required answer:**
Making use of an algorithm (which is already known by students or which is given to students) to proceed to the answer.

38 **Generalising from information:**
Establishing by inference or induction the essential characteristics of known information or a result.

41 **Hypothesising:**
Formulating a plausible supposition to account for known facts or observed occurrences.
The supposition is often the subject of a validation process.

42 **Criticising:**
Appraising logical consistency and/or rationally scrutinising for authenticity/merit.
*Note: also critiquing — critically reviewing.*

43 **Analysing:**
Dissecting to ascertain and examine constituent parts and/or their relationships.

44 **Synthesising:**
Assembling constituent parts into a coherent, unique and/or complex entity.
The term “entity” includes a system, theory, communication, plan, set of operations.

45 **Judging/evaluating:**
Judging: applying both procedural and deliberative operations to make a determination.
Procedural operations are those that determine the relevance and admissibility of evidence, whilst deliberative operations involve making a decision based on the evidence.
Evaluating: assigning merit according to criteria.

46 **Creating/composing/devising**

48 **Justifying:**
Providing sound reasons or evidence to support a statement.
Soundness requires that the reasoning is logical and, where appropriate, that the premises are likely to be true.
49 **Perceiving patterns:**
Recognising and identifying designs, trends and meaningful relationships within text.

50 **Visualising:**
*Note: Examples of aspects of this element that might be tested include:*
- visualising spatial concepts (e.g. rotation in space)
- visualising abstractions in concrete form (e.g. kinetic theory—the movement of molecules)
- visualising a notion of a physical appearance from a detailed verbal description.

51 **Identifying shapes in two and three dimensions**

52 **Searching and locating items/information:**
*Note: This element as it occurs in syllabuses usually refers to field work. As these conditions are plainly impossible to reproduce under QCS Test conditions, testing can only be performed at a “second order” level.*

In the sense of looking for things in different places, “searching and locating items/information” may be taken to include quoting, i.e. repeating words given in an extract in the stimulus material.

53 **Observing systematically:**
*Note: This element as it occurs in syllabuses usually refers to laboratory situations. As these conditions are plainly impossible to reproduce under QCS Test conditions, testing can only be performed at a “second order” level.*

55 **Gesturing:**
Identifying, describing, interpreting or responding to visual representations of a bodily or facial movement, or expression that indicates an idea, mood or emotion.

*Note: This element as it occurs in syllabuses refers to acting and other forms of movement. It is possible to test only the interpretation of movement and expression. It is understood that there are cultural variations relating to the meanings of particular gestures.*

57 **Manipulating/operating/using equipment:**
Displaying competence in choosing and using an implement (in actual or representational form) to perform a given task effectively.

60 **Sketching/drawing:**
Sketching: executing simply a drawing or painting, giving essential features but not necessarily with detail or accuracy.

Drawing: depicting an object, idea or system pictorially, such as in a clearly defined diagram, or flowchart.

*Note: Sketching/drawing does not include the representation of numerical data as required in CCE 14 and CCE 15.*
## Appendix 2: CCEs grouped by baskets

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<td>Manipulating/operating/using equipment.</td>
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<thead>
<tr>
<th>β</th>
<th>Structure and sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Structuring/organising extended written text.</td>
</tr>
<tr>
<td>22</td>
<td>Structuring/organising a mathematical argument.</td>
</tr>
<tr>
<td>29</td>
<td>Comparing, contrasting.</td>
</tr>
<tr>
<td>30</td>
<td>Classifying.</td>
</tr>
<tr>
<td>31</td>
<td>Interrelating ideas/themes/issues.</td>
</tr>
<tr>
<td>36</td>
<td>Applying strategies to trial and test ideas and procedures.</td>
</tr>
<tr>
<td>38</td>
<td>Generalising from information.</td>
</tr>
<tr>
<td>49</td>
<td>Perceiving patterns.</td>
</tr>
<tr>
<td>50</td>
<td>Visualising.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>θ</th>
<th>Analyse, assess and conclude</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>Reaching a conclusion which is necessarily true provided a given set of assumptions is true.</td>
</tr>
<tr>
<td>33</td>
<td>Reaching a conclusion which is consistent with a given set of assumptions.</td>
</tr>
<tr>
<td>34</td>
<td>Inserting an intermediate between members of a series.</td>
</tr>
<tr>
<td>35</td>
<td>Extrapolating.</td>
</tr>
<tr>
<td>41</td>
<td>Hypothesising.</td>
</tr>
<tr>
<td>42</td>
<td>Criticising.</td>
</tr>
<tr>
<td>43</td>
<td>Analysing.</td>
</tr>
<tr>
<td>44</td>
<td>Synthesising.</td>
</tr>
<tr>
<td>45</td>
<td>Judging/evaluating.</td>
</tr>
<tr>
<td>48</td>
<td>Justifying.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>π</th>
<th>Create and present</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Using correct spelling, punctuation, grammar.</td>
</tr>
<tr>
<td>10</td>
<td>Using vocabulary appropriate to a context.</td>
</tr>
<tr>
<td>11</td>
<td>Summarising/condensing written text.</td>
</tr>
<tr>
<td>14</td>
<td>Compiling results in a tabular form.</td>
</tr>
<tr>
<td>15</td>
<td>Graphing.</td>
</tr>
<tr>
<td>20</td>
<td>Setting out/presenting/arranging/displaying.</td>
</tr>
<tr>
<td>26</td>
<td>Explaining to others.</td>
</tr>
<tr>
<td>27</td>
<td>Expounding a viewpoint.</td>
</tr>
<tr>
<td>46</td>
<td>Creating/composing/devising.</td>
</tr>
<tr>
<td>60</td>
<td>Sketching/drawing.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>φ</th>
<th>Apply techniques and procedures</th>
</tr>
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<tbody>
<tr>
<td>16</td>
<td>Calculating with or without calculators.</td>
</tr>
<tr>
<td>17</td>
<td>Estimating numerical magnitude.</td>
</tr>
<tr>
<td>18</td>
<td>Approximating a numerical value.</td>
</tr>
<tr>
<td>19</td>
<td>Substituting in formulae.</td>
</tr>
<tr>
<td>37</td>
<td>Applying a progression of steps to achieve the required answer.</td>
</tr>
</tbody>
</table>
Appendix 3: Glossary of terms used in relation to the QCS Test

**acceptable minimum standards**: the description of a marking process whereby markers are required to use their assessment skills to interpret a student response and match it to a standard in each performance domain being tested by the item. Predetermined trade-offs are already incorporated. Markers then award a grade for that performance domain for that item.

**adjacent grades**: on a short response marking scheme, a pair of available grades in direct proximity, e.g. A and B, D and E, N and O (see grade)

**assumed knowledge**: the benchmark of students’ required learning in terms of QCS testing; taken to be the possession of both an elementary level of general knowledge and a knowledge of vocabulary and mathematical operations at a level of sophistication consistent with that of a student with a sound general Year 10 education

**batched items**: a group of items which relate to the same stimulus material

**built-in trade-off**: a property of a marking scheme that ensures that the performance domains contribute to the grade in a manner reflective of their hierarchical position in that item

**calibration**: a routine process aimed at controlling reliability loss by removing irregularities in a marker’s judgment “gauge” before that marker is free to “gauge standards”, i.e. to mark

**check marking**: a process involving scrutiny by marking supervisors (WT), immersers (SR) and unit managers (SR) of grades awarded by markers

**closed response item**: a short response item which involves the student in the production of an answer and requires the marker to assess the accuracy of the response. This type of item usually produces a definite number of response types.

**common curriculum element (CCE)**: one of the 49 generic skills that are common to at least two subjects in the Queensland senior curriculum, testable in the current format of the QCS Test, and within the learning opportunities of a high proportion of students

**creditable response**: a response (to a short response item) which is awarded one of the available grades, A to E, and which thus attracts credit

**criterion (also called basket)**: macroskill. The QCS Test measures achievement in five criteria, each of which is symbolised by a letter of the Greek alphabet:

- \( \alpha \) comprehend and collect
- \( \beta \) structure and sequence
- \( \theta \) analyse, assess and conclude
- \( \pi \) create and present
- \( \phi \) apply techniques and procedures.

The 49 common curriculum elements can be distributed amongst these five criteria, each criterion representing a set of related CCEs.

**cue**: an instruction attached to a short response item, situated next to the space provided for the student response. The cue gives students a clear idea of what is required of them, sometimes providing essential further information on how to respond.

**curriculum element**: identifiable coherent activity specified by a syllabus as relevant to the pursuit of the aims and objectives of that syllabus

**denotation**: descriptor and/or notes related to a CCE, which represent the meaning of that CCE for the purpose of the QCS Test. Denotations are circulated to the appropriate audiences.

**descriptor**: see standard descriptor

**desirable feature**: item-specific characteristic of a student’s short response that demonstrates achievement and therefore contributes to the determination of attainment in a particular performance domain
**dimension:** one of nine defined characteristics of a test item. Each item can be classified in terms of each of these nine dimensions. This classification is used for assessing range and balance in the test.

**discrepant marker:** a marker whose marking differences (compared with other markers) are either not acceptably small or not apparently random

**dissonant markings:** binders whose items have been given significantly different marks by different markers

**essential equipment:** “tools of the trade” listed in the *Student Information Bulletin* and in *Directions* on the cover of the testpaper, and which the student must provide in order to complete the test, namely:
- pens (black ink)
- pencil (for drawing, sketching, etc. but not for writing)
- protractor
- drawing compass
- eraser
- coloured pencils
- ruler
- calculator with spare batteries.

**exemplar:** example of a response included in the marking scheme as an indication to markers of the acceptable standard for the award of an A-grade

**flyer:** a written mechanism by which unit managers and immersers can communicate to markers any decisions regarding the treatment of scripts made after marking has commenced

**footnote:** additional information provided at the end of the relevant piece of stimulus material, with reference to the stimulus material via a superscript. It may take the form of a commentary on word usage, sourcing of an extract, etc.

**gloss:** definition of a term that students are not expected to know. When substantive vocabulary of a high level of sophistication whose meaning cannot be determined from the context is used, a meaning or explanation is provided at the end of the relevant passage. Reference to the passage is made via a superscript.

**grade (response grade):** a measure of performance on a short response item on the basis of a student's response. Grades are consecutive letters, with A denoting the grade pertaining to the highest performance level. The number of grades may vary from item to item. The lowest available grade identifies the threshold for creditable performance.

**hierarchy:** a ranking of the performance domains of an item, indicating their relative contributions to the award of the grades

**immerser (SR):** immersers train markers to apply the prescribed marking schemes and standards for each item; conduct check marking and refocusing sessions as determined by quality control; support markers with advice on marking; maintain the standards of the marking

**immersion:** instruction to acquaint markers with details and subtleties of the marking schemes for the items in an allocated unit; discussion of common response types and marking of real student responses

**immersion notes:** unit-specific script prepared by immersers for use in training markers

**immersion session:** a set period of time when immersers train markers in the marking scheme and provide them with guided assistance in practice marking. Verbal instructions which form part of the marking prescription may be given at this time.

**incline of difficulty:** the sequencing of units within a testpaper in such a way that units tend to become progressively more difficult towards the end of the testpaper

**introduction:** a block of text at the beginning of a unit that, when necessary, gives a reference for the stimulus material and items to follow

**item:** comprises the stem, cue and response area
**Item-specific**: pertaining to a particular item; usually, item-specific documents contain information which can only pertain to one of the items on a particular subtest

**Item writer**: a person who writes and develops items for inclusion in the itembank. Test specifications are heeded in the writing of items.

**Key term**: one of a list of verbs used in the stems of short response items as commands or task setters, and for which clear definitions are appropriately circulated to students and markers for the purposes of the QCS Test. The key terms include the following:

<table>
<thead>
<tr>
<th>account for</th>
<th>draw (cf. sketch)</th>
<th>illustrate/exemplify</th>
<th>show (calculations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>approximate</td>
<td>estimate</td>
<td>indicate</td>
<td>sketch (cf. draw)</td>
</tr>
<tr>
<td>argue</td>
<td>evaluate</td>
<td>justify</td>
<td>state</td>
</tr>
<tr>
<td>comment on</td>
<td>explain</td>
<td>list</td>
<td>substitute in</td>
</tr>
<tr>
<td>compare</td>
<td>expound</td>
<td>outline (in words)</td>
<td>suggest</td>
</tr>
<tr>
<td>contrast</td>
<td>express</td>
<td>present</td>
<td>summarise</td>
</tr>
<tr>
<td>derive</td>
<td>extrapolate</td>
<td>prove</td>
<td>transcribe</td>
</tr>
<tr>
<td>describe</td>
<td>find</td>
<td>rank</td>
<td>verify</td>
</tr>
<tr>
<td>determine</td>
<td>generalise</td>
<td>refer</td>
<td></td>
</tr>
<tr>
<td>discuss</td>
<td>identify</td>
<td>quote</td>
<td></td>
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**Line numbers**: numbers situated in the left-hand margin of some passages of stimulus material to help students locate details mentioned in associated items

**Marking training**: a process which occurs during the days immediately preceding the marking proper, and consists of a pretraining/administration session, immersion session in an allocated marking unit, together with preliminary marking and feedback sessions

**Marking history**: a collection of marking schemes for all items in the unit in which a marker is trained to mark, together with the marker manual. Running rules and flyers are sometimes added to the folio during the course of the marking operation.

**Marking grid**: an item-specific sheet, accompanying the marking scheme, designed to assist markers’ decision making when the application of descriptors is particularly complex. The use of such grids may be either compulsory or non-compulsory.

**Marking pool**: the total group of markers selected from the register of markers to be involved in the marking operation for a given year

**Marking scheme**: the item-specific criteria and standards schema from which markers can determine grades; the marking scheme may not include all of the instructions to the markers. Most marking schemes are presented as a table in which the cells of each column give the descriptors of standards for the grade shown in that column’s heading.

**Marking supervisor (WT)**: marking supervisors train markers to apply the prescribed criteria and standards; conduct check marking and refocusing sessions as determined by quality control; support markers with advice on marking; maintain the standards of marking.

**Marking unit**: a collection of items that is to be marked using a single marksheet. An individual marking unit may include items from more than one test unit. The items of an individual test unit may be spread over more than one marking unit.

**Marksheet**: a pre-printed sheet markers use to record information about marking.

**Mathematical operations**: at the level of QCS testing, the basic operations involved in calculation (addition, subtraction, multiplication, division), as well as fundamental mathematical concepts such as simple algebra, percentage, ratio, area, angle, and power of ten notation

**Miniature SR paper**: an A3 sheet containing abbreviated versions of the items in the testbook. Students may retain this at the conclusion of the test.
*model response:* an example of a response that demonstrates the highest level of performance and which would invariably be awarded the highest grade

*monitoring (marker monitoring):* comparison of markers (many pairings) to identify responses to be re-marked, markers who require refocusing, and aspects of marking schemes which need attention during calibration

*non-contributory:* term applied to the grade given to a short response item when a response is unintelligible or does not satisfy the requirements for any other grade \((N)\), or when the item is omitted \((O)\)

*notes:* a note on a marking scheme that: clarifies features of the item; defines, qualifies or explains terms used in the descriptors; gives additional information about the treatment of particular types of response

*omit:* label given to that category of response to a test item where the student fails to provide a response; that is, the student makes no apparent attempt to respond to the task set and leaves the response space completely blank

*open-ended response item:* a short response item which involves the student in generative thinking and requires the marker to assess the quality of the response. No exhaustive list of desirable features can be identified a priori to describe a given response type.

*optional equipment:* “tools of the trade” (other than essential equipment) normally used in a course of study, which students may choose to provide for the test, e.g.
- set square
- correction fluid
- sharpener.

*pathological response:* one of the 2% or less of different or unpredictable responses not covered directly by the descriptors in the marking scheme, and discovered after marking commences

*performance domain(s):* common curriculum element(s) tested by a particular item. For items which are associated with more than one CCE, the influence of each CCE is clearly evident in the marking scheme.

*practice effect:* an increase in marking speed as the marker gains experience in reading student responses and grading them with the marking scheme

*practice set:* booklet of authentic student responses given to markers within an immersion session to reinforce learning

*preliminary marking:* mandatory initial session of actual marking conducted under normal conditions with grades to stand. Preliminary marking usually occurs immediately after immersion and before the feedback session.

*primary marking:* the totality of the first two independent markings of all items on the testpaper

The number of marker judgments in the primary marking is

\[
2N \sum_{i=1}^{p_i} \pi_i,
\]

where \(N = \) number of students, \(n = \) number of items on the testpaper, and \(p_i = \) number of performance domains for the \(i\)th item.

*refocusing:* a one-on-one counselling session between an immerser and a marker who is experiencing problems with his/her marking, as identified by quality-control procedures

*referee marking:* an independent third marking of a student response which occurs when two independent markers disagree to an extent which is regarded as significant for that item

*registered marker:* a marker who has successfully completed a recruitment session

*reliability:* the degree to which measurements are consistent, dependable or repeatable; that is, the degree to which they are free of errors

*reliability of grades:* the degree to which there is marker agreement as to the grade awarded (although some grades are truly borderline)

*response:* the student’s work on an item as communicated to the marker. In writing, drawing, calculating and so on in the case of a short response item. By blackening a circle corresponding to the selected response option in the case of a multiple choice item.
response alternative: one of four options from which students choose the best response for a multiple choice item. Students record their responses on a mark-sensitive sheet which is computer scanned for scoring.

response area: the space provided in the short response testbook where students give their response. It may be a ruled area or grid, a designated space in which to write, draw, complete a diagram, fill in a table, etc.

richness: a property of a test item whereby the item can provide more than the usual single piece of information about student achievement. In the case of a rich short response item, markers are required to award a grade in more than one, usually two, performance domains.

running rules: decisions made by unit managers and immersers after the marking has commenced to supplement the application of marking schemes

sample response: authentic student response used for the purposes of training

second guessing: anticipating the grade selected by other markers by considering "What will other markers do?" rather than by applying the marking scheme

standard: a reference point for describing the quality of student responses in performance domains (see marking scheme)

standard descriptor: a statement or list of statements that succinctly conveys the standard or features required in a response to be awarded that grade in a particular performance domain

star-value: a rating for a short response item relative to other items on the short response paper, in terms of worth/effort, from [*] lowest to [*****] highest. The star-value is printed beside the item number.

stem: that part of the item which indicates the task set or the question to be answered

stimulus material: verbal, numerical, pictorial, tabular, or graphical material that sets the context for the item(s) to follow with the aim of promoting students' responses

testbook (testpaper): the booklet provided to a student for the SR subtest; the cover carries directions to students; the booklet contains items arranged within units. The booklet also contains spare pages (in case the student needs extra response space, or decides to rewrite a response after cancelling the initial attempt) and a fold-out section inside the back cover containing the item and star-value distribution.

training: see marker training

unit: a part of a test consisting of stimulus material and associated items and, often, an introduction

unit manager (SR): a person who trains the immersers of a particular unit so that they can train the markers with due regard to the construct of the test. Unit managers direct, assist and monitor the performance of immersers; provide clarification of marking schemes when required; assist with check marking, referee marking and other quality-control procedures.

validity: the extent to which an assessment instrument measures what it is claimed to measure

validity of grades: the extent to which the item and marking scheme measure achievement in the designated CCE(s)

verbal instructions: information given to markers by immersers to acquaint them with the details and subtleties of marking schemes, and with common response types gleaned from a sample of student responses