

Agriculture and Horticulture

2013 Chief Assessor's Report



Government
of South Australia

SACE
Board of SA

AGRICULTURE AND HORTICULTURE

2013 CHIEF ASSESSOR'S REPORT

OVERVIEW

Chief Assessors' reports give an overview of how students performed in their school and external assessments in relation to the learning requirements, assessment design criteria, and performance standards set out in the relevant subject outline. They provide information and advice regarding the assessment types, the application of the performance standards in school and external assessments, the quality of student performance, and any relevant statistical information.

SCHOOL ASSESSMENT

Assessment Type 1: Practical Skills

Students were presented with a wide range of assessment tasks that allowed them to demonstrate their skills and knowledge in ways that reflected the diverse nature of their contexts. Although there was a general improvement in the design of tasks for this assessment type, a number of areas still need to be considered by all teachers when preparing their course for 2014.

There are still many tasks that do not show any evidence of how students obtained grades against specific features I3 (manipulating equipment and apparatus) and A3 (demonstrating individual and collaborative skills). As suggested in the 2012 report, a checklist or rubric indicating the criteria used to assess students against these features, and how they achieved their grades, is a relatively easy way to provide this evidence. A number of these are on the SACE website, but they should be seen simply as examples, not as definitive. Ideally, a specific checklist should be developed for each practical skills activity, to reflect the particular skills being assessed. Some tasks assessed students against specific features I3 and A3 without any clarifying questions or analysis and evaluation, and as a result there was little or no evidence of student achievement other than an allocated grade. Awareness of workplace health and safety principles and the demonstration of safe and ethical work practices need to be incorporated in practical activities. These provide evidence towards specific features I3 and A3.

Once again, an area of concern was the lack of opportunity for students to demonstrate evidence against the specific features that deal with analysis and evaluation, AE1 and AE2. Moderators noticed that many higher achieving students provided evidence of these even though they were not specifically asked to do so in the task. However, less strong students in the same classes often did not address these areas at all and therefore had their grades adjusted down accordingly. Teachers can address this issue by providing scaffolding questions that direct students to reflect on their findings and thus provide some evidence against these features.

Another area of concern is the specific feature that deals with the design of investigations, I1. This feature requires students to design their own method, as opposed to correctly recording instructions set out by the teacher. Students are

expected to develop a hypothesis or investigable question, and then design an investigation that will provide data that can be used to answer that question. Students should provide evidence of how they carried out the investigation, and the variables that they worked with. The investigation report should include a discussion that describes any trend observed in the results, errors that may have affected the results, an evaluation of the procedure used and possible useful improvements to this procedure.

Assessment Type 2: Skills and Applications Tasks

The moderators were impressed by the variety of task types and the subject matter in most classes. They were also impressed by an overall improvement in the design of tasks. However, some tasks did not give students the opportunity to demonstrate the level of skills, knowledge, and understanding required at Stage 2.

As in Assessment Type 1: Practical Skills, the main concerns were with the lack of opportunity for students to demonstrate evidence against AE1 and AE2. These specific features require students to use information that they have gathered, or are presented with, to draw conclusions and to evaluate procedures used in agriculture. This was particularly evident in tests, where students were usually presented with a large number of lower order recall questions, and very few higher order questions that allowed them to address the analysis and evaluation specific features as well as specific feature A1, where recommendations or solutions are used to address problems in agriculture. Similarly some assignment tasks simply asked students to recount activities and did not guide them to reflect on what was learnt and how it related to a sustainable agricultural industry. In some cases, although students were given the opportunity to address these features, their evidence was not at a high level. Teachers could consider spending more class time addressing the skills and understanding necessary to provide high-quality responses to these types of question.

When a large number of specific features (greater than 6) were assessed in a task, the ability of students to demonstrate high-quality evidence against all the features was often limited. Generally a maximum of four or five features is sufficient to be assessed in each task.

A number of tasks had marking schemes from previous versions of the course, suggesting that there may not have been any reflection on the suitability of the task for the new subject outline. Although marks can be useful for the assessment of some tasks, the grade for each assessment type must be based on the evidence provided against the specific features. A simple conversion of a percentage to a grade does not always match a grade determined by using the grades for specific features. This applies particularly when students have not been given opportunities to present higher level reasoning or provide much evidence against some specific features.

EXTERNAL ASSESSMENT

Assessment Type 3: Investigation

The presentation of investigations continued to improve this year. Teachers used the cover sheets provided on the Agriculture and Horticulture minisite and most student work was presented without marks or identifying features. The requirements specified in the subject outline, such as word limit, were adhered to by most students.

The selection of topics this year was broad. Most students chose to generate their own data by conducting an investigation. This format generally provides the best opportunities for students to achieve highly against the performance standards. Nearly all students who conducted a scientific experimental investigation covered the investigation specific features adequately and received a C grade or better. Most students showed sound design skills and the appropriate use of terminology. Generally students who conducted an experimental investigation were able to analyse and evaluate their results and procedures satisfactorily. They were also able to discuss the accuracy of their results, the value of repeating trials, and the impact of errors. Those who did best clearly explained the results and their relevance to agriculture, and presented perceptive conclusions and recommendations to farmers. Those students who achieved excellent results displayed depth and quality in their analysis and evaluation.

Students who conducted an issues investigation generally did not cover the investigation specific features well. Often no data had been collected, recorded, or displayed and so students found it very difficult to address the required specific features. These investigations had little or no analysis of data or evaluation of procedures. Consequently these students struggled to reach a C grade.

If an investigation is to involve the collection of data about animals, consideration must be given to potential animal ethics issues. Animals must not be stressed by procedures such as deficiency diets or questionable handling issues. If there is any doubt, an animal ethics committee should be consulted before students proceed.

There was a general improvement in the referencing of sources this year but few or no references were supplied with some investigations. Some students did not use an appropriate scientific format and had little understanding of how best to display their data. For clear and effective presentation, summary tables and graphs should be used, rather than masses of raw data for individual trials. Students are reminded that any information included in appendices is not assessed; this is an appropriate place for raw data.

Students may work collaboratively to collect data but each student must then work independently to produce an individual investigation report. This means that the display of data in tables and graphs and the discussion of results should be their own work, and not shared with others. Teachers should be mindful about how much specific input they have into students' work during the drafting process. The report is the student's work.

Finally, teachers must ensure that students select agricultural topics and should allocate a reasonable amount of time for research, data collection, and report writing, as this task represents 30% of students' total assessment.

OPERATIONAL ADVICE

Teachers are reminded to refer to the subject operational information on the Agriculture and Horticulture minisite to check the requirements for the preparation of moderation materials before submitting them for final moderation. Although there continues to be an improvement in the preparation of moderation packages, some simple adaptations could improve the efficiency of the moderation process.

Each moderation package should include a copy of the approved learning and assessment plan, with an addendum highlighting any changes made to the plan and a complete set of tasks that moderators can refer to during the moderation process. All student work should be organised so that each assessment type is separate, and should not be in hard folders. Ideally each task should have a cover sheet that indicates the specific features that were assessed in the task and the level of achievement allocated to the student for each feature. Any missing work must be identified on the Variations — Moderation Materials form. This will allow the moderator to determine if a missing piece was submitted and assessed and then lost, rather than not submitted. If there is no form, the moderators will assume that it was not submitted and that the grade for the assessment type has been adjusted accordingly.

GENERAL COMMENTS

Teachers preparing to teach this course in 2014 are advised to read the subject outline and the subject operational information on the Agriculture and Horticulture minisite. The moderation feedback sheet and student results sheets that were sent to schools provide some feedback on student performance last year. New teachers should make use of any opportunities offered by the SACE Board for professional development such as clarifying forums. It is also useful to develop a professional relationship with a more experienced teacher to discuss teaching strategies and assessment tasks. For more advice, contact the SACE Officer — Curriculum at the SACE Board.

Agriculture and Horticulture
Chief Assessor