2018 Agricultural Systems Subject Assessment Advice

Overview

Subject assessment advice, based on the previous year’s assessment cycle, gives 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, and the quality of student performance.

Teachers should refer to the subject outline for specifications on content and learning requirements, and to the subject operational information for operational matters and key dates.

School Assessment

Assessment Type 1: Agricultural Reports

Students complete three agricultural reports. Two reports have a practical focus, and one report has a focus on science as a human endeavour in an agricultural context.

Both assessment design criteria, Investigation, Analysis and Evaluation, and Knowledge and Application, are used for this assessment type. Student evidence in the Agricultural Reports should focus on the science inquiry skills, explain connections with science as a human endeavour and apply the key agricultural understandings. In at least one practical investigation, students deconstruct a problem and design a method to investigate one aspect of the problem. Students should be encouraged to trial and/or research aspects of their proposed design before they write their final method.

The more successful responses commonly:

* deconstructed open-ended problems that had several possible aspects to explore that allowed opportunities for individual design and investigation of an uncertain outcome
* provided a clear, considered, individual design of an experimental investigation which included a testable hypothesis, independent and dependent variables, and controlled variables
* used research and/or trials to help justify the proposed method for an investigation
* discussed trends and errors specifically in terms of the data collected in practical investigations
* had clear and succinct analysis and evaluation contained within the word count
* were able to justify results that did not show a clear trend in terms of sources of uncertainty
* discussed the validity of the conclusion in reference to the parameters of the investigation
* supported the discussion in the SHE investigation with substantial, well-referenced research
* specifically linked key SHE concepts to examples in the SHE investigation

The less successful responses commonly:

* were limited by too much scaffolding in the task
* had little opportunity to develop an individual design and very little evidence of the deconstruction of a problem
* had limited justification of the design procedure
* discussed theoretical errors without acknowledging the significance of these on the data collected and hence on the conclusion
* displayed a poor understanding of errors, mistakes, precision and reliability of results
* responded more to theoretical questions rather than discussing the data collected in practical investigations
* did not identify key SHE concepts in the examples chosen for the SHE investigation
* did not explain the interaction between the relevant agricultural science and society in the SHE investigation

Assessment Type 2: Applications

Students undertake three applications tasks, with at least one of these tasks done under direct teacher supervision within a maximum of 90 minutes of class time.

Both assessment design criteria, Investigation, Analysis and Evaluation, and Knowledge and Application, are used for this assessment type. Student evidence in the Applications tasks should focus on the key agricultural understandings, apply science inquiry skills, and explain connections with science as a human endeavour.

The more successful responses commonly:

* used opportunities to present knowledge, understanding, application and analysis in a variety of tasks such as a viva with the teacher, a practical activity or an oral/multimedia presentation
* responded to different question types of varying complexity in new and familiar contexts, thus being able to demonstrate deep understanding
* succinctly analysed and explained data from graphs, diagrams and unfamiliar information sources
* selected and explained SHE concepts from information provided

The less successful responses commonly:

* responded to questions requiring predominately recall of learned facts and recording of information and little application or analysis of agricultural practices

# External Assessment

Assessment Type 3: Experimental Investigation

**General comments**

The purpose of this investigation is for students to conduct their own individual experimental investigation that is based on a specific aspect of animal or plant production systems. They submit a proposal and a report. The specific features used to assess this task are IAE1, IAE2, IAE3, IAE4, KA1 and KA4.

Generally, the investigations this year were appropriate for the new course and the overall standard of work presented was good. Students and teachers must discuss the proposed plans before they are finalised to check that animal welfare has been properly considered

The more successful responses commonly:

* included a reasoned justification for the design
* explained the relevance of the purpose and design of the investigation to a specific aspect of an animal or plant production system
* used only summary data for tables and graphs
* used in-depth analysis of the data collected to draw a logical conclusion
* evaluated the design by explaining how the data collected was affected by limitations in the method and suggesting improvements to minimise these effects

The less successful responses commonly:

* had a very broad or general hypothesis that lead to the collection of data that was either non-specific to the independent variable or very predictable because the outcome had been previously well-documented
* provided little background in the introduction in terms of relevant agricultural concepts or research findings
* presented inappropriately formatted tables and graphs
* made weak attempts to link random and systematic errors to the data collected
* drew weak conclusions with little relevance to agricultural systems