

Agricultural Science

General senior subject

General

Agricultural Science is an interdisciplinary science subject suited to students who are interested in the application of science in a real-world context. They understand the importance of using science to predict possible effects of human and other activity, and to develop management plans or alternative technologies that minimise these effects and provide for a more sustainable future.

Students examine the plant and animal science required to understand agricultural systems, their interactions and their components. They examine resources and their use and management in agricultural enterprises, the implications of using and consuming these resources, and associated management approaches. Students investigate how agricultural production systems are managed through an understanding of plant and animal physiology, and how they can be manipulated to ensure productivity and sustainability. They consider how environmental, social and financial factors can be used to evaluate production systems, and how research and innovation can be used and managed to improve food and fibre production.

Students learn and apply aspects of the knowledge and skill of the discipline (thinking, experimentation, problem-solving and research skills), understand how it works and how it may impact society.

Pathways

A course of study in Agricultural Science can establish a basis for further education and employment in the fields of agriculture, horticulture, agronomy, ecology, food technology, aquaculture, veterinary science, equine science, environmental science, natural resource management, wildlife, conservation and ecotourism, biotechnology,

business, marketing, education and literacy, research and development.

Objectives

By the conclusion of the course of study, students will:

- describe and explain scientific concepts, theories, models and systems and their limitations
- apply understanding of scientific concepts, theories, models and systems within their limitations
- analyse evidence
- interpret evidence
- investigate phenomena
- evaluate processes, claims and conclusions
- communicate understandings, findings, arguments and conclusions.

Structure

| Unit 1 | Unit 2 | Unit 3 | Unit 4 |
|---|--|--|---|
| Agricultural systems <ul style="list-style-type: none"> • Agricultural enterprises A • Animal production A • Plant production A | Resources <ul style="list-style-type: none"> • Management of renewable resources • Physical resource management • Agricultural management, research and innovation | Agricultural production <ul style="list-style-type: none"> • Animal production B • Plant production B • Agricultural enterprises B | Agricultural management <ul style="list-style-type: none"> • Enterprise management • Evaluation of an agricultural enterprise's sustainability |

Assessment

Schools devise assessments in Units 1 and 2 to suit their local context.

In Units 3 and 4 students complete *four* summative assessments. The results from each of the assessments are added together to provide a subject score out of 100. Students will also receive an overall subject result (A–E).

Summative assessments

| Unit 3 | | Unit 4 | |
|--|-----|--|-----|
| Summative internal assessment 1 (IA1): • Data test | 10% | Summative internal assessment 3 (IA3): • Research investigation | 20% |
| Summative internal assessment 2 (IA2): • Student experiment | 20% | | |
| Summative external assessment (EA): 50% • Examination | | | |