Highfields State Secondary College

Semester 1 Course Overview

Faculty: Science

Subject: Agricultural Science

Year level: 12

Course Outline

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.

Semester 1
Unit 3: Agricultural Production

In Unit 3, students explore the ways agricultural science is used to describe and explain how the anatomy and physiology of agricultural plants and animals influences agricultural production. An understanding of the anatomy and physiology of plants and animals is needed to appreciate their influence on production and justify management decisions. Students design and conduct experiments and investigations on anatomical and physiological phenomena and analyse their effect on production.

Contexts that could be investigated in this unit include animal nutrition, animal growth and development and animal/plant health and animal welfare. This can be applied to agricultural production systems of local, regional and national significance. Through the investigation of these contexts, students may explore how an application of science can be used to maximise production.

Participation in a range of experiments and investigations will allow students to progressively develop their suite of science inquiry skills while gaining an enhanced appreciation of the influence of anatomy and physiology on production. Collaborative experimental work also helps students to develop communication, interaction and self-management skills.

Throughout the unit, students develop skills in describing, explaining, applying, investigating, analysing, evaluating processes, claims and conclusions and communicating understandings, findings, arguments and conclusions.

Summative Assessment

1. **Data Test (Assessed in Term 1)**

Students respond to items using qualitative data and/or quantitative data derived from the mandatory or suggested practicals, activities or case studies from the unit being studied.

The data test contains two to four datasets and consists of a number of different types of items, which include:
- short response items requiring single-word, sentence or short paragraph responses
- calculating using algorithms
- interpreting datasets.

2. **Student Experiment (Due at the start of term 2)**

This assessment requires students to research a question or hypothesis through collection, analysis and synthesis of primary data. A student experiment uses investigative practices to assess a range of cognitions in a particular context. Investigative practices include locating and using information beyond students' own knowledge and the data they have been given.

Research conventions must be adhered to. This assessment occurs over an extended and defined period of time. Students may use class time and their own time to develop a response.