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**Science**

**Agriculture**

Subject Code Information:

**Subjects with an A or B in their name:** these subjects are Semester long units that can be studied individually or together to make a full year subject. There is no assumption that A has been studied before students can undertake the B option. Some subjects highly recommend both are studied (see course descriptions).

**Subjects with a 1 or a 2 in their name:** these subjects are sequential. Before students can study the 2nd option they must undertake the 1st option. There is an assumption that students know the content of the 1st option before they undertake the 2nd to enable them to be successful.
Length: 2 Semesters

Assumed Knowledge:
Year 8 Science

Description:
This compulsory Science course builds on knowledge and skills developed in Year 8.

In term 1, students are introduced to atoms as the basic unit of all matter. From protons, electrons and neutrons at the subatomic level, we move to study the structure of atoms and similarly, students will explore the differences between ions, isotopes and radioactive substances. Students engage in a range of practicals to understand chemical change. The study of chemical reactions encourages students to identify the changes that occur as molecules undergo a variety of reactions. Core to this focus is the understanding of acids and bases, combustion, respiration and photosynthesis, and the positive use of chemical change and the negative effects on our environment. In term 2, students continue to develop their understanding of the differing systems of life and will participate in an integrated HASS/Science unit looking at the role of wetlands in maintaining a healthy ecosystem. They will also design investigations to look at the way organisms respond to the world around them. This is studied through different body systems and looking at the way our bodies respond to external changes such as exercise. Students’ progress their learning of energy in term 3 and understand the ways in which energy moves through different mediums. Investigations of thermal energy and heat transfer, interpreting sound energy and the electromagnetic wave spectrum guide this topic. The completion of year 9 science in term 4 sees our students investigating the structure of the Earth’s surface is studied with a focus on tectonic plates, boundaries, the causation of earthquakes and volcanoes.

The course is designed to provide significant opportunity for integrated STEM learning to occur throughout the year.

The following topics provide the framework for learning in Year 9 Science:
- Lights, Camera, Action
- Nuclear Radiation
- Learning in the Landscape
- Responding to Change
- Movement on the Earth's Surface

Assessment Details:
Evidence of student achievement will be collected against a number of practical investigations, STEM inquiries, tests and research tasks.

For more information on Australian Curriculum please visit:  
http://www.australiancurriculum.edu.au
Agriculture

Length: 1 Semester

Assumed Knowledge:
None

Description:
A general unit designed to meet the needs of students from diverse backgrounds. This unit addresses animal welfare and working safely on the RHS farms. Students study an introduction to a range of food and fibre production topics from both livestock and horticulture. The unit uses vegetable production to cover a broad range of plant science topics and poultry production to cover a broad range of animal science topics. Elementary studies in farm animals, principally poultry, are given. Students are expected to participate in the general running of the Agricultural Block.

Selected students* will also get an opportunity to participate in Royal Adelaide Show for Merino Wether competition.

This course will enable students to develop a solid base of skills and knowledge for further Agricultural and Horticultural studies.
*see Subject Coordinator for more info.

Assessment Details:
Regular practical assessment tasks, tests, written assignments.

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