Science (SCI) – Year 10

Subject Outline:

In the Year 10 curriculum students explore systems at different scales and connect microscopic and macroscopic properties to explain phenomena. Students explore the biological, chemical, geological and physical evidence for different theories, such as the theories of natural selection and the Big Bang.

Students develop their understanding of atomic theory to understand relationships within the periodic table. They understand that motion and forces are related by applying physical laws. They learn about the relationships between aspects of the living, physical and chemical world that are applied to systems on a local and global scale and this enables them to predict how changes will affect equilibrium within these systems.

Course Content:

Topic	Description
Biology	Transmission of heritable characteristics from one generation to the next involves DNA and genes ACSSU184 and the theory of evolution by natural selection explains the diversity of living things and is supported by a range of scientific evidence ACSSU185.
Chemistry	The atomic structure and properties of elements are used to organise them in the Periodic Table ACSSU186 and different types of chemical reactions are used to produce a range of products and can occur at different rates ACSSU187.
Physics	Energy conservation in a system can be explained by describing energy transfers and transformations ACSSU190 and the motion of objects can be described and predicted using the laws of physics ACSSU229.
Earth and Space	The universe contains features including galaxies, stars and solar systems, and the Big Bang theory can be used to explain the origin of the universe ACSSU188 and Global systems, including the carbon cycle, rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere ACSSU189.

Assessment Outline:

- Student Experimental Investigations (SE)
- Supervised Assessments (SA)
- Research Assignments
- Laboratory Reports

Learning Pathways:

Year 11/12 Subject	General/Applied/Other	Potential QCE Points	Recommended
Biology	General	4	B in Year 10 Mathematics C in Year 10 English
Chemistry	General	4	B in Year 10 Mathematics C in Year 10 English
Physics	General	4	B in Year 10 Mathematics C in Year 10 English
Aquatic Practices	Applied	4	No prerequisites

Career Pathways:
Students considering tertiary studies in various scientific fields such as; Engineering, Medical, Veterinary, Physiotherapy, Nursing and Teaching.

Student requirements:

- 2 x 128 page single subject exercise book each year
- Pencil case containing: pens, glue, scissors, ruler, and scientific calculator

Approximate Cost: Nil