Science

Year 9 Core subject — two semesters
Offered to: Home-based students

The Year 9 Science course follows the Australian Curriculum which is studied in all Australian States. Science provides students with a way of answering interesting and important questions about the biological, physical and technological world.

In Year 9, students consider the operation of systems at a range of scales. They explore ways in which the human body as a system responds to its external environment and the interdependencies between biotic and abiotic components of ecosystems. They are introduced to the notion of the atom as a system of protons, electrons and neutrons, and how this system can change through nuclear decay. They learn that matter can be rearranged through chemical change and that these changes play an important role in many systems. They are introduced to the concept of the conservation of matter and begin to develop a more sophisticated view of energy transfer. They begin to apply their understanding of energy and forces to global systems such as continental movement.

Assessment

Students are required to regularly submit formative and summative assessment tasks. Summative tasks will cover a range of assessment techniques including:

- Supervised assessments
- Research investigations
- Student experiments
- Collection of work

Topics studied

- Tectonic theory
- Chemical elements and reactions
- Body organs and systems
- Energy, waves, and electromagnetism
- Thermochemistry
- Ecosystems

Requirements/Resources

Students should have access to the following:

- Computer and the internet (as the course is in an electronic format)
- Suitable headset with a microphone (to participate in scheduled lessons)
- Writing tablet (similar to Wacom Bamboo) would be beneficial for lessons
- Suitable space and adult supervision for controlled laboratory-style work (clear bench space, ready access to water supply, first-aid and cleaning equipment)
- Personal protective equipment, specifically eye protection (clear goggles/protective glasses), apron or lab coat, disposable gloves and fully enclosed shoes
- Basic kitchen ingredients and equipment (measuring cups/spoons, scales, trays) – a Science kit is provided, containing scientific materials not readily available however some items will need to be purchased
- Stop watch or similar timer
- Microsoft Office (2007 onwards)
- Science Quest 9 for the Australian Curriculum 2E eBook (included in the Jacaranda Digital Bundle subscription, purchased upon enrolment at BrisbaneSDE).