

### Recommendation

A Sound Achievement (C) in Year 10 Science.

### Rationale

Science in Practice develops critical thinking skills through the evaluation of claims using systematic reasoning and an enhanced scientific understanding of the natural and physical world.

Students learn through a contextual interdisciplinary approach that includes aspects of at least two science disciplines — Biology, Chemistry, Earth and Environmental Science or Physics. They are encouraged to become scientifically literate, that is, to develop a way of thinking and of viewing and interacting with the world that engages the practical and analytical approaches of scientific inquiry.

Students plan investigations, analyse research and evaluate evidence. They engage in practical activities, such as experiments and hands-on investigations. Through investigations they develop problem-solving skills that are transferable to new situations and a deeper understanding of the nature of science.

### Pathways

A course of study in Science in Practice is inclusive and caters for a wide range of students with a variety of backgrounds, interests and career aspirations. It can establish a basis for further education and employment in many fields, e.g. animal welfare, food technology, forensics, health and medicine, the pharmaceutical industry, recreation and tourism, research, and the resources sector.

### Objectives

By the conclusion of the course of study students should:

- describe and explain scientific facts, concepts and phenomena in a range of situations
- describe and explain scientific skills, techniques, methods and risks
- analyse data, situations and relationships
- apply scientific knowledge, understanding and skills to generate solutions
- communicate using scientific terminology, diagrams, conventions and symbols
- plan scientific activities and investigations
- evaluate reliability and validity of plans and procedures, and data and information
- draw conclusions, and make decisions and recommendations using scientific evidence.

### Delivery (mode, time requirements, lessons)

Students are expected to undertake independent study to complete tasks and assessment in accordance with the Work Rate Calendar. Students also have access to a one-hour scheduled lesson and a one-hour tutorial each week. Lessons are delivered via Blackboard Collaborate and teleconferencing.

### Student requirements

Computer, access to email and internet, telephone and USB headset with microphone, exercise book, stationery.

### Structure

The Science in Practice course is designed around core topics and at least three electives.

### Assessment

For Science in Practice, assessment from Units 3 and 4 is used to determine the student's exit result, and consists of four instruments, including:

- at least one investigation based on primary data
- a range of assessment instruments that includes no more than two assessment instruments from any one technique.

## Course and assessment overview

Science in Practice is a four-unit course of study.

Units 1 and 2 of the course are designed to allow students to begin their engagement with the course content, i.e. the knowledge, understanding and skills of the subject. Course content, learning experiences and assessment increase in complexity across the four units as students develop greater independence as learners.

Units 3 and 4 consolidate student learning.

Unit	Module of work	Assessment Instrument No.	Assessment Instrument	Formative or Summative
1.	<b>Module one</b> Health and disease in the tropics	1	Extended response	F
	<b>Module two</b> Energy efficient homes in Far North Queensland	2	Collection of work	F
2.	<b>Module three</b> Consumer Protection	3	Investigation	F
	<b>Module four</b> Water Safety	4	Project	F
Interim Standards				
Interim Result				
3.	<b>Module five</b> Flood Management	5	Investigation	S
	<b>Module six</b> Outdoor Festivals	6	Project	S
4.	<b>Module seven</b> Microorganisms in food production	7	Project	S
	<b>Module eight</b> Environmental Management	8	Extended response	S

**Disclaimer** All of the above information is accurate at the time of publication