

Earth and Environmental Science

COURSE DETAILS

Hours	240 hours
Type	Board Developed Course
Duration	2 years
Unit Value	2-unit Year 11 2-unit Year 12
HSC Exam	Yes
ATAR	Yes
Exclusions	None
RECOGNITION	HSC Qualification

COURSE DESCRIPTION

The Earth and Environmental Science Stage 6 Syllabus explores the Earth's renewable and non-renewable resources and environmental issues. An understanding of the Earth's resources and the ability to live sustainably on the planet is a central purpose of the study of Earth and Environmental Science.

The course provides the foundation knowledge and skills required to study earth and environmental science after completing school and supports participation in careers in a range of related industries. The application of earth and environmental science is essential in addressing current and future environmental issues and challenges. It is also necessary for the use and management of geological resources that are important to Australia's sustainable future.

AIMS

The study of Earth and Environmental Science in Stage 6 enables students to develop an appreciation and understanding of geological and environmental concepts that help explain the changing face of the Earth over time. Through applying Working Scientifically skills processes, the course aims to examine how earth and environmental science models and practices are used and developed.

YEAR 11 COURSE OUTCOMES (from NESA)

A student –

1. Develops and evaluates questions and hypotheses for scientific investigation
2. Designs and evaluates investigations in order to obtain primary and secondary data and information
3. Conducts investigations to collect valid and reliable primary and secondary data and information
4. Selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media
5. Analyses and evaluates primary and secondary data and information
6. Solves scientific problems using primary and secondary data, critical thinking skills and scientific processes
7. Communicates scientific understanding using suitable language and terminology for a specific audience or purpose
8. Describes the key features of the Earth's systems, including the geosphere, atmosphere, hydrosphere and biosphere and how they are interrelated
9. Describes the evidence for the theory of plate tectonics and the energy and geological changes that occur at plate boundaries
10. Describes the factors that influence how energy is transferred and transformed in the Earth's systems
11. Describes human impact on the Earth in relation to hydrological processes, geological processes and biological changes
12. describes and evaluates the models that show the structure and development of the Earth over its history
13. describes and evaluates the causes of the Earth's hazards and the ways in which they affect, and are affected by, the Earth's systems
14. analyses the natural processes and human influences on the Earth, including the scientific evidence for changes in climate
15. describes and assesses renewable and non-renewable Earth resources and how their extraction, use, consumption and disposal affect the Earth's systems

TOPICS COVERED

Year 11 Course

Module 1 Earth's Resources

Module 2 Plate Tectonics

Module 3 Energy

Transformations **Module 4**

Human Impacts

Plus, a minimum of one Depth Study

Year 12 Course

Module 5 Earth's Processes

Module 6 Hazards

Module 7 Climate Science

Module 8 Resource Management

Plus, a minimum of one Depth Study

ASSESSMENT

Assessment strategies may include:

- Examinations
- Open-ended investigations
- Research tasks
- Analysis of primary/secondary information

POTENTIAL CAREERS/REASONS TO CHOOSE COURSE

- Engineering geologist
- Geophysicist
- Volcanologist
- Scientific researcher
- Mineralogist
- Palaeontologist
- Surveyor