

## Investigating Science

2 units for each of Preliminary and HSC  
 Board Developed Course  
 Exclusions: Nil

### Course Description:

The Investigating Science Stage 6 Syllabus is designed to assist students of all abilities engage with scientific processes, and apply those processes to investigate relevant personal, community and global scientific issues.

The ongoing study of science and the specific Working Scientifically skills processes and their application have led humans to accumulate an evidence-based body of knowledge about human interactions – past, present and future – with the world and its galactic neighbourhood. The course is firmly focused on developing the Working Scientifically skills, as they provide a foundation for students to value investigation, solve problems, develop and communicate evidence-based arguments, and make informed decisions.

The course promotes active inquiry and explores key concepts, models and phenomena. It draws and builds on the knowledge, understanding, skills, values and attitudes gained in Science Stage 5. The Stage 6 course is designed to enhance students' understanding of the value of evidence-based investigations and the use of science-based inquiry in their lives.

The Investigating Science course is designed to complement the study of the science disciplines by providing additional opportunities for students to investigate and develop an understanding of scientific concepts, their current and future uses, and their impacts on science and society. The course draws on and promotes interdisciplinary science, by allowing students to investigate a wide range of STEM (Science, Technology, Engineering and Mathematics) related issues and concepts in depth.

Investigating Science encourages the development of a range of capabilities and capacities that enhance a student's ability to participate in all aspects of community life and within a fast-changing technological landscape. The knowledge, understanding and skills gained from this course are intended to support students' ongoing engagement with science, and to form the foundation for further studies and participation in current and emerging STEM-related post-school activities and industries.

### Main Topics Covered:

#### Preliminary Course

- Working Scientifically Skills
- Cause and Effect – Observing
- Cause and Effect – Inferences and Generalisations
- Scientific Models
- Theories and Laws

#### HSC Course

- Working Scientifically Skills
- Scientific Investigations
- Technologies
- Fact or Fallacy?
- Science and Society

### Course Requirements:

- Students are provided with 30 hours of course time for Depth Studies in both Year 11 and Year 12. During this time students may undertake an investigation/activity that allows for the further development of one or more scientific concepts. A Depth Study may be one investigation/activity or a series of investigations/activities. Depth Studies may be included in one module or across several modules.
- Practical investigations are an essential part of the Year 11 and Year 12 courses and must occupy a minimum of 35 hours of course time each year.