

|               | 1  | 2 | 3 | 4 | 5 | 6 | 7                  | 8 | 9 | 10 | 11 |
|---------------|--|---|---|---|---|---|--------------------|---|---|----|----|
| <b>TERM 4</b> | <p><b>Module 5: Scientific Investigations (including 16 hours of Depth Study)</b><br/> <b>Outcomes:</b> INS12-1; INS12-2; INS12-3; INS12-4; INS12-5; INS12-6; INS12-7; INS12-12<br/> <b>Content focus:</b><br/>           Students learn that the experimental method is a dynamic process influenced by initial observations, new evidence, unexpected results or phenomena arising from the investigation. They examine the interrelated roles of practical and secondary-sourced investigations. When conducting practical and secondary-sourced investigations, students use peer feedback to refine their investigative designs and report on their findings.<br/>           Students explore the importance of accuracy, validity and reliability in relation to the investigative work of a scientist. They examine the differences between a scientific investigation and a scientific report, recognising that although the report format follows a sequential order, the investigation need not.<br/> <b>Working Scientifically:</b><br/>           Students focus on: developing and evaluating hypotheses and questions; designing and evaluating investigations; and undertaking valid scientific investigations. Students should be provided with opportunities to engage with all Working Scientifically skills throughout the course<br/> <b>Inquiry questions:</b><br/> <i>What initiates an investigation?</i><br/> <i>What type of methodology best suits a scientific investigation?</i><br/> <i>How is the integrity of a scientific investigation judged?</i><br/> <i>What is the structure of an investigative report?</i><br/> <b>Working Scientifically Skills:</b> Questioning and Predicting, Conducting investigations, Processing Data and Information, Analysing Data and Information, Problem Solving, Communicating<br/> <b>HSC Skills:</b> answering HSC questions, multiple choice, short answer, long response<br/> <b>Assessment:</b> Depth Study, Week 7 Term 4</p> |   |   |   |   |   |                    |   |   |    |    |
|               |  |   |   |   |   |   | Depth Study<br>30% |   |   |    |    |

|               | 1  | 2 | 3 | 4 | 5                    | 6 | 7 | 8 | 9   | 10 | 11 |
|---------------|--|---|---|---|----------------------|---|---|---|---|----|----|
| <b>TERM 1</b> | <p><b>Module 6: Technologies</b><br/> <b>Outcomes:</b> INS12-1; INS12-2; INS12-3; INS12-4; INS12-5; INS12-6; INS12-7; INS12-13<br/> <b>Content Focus:</b><br/>           The rapid development of new technologies has enhanced industrial and agricultural processes, medical applications and communications. Students explore the dynamic relationship between science and technology where the continuing advancement of science is dependent on the development of new tools and materials. They also examine how advances in science inform the development of new technologies and so reflect the interdependence of science and technology.<br/>           Students consider experimental risks as they engage with the skills of Working Scientifically. They investigate the appropriateness of using a range of technologies in conducting practical investigations, including those that provide accurate measurement.<br/> <b>Working Scientifically:</b><br/>           In this module, students focus on developing hypotheses and questions and process appropriate qualitative and quantitative data. They demonstrate how science drives demand for the development of further technologies. Students should be provided with opportunities to engage with all Working Scientifically skills throughout the course.<br/> <b>Inquiry questions:</b><br/> <i>How does technology enhance and/or limit scientific investigation?</i><br/> <i>How have developments in technology led to advances in scientific theories and laws that, in turn, drive the need for further developments in technology?</i><br/> <b>Working Scientifically Skills:</b> Questioning and Predicting, Processing Data and Information, Analysing Data and Information, Problem Solving, Communicating<br/> <b>HSC Skills:</b> answering HSC questions, multiple choice, short answer, long response<br/> <b>Assessment:</b> Data Analysis week 5, Term 2.</p> |   |   |   |                      |   |   |   | <p><b>Module 7: Fact or Fallacy (including 14 hours depth study).</b></p> |    |    |
|               |  |   |   |   | Data Analysis<br>20% |   |   |   |   |    |    |

