

School administrators, Heads of Learning Area – Science and Teachers of Science in Practice General Year 12 are requested to note for 2027 the following minor syllabus changes. The syllabus is labelled as ‘For teaching from 2027’.

Science in Practice | General Year 12 | Summary of minor syllabus changes for 2027

The content identified by ~~striketrough~~ has been deleted from the syllabus and the content identified in *italics* has been revised in the syllabus for teaching from 2027.

Unit 3

Scientific Method

- ~~identify a topic for investigation;~~ research and construct questions for investigation
- ~~determine the appropriate methodology for investigations~~
- design scientific investigations, including the formulation of investigable questions and/or hypotheses, materials required, procedures to be followed to collect valid and reliable data, and identification of safety and ethical considerations
- ~~use select appropriate~~ equipment and techniques safely, competently and methodically for the collection of valid and reliable data, and use equipment with precision, accuracy and consistency
- represent qualitative and quantitative data in meaningful and useful ways, including the construction of appropriately labelled tables, processing quantitative data using appropriate mathematical *techniques relationships* and units, and drawing of appropriate graphs
- analyse data to identify and describe ~~trends, patterns and relationships, including the use of appropriate mathematical techniques,~~ and recognise errors and limitations in data
- draw conclusions consistent with the evidence and relevant to the question being investigated; ~~identify further evidence that may be required, and recognise the limitations of conclusions~~
- evaluate the investigative procedure, including the relevance, accuracy, validity and reliability of data, and suggest improvements
- ~~communicate information and ideas in a variety of ways using scientific conventions and terminology, including the selection and presentation of data and ideas to convey meaning to selected audiences in written, oral and multimedia formats~~

Workplace health and safety

- use and apply workplace health and safety documents, including safety data sheets (SDS), and other relevant documents, such as standard operating procedures (SOP), when performing activities
- ~~select and use appropriate scientific and technological equipment safely to gather data and information~~
- conduct risk assessments to identify potential hazards and prevent potential incidents and injuries

Scientific Literacy

- distinguish between opinion, anecdote and evidence, and scientific and non-scientific ideas
- ~~use reasoning to construct scientific arguments, and to draw and justify conclusions consistent with the evidence and relevant to the question under investigation~~
- identify examples of where the application of scientific knowledge may have beneficial, harmful and/or unintended consequences

- use scientific knowledge to develop and evaluate projected economic, social and environmental impacts and to design action for sustainability
- *communicate information and ideas in a variety of ways using scientific conventions and terminology, including the selection and presentation of data and ideas to convey meaning to selected audiences in written, oral and multimedia formats*

Unit 4

Scientific Method

- ~~identify a topic for investigation;~~ research and construct questions for investigation
- ~~determine the appropriate methodology for investigations~~
- design scientific investigations, including the formulation of investigable questions and/or hypotheses, materials required, procedures to be followed to collect valid and reliable data, and identification of safety and ethical considerations
- ~~use select appropriate~~ equipment and techniques safely, competently and methodically for the collection of valid and reliable data, and use equipment with precision, accuracy and consistency
- represent qualitative and quantitative data in meaningful and useful ways, including the construction of appropriately labelled tables, processing of quantitative data using appropriate mathematical *techniques* relationships and units, and drawing of appropriate graphs
- analyse data to identify and describe trends, patterns and relationships, ~~including the use of appropriate mathematical techniques,~~ and recognise errors and limitations in data
- draw conclusions consistent with the evidence and relevant to the question being investigated, ~~identify further evidence that may be required, and recognise the limitations of conclusions~~
- evaluate the investigative procedure, including the relevance, accuracy, validity and reliability of data, and suggest improvements
- ~~communicate information and ideas in a variety of ways using scientific conventions and terminology, including the selection and presentation of data and ideas to convey meaning to selected audiences in written, oral and multimedia formats~~

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Assessment table – Year 12

Type of assessment	Weighting
Investigation (minimum of 10 hours in class per unit) One investigation should be conducted for the pair of units. An investigation follows the scientific method, where students <i>modify one or more practical activities</i> develop their own question in order to investigate <i>a specific question</i> through the collection and analysis of primary data. Students work individually or in groups to plan and conduct the investigation and summarise their findings in a live or virtual poster presentation. Each student will prepare a written report to communicate their findings. Planning, <i>working safely</i> safety and group contributions could be monitored via student logbooks/journals, responses to reflection questions, teacher observations and/or peer assessment.	25%
Project (minimum of 5 hours in class per unit) One project should be conducted in each unit and each project should have equal weighting. A project involves students selecting and exploring a recent discovery, innovation or issue related to the context they are studying. Students are required to analyse and synthesise information from <i>a variety of at least two different</i> sources to explain the relevant scientific concepts involved, and describe its impact and/or influence on society. Students will communicate their findings <i>to selected audiences in written, oral and/or multimedia formats</i> in writing (e.g. a scientific article, infographic, animation or vlog poster or report) and/or present their findings to a live or virtual audience.	30%
Practical assessment (maximum of 1 hour in class per unit) One practical assessment should be conducted in each unit and each practical assessment should have equal weighting. Practical work helps develop technical and scientific skills, and improves scientific understanding. A practical assessment enables students to demonstrate their skills in the use of apparatus to collect data and model science concepts relevant to the context they are studying. Students will demonstrate their ability to <i>work safely</i>, manipulate apparatus <i>and</i> take accurate readings and work safely. <i>Students may also demonstrate their ability to process and analyse data.</i>	10%

Type of assessment	Weighting
Supervised written assessment (maximum of 1 hour in class per unit) One supervised written assessment should be conducted in each unit and each supervised written assessment should have equal weighting. A supervised written assessment contains one or more items. The items might be in response to stimulus materials, which may be seen or unseen, or questions which should be unseen prior to the administration of the assessment. Items may include: • Short answer questions requiring students to provide single word, sentence or short paragraph responses; construct, use, interpret or analyse secondary data, graphs, tables or diagrams; and/or perform mathematical calculations. • Extended answer questions requiring students to provide responses making connections, drawing conclusions, constructing arguments, analysing and/or evaluating information. The responses may incorporate labelled diagrams or tables with explanatory notes.	20%
Externally Set Task (50 minutes in class) A written task or item or set of items developed by the School Curriculum and Standards Authority and administered by the school. The emphasis of this task will be on the Scientific Method, Workplace Health and Safety and Scientific Literacy content and may be in a context that is unfamiliar to students.	15%