LEARNING AND ASSESSMENT PLAN

**Stage 1 Earth and Environmental Science**

Pre-approved learning and assessment plans are for *school use only*.

* Teachers may make changes to the plan, retaining alignment with the subject outline.
* The principal or delegate endorses the use of the plan, and any changes made to it, including use of an addendum.
* The plan does not need to be submitted to the SACE Board for approval.

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| School |  | Teacher(s) |  |

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| SACE  School Code | | |  | Year |  | Enrolment Code | | | | |  | Program Variant Code (A–W) |
| Stage | Subject Code | | | No. of Credits (10 or 20) |
|  |  |  |  | **1** |  |  |  | **10** |  |

**Addendum – changes made to the pre-approved learning and assessment plan**

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| Describe any changes made to the pre-approved learning and assessment plan to support students to be successful in meeting the requirements of the subject. In your description, please explain:   * what changes have been made to the plan * the rationale for making the changes * whether these changes have been made for all students, or for individuals within the student group. |

**Endorsement**

The use of the learning and assessment plan is approved for use in the school. Any changes made to the plan support student achievement of the performance standards and retain alignment with the subject outline.

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| Signature of principal or delegate |  | Date |  |

Stage 1 Earth and Environmental Science (10-credits)

Assessment Overview

The table below provides details of the planned tasks and shows where students have the opportunity to provide evidence for each of the specific features of all of the assessment design criteria.

| **Assessment Type and Weighting** | **Details of assessment** | **Assessment Design Criteria** | | **Assessment conditions**  (e.g. task type, word length, time allocated, supervision) |
| --- | --- | --- | --- | --- |
| **IAE** | **KA** |
| **Assessment Type 1: Investigations Folio**  Weighting  60% | Students investigate water sustainability as an example of science as a human endeavour. Students use an infographic about global water resources to evaluate potential solutions that provide sustainable water resources in regions where quality water supplies are scarce.  The presentation must include use of scientific terminology and:   * an introduction to identify the focus of the investigation and how it links to science as a human endeavour * relevant earth and environmental science concepts or background * an explanation of the impact or significance of the focus of the investigation e.g. potential of new development, effect on quality of life, environmental implications, economic impact, intrinsic interest * a conclusion with justification * citations and referencing. | 3 | 3, 4 | Students can present their findings in a format of their own choice, with a maximum of 1000 words if written or a maximum of 6 minutes for an oral presentation, or the equivalent in multimodal form. |
| Students individually design a field investigation about one aspect of environmental damage caused by acid leaching at Brukunga Mine. Their investigation question is based on research into the history of the area. At the mine site, students collaborate in groups of 2 or 3 to choose one of their designs and questions and make modifications for a more effective investigation. They implement the design to collect data together. Individually, students display, analyse, and evaluate their data in a written report. Students use their results to answer their question.  The report should include:   * an introduction with relevant earth and environmental science concepts * a hypothesis and variables or an investigable question * materials/apparatus, method/procedure outlining steps taken * identification and management of safety and/or ethical risks * results * analysis of results, identifying trends, and linking results to concepts * evaluation of procedures and data, identifying sources of uncertainty * conclusion with justification. | 1, 2, 3, 4 | 1 | Students work individually to research background information. They work in pairs or threes to perform the investigation under supervision and then prepare individual reports. The task is completed in 2–3 weeks.  The report should be a maximum of 1000 words, if written or a maximum of 6 minutes for an oral presentation or the equivalent in multimodal form. The materials/apparatus, method/procedure outlining steps to be taken, identification and management of safety and/or ethical risks, and results sections are excluded from the word count. |
| **Assessment Type 2: Skills and Applications Tasks**  Weighting  40% | Students demonstrate application of knowledge and understanding by answering questions and by testing samples to identify various rocks and minerals. Students record their observations and relate these to their knowledge of physical characteristics of rocks and minerals to identify familiar and new specimens. | 2, 3 | 2 | Written and practical: supervised, 80 minutes |
| Students demonstrate knowledge and understanding of the interaction between humans and natural ecosystems services. They present their research findings about how increased scientific understanding of ecosystem services influences decisions made in agricultural production. | 3 | 1, 3, 4 | Students work individually to prepare a presentation in an appropriate format. The task is completed in 2 weeks. |

***Four assessments.*** *Please refer to the draft Stage 1 Earth and Environmental Science subject outline.*