Articulates with Program 2

PRE-APPROVED LEARNING AND ASSESSMENT PLAN

**Stage 2 Chemistry**

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) |
|  |  |  |  | **2** | **C** | **E** | **M** | **20** |  |

**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 2 Chemistry

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  30% | Students deconstruct the problem “What’s the best charcoal fuel to use in a home barbeque?” and investigate how one factor affects the heat generated by various charcoal fuels. They work in pairs to trial a procedure to compare the heat generated by different charcoal fuels and then individually design an investigation with an appropriate hypothesis, variables and method.  Each student submits a practical report according to the guidelines in the subject outline. | 1 ,2 ,3, 4 |  | Class time is given for students to design and trial the investigation. Students may submit one draft for feedback  Students undertake the practical in pairs.  Word Count: maximum of 1500 words or 10 minutes for an oral presentation for the introduction, analysis, evaluation and conclusion sections of the report. |
| Students undertake a practical investigation to compare the effectiveness of two antacid preparations. A known amount of antacid is dissolved in an excess of HCl, and then the excess acid is back-titrated with standardised NaOH solution.  Students the experiment in groups but individually record and present data using appropriate terms and conventions in a report. Students evaluate procedures and discuss their effects on the data collected. They use their findings to discuss which antacid preparation is more effective. | 2, 3 | 2 | Each student submits a practical report according to the guidelines in the subject outline.  Word Count: maximum of 1500 words or 10 minutes for an oral presentation for the introduction, analysis, evaluation and conclusion sections of the report. |
| The Science as a Human Endeavour Investigation enables students to demonstrate a comprehensive understanding of an aspect of, or context related to global warming.Students will select at least one aspect of the Science as a Human Endeavour understandings as a basis for their investigation. Students use relevant chemical concepts and information from different sources to explain the significance of the focus of the investigation.  Students choose the format for their investigation: either an article for a scientific journal, a written report providing an expert’s point of view, or an analysis of a new development that has economic, social, environmental or political implications, and acknowledge appropriate sources. | 3 | 2, 3, 4 | 2 weeks to complete. Class time provided for research and to support students.  Students submit a focus and plan for review by the teacher. Verification of work occurs as the student undertakes research and planning.  Students may submit one draft for feedback  Word Count: maximum of 1500 words or 10 minutes for an oral presentation. |
| **Assessment Type 2: Skills and Applications Tasks**  Weighting  40% | Students demonstrate chemical knowledge and skills from **Topic 1: Monitoring the Environment**. The content of the task covers key concepts from any aspect of the topic taught. Students apply their knowledge and skills to a range of questions in both new and familiar contexts. They solve problems, and interpret data or diagrams. Questions include those in which students use science inquiry skills to provide an answer. An extended response question is included. A number of questions address aspects of Science as a Human Endeavor. Correct use of chemical terminology, formulae and equations is assessed. | 2, 4 | 1, 3, 4 | Supervised written assessment.  Total Time: 55 minutes + 5 minutes reading time.  Students are provided with a sheet containing a Periodic Table and a data sheet. |
| Students demonstrate chemical knowledge and skills from **Topic 2: Managing Chemical Processes**. The content of the task covers key concepts from any aspect of the topic taught. Students apply their knowledge and skills to a range of questions in both new and familiar contexts. They solve problems, and interpret data or diagrams. Questions include those in which students use science inquiry skills to provide an answer. Correct use of chemical terminology, formulae and equations is assessed. | 1, 3 | 1,2,4 | Supervised written assessment.  Total Time: 90 minutes + 5 minutes reading time.  Students are provided with a sheet containing a Periodic Table and a data sheet. |
| Students demonstrate chemical knowledge and skills from **Topic 3: Organic and Biological Chemistry**. The content of the task covers key concepts from any aspect of the topic taught. Students apply their knowledge and skills to a range of questions in both new and familiar contexts. They solve problems, and interpret data or diagrams. Questions include those in which students use science inquiry skills to provide an answer. An extended response question is included. Correct use of chemical terminology, formulae and equations is assessed. | 2 | 1, 2, 4 | Supervised written assessment.  Total Time: 90 minutes + 5 minutes reading time.  Students are provided with a sheet containing a Periodic Table and a data sheet. |
| Students demonstrate chemical knowledge and skills from **Topic 4: Managing Resources**. The content of the task covers key concepts from any aspect of the topic taught. Students apply their knowledge and skills to a range of questions in both new and familiar contexts. They solve problems, and interpret data or diagrams. Questions include those in which students use science inquiry skills to provide an answer. An extended response question is included. A number of questions address aspects of Science as a Human Endeavor. Correct use of chemical terminology, formulae and equations is assessed. | 3 | 1, 3, 4 | Supervised written assessment.  Total Time: 90 minutes + 5 minutes reading time.  Students are provided with a sheet containing a Periodic Table and a data sheet. |
| **Assessment Type 3: Examination**  Weighting  30% | Examination: 2 hours and 10 minutes | Questions of different types cover all Stage 2 topics and the science inquiry skills. Some questions may require students to integrate their knowledge from more than one topic and show an understanding of science as a human endeavour. | | |

***Eight assessments.*** *Please refer to the Stage 2 Chemistry subject outline.*