Articulates with Program 1

LEARNING AND ASSESSMENT PLAN

**Stage 1 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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| SACESchool Code |  | Year |  | Enrolment Code |  | Program Variant Code (A–W) |
| Stage | Subject Code | No. of Credits (10 or 20) |
|  |  |  |  | **1** | **C** | **E** | **M** | **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.
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**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 Chemistry (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 50%** | **Investigation 1 (Practical Investigation): Effectiveness of a Solid Oxygen Bleach. –** See assessment task exemplarsThis investigation is in three parts.In **Part A** students work individually to design an experimental procedure to investigate the effect of increasing water temperature on the ability of a solid oxygen bleach to remove stains from a fabric. They:* deconstruct the problem
* pose a hypothesis
* identify dependent and independent variables
* consider factors that should be held constant and explain why and how they will attempt to control these factors
* identify factors that may not be able to be controlled
* list materials required
* devise a procedure to be followed
* consider how they will display and analyse data
* identify safety considerations.

In **Part B** students will carry out the procedure and record their results.In **Part C** students will write a report that includes:* an introduction with relevant chemistry concepts, an hypothesis and variables, or investigable question
* materials/apparatus, method/procedure outlining and trials and steps to be 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 |  | Students work individually for Part A and in pairs for Part B. They prepare reports individually in Part C.Two lessons are allocated for Part A and Part B. These lessons are about a week apart to allow collection of necessary materials.The report will be a maximum of 1000 words. The materials/apparatus, method/procedure outlining steps to be taken, identification and management of safety risks, and results sections are excluded from the word count. The report may be completed at home and submitted no later than two days after completion of the practical. |
|  | **Investigation 2 (SHE Investigation): Metals and Mining –** See assessment task exemplarsMining for metals has resulted in environmental disaster in several locations around the world. Students select one metal that was mined in one of these locations They use a variety of sources to investigate:* how the properties of the metal relate to its uses
* the positive and negative impacts of the mining, use, and disposal of the metal on the country or region (e.g. economic, social, political, environmental)
* possibilities of alternative materials to replace the metal

Students may present their findings in an appropriate format of their choice. | 3 | 3,4 | Students work individually in their own time.The investigation should be a maximum of 1000 words if written or a maximum of 6 minutes speaking, or the equivalent in multimodal form.Students will have two weeks to complete this investigation.  |
| **Assessment Type 2: Skills and Applications Tasks****Weighting****50%** | **SAT 1: Classification of Substances into Structure Types –** See assessment task exemplarsIn this task students: * use resources to find information about six substances of a range of structure types
* explain the information obtained in terms of the structures of the substances
* design an investigation to determine properties related to the structure and bonding of two unknown white powders
* use the evidence from their investigation to determine the identity of the two white powders
* connect the data to concepts and hence formulate a conclusion about the identity of the two white powders
* answer questions relating structure to uses of substances.
 | 1,2,3 | 1 | Students will work individually in all parts of the activity.Three lessons are allocated for the task, which will be completed in class time.  |
| **SAT 2: Test topics 1, 2 and 3. –** See assessment task exemplarsThis SAT consists of short-answer questions. will require students to:* demonstrate their knowledge and application of the principles of atomic structure, the periodic table, bonding between atoms, the relationship between structure type and the properties and uses of substances, shapes of molecules, secondary interactions, the mole concept and organic compounds.
* attempt problems of a range of difficulty and complexity
* attempt problems posed in both familiar and new social contexts
* demonstrate understanding of the impact of chemistry on society
* attempt relevant calculations.
 |  | 1,2,3 | Time: 50 minutesThe test is completed individually under direct teacher supervision.Students are provided with a periodic table of elements and a formula sheet. |

***Four assessments.*** *Please refer to the Stage 1 Chemistry subject outline.*