# Pre-approved Learning and Assessment Plan

Stage 2 Scientific Studies

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** | **S** | **C** | **F** | **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 |  |

# Assessment overview

Stage 2 Scientific Studies – 10 credits

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 1:Investigations Folio – weighting 40%

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| Assessment details | Assessment design criteria | | | | Assessment conditions  (e.g. task type, word length, time allocated, supervision) |
| I | AE | A | KU |
| Practical investigation – Vitamin C: Students design an experiment to investigate the Vitamin C content in a range of products containing orange juice. Each student formulates a hypothesis, identifies variables, and designs a method which includes a way of obtaining and recording results. When the plan has been approved, the student conducts the experiment, collects data, graphs results, analyses the data and identifies sources of error, evaluates the experiment, suggests improvements, and formulates a conclusion based on the results. The manipulation and implementation of investigation procedures is assessed during the implementation of the investigation. Students present their findings in a written practical report. | 1,3,4 | 1,2 | 2 | 1,3 | Task Type: Written Practical Report. Time allocated: 1 lesson to design, 2 lessons to implement investigation, 1 lesson and homework to complete the report. Word Length: 750 words maximum. Teacher supervision in class and homework time. |
| Issues investigation: Students select an issue in the area of health science. They individually investigate the issue by gathering information from a variety of different sources, looking at alternative views, analysing their findings and writing an evaluation. Students present the findings of their investigation by completing a written report which includes the following: introduction to the issue and scientific background, alternative views and explanations of the students understanding of the alternative views, evaluation of the information, conclusion and a reference list. Students include in-text referencing throughout their report. | 2 | 1 | 1,2 | 1,2 | Task Type: Written Report  Time allocated: 10 lessons and homework to complete the report  Word Length: 750 words maximum  Supervision: Teacher supervision in class and homework time |

Assessment Type 2: Skills and Applications Tasks – weighting 30%

| Assessment details | Assessment design criteria | | | | Assessment conditions  (e.g. task type, word length, time allocated, supervision) |
| --- | --- | --- | --- | --- | --- |
| I | AE | A | KU |
| Reproduction issues oral presentation  In groups of three, students decide on an issue related to reproduction to investigate, e.g. an issue surrounding IVF, fertility drugs, surrogacy. Based on their research, they summarise different perspectives (e.g. for and against the issue) to be used in an oral presentation to the class. Students are encouraged to use a PowerPoint presentation to support their oral presentation. At the end of the oral presentation, students review the collaborative skills demonstrated and/or developed. | 2 | 1 | 1,3 | 1,2,3 | Task Type: Oral presentation  Time: Maximum 5 minutes  Time allocated: 7 lessons  Supervision: Teacher supervision in class |
| Nutrition assignment  Students keep a food diary for two weeks. They also keep a diary of exercise and general activities (studying, watching TV, etc.) for this time. Following lessons in BMI, kilojoule intake and output, daily requirements and food components, students use their information to analyse their kilojoule intake and nutrition, and their output. Students use the site “Calorie King” to assist them in calculating their kilojoule intake. Students present their data in tables and prepare graphs. They answer a series of short-answer questions which relate to the data they have obtained. They then suggest ways in which they can improve their diet based on their individual needs. | 4 | 1 | 1,2 | 1,3 | Task Type: Short-answer questions and graphing. Time allocated: 2 weeks for data collection and 5 lessons for analysis and graphing. Word Length: 500 words maximum. Supervision: Teacher supervision in class and homework time. |

Assessment Type 3: Practical Investigation – weighting 30%

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| Assessment details | Assessment conditions  (e.g. task type, word length, time allocated, supervision) |
| External Assessment | *Students carry out an individual practical investigation and present an individual written report. The practical investigation has two parts: the practical investigation design proposal, and a report of the investigation. The practical design proposal includes a statement of an investigable question or hypothesis, the identification of variables, and an outline of the proposed research approach and method. This proposal is assessed before the student begins the practical investigation. The investigation report includes the hypothesis investigated, the method used, the results, a discussion of the results, the conclusion, and an evaluation of the practical investigation.*  *Individual practical investigation followed by an individual written report of a maximum 1000 words.* |

***Four or five assessments.*** *Please refer to the Stage 2 Scientific Studies subject outline.*