Articulates with Program 2

PRE-APPROVED LEARNING AND ASSESSMENT PLAN

**Stage 2 Biology**

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** | **B** | **G** | **Y** | **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 Biology (20-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 30%** | Students design and implement a practical investigation related to **Topic 2: Cells as the Basis of Life**. Students use their knowledge to design a method to investigate the effects of a factor on photosynthesis (respiration next year).  Students individually design an investigation with an appropriate method, hypothesis and variables. They record and present data using appropriate terms and conventions. Students evaluate procedures and discuss their effects on the data collected. Correct use of biological terminology is assessed. | 1, 2,3,4 | 1, 4 | Class time will be given for students to individually design the investigation question/hypothesis.  A double lesson to undertake the practical in an allocated group of students.  Each student submits a practical report according to the guidelines in the subject outline.  Students may submit one draft for feedback  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 deconstruct a problem, design a method and implement a practical investigation related to **Topic 4: Evolution**. They simulate the concept of Natural Selection. Students investigate predation and natural selection using a model. They will develop a method, by testing and considering a range of questions, that is based on one that has been provided. They identify an appropriate hypothesis and variables and complete the practical, recording and presenting data using appropriate terms and conventions. Students evaluate procedures and discuss their effects on the data collected. They justify their conclusions. Correct use of biological terminology is assessed. | 1, 2,3,4 | 1 | Class time will be given for students to individually design the investigation question/hypothesis.  A double lesson to undertake the practical in an allocated group of students  Each student submits a practical report according to the guidelines in the subject outline.  Students may submit one draft for feedback  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 any of the topics in Stage 2 Biology**.** The focus of this task is for a student to research an aspect of Biology with a particular emphasis on how humans interact with and use biological knowledge. Students will select at least one aspect of the Science as a Human Endeavour key concept described on page 45 and 46 of the subject outline as a basis for their chosen aspect or issue. Students choose a focus, access information from different sources, select and acknowledge appropriate sources to support their own conclusions. They will need to logically link their knowledge of Biology to the aspect chosen. They undertake detailed and deep research to analysis and evaluate the aspect of Biology chosen for the task. Students may choose the format of their report: either an article for a scientific journal, a written report providing an expert’s point of view, an analysis of a new development in a field or a concern about a change which has economic, social, environmental or political implications. |  | 1,3,4 | 4 weeks to complete. Class time provided for research and to support students.  Students will submit a focus and plan for review by the teacher. Verification of work will occur 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 Biological knowledge and skills from **Topic 1: DNA and Proteins** and **Topic 2: Cells as the Basis of Life**. 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. Questions requiring paragraph answers are included. Correct use of biological terminology is assessed. | 1,2,3 | 1,2,4 | Supervised written assessment.  Total Time: 90 minutes + 5 minutes reading time. |
| Students demonstrate Biological knowledge and skills from **Topic 2: Cells as the Basis of Life**. The content of the task covers key concepts from any aspect of the topic. Students apply their knowledge and skills to a range of questions in both new and familiar contexts. They apply their knowledge, solve problems, and interpret data or diagrams. Questions requiring paragraph answers are included. Some questions require students to use science inquiry skills to provide an answer. A number of questions address aspects of Science as a Human Endeavour. Correct use of biological terminology is assessed. | 3, 4 | 1, 2, 3 | Supervised written assessment.  Total Time: 90 minutes + 5 minutes reading time. |
| Students demonstrate Biological knowledge and skills from **Topic 3: Homeostasis** and **Topic 4: Evolution.** The content of the task covers key concepts from any aspect of the topics. Students apply their knowledge and skills to a range of questions in both new and familiar contexts. They apply their knowledge, solve problems, and interpret data or diagrams. Questions include those in which students use science inquiry skills to provide an answer. A number of questions address aspects of Science as a Human Endeavour. Questions requiring paragraph answers are also included. Correct use of biological terminology is assessed. | 2 | 1,2,3,4 | Supervised written assessment.  Total Time: 90 minutes + 5 minutes reading time. |
| Students demonstrate their deep and broad knowledge and understanding of a range of biological concepts linked to Topic 1, 2 and 4 through answering a series of questions. Using a scientific article as the initial source of information, students will apply their knowledge in a new context, undertake additional research to demonstrate a deeper understanding, and explore some of the key concepts of Science as a Human Endeavor explored in the article provided. In addition, students will provide evidence of their science inquiry skills by designing a detailed investigation (which will not be performed). | 1 | 1,2,3 | Students will be provided with the article a week before the classroom session.  Students will then be given class time (90 minutes), to answer questions relating to the article, SHE and designing an investigation.  This is a supervised task; however, students will have access to any resources required, including internet access.  *This will be an online task.* |
| **External Examination**  **Weighting 30%** | 130 minute online examination | All specific features of the assessment design criteria for this subject may be assessed in the external examination.  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 including the external examination.*** *Please refer to the draft Stage 2 Biology subject outline.*