Articulates with Program 4 – one semester (pre-trade)

LEARNING AND ASSESSMENT PLAN 4

Stage 1 Physics

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** | **P** | **Y** | **I** | **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 Physics (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%** | **SHE Task -** Students investigate a mode of transport (land, sea, air or space) and consider which one of the following possible options to explore:* How modern advances in technology have improved safety and/or performance
* The social, ethical and/or environmental impacts of a particular form of transport

Students will clearly : * demonstrate an understanding of the relevant physics
* describe the development and/or impact of the chosen mode of transport in relation to at least one of the key concepts of science as a human endeavour to consider the interaction between science and society.

They submit a brief plan for their investigation.The report can either be a written article, oral presentation, or video.Students submit a bibliography. |  | 1,3,4 | Format: Article, oral presentation, or video.Word length: 1000 words or 6 minutesTime allocated: 6 lessons plus homework time over four week period.Drafting: Students will receive feedback initially on their plan and they may submit their presentation for feedback once before the final assessment. |
| **Practical Investigation -** Students deconstruct a problem and design and complete a practical investigation into the properties of ohmic and non-ohmic conductors. As part of this they: * discuss relevant physics concepts
* design a hypothesis
* identify variables
* work out and justify an appropriate procedure
* demonstrate they can safely and correctly set up electrical circuits, properly use appropriate measuring technology, and appropriately record results
* represent results in table and graphical form
* analyse trends in results using relevant physics concepts
* evaluate procedures and data and identify evidence of sources of uncertainty
* justify a conclusion.
 | 1,2,3,4 | 1,4 | Format: Practical reportWord length: 1000 words (excluding apparatus, method, results).Time allocated: One lesson planning, one lesson to complete practical, two lessons to analyse data and prepare a report.Drafting: The draft design must be submitted before commencing the experimental part. Students may submit one draft. |
| **Assessment Type 2: Skills and Applications Tasks****Weighting 50%** | **Motion High Performance Car Analysis -** Students are assessed on their knowledge and understanding of linear motion and Newton’s Laws and their ability to apply these to various situations particularly in the context of high performance cars. They relate their knowledge to a relevant application and science as a human endeavour. |  | 1,2,3,4 | Format: TestTime: 90 minutesMaterials Allowed: Calculator |
| **Home Energy Audit -** Students analyse their home energy usage. They are assessed on knowledge and understanding of the energy requirements and efficiency of household electrical appliances and their ability to design an investigation to test a particular device, represent data on a graph and evaluate data. | 3 | 1,2,4 | Students have some supervised time and some unsupervised time over 1 week. |

***Four assessments****. Please refer to the draft Stage 1 Physics subject outline. Advice*