PRE-APPROVED LEARNING AND ASSESSMENT PLAN

**Stage 1 Physics** Aligns with Program 2

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) |
|  |  |  |  | **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. |

**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) – It’s *~~not~~* Rocket Science

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 %** | **Design Investigation –** See assessment task exemplars  Students design and implement a practical investigation to investigate **factors that affect the drop time of a parachute.** Students deconstruct factors and design an investigation to determine the effect of a factor (for example: string length, string number, surface area, payload mass etc) on the time it takes for a parachute and payload float to the ground. Students individually design and justify an investigation with an appropriate method, hypothesis and variables. They record and present data using appropriate terms and conventions. Students interpret their results using physics concepts. Students evaluate procedures and their effects on the data collected. | 1, 2, 3, 4 | 1,4 | Students will individually design the investigation testing their chosen hypothesis under test conditions.  A double lesson to undertake the practical in a group. Each student submits a practical report according to the guidelines in the subject outline.  Word Count: maximum of 1000 words for the introduction, analysis, evaluation and conclusion sections of the report. |
| The **Science as a Human Endeavour Investigation** enables students to focus on the role of science and/or scientists and various aspects of spaceflight and their contribution to humanity. **–** See assessment task exemplars  Students choose to examine a past, present or future space program through either a global or local lens and in one of a variety of genre. They may negotiate topics or formats beyond those provided. |  | 1, 3, 4 | 1 week to complete. Class time provided for research and to support students.  Students submit an outline for feedback.  The word count for the final presentation is a maximum of 1000 words or 6 minutes for an oral presentation. |
| **Assessment Type 2: Skills and Applications Tasks**  **Weighting**  **50 %** | **Test Topic 1** **–** See assessment task exemplars  Students demonstrate Physics knowledge, understanding, and application of concepts from **Topic** **1: Linear Motion and Forces** in new and familiar contexts. | 2 | 1, 2, 4 | Students undertake this task individually under supervision in a 50 minute test. |
| **Rocket Science presentation –** See assessment task exemplars  Students design, build and test rockets using a physics simulation: *Kerbal Space Program* (Demo or paid edu version). Students demonstrate their application of Physics knowledge and understanding by preparing a report on the physics behind their design, failures and successes. Students will draw on the course focus of **Topic 1: Linear Motion and Forces, Topic 3: Heat, and Topic 4: Energy and Momentum** | 1, 3 | 1, 2, 4 | 1 week of class time to complete.  Students may choose the format of screencast, presentation, or poster. |

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