Notice of Assessment Task
HSC Physics
Scientific Investigation

Date of initial notification:	Date of submission of task:
Thursday, 16 November 2023 Week 6, Term 4	Thursday, 30 November 2023 Week 8, Term 4

Teacher:	Task Number:
Miss Nunes	1

Time Allowed:	Weighting of task:
1 hour	20%

Course Component/Focus area/topic/module:
Module 6 – Electromagnetism

Task Description
You will be required to conduct a ***Scientific Investigation*** in which students will engage in seven questions to complete and analyse different scenarios.

Understanding the similarities and differences in the interactions of single changes in electric and magnetic fields provide students with a conceptional foundation. Phenomena that include the force produced on a current-carrying wire in a magnetic field, the force between current-carrying wires, Faraday's Law of Electromagnetic Induction, the principles of transformers and the workings of motors and generators can all be understood as instances of forces acting on moving charged particles in magnetic fields.

Task Outline

1. Students observe or conduct first-hand investigations at various stations
2. Students respond to questions relating to each station
3. Students complete HSC style questions

Instructions

- Ensure your name, class, and teacher is clearly labelled.
- All work submitted must be original and completed individually.
  (NOTE: Any work deemed to be plagiarised will be treated as a non-serious attempt and dealt an appropriate consequence in accordance with the school and faculty policy)

Outcomes/Competencies to be assessed in this task:

PHY12-2 – designs and evaluates investigations in order to obtain primary and secondary data and information
PHY12-3 – conducts investigations to collect valid and reliable primary and secondary data and information
PHY12-6 – solves scientific problems using primary and secondary data, critical thinking skills and scientific processes
PHY12-13 – explains and analyses the electric and magnetic interactions due to charged particles and currents and evaluates their effect both qualitatively and quantitatively

Feedback: How will I receive feedback on this task?

☒ Written

☒ Whole class