



Task Number	1	Task Name	Depth Study Presentation
Course	Year 11 Physics	Faculty	Science
Teacher	Anderson	Head Teacher	Yates
Issue date	Term 1, Week 3 10 Feb 2025	Due date	Term 2, Week 2 By 9am, 5 May 2025
Focus (Topic)	Wind-powered cars	Task Weighting	40%

Outcomes

A student:

PH11-1 - develops and evaluates questions and hypotheses for scientific investigation

PH11-2 - designs and evaluates investigations in order to obtain primary and secondary data and information

PH11-4 - selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media

PH11-7 - communicates scientific understanding using suitable language and terminology for a specific audience or purpose

PH11-8 - describes and analyses motion in terms of scalar and vector quantities in two dimensions and makes quantitative measurements and calculations for distance, displacement, speed velocity and acceleration

Task description

Students are required as part of the course to complete a depth study. The topic of the depth study is wind-powered cars. Students will have to research and test how a certain variable affects the motion of a wind-powered car. Possible variables include sail size, sail shape, mass of car or sail material.

Students will need to develop their own inquiry question and hypothesis to test. The test must be conducted as a first-hand investigation. The information will need to be collected, collated and analysed so that students can present their findings to their peers.

Students will need to present their depth study as a poster. The poster must include all the parts of the depth study. As research is being conducted, a reference list needs to be included with sources of information being referenced appropriately.

Students also need to complete and submit a reflection about the depth study. They are required to address what they learned, the difficulties they had to overcome, the quality of information, what they would do differently and what the best part of the task was. A scaffold is provided for the task to assist students to break the task into manageable sections.

Students will need to submit a picture of their poster, reference list and reflection onto the class Google Classroom or their poster, reference list and reflection to the teacher on the due date by 9am. The poster needs to be brought to class during that week as part of the learning.

Marking Guidelines

CRITERIA	MARK %
Outstanding The student demonstrates extensive knowledge of content and understanding of course concepts, and applies highly developed skills and processes in a wide variety of contexts. In addition the student demonstrates creative and critical thinking skills using perceptive analysis and evaluation. The student effectively communicates complex ideas and information.	90-100
High The student demonstrates thorough knowledge of content and understanding of course concepts, and applies well-developed skills and processes in a variety of contexts. In addition the student demonstrates creative and critical thinking skills using analysis and evaluation. The student clearly communicates complex ideas and information.	75-89
Sound The student demonstrates sound knowledge of content and understanding of course concepts, and applies skills and processes in a range of familiar contexts. In addition the student demonstrates skills in selecting and integrating information and communicates relevant ideas in an appropriate manner.	50-74
Basic The student demonstrates a basic knowledge of content and understanding of course concepts, and applies skills and processes in some familiar contexts. In addition the student demonstrates skills in selecting and using information and communicates ideas in a descriptive manner.	25-49
Limited The student demonstrates an elementary knowledge of content and understanding of course concepts, and applies some skills and processes with guidance. In addition the student demonstrates elementary skills in recounting information and communicating ideas.	0-24
Late submission – no misadventure Assessment not submitted	Parental notification