



Year 7 Technology Mandatory Engineered Systems Assessment Task 2025

TOPIC: Engineering Systems

SUBMISSION REQUIREMENTS:

Submitted on Canvas Term 2 Week 2 Thursday 8th May 2025.

TASK DESCRIPTION:

During class time you will be constructing a solar powered car. You will be required to complete an e-portfolio on CANVAS which outlines the **planning** process you have used in the creation of your solar car as well as an **explanation** of how force, motion and energy are used by your solar car.

In order to successfully meet the requirements of this task you should consider the following things:

- Complete all sections of the e-portfolio template found on CANVAS.
- Your e-portfolio will include sections that relate to the **planning** stages of your solar car.
- Design sketching (ideation), a final design sketch with a front, side and top view.
- A record of production steps with a self-evaluation table.
- Three scaffolded tables that ask you to accurately identify with a diagram, the key concept and give a detailed **explanation** of how motion, force and energy are used by your solar car.
- Upload your finished e-Portfolio to the CANVAS submission point when completed. Your teacher will go through this process in a timetabled computer room lesson.
- Make sure the task is submitted by the due date.

OUTCOMES TO BE ASSESSED:

TE4-2DP – student **plans** and manages the production of designed solutions

TE4-8EN – **explains** how force, motion and energy are used in engineered systems

DIRECTIONAL VERBS:

Plans: to decide and outline designs for a particular project

Explains: to make an idea clear to someone by providing details and evidence.

ASSESSMENT MARKING CRITERIA

TE4-2DP - Plans and manages the production of designed solutions TE4-8EN – explains how force, motion and energy are used in engineered systems	Mark	Grade
<p>Expertly experiments with creative planning & ideation techniques and approaches in designing, producing & managing a portfolio for the Solar Car. <i>Student has demonstrated an extensive use of planning in all stages of the design process. A range of planning and ideation techniques are addressed with the inclusion of project management techniques. Extensive effort in communicating all sections in the portfolio in a succinct and well written manner. A detailed explanation of the engineering concepts; force, motion and energy with a clear link to the solar car project.</i></p>	17-20	A
<p>Successfully experiments with a range of creative planning and ideation techniques and approaches in designing, producing & managing a portfolio for the Solar Car. <i>Student has demonstrated a thorough use of planning in all stages of the design process. A range of planning and ideation techniques are addressed with the inclusion of project management techniques. A High level of effort in communicating all sections in the portfolio. Creates a report that includes a thorough explanation of the engineering concepts; force, motion and energy with a clear link to the solar car project.</i></p>	13-16	B
<p>Experiments with some creative planning and ideation techniques and/or approaches in designing, producing & managing a portfolio for the Solar Car. <i>Student has demonstrated a sound use of some of the planning and ideation techniques used in the design process. Sound effort made in communicating most sections of the portfolio. Creates a report that includes a sound explanation of at least one to two of the engineering concepts; force, motion and energy in relation to the solar car project.</i></p>	9-12	C
<p>Some experimentation has occurred with planning & ideation techniques and/or approaches in producing a portfolio & solar car. <i>Student has demonstrated the basic use of planning and ideation in some stages of the design process. Some effort made in communicating sections of the portfolio. Creates a report that includes a basic explanation of an engineered concept that has limited link to the solar car project.</i></p>	5-8	D
<p>Limited use of planning & ideation techniques with minimal reference to the final design product. <i>Student has demonstrated the limited use of planning and ideation in the design process. Minimal effort made communicating ideas in the portfolio. Creates a report that includes limited or very little explanation of an engineered concept with little or no relation to the solar car project.</i></p>	1-4	E

Teacher comment / feedback:
