Year 7 Technology Mandatory

Engineered Systems Assessment Task 2023

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| **TOPIC**: **Engineered Systems** | **MARKS:** /20 |
| **SUBMISSION REQUIREMENTS:**  Online submission through canvas due Friday 18th August Week 5, Term 3 | **WEIGHTING:**  25% |
| **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. | |
| **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. | |
| **ASSESSMENT CRITERIA:**  **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.   ***If you need any assistance outside class time, please contact your teacher via email:***  Mr Franzman: [wade.franzman2@det.nsw.edu.au](mailto:wade.franzman2@det.nsw.edu.au)  Mrs Stipanovic: [vanessa.stipanovic@det.nsw.edu.au](mailto:vanessa.stipanovic@det.nsw.edu.au)  Mr O’Brien: [ty.obrien1@det.nsw.edu.au](mailto:ty.obrien1@det.nsw.edu.au)  Mr Greenway: [simon.greenway2@det.nsw.edu.au](mailto:simon.greenway2@det.nsw.edu.au) | |

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| **ASSESSMENT MARKING CRITERIA** | | |
| **E- Portfolio (TE4-2DP), (TE4-8EN) 20 Marks** | **Mark** | **Grade** |
| Expertly experiments with creative **planning** & ideation techniques and approaches in designing, producing & managing a portfolio for the Solar Car.  *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.* Adetailed **explanation** of the engineering concepts; force, motion and energy with a clear link to the solar car project. | 17-20 | A |
| Successfully experiments with a range of creative **planning** and ideation techniques and approaches in designing, producing & managing a portfolio for the Solar Car.  *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. | 13-16 | B |
| Experiments with some creative **planning** and ideation techniques and/or approaches in designing, producing & managing a portfolio for the Solar Car.  *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. | 9-12 | C |
| Some experimentation has occurred with **planning** & ideation techniques and/or approaches in producing a portfolio & solar car.  *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. | 5-8 | D |
| Limited use of **planning** & ideation techniques with minimal reference to the final design product.  *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** ofan engineered concept with little or no relation to the solar car project. | 1-4 | E |

**Teacher comment / feedback:**

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