| Level | Description |
| --- | --- |
| 5 | The student has provided **clear and convincing evidence** that they:   * **actively** designed and built a prototype of an innovative product * **identified** a need or problem and developed a solution that is an **improvement** over current alternatives * addressed an issue of **technological significance** * had a **good understanding** of the technological concepts used in the product * included **relevant** background research and **evaluated** the **originality** of their design by exploring similar related products * had been **creative** in the design of the product and its production * employed **safe** and **competent** construction and design skills * exhibited **resourcefulness** in the use of materials * produced a **reliable** innovative product that is **easy to use** and **performs as intended** * included a **comprehensive** logbook or portfolio, detailing the design process from brainstorming through construction, to final product and evaluation * **used critical thinking** in the evaluation and testing of the innovative product, discussing modifications or improvements * suggested directions for **future development** in a succinct manner * **formally acknowledged** those who contributed to the project * used **clear**, **concise** and **meaningful** language to communicate the operational details of the innovative product to the intended audience |
| 4 | The student has provided **substantial evidence** that they:   * designed and built a prototype of an innovative product with **considerable planning** * developed an innovative product which is a **solution** to a need or problem, different from existing products * **identified** and **understood** technological concepts used in the innovative product * performedbackground research and **searched** for similar products on the market * demonstrated **some creative** aspects * had shown **skill** in the design and construction of the innovative product and **safe procedures** were adopted in the product’s production * made **considered** choices in the selection of materials * had constructed a prototype of an innovative product that **works well** * included a logbook or portfolio **detailing** the different stages of the design process * exhibited r**ational thinking** in the testing of the innovative product and **alternative procedures** for improvements have been suggested * **acknowledged** and provided details of any assistance given * **effectively** communicated the innovative product’s operational details and the language and visuals **take account** of the intended audience |
| 3 | The student has provided **evidence** that they:   * designed and built a prototype of an innovative product * developed an innovative product which is a **solution** to a need or problem * demonstrated an **understanding** of technological concepts used in the product * performed **relevant** background research * had an innovative product which has some **creative** features * displayed **reasonable** workmanship in the design and construction of the innovative product * used **suitable** materials in the prototype’s construction * had a prototype of an innovative product that **works** most of the time * provided **supporting** documentation in the accompanying logbook or portfolio * **tested** the product and put forward some **good** ideas for future improvements * **acknowledged** any assistance given * included an **adequate** set of operational details to **assist** the intended audience |
| 2 | The student has provided **evidence** that they:   * built a prototype of an innovative product with **little** planning or design * built a product which **lacks** originality * had placed the innovative product in a **technological context** * performed **little** background research * had shown **glimpses** of creativity * displayed **satisfactory** workmanship in the design and construction of the innovative product * used some materials in the working model’s construction that were **not suitable** * had a prototype that works **irregularly** * provided **limited** documentation in the accompanying logbook or portfolio * **briefly** tested the prototype and **insufficient** ideas have been put forward for future improvements * **casually** mentioned people who have helped without **formally** acknowledging assistance given * included an **inadequate** set of operational details for the intended audience |
| 1 | The student has provided **evidence** that they:   * entered an innovative product that **does not fully work** * had an **inadequate** understanding of the related technological concepts * provided designs and sketches that were **haphazard** * made a prototype with **poor** workmanship * **failed** to test the prototype and ideas for future improvements are **vague** and **impractical** * provided **limited** or **disorganised** documentation * **neglected** to acknowledge assistance givendid **not** include instructional details about the innovative product |