| Level | Description |
| --- | --- |
| 5 | The student has provided **clear and convincing evidence** that they:   * designed and built a **highly original** invention or innovative product to meet an **identified need** or problem * **gathered highly relevant** background information and **evaluated** the **originality** of their design by exploring related existing products or applications * had an **in-depth understanding** of the technological concepts related to the need, problem or innovation * demonstrated **high** level skills in the safe and ethical construction of the product * completed a detailed **risk assessmen**t and carefully selected **appropriate materials** and **technologies** * demonstrated **high** levels of **creativity** during the design process * **extensively tested** the invention or innovative product to refine and improve the design * included a logbook or portfolio that **extensively** detailed the stages in the design process from initial ideas, through construction, to final product and evaluation * **acknowledged** the nature of all assistance given in conducting and communicating the design process\* * included a **clear and detailed description** of how their invention or innovative product is used and operated * language used in **all** written documentation reflects students own **authentic voice** and **understanding\*** |
| 4 | The student has provided **substantial evidence** that they:   * designed and built an original invention or innovative product in response to a need or problem * **gathered some relevant** background research by exploring related existing products or applications * had a **clear understanding** of the technological concepts related to the innovation * demonstrated **satisfactory** skills in the safe and ethical construction of the product * completed a risk assessment and selected mostly appropriate materials and technologies * demonstrated **some creative** aspects during the design process * **reasonably tested** the invention or innovative product to refine and improve the design * included a logbook or portfolio that **clearly detailed** the different **stages** of the design process * **acknowledged** all assistance given in conducting and communicating the design process * included a **description** of how their invention or innovative product is used and operated * language used in written documentation mostly reflects students own **authentic voice** and **understanding\*** |
| 3 | The student has provided **evidence** that they:   * **built** an invention or innovative product which was a **solution** to a need or problem * gathered somebackground research by identifying related existing products or applications * had a **reasonable** understanding of the technological concepts related to the innovation * displayed some **skills** in the safe and ethical **construction** of the product * completed a risk assessment and selected some appropriate materials and technologies * demonstrated **little or no** creativity in the design process * Some testing of the invention or innovative product to refine and improve the design * included a logbook or portfolio that provided **some** details of the stages of the design process * **acknowledged some** of theassistance that was given in conducting and communicating the design process * included a **description** of how their invention or innovative product is used and operated * language used in written documentation does not always reflect students own **authentic voice** and **understanding\*** |
| 2 | The student has provided **evidence** that they:   * built an invention or innovative product * gathered little to no background research * had a basic understanding of the technological concepts related to the innovation * demonstrated basic skills in the construction of a product * did not complete a risk assessment and gathered minimal appropriate materials and technologies * demonstrated **no** creativity in the design process * no testing of the invention or innovative product to refine and improve the design * **did not** detail the progress of the investigation in a logbook provided * **no** acknowledgment of assistance given in conducting and communicating the design process * included an **incomplete** description of how their invention or innovative product was used and operated * language used does not reflect students own **authentic voice** and **understanding** |
| 1 | The student has provided **evidence** that they:   * attempted to build an invention or innovative product * gathered little to no background research * had **minimal** understanding of the related technological concepts * made an invention or product with **poor** workmanship and limited documentation * did not complete a risk assessment and gathered minimal appropriate materials and technologies * demonstrated **no** creativity in the design process * no testing of the invention or innovative product to refine and improve the design * **did not** detail the progress of the investigation in a logbook * **failed to acknowledge** assistance given * failed to describe how the invention or innovative product is used or operated * language used does not reflect students own authentic **voice** and **understanding** |