

Level	Description
5	<p>The student has provided clear, consistent and convincing evidence that they:</p> <ul style="list-style-type: none"> • actively designed and built a prototype of an innovative product • identified a need or problem and developed a solution that is a significant improvement over previous alternatives or applications • addressed an issue of social or technological significance • displayed a deep understanding of technological concepts used in the prototype • included a concise and comprehensive summary of relevant prior research in the field, exploring the existence of similar products • had been creative in the prototype’s design, innovative in the development of an original solution and enterprising in commercial awareness and decision making • employed safe and quality construction and design skills • had convincing arguments for the choice of materials and technologies selected • produced a neat and reliable prototype that’s easy to use and performs as intended • included a comprehensive portfolio or logbook, detailing the stages of the design process from brainstorming, through prototyping, to final product and evaluation • used critical thinking in the evaluation and testing of the prototype, discussing alternatives and modifications • suggested worthwhile directions for future development in a succinct manner • comprehensively acknowledged the nature of any assistance given • used clear, concise and meaningful language to communicate the operational details and applications of the prototype to the intended audience
4	<p>The student has provided substantial evidence that they:</p> <ul style="list-style-type: none"> • 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 previous alternatives or applications • designed the innovative product for the benefit of society • displayed a thorough understanding of technological concepts used in the product • included a summary of current relevant information • designed an innovative prototype and developed an original solution • had shown skill in the design and construction of the prototype and safe procedures were adopted in the prototype’s production • included some justification for the selection of materials • had constructed a prototype that is easy to use and performs as intended • included a portfolio or logbook detailing the different stages of the design process • exhibited rational thinking in the testing and evaluation of the prototype • put forward directions for future development • acknowledged the nature of all assistance given • effectively communicated the prototype’s operational details and the language and visuals take account of the audience

Level	Description
3	<p>The student has provided evidence that they:</p> <ul style="list-style-type: none"> • designed and built a prototype of an innovative product • developed an innovative product which is a solution to a need or problem • had an innovative product which has some innovative or creative features • demonstrated an understanding of technological concepts used in the product • collected background research with some relevance to the need or problem • considered a variety of designs with the selected design being chosen with little justification • displayed good workmanship in the design and construction of the prototype • used materials in the prototype model's construction with little justification • had constructed a prototype that works • had performed preliminary testing of the prototype • provided supporting documentation in the accompanying portfolio or logbook • put forward some good and practical ideas for future improvements • acknowledged all assistance given • communicated the prototype's operational details with good use of language visuals and sequencing, appropriate to the intended audience
2	<p>The student has provided evidence that they:</p> <ul style="list-style-type: none"> • built a prototype of an innovative product with little planning or design • built a product lacking any innovative or creative features • demonstrated some understanding of technological concepts used in the prototype • performed limited or general background research • considered only one or two designs before commencing constructing • displayed simple workmanship in the design and construction of the prototype • used some materials in the prototype's construction that were not suitable • had tested the prototype with irregular performances • provided limited documentation in the accompanying portfolio or logbook • put forward some ideas for future improvements • acknowledged some assistance given • included an adequate set of operational instructions to assist the audience
1	<p>The student has provided evidence that they:</p> <ul style="list-style-type: none"> • entered a prototype of a product that does not fully work • demonstrated little understanding of technological concepts used in the product • performed nominal or irrelevant background research • provided designs and sketches that were haphazard • made a prototype with poor workmanship • poorly selected materials and technologies • had not sufficiently tested the prototype and ideas for future improvements are vague and impractical • provided limited or disorganised documentation • neglected to acknowledge assistance given • provided poorly expressed operational instructions for the innovative product