

## ASSESSMENT RUBRIC – YRS 11+ (DRAFT)

Key question	Does the solution solve a worthy problem?		Is the outcome or approach new or different from existing solutions?		How were technological and scientific processes used to develop the outcome?	Can the outcome be implemented with current technology and resources?	Does the outcome have potential to be successful?	
	Authentic Context (10%) Identifying an issue that impacts your community or group of people.	Stakeholder Engagement (10%) Consultation with stakeholders	Creativity (10%) Creativity of the process and/or outcome	Originality (10%) Originality of the idea	Process (20%) Application of STEAM to help solve the problem or issue	Final Prototype (20%) Final functioning working outcome	Feasibility (10%) Feasibility of the solution using testing and trialling	Evaluation (10%) Analysis of fitness for purpose
9 to 10	Substantial evidence of having identified an authentic need or opportunity through research and brief development.	Continuous stakeholder feedback has aided iteration and modification throughout the project. A wide range of stakeholders have been utilised.	Substantial evidence that the approach and/or the outcome is creative and innovative.	Substantial evidence that the outcome is unique from existing outcomes	Substantial evidence of an iterative technological /scientific process utilised to develop an outcome for the specified need.	Substantial evidence of manipulation, transformation, combination and/or formation of materials and components for the creation of the outcome.	Substantial evidence of testing and trialling of the outcome against the brief, in situ or in a simulated environment, resulting in a wide range of stakeholders' feedback.	Substantial evidence of analysis of fulfilment of the brief and identification of potential improvements.
4 to 8	<p>Some evidence of having identified an authentic need or opportunity and brief development.</p> <p>Considerations:</p> <ul style="list-style-type: none"> <li>- there may be limited or no research into the opportunity/environment/people/community.</li> <li>- Project may demonstrate an inauthentic need or opportunity</li> <li>-basic conceptual statement (brief) evident.</li> <li>-physical and functional attributes described rather than a clear specification.</li> <li>-possible lack of justification for the identified need/opportunity</li> <li>- There may be minimal stakeholder consideration when creating the brief.</li> </ul>	<p>Some evidence of stakeholder feedback has aided modification throughout the project but there are missing elements.</p> <p>Considerations:</p> <ul style="list-style-type: none"> <li>-the process may be missing iteration.</li> <li>- stakeholder feedback may be gathered but not implemented.</li> <li>- stakeholder engagement may not be continuous.</li> <li>-there is a limited range of stakeholders (predominantly end-users).</li> </ul>	<p>Some evidence that the approach and/or outcome has elements of being creative and/or innovative.</p> <p>Considerations:</p> <p>The evidence may include:</p> <ul style="list-style-type: none"> <li>- Ideation</li> <li>-conceptual design</li> <li>-a variety of sources of inspiration and influence.</li> <li>-strategies for modifying design concepts</li> <li>-utilisation of new technologies or combination of technologies.</li> <li>-use of alternative design-thinking processes</li> </ul>	<p>Some evidence that the outcome is different from existing outcomes.</p> <p>Considerations:</p> <p>The evidence may include:</p> <ul style="list-style-type: none"> <li>-product analysis</li> <li>-market research</li> <li>-modification of existing outcomes</li> <li>-exploration and experimentation of materials and processes.</li> <li>-Justification of chosen solutions</li> <li>- utilisation of end-user feedback</li> </ul>	<p>Aspects of technological /scientific processes evident</p> <p>Considerations:</p> <p>Students may use:</p> <ul style="list-style-type: none"> <li>- design thinking process.</li> <li>- scientific experimentation.</li> <li>- engineering design process.</li> <li>- Iterative process</li> <li>- thinking skills</li> <li>- problem solving</li> <li>- resilience and persistence</li> <li>- STEAM considerations (linking aspects of the project to a variety of subjects)</li> </ul>	<p>Some evidence of manipulation, transformation, combination and/or formation of materials and components for the creation of the outcome.</p> <p>Considerations:</p> <ul style="list-style-type: none"> <li>- the evidence may have incomplete documentation of the process.</li> <li>- the evidence may have incomplete documentation of the final outcome.</li> <li>-the student may use simplified skills and techniques to create the outcome.</li> <li>-there may be consideration of properties of materials and their uses.</li> <li>-the student may have considered sustainable practices.</li> <li>-the student may have considered mātauranga māori and tikanga.</li> </ul>	<p>Some evidence of testing and trialling of the outcome against the brief</p> <p>Considerations:</p> <ul style="list-style-type: none"> <li>-the final outcome may not be tested in situ or simulated environment</li> <li>- there may be a lack of stakeholder, or end-user feedback only feedback during testing.</li> <li>-the outcome may not be tested against the attributes or specifications.</li> <li>-the outcome may not be tested against the brief.</li> </ul>	<p>Some evidence of final evaluation</p> <p>Considerations:</p> <ul style="list-style-type: none"> <li>-data from testing and trialling may not be used to support evaluation.</li> <li>-the outcome may not be analysed against the brief</li> <li>- the outcome may not be analysed against the attributes and specifications.</li> <li>- discussion of fitness for purpose may not be evident.</li> <li>-there may not be any suggestions for improvements.</li> <li>-there may not be any evidence of stakeholder feedback.</li> </ul>
1 to 3	<p>Limited evidence of having identified an authentic need.</p> <p>(Evidence of two or less considerations above)</p>	<p>Limited evidence of stakeholder feedback throughout the project.</p> <p>-Inconsistent engagement with stakeholders.</p> <p>-End user stakeholders only</p>	<p>Limited innovation evident in outcome or approach</p> <p>(Evidence of two or less considerations above)</p>	<p>Limited evidence of research into existing outcomes</p> <p>(Evidence of two or less considerations above)</p>	<p>Limited evidence of a technological /scientific process undertaken.</p> <p>-Incomplete process.</p> <p>-Poorly documented process</p>	<p>Limited evidence of a non fit-for-purpose outcome.</p> <p>The outcome may be:</p> <ul style="list-style-type: none"> <li>-functional model rather than prototype</li> <li>-imbalance of aesthetics/function</li> <li>-incomplete</li> </ul>	<p>Limited evidence of testing and trialling</p> <p>(Evidence of two or more considerations above)</p>	<p>Limited evidence of evaluation</p> <p>(Evidence of two or more considerations above)</p>
Zero	No evidence of having identified an authentic need or opportunity through research and brief development.	No evidence of stakeholder feedback throughout the project.	No innovation evident in outcome or approach	No evidence of research into existing outcomes	No evidence of a process.	No evidence of an outcome.	No evidence of testing and trialling.	No evidence of final evaluation.

