

**Assessment Schedule – 2023****Technology: Demonstrate understanding of how materials enable technological products to function (91049)****Assessment Criteria**

<b>Achievement</b>	<b>Achievement with Merit</b>	<b>Achievement with Excellence</b>
<p>Demonstrating understanding of how materials enable technological products to function involves:</p> <ul style="list-style-type: none"> <li>describing the composition, structure and performance properties of materials used in a technological product</li> <li>describing the impact of the composition and structure of materials on how materials can be manipulated (e.g. mixed, shaped, joined, combined, separated, finished)</li> <li>explaining how the materials used and the way they have been manipulated allow technological products to function as intended.</li> </ul>	<p>Demonstrating in-depth understanding of how materials enable technological products to function involves:</p> <ul style="list-style-type: none"> <li>explaining how the composition and structure of materials determine the performance properties the materials exhibit</li> <li>explaining how the composition and structure of materials determine the ways materials can be manipulated.</li> </ul>	<p>Demonstrating comprehensive understanding how materials enable technological products to function involves:</p> <ul style="list-style-type: none"> <li>discussing how the interaction between the composition, structure and manipulation of materials enables technological products to function as intended.</li> </ul>

**Evidence**

<b>N1</b>	<b>N2</b>	<b>A3</b>	<b>A4</b>	<b>M5</b>	<b>M6</b>	<b>E7</b>	<b>E8</b>
Not enough evidence to show understanding, and / or is substantially reproduced with little mediation by candidate.	Report is substantially produced by the candidate but demonstrates little understanding. One part of the required response may be completely missing, or several parts may be weak.	Describes and explains as required to show understanding. Some aspects may be partial or weak.	Describes and explains as required to clearly show understanding.	Explains as required to show in-depth understanding. Some aspects may be partial or weak.	Explains to clearly establish in-depth understanding.	Discusses to show comprehensive understanding. Some aspects may be partial or weak.	Fully discusses to clearly show comprehensive understanding.

**N0** = No response; no relevant evidence.

**Cut Scores**

<b>Not Achieved</b>	<b>Achievement</b>	<b>Achievement with Merit</b>	<b>Achievement with Excellence</b>
0 – 2	3 – 4	5 – 6	7 – 8

The final grade is determined using professional judgment based on a holistic examination of the evidence provided against the criteria.

### Length and legibility

If the candidate has provided a brief report, the report should not be penalised because of length.

Candidate work in excess of 8 pages must not be marked. In the case that the candidate has used a small font, the marker should make their own judgment about where to stop marking. This judgment should be made relative to 8 pages of text in 12pt Arial font, with 2.5cm margins.

If work is illegible, it cannot be marked.

Digital submissions that cannot be read cannot be marked.

### Demonstration of understanding

The report must use information to demonstrate understanding. The marker must exercise professional judgment to decide if it does so. The following guidance is provided to assist in making this judgment.

- The report demonstrates understanding if it can be described wholly or substantially by one or more of the statements in the left-hand column.
- The report does not demonstrate understanding if it can be described wholly or substantially by one or more of the statements in the right-hand column.
- If the report is comprised of both used and reproduced information, the marker must decide if it meets the standard when the reproduced information is ignored.

Evidence of <u>use</u> of information	Evidence of <u>reproduction</u> of information
<p>The report describes and explains the candidate's use, in their practice, of information relating to the standard.</p> <p>Information from the candidate's practice, research, the practice of others, and teaching is related to the candidate's technological experiences.</p> <p>The report describes experiences that could be expected to come from a course of instruction derived from the Technology Learning Area in the <i>New Zealand Curriculum</i>.</p> <p>These could include but are not limited to:</p> <ul style="list-style-type: none"> <li>• testing and trialling within a modelling process</li> <li>• developing a conceptual statement</li> <li>• developing a conceptual design</li> <li>• development of a brief</li> <li>• material selection</li> <li>• refinement of a brief</li> <li>• development of a prototype</li> <li>• development of a one-off solution.</li> </ul> <p>Information from research, the practice of others, and teaching is reported in the candidate's own voice.</p> <p><b>Referenced</b>, complex research information unchanged by paraphrase is related to other information in a manner that unambiguously constructs meaning (very rare).</p>	<p>Information is presented in isolation from the candidate's technological experiences.</p> <p>Little or nothing is offered to suggest the information is related to a course of instruction at Level 6 of the <i>New Zealand Curriculum</i>.</p> <p>Information is not in the candidate's voice.</p> <p>The word choice, sentence structure, sentence length, punctuation etc. are not what a candidate could be expected to produce.</p> <p><b>Unreferenced</b>, complex, research information is presented as though it is the candidate's own work.</p>