

Pilot Assessment Schedule – 2023

Materials and Processing Technology: Demonstrate understanding of sustainable practices in the development of a Materials and Processing Technology design (92014)

Assessment Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<p>The candidate uses a design process to develop a design for a specified person, whānau, or community.</p> <p>Evidence could include:</p> <ul style="list-style-type: none"> • a design and its specifications • designing for an end user (person / whānau / community) • identifying and describing materials / components for use in the design • research into sustainable practices • identifying an improvement to the design • stakeholder feedback. 	<p>The candidate examines and applies stakeholder feedback in the development of the design for a person, whānau, or community.</p> <p>Evidence could include:</p> <ul style="list-style-type: none"> • how material / component choices were made • how research into sustainable practices influenced material / component choices • identifying and explaining improvements (more than one) to the design for an end user (person / whānau / community) • describing how feedback from stakeholders was considered in the development of the design. 	<p>The candidate evaluates decisions that informed the improvement of the design for a person, whānau, or community.</p> <p>Evidence could include:</p> <ul style="list-style-type: none"> • evaluating material / component choices • explaining, in detail, relevant improvements to the design for an end user (person / whānau / community) • explaining how stakeholder feedback was considered in the development of the design.
<p>The candidate applies sustainable practices in the development of the design, by providing evidence of decisions made in relation to sustainable practices.</p> <p>This could include:</p> <ul style="list-style-type: none"> • consideration of kaitiakitanga (people, land) • consideration of sustainable practices when selecting materials • using materials economically • consideration of waste materials and their disposal. 	<p>The candidate explains decisions to improve sustainable practices used in the development of the design.</p> <p>This could include:</p> <ul style="list-style-type: none"> • how decisions affected kaitiakitanga (people, land) • how sustainable practices impacted their material selection • how materials were used economically • how waste materials were disposed. 	<p>The candidate evaluates decisions to improve sustainable practices used in the development of the design.</p> <p>This could include:</p> <ul style="list-style-type: none"> • impacts on kaitiakitanga guided their material choice • the sustainable practices followed • the disposal of the waste materials.

Sample evidence

Achievement	Achievement with Merit	Achievement with Excellence
I chose locally grown feijoas because they were free and didn't need to be transported from another country. This made my feijoa tart sustainable. The skins were composted in the school's compost bin.	I chose locally grown feijoas because they were free. This means I had money left in my budget to buy more expensive organic flour. Because they are locally grown, the feijoas also didn't need to be transported far, which cuts down on the carbon footprint. I composted the feijoa skins at school. The compost is used to fertilise the school kitchen garden. This is a good way to dispose of the skins and waste fruit, and to make sure the waste is useful.	I originally planned to make a strawberry tart because my grandmother loves strawberries, but when I researched them, I found out that strawberries use a lot of water and are out of season so they would need to be imported from overseas, increasing the carbon footprint. My grandmother said she also loves feijoas though, and I was able to get them for free from my neighbour, so I decided on a feijoa tart instead. Because I didn't need to buy the fruit, I could choose from different flour options and still be within budget. I chose to buy more expensive organic flour as my grandmother uses this when she can. I have also been exploring different ways of disposing of the feijoa skins. I looked at composting, pickling for eating with cheese, and educating people about the eating of the skins.

NB: This standard does **not** require the design to be developed into a physical outcome.

N1	N2	A3	A4	M5	M6	E7	E8
The response shows limited understanding of sustainable practices in the design development.	The response shows some attempt of understanding of sustainable practices in the design development.	The response shows understanding of sustainable practices in the design development, although some aspects may be partial or weak.	The response clearly shows understanding of sustainable practices in the design development.	The response explains sustainable practices in the design development, although some parts of the explanation may be partial or weak.	The response clearly explains sustainable practices in the design development.	The response evaluates sustainable practices in the design development, although some parts of the discussion may be partial or weak.	The response clearly evaluates sustainable practices in the design development.

N0 = No response; no relevant evidence.

Cut Scores

Not Achieved	Achievement	Achievement with Merit	Achievement with Excellence
0–2	3–4	5–6	7–8

Appendix: Marker determination of validity of evidence

Professional judgment

The marker will determine a grade using their professional judgment based on a holistic examination of the evidence provided.

Demonstration of understanding

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

- A response **demonstrates understanding** if it can be described wholly or substantially by one or more of the statements in the **left-hand column**.
- A response **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 a response 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>Prompts and / or questions have been provided and the candidate has responded to these.</p> <p>The response uses information relating to the standard, the prompts, or questions.</p> <p>Information from the candidate's practice, performance, research, the practice of others, and or teaching, is related to the candidate's experiences.</p> <p>The response shows understanding that could be expected to come from a course of instruction derived from Level 6 of <i>The New Zealand Curriculum</i>.</p> <p>Information is presented in the candidate's own voice.</p> <p>Referenced complex research information unchanged by paraphrase is related to other information in a manner that constructs meaning.</p>	<p>Information is presented that does not relate to the prompts.</p> <p>Information is presented in isolation from the candidate's experiences.</p> <p>Little or nothing is offered to suggest the information is related to a course of instruction at Level 6 of <i>The New Zealand Curriculum</i>.</p> <p>Information is not in the candidate's voice. The word choice, sentence structure, sentence length, punctuation etc. are not what a candidate could be expected to produce.</p> <p>Unreferenced complex information is presented as though it is the candidate's own work.</p>

In general, the marker will exercise the following judgment:

N1	N2
<p>The response does not include enough evidence to show understanding, and / or is substantially reproduced with little mediation by candidate.</p>	<p>The response is substantially produced by the candidate but demonstrates little understanding.</p> <p>One part of the required response may be completely missing, or several parts may be weak.</p>

Where doubt exists as to whether evidence has been produced, mediated, or used by the candidate, the doubt must be exercised to the benefit of the candidate.