

This assessment is based on a now-expired version of the achievement standard and may not accurately reflect the content and practice of external assessments developed for 2024 onwards.  
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Mana Tohu Mātauranga o Aotearoa  
New Zealand Qualifications Authority

## **Level 1 Materials and Processing Technology RAS 2023**

**92015 Demonstrate understanding of materials and  
techniques for a feasible Materials and Processing  
Technology outcome**

### **EXEMPLAR**

**Achievement**

**TOTAL 04**

To be completed by candidate:

NSN

School Code



Mana Tohu Mātauranga o Aotearoa  
New Zealand Qualifications Authority

## Level 1 Materials and Processing Technology RAS 2023

**92015 Demonstrate understanding of materials and techniques for a feasible Materials and Processing Technology outcome**

Credits: Four

## PILOT ASSESSMENT

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of materials and techniques selected for a feasible Materials and Processing Technology outcome.	Explain materials and techniques selected for a feasible Materials and Processing Technology outcome.	Evaluate materials and techniques selected for a feasible Materials and Processing Technology outcome.

Enter your 9-digit National Student Number (NSN) and School Code into the space at the top of slide 1. (If your NSN has 10 digits, omit the leading zero.)

**Answer ALL parts of the assessment task in this document.**

Your answers should be presented in Verdana font within the text boxes. You may include only information you produce during this assessment session. Internet access is not permitted.

Save your finished work using the following naming convention: **SchoolCode-YourNSN-92015.pptx**.  
If you submit your report orally, embed the single file into this document.

If you open this document using software other than PowerPoint:

- save your slideshow as a PDF, using **SchoolCode-YourNSN-92015.pdf**
- if submitting oral responses with a PDF report, submit a separate file for the audio, using **SchoolCode-YourNSN-92015.mp3 or wma**

By saving your work at the end of the assessment session, you are declaring that this work is your own. NZQA may sample your work to ensure this is the case.

### INSTRUCTIONS

Respond to the following task about how you **selected, tested, and trialled materials and techniques** for the design of a feasible outcome.

You may support your answers with images, which can be inserted into the report where image boxes have been provided.  
*Do not use video files.*

You should aim to write no more than **800 words** in total. Where audio evidence is used, the total duration should not exceed **4 minutes**.

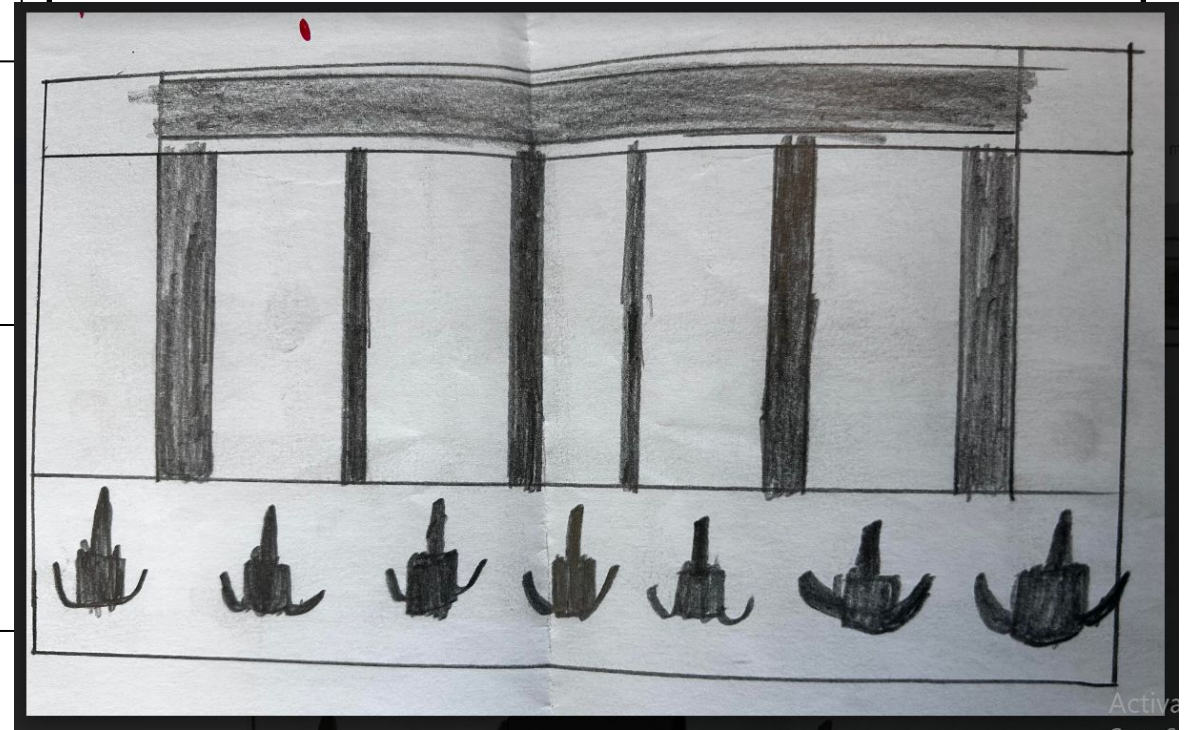
(a) Your design – what it is

(i) Who is your design for (i.e. person, whānau, or community)?

I will be making this project for my dad.

(ii) In what environment is the design intended to be used?

It will be designed to be hanged on the wall.



(iii) Describe in detail the physical attributes of your feasible outcome.

It is made from a part of a thick wooden pallet, with six hooks on the bottom used for hanging up coats and other bits of clothing, and the top processes a shelf used for storing certain objects and items.

Image 1



Image 2



*Images (optional)*

(iv) Describe in detail the functional attributes of your feasible outcome.

It is designed to hold various items on the top self

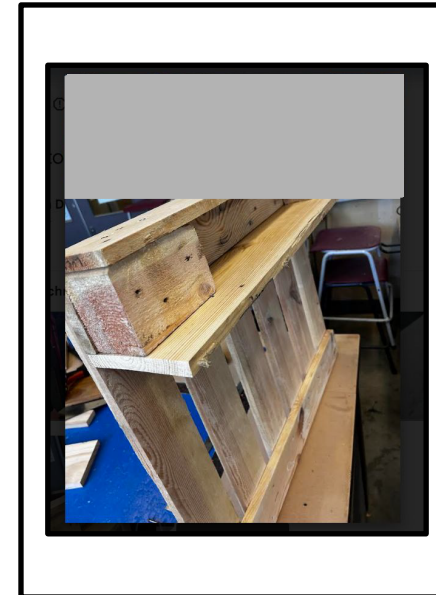


Image 3

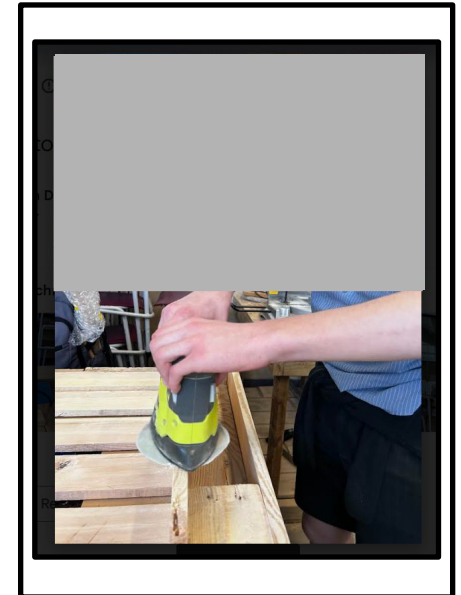


Image 4

(b) Based on the physical and functional attributes of your feasible outcome, identify **one or more** tests you undertook on **at least one** possible material / component.

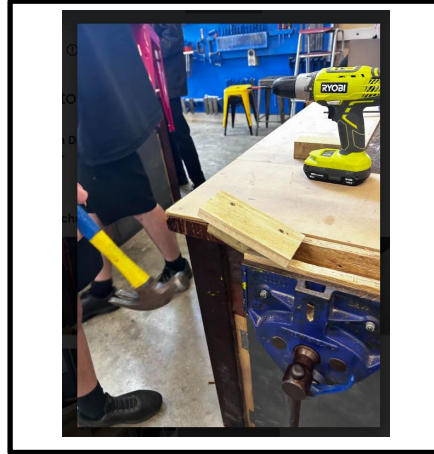
Material / component	Tests
Type name of material / component	Type name of test
Wood (type unknown) Wooden pallet	We cut out a section of the wooden pallet to see if it is the best shape for our final product.
Metal hooks	Drilling six hopes through the piece of wood and then with a certain type of screw we placed the metal hooks into the holes and kept them in place.
Screws	We used a separate piece of wood and connected them together with both screws and nails and hammered the pieces of wood together to see which on is the strongest and more durable and after much testing we learnt that the screws were the most strongest and the most durable and did a better job at keeping the wood together and so we used the screws for the final product.

- (c) Provide evidence of at least one test you carried out on your selected materials / components for use in your feasible outcome. You may show evidence from up to four tests.



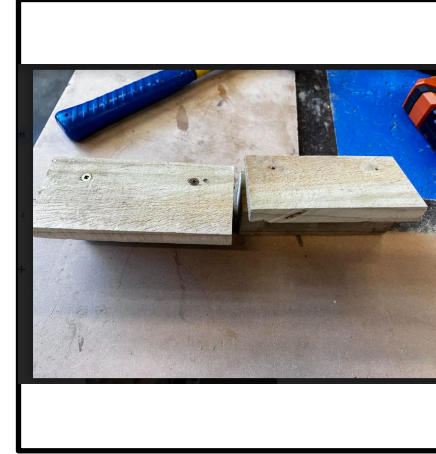
#### Results

To hold the wood together we used various different types of screws and nails to see which one of these would be strong enough to hold the wood in place.



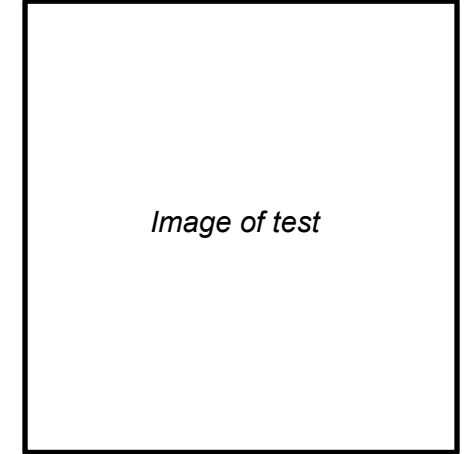
#### Results

First we tested the nails by hitting each piece of wood with a hammer and we learnt that the nails are too weak to hold the wood in place.



#### Results

In the end we learnt that the screws are more durable than the nails and thus we used them in the final project.



#### Results

Start typing here



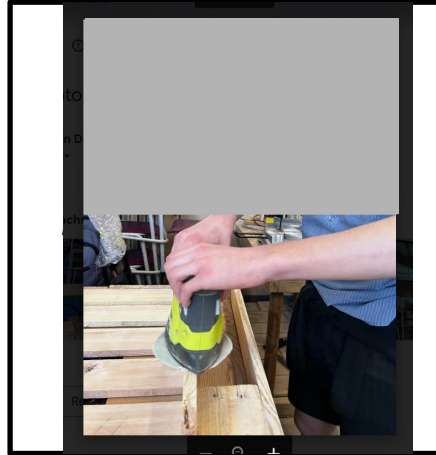
(d) Based on the physical and functional attributes of your feasible outcome, identify **one or more** techniques you trialled with **at least one** possible material / component.

Material / component	Techniques
Type name of material / component	Type name of technique
Orbital sander, belt sander and clamp	Sanding using different tools

- (e) Provide evidence of at least one test of a technique you carried out to select the most relevant one for your feasible outcome. You may show evidence from up to four tests.

**Results**

For the tops of the wood I used an orbital sander to smoothen down to wood.

**Results**

For the sides of the wood I also used another type of orbital sander to prevent there from being splinters or shards of wood from sticking out from the sides

*Image of technique trialled*

**Results**

Start typing here

*Image of technique trialled*

**Results**

Start typing here

(f) Impact of testing and stakeholder feedback

- (i) What influence did your selection and testing of different materials / components and trialling of techniques have on the feasibility of your outcome and its physical and functional attributes?

Add images that support your response into the next slide as needed.

For the final product I decided to use teak oil and clear wax to give the final product its protective coat of the two, preventing it from getting damaged both by rough housing and by whether..

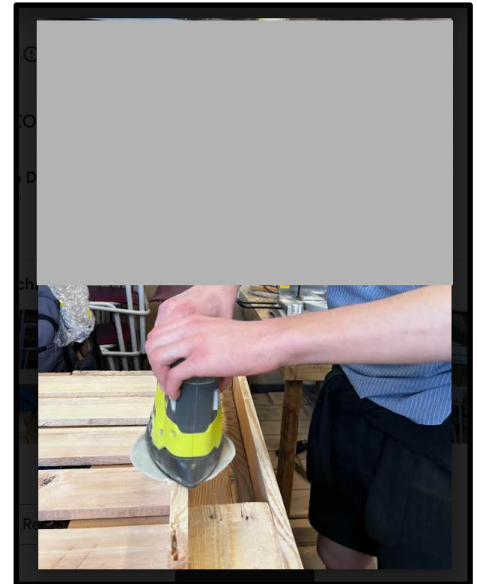
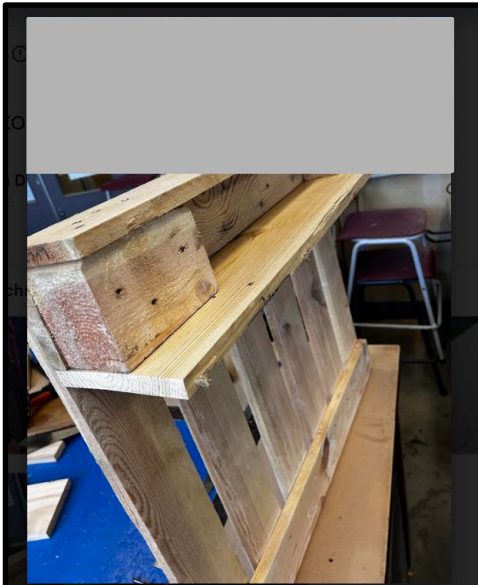
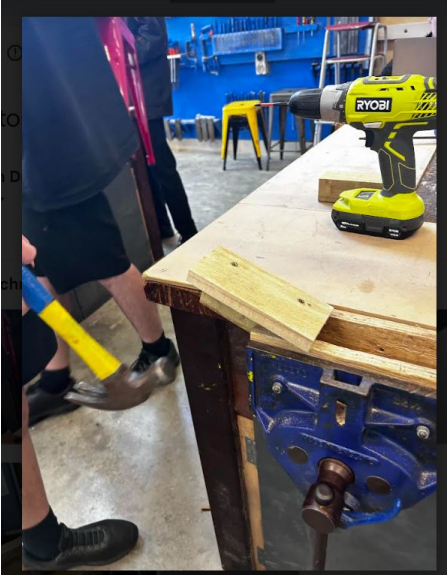
- (ii) What influence did stakeholder feedback have on your feasible outcome, including the selection of materials / components and techniques?

Add images that support your response into the next slide as needed.

The way that my end user influenced the creation of my final product was that he chose what he wanted me to make base off an image of a similar looking product online and because I was unsure of what I wanted to make and who I wanted to make it for.

We both decided to make the final product mostly out of a certain section of a wooden pallet and he chose the metal hooks for me that he had lying around at his factory.

You may include clearly labelled images to support your response to part (f).



## Achievement

**Subject:** Materials and Processing Technology

**Standard:** 92015

**Total score:** 04

Q	Grade score	Marker commentary
(a)–(e)	A4	The candidate has provided limited description of the environment. Some physical attributes are evident, but not described in detail. Limited understanding of functional attributes is shown. The candidate Identifies materials, but did not name a test to be carried out. The candidate shows understanding of components and techniques.
(f)(i)		The candidate shows limited reasoning behind selection of materials and techniques chosen.
(f)(ii)		There is a lack of reflection on stakeholder feedback in the selection of materials and techniques for the outcome.