

This is a resource for Skill Standard 40546 and Skill Standard 40544. It is a generic template that should be edited to best fit your students. It is designed to make sure your students have met all the criteria. Parts of this template are not assessed but are essential learning.



NEW ZEALAND GRAPHICS AND
TECHNOLOGY TEACHERS ASSOCIATION
NGA POUAKO TOI O AOTEAROA

40546 Create joints for a BCATS project or related tasks

40544 Carry out construction processes for a BCATS project or related

OVERVIEW

- In the next two terms you are going to be challenged in your design thinking and skills.
- This will be a course where you will learn about design construction and sustainability.
- You are going to design and make a coffee table with specifications in a design brief.
- You will develop a range of skills that may build on your prior knowledge or set you up to work confidently if you are new to the workshop.
- You will design, make and take home a quality outcome that you are proud of.



SKILL STANDARD

Create joints for a BCATS project or related tasks.

SKILL STANDARD: 40546 (v1)

4 Credits

NAME: .

PROJECT: Coffee table

BRIEF

- You will make a functional coffee table no larger than 1000 x 600mm.
- The coffee table must have at least three legs.
- It must have a shelf or rack.
- Be made from majority of timber.
- Have at least two different joints.
- You will work with a stakeholder/client to develop the coffee table.
- Complete the documentation slide.

LIST PHYSICAL AND FUNCTIONAL ATTRIBUTE OF A COFFEE TABLE?

PHYSICAL ATTRIBUTE:

- Smooth surface

FUNCTIONAL ATTRIBUTE:

- Easy to clean

BRIEF

I am making a coffee table for...

It is going to be located in the...

Their special requests are...

It needs to hold, display, store...

Who will be using the table...

Is the table in a high use area...

The aesthetic is going to be...

SPECIFICATIONS

Specifications must include physical and functional requirements.

Speaking to your client you will be able to identify the specifications specific to your coffee table. List all specifications below.

-

PARTS OF A TABLE



NAME THE PARTS OF THE TABLE:

1. :
2. :
3. :
4. :
5. :

RESEARCH

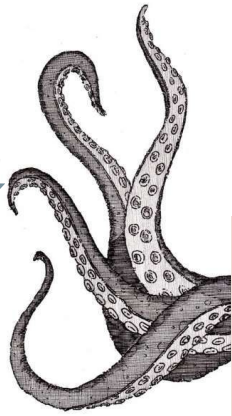
RESEARCH A RANGE OF DIFFERENT COFFEE TABLES CONSIDERING YOUR STAKEHOLDER

CLIENT FEEDBACK:

MOOD BOARD

EXEMPLAR

I am looking at organic shapes, octopus legs
And oval or round table top.



CHESTNUT TIMBER



Japanese term for burnt timber is Shou Sugi Ban (焼杉板).
This traditional Japanese technique involves charring the surface
of wood to preserve it and enhance its aesthetic qualities.



I like the apron design on this table as it
Gives the look that the table top is floating.



MOOD BOARD



CONCEPTS

FROM YOUR RESEARCH DRAW UP A RANGE OF IDEAS

JOINT EXPLORATION

VISUAL EVIDENCE AND NOTES IN THE EXPLORATION OF DIFFERENT JOINTS.

JOINT DEVELOPMENT

JOINT 1:

VISUAL EVIDENCE AND NOTES IN THE DEVELOPMENT OF THE JOINT

Pics should include:

- Marking out
- machining/cutting
- Fitting
- Final joint.

NAME THE JOINT YOU WILL BE DEVELOPING:

WHY DO YOU THINK THIS JOINT WILL BE GOOD FOR THIS PART OF THE TABLE?

WHAT PART OF THE COFFEE TABLE WILL THE JOINT BE USED FOR?

WHAT ARE THE FUNCTIONAL ATTRIBUTES OF THE JOINT?

WHAT METHOD DID YOU USE TO MAKE THE JOINT?

WHAT OTHER WAYS ARE THERE TO MAKE THE JOINT?

WHAT IS YOUR CONCLUSION AFTER MAKING THE JOINT?

JOINT DEVELOPMENT

JOINT 2:

VISUAL EVIDENCE AND NOTES IN THE DEVELOPMENT OF THE JOINT -

Pics should include:

- Marking out
- machining/cutting
- Fitting
- Final joint.

NAME THE JOINT YOU WILL BE DEVELOPING:

WHY DO YOU THINK THIS JOINT WILL BE GOOD FOR THIS PART OF THE TABLE?

WHAT PART OF THE COFFEE TABLE WILL THE JOINT BE USED FOR?

WHAT ARE THE FUNCTIONAL ATTRIBUTES OF THE JOINT?

WHAT METHOD DID YOU USE TO MAKE THE JOINT?

WHAT OTHER WAYS ARE THERE TO MAKE THE JOINT?

WHAT IS YOUR CONCLUSION AFTER MAKING THE JOINT?

FINISHED PROJECT

VISUAL EVIDENCE OF FINAL OUTCOME - Include close up images of completed joints

Assessment schedule: Skill Standard 40546

Learners do not need to complete a BCATS project, or related tasks as part of a group, to be awarded this skill standard. However, they must provide sufficient evidence as stated in the assessment resource. Examples of suitable level 1 projects can be found in the BCATS Programme Guidance document.

Joint types used for the project/related tasks may include box, box pin, butt, dowelled, halving, housing, mitre, rebated, riveted, soldered, MIG welded, spot welded.

The schedule below shows the evidence required for assessment criteria in the skill standard, guidance for the teacher and judgement statement/s. Note: teacher observations and comments made in the assessment resource serve as key evidence requirements for each skill standard. All guidance below is intended to support the teacher's observations/comments.

Learning outcome	Evidence required	Teacher guidance (to be used in accordance with commentary in the Programme Guidance document)	Judgement statement
Create joints for a BCATS project or related tasks.	Notes explaining why and how the methods used to create the joints were correct.	Explanation must give a basic reflection of the jointing methods chosen based on the project instructions, and what was achieved at the end, considering the stability of the joints.	Evidence must meet the minimum of Achieved criteria as outlined in the Waihangā Ara Rau BCATS Programme Guidance document – SS 40546. Comments related to the award of higher grades must reflect commentary in the Programme Guidance.
	Photos that clearly show the learner carrying out jointing tasks (if needed).	If required in addition to the teacher's observation, photos must clearly show the process of the joints being created. The learner should be seen working with the materials and tools so their installation and assembly methods can be assessed.	
	Photos of the completed joints.	Photos must clearly show the joints in the end product, providing the opportunity to view their strength and stability.	

TEACHER OBSERVATION: JOINTS

DATE:

Learner name:		Project: Coffee Table	
Not Achieved	Achieved	Merit	Excellence
Appropriate joints are not created for a BCATS project or related tasks.	Create joints for a BCATS project or related tasks.	Create strong and secure joints for a BCATS project or related tasks.	Create reliable and durable joints for a BCATS project or related tasks.

Provide comments on the learner's ability to meet the following assessment criteria, considering everything you observed throughout the project.

Joint types and methods are confirmed from project instructions.

Joints are assembled using identified methods.

FINAL GRADE:

Justification for final grade. (Provide overall comments, considering all evidence collected)

Teacher sign-off

SKILL STANDARD

Carry out construction processes for a BCATS project or related tasks.

SKILL STANDARD: 40544 (v1)

8 Credits

NAME:

PROJECT: Coffee table

KEY PARTS OF YOUR TABLE:

You need to show visual evidence of these five key parts.

1. Plan & Scale model
2. Table top
3. Apron
4. Legs
5. Shelf
6. Finishing



SCALE MODEL

Scale models play an important role in the design and development process. They help in: Visualization: Providing a tangible form of a concept that can be inspected from all angles.

Draw your design in illustrator, then use the laser cutter to cut out a scale model.

Assemble the coffee table and gain feedback from your stakeholders. Evaluate the design considering the feedback given on the next slide.



IMAGES AND NOTES OF SCALE MODEL

KEY ASPECTS TO DISCUSS: AESTHETIC, SCALE, PROPORTION

SCALE MODEL

PLAN DRAWING

CLIENT FEEDBACK:

CHANGES TO PLAN: .

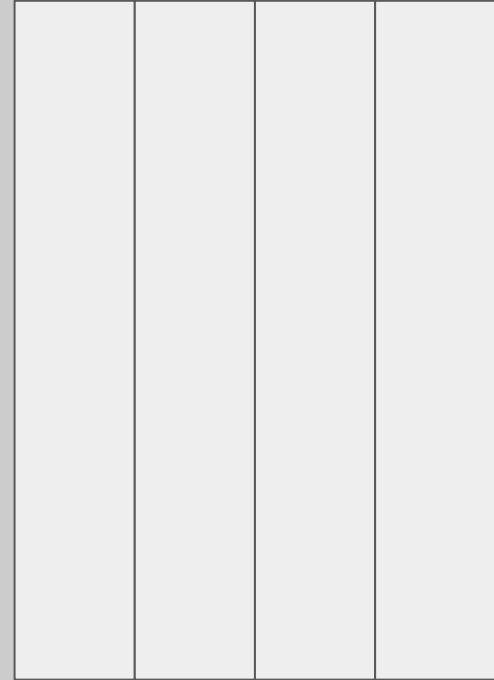
CONSTRUCTION PROCESS

TABLE TOP DOCUMENTATION

- Clamping
- Glued up top

CONSTRUCTION METHOD: .

...MM



...MM

...MM

CONSTRUCTION DOCUMENTATION

APRON DOCUMENTATION

- Size
- Joining method to table top
- Joining method to Legs

What are the methods been used : .

What would you do differently and why :

How could it be improved (physical or functionally) : .

CONSTRUCTION DOCUMENTATION

LEG DOCUMENTATION

- Size
- Shape
- Joining method to apron
- Leg to shelf joining method

What are the methods been used : .

What would you do differently and why :

How could it be improved (physical or functionally) : .

CONSTRUCTION DOCUMENTATION

SHELF DOCUMENTATION

- Size
- Shape
- Joining method to Legs

What are the methods been used : .

What would you do differently and why :

How could it be improved (physical or functionally) : .

CONSTRUCTION DOCUMENTATION

FINISHING DOCUMENTATION

- Sanding
- Table edges
- Staining
- Varnishing
- Oiling

What are the methods been used : .

What would you do differently and why :

How could it be improved (physical or functionally) : .

FINAL COFFEE TABLE

DETAILED IMAGES OF COMPLETED COFFEE TABLE.

Table top
Shelf
Apron
Legs
Joints
Joining methods
Finish

EVALUATE THE OUTCOME AGAINST THE BRIEF AND SPECIFICATIONS TO DETERMINE WHETHER IT IS FIT FOR PURPOSE: .

WHAT WERE YOUR STRENGTHS THROUGHOUT THE PROJECT : .

IF YOU COULD GO BACK AND MAKE IT AGAIN WHAT WOULD YOU CHANGE AND WHY: .

WHAT WERE YOUR CLIENTS REACTIONS TO THE FINISHED COFFEE TABLE AND DID IT MEET THEIR SPECIFICATIONS: .

Assessment schedule: Skill Standard 40544

Learners must complete a BCATS project, or related tasks as part of a group, to be awarded this skill standard.

The schedule below shows the evidence required for assessment criteria in the skill standard, guidance for the teacher and judgement statement/s. Note: teacher observations and comments made in the assessment resource serve as key evidence requirements for each skill standard. All guidance below is intended to support the teacher's observations/comments.

Learning outcome	Evidence required	Teacher guidance (to be used in accordance with commentary in the Programme Guidance document)	Judgement statement
Carry out construction processes for a BCATS project or related tasks.	Project reflection worksheet completed in the Construction processes assessment resource.	Project reflection must identify strengths and weaknesses based on the finished project. Areas of improvement for future projects may include attention to detail, use of tools, tolerances, etc.	Evidence must meet the minimum of Achieved criteria as outlined in the Waihangā Ara Rau BCATS Programme Guidance document – SS 40544.
	Photos that clearly show the finish and detail of the completed project.	Photos must clearly show detail on the finished project, so it is clear which finishing processes have been used.	Comments related to the award of higher grades must reflect commentary in the Programme Guidance.

TEACHER OBSERVATION: JOINTS

DATE:

Learner name:		Project: Coffee Table	
Not Achieved	Achieved	Merit	Excellence
Construction processes are not carried out safely for a BCATS project or related tasks.	Carry out construction processes for a BCATS project or related tasks.	Efficiently carry out construction processes for a BCATS project or related tasks.	Skilfully carry out construction processes for a BCATS project or related tasks.

Provide comments on the learner's ability to meet the following assessment criteria, considering everything you observed throughout the project.

Construction processes are carried out to complete the project.

Project process is evaluated, with strengths identified and suggestions for future improvements.

FINAL GRADE:	
Justification for final grade. (Provide overall comments, considering all evidence collected)	
Teacher sign-off	