

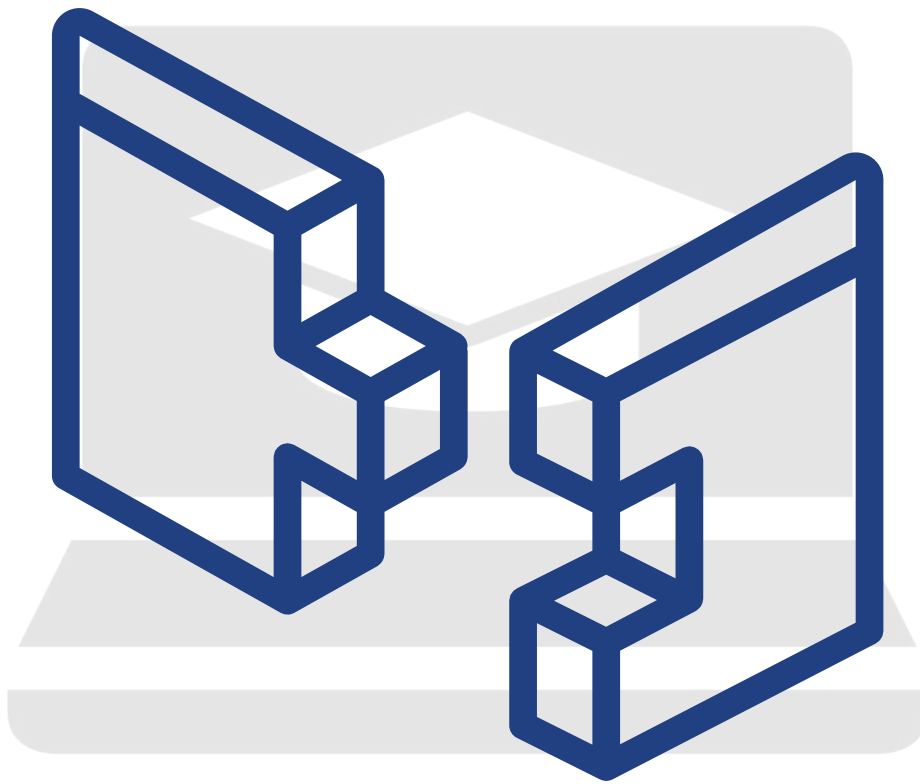


**BCATS**

BUILDING, CONSTRUCTION  
AND ALLIED TRADE SKILLS

# Joins

Teacher/Tutor resource



**Unit Standard 25920 (v3), Level 1**

Use joints for  
a BCATS project

**3** CREDITS

**BCITO**  
buildingpeople

**Building and Construction Industry Training Organisation  
(BCITO)**

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# Teaching and assessment tips

## Purpose

This unit standard credits a learner who can identify and describe different types of joints and use at least two of them in a BCATS project. Examples of suitable projects include a cupboard, table, rabbit hutch, tool box, and items of similar complexity.

Students must:

- identify and describe types of wood and metal joints
- establish jointing requirements from job specifications
- select the appropriate jointing methods for a project
- set out and cut the joints to the project specifications
- assemble the joints
- complete all operations safely
- clean and store tools, plant and equipment correctly.

They must use at least two types of these joints: mitre, dovetail, housing, mortise and tenon, rebated, halving, dowelled, biscuit, welded, soldered, riveted.

## Assessment

Information to support assessment decisions should, wherever possible, be collected naturally as the BCATS project progresses.

Photographic or other evidence to show the joints used on a completed project must be attached to the Assessor Observation Sheet.

**Assessment of this unit standard consists of:**

- **completion of the Knowledge Assessment and**
- **completion of a BCATS project using at least two different joints and**
- **completion of an Assessor Observation Sheet.**

# Alignment with other unit standards

Developing programmes that integrate teaching and learning helps to provide students with meaningful and manageable learning opportunities. The following unit standards are not an exhaustive list of which you could include in your programme and nor should one feel obligated to offer all as linked units. Other unit standards you include will depend on your overall programme of study and what will best meets your learners' needs.

## Level 1

**24352:** *Demonstrate knowledge of and apply safe work practices and use PPE in the construction of a BCATS project*

It is recommended that students work towards completing this unit standard as they construct their joints project.

**24355:** *Demonstrate knowledge of construction and manufacturing materials used in BCATS projects*

US 24355 credits learners who are able to establish job requirements and select construction and manufacturing materials for a BCATS project, and describe the properties of selected materials and evaluate their suitability to meet project requirements. The materials must include timber and at least three of manufactured board, metal, plastic, glass, concrete, mechanical fasteners, adhesives, finishing materials, upholstery (fabric or leather). Jointing methods is one of the specified factors for selecting materials appropriate for their project.

**24356:** *Apply elementary procedures and processes for a BCATS project*

To achieve US 24356, students are required to complete a construction project where the student can establish the job requirements, prepare materials, mark out, shape, and join components, and finish the project. Suitable projects for this unit standard include tables, cabinets, seating, storage chests, shelving units, or projects of similar complexity. These will almost certainly require at least two joints.

## Level 2

**12927:** *Demonstrate knowledge of, select, maintain, and use hand tools used for BCATS projects*

The project they need to complete for US 25920 can be one of two practical projects required for US 12927. While students may not necessarily complete all the theory aspects of the standard as part of completing their project, they should be encouraged to document evidence of the tools they selected and used.

US 25920 would work well in conjunction with US 25921 (*Make a cupboard with a drawer as a BCATS project*) and US 12932 (*Construct timber garden furniture as BCATS projects*), but almost any BCATS project can incorporate the use of two joints.

# Examples of oral assessment questions

1. What are the two metals that make up solder?

*Lead and tin.*

2. What is another name for resistance welding?

*Spot welding.*

3. When cramping a joint together what can be done to keep the surface of the joint straight?

*Alternate the cramps over and under the work.*

4. What is the recommended thickness of the tenon in a mortise and tenon joint?

*No more than one third the thickness of the piece of timber.*

5. Why may it be necessary to reinforce a mitre joint?

*Because end grain has poor holding power when glued.*

6. When assembling a butt joint, what can be done to prevent cramps marking the timber?

*Place a batten or packing piece between the work and the cramp heads.*

7. Where a drawer or box construction will not be subjected to a lot of stress, name the type of joint that can be used instead of a dovetail joint?

*A rebate joint.*

8. What can be done to the metal parts of tools to prevent corrosion while they are in storage?

*Thoroughly cleaned and then wiped with an oily rag.*

# Assessment Schedule

## US 25920 (v3) - Use joints for a BCATS project (Level 1, Credit 3)

<b>Outcome 1</b>	<b>Identify and describe types of joints and select jointing methods for a BCATS project.</b>	<b>Assessment evidence and judgement</b>
PC 1.1	Types of joints are identified and described in terms of purpose and method of construction.	<ul style="list-style-type: none"> <li>Completed Knowledge Assessment sheet, supplemented by oral questions if need be.</li> </ul>
PC 1.2	BCATS project documentation is obtained, and verified with the supervisor, in accordance with workplace practice	<ul style="list-style-type: none"> <li>Assessor observation sheet</li> </ul>
PC 1.3	Jointing requirements are identified from BCATS project documentation.	<ul style="list-style-type: none"> <li>Assessor observation sheet</li> </ul>
PC 1.4	Jointing methods are selected in accordance with BCATS project documentation.	<ul style="list-style-type: none"> <li>Assessor observation sheet</li> </ul>
<b>Outcome 2</b>	<b>Use joints for a BCATS project. Range: two of – mitre, dovetail, housing, mortise and tenon, rebated, halving, dowelled, biscuit, welded, soldered, riveted.</b>	<b>Assessment evidence and judgement</b>
PC 2.1	Joints are set out and cut in accordance with BCATS project documentation and workplace practice.	<ul style="list-style-type: none"> <li>Assessor observation sheet</li> </ul>
PC 2.2	Joints are assembled and fixed in accordance with BCATS project documentation and workplace practice.	<ul style="list-style-type: none"> <li>Assessor observation sheet</li> <li>Verified photo(s)</li> </ul>
<b>Outcome 3</b>	<b>Complete work operations</b>	<b>Assessment evidence and judgement</b>
PC 3.1	All operations are safely completed in accordance with workplace practice.	<p>The learner:</p> <ul style="list-style-type: none"> <li>Correctly uses personal protective equipment as they work</li> <li>Uses machine safety guards and dust extraction facilities and adjusts them appropriately</li> <li>Uses the correct machine settings</li> <li>Follows safe working practises and the job is safely completed.</li> </ul>
PC 3.2	Workplace, tools, plant and equipment are cleaned, and tools, plant and equipment are stored in accordance with workplace practice.	<p>The learner:</p> <ul style="list-style-type: none"> <li>Cleans the tools, plant and equipment they used as part of the job</li> <li>Stores tools plant and equipment in accordance with workplace practice</li> <li>Leaves a clean work area on completion.</li> </ul>