

National Certificate in Building, Construction and Allied Trades Skills (BCATS)
Teacher Information & Resources

**Use hardware and fastenings for a
BCATS project**

Unit Standard – 25919

Level 1, Credit 2





Teaching and assessment tips

Intent – The intent of the unit standard is that the learner can:

- identify and describe ten different types of hardware and fastenings and
- use at least 3 of them in a BCATS project.

The skills required for this unit standard are assessed using the worksheet, the assessor observation sheet and evidence of a completed project.

This unit fits perfectly as a shared assessment project particularly in conjunction with unit standard 25921 (*Make a cupboard for a BCATS project*) but almost any other BCATS suitable project will result in the use of hardware and fasteners that meet the requirements of this unit.

Only three types of hardware and fastenings need to be used from the following: nails, screws, bolts, common hinges, handles, locks, latches, timber connectors, adhesives, wheels/castors.

The projects associated with Unit Standard 12932 (*Construct timber garden furniture and items of basic construction equipment as a BCATS project*) can almost certainly require the use of 3 types of hardware and fastenings. A popular item of garden furniture for unit 12932 is the Cape Cod lounge. By using both screws and nails in this project and attaching wheels a learner will automatically have fulfilled the practical part of this unit and (by completing the worksheet) have gained 2 credits.

Evidence to show that a project has been finished must also be attached to the assessor observation sheet. This should be in the form of a verified photo.

Assessment



Assessment of this unit standard consists of:

- completion of the worksheet and
- completion of the assessor observation sheet and
- completion of a BCATS project.

Worksheet US 25919

Student Name: _____

1. What is the main advantage when using a jolt head nail?

2. What is the result of driving nails at an angle?

3. How are wood screws usually named?

4. What can you do to make a screw easier to drive?

5. What is the difference between the heads of a coach bolt and an engineers' bolt?

6. When drilling a hole for a coach bolt, is the hole drilled slightly smaller or larger than the bolt?



7. What type of hinge should not be fitted to an external, outward-opening door and why?

8. Where would the information on what type of hinge is to be fitted to a door or window be found?

9. What is the difference between a lock and a latch?

10. What is the most common reason for a glued joint to fail?



Worksheet Model Answers

1. What is the main advantage when using a jolt head nail?
The nail can be punched below the surface of the timber and the hole filled with putty.
2. What is the result of driving nails at an angle?
Produces a stronger joint.
3. How are wood screws usually named?
For the shape of their head or the method used to drive the screw
4. What can you do to make a screw easier to drive?
Lubricate the screw thread with wax, grease or soap.
5. What is the difference between the heads of a coach bolt and an engineers' bolt?
The coach bolt has a domed head and the engineers bolt has a hexagonal head.
6. When drilling a hole for a coach bolt is the hole drilled slightly smaller or larger than the bolt?
The hole is drilled slightly larger.
7. What type of hinge should not be fitted to an external, outward-opening door and why?
A loose pin hinge. Because the pin can be removed allowing an intruder entry.
8. Where would the information on what type of hinge is to be fitted to a door or window be found?
In the job specifications.
9. What is the difference between a lock and a latch?
*A latch holds a door or gate open or closed.
A lock secures a door, window or gate closed preventing unwanted entry.*
10. What is the most common reason for a glued joint to fail?
Not following the manufacturer's instructions.

Examples of oral assessment questions

1. What is the major cause of metal failure affecting hardware?
Corrosion.
2. Describe the type of hardware you used on your project.
The answer should be consistent with the hardware on the project.
3. What is the purpose of annular grooves on the shank of a nail?
It increases the holding power of nail.
4. Explain the steps that should be taken to prepare a hole for a screw
Pilot hole, clearance hole, countersink
5. What is the most common hinge used to hang a gate?
Tee hinge or strap hinge.
6. What type of adhesive has the ability to bond to itself?
Contact adhesive
7. What is the full name of the most commonly used synthetic adhesive?
Polyvinyl acetate
8. Where would you find information on the safe use of adhesives?
In the manufacturer's instructions or the product safety data sheet
9. After use what can be done to prevent steel parts of a hand tools going rusty?
Wiping the tool with an oily rag
10. What does the abbreviation RCD stand for and what is it used for?
Residual Current Device. Protects an operator against electric shock

Assessor Observation Sheet – Hardware and fastenings

US 25919 Use hardware and fastenings for a BCATS project (Level 1, Credit 2)

Student Name:
Project:
Hardware and Fastenings Used:

Assessor observation:

Assessment criteria: <i>This unit standard requires the completion of a BCATS project that uses at least 3 of: nails, screws, bolts, common hinges, handles, locks, latches, timber connectors, adhesives, wheels/castors.</i>	Comments and/or notes
Worksheet completed correctly <input type="checkbox"/>	
Three items of hardware/fastenings are selected and correctly used for a completed project <input type="checkbox"/>	
Work is in accordance with job specifications <input type="checkbox"/>	
All operations completed safely and according to site/workplace practices <input type="checkbox"/>	
Tools are looked after and put away correctly <input type="checkbox"/>	
Evidence of finished project attached (may be a verified photo) <input type="checkbox"/>	
Assessor name:	RESULT: A = Achieved, N = Not Yet Achieved
Assessor signature: Date:.....	

Assessment Schedule

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Outcome 1	Identify and describe types of hardware and fastenings and select hardware and fastenings for a BCATS project.	Assessment evidence and judgement
ER 1.1	Types of hardware and fastenings are identified and described in terms of purpose and use.	<ul style="list-style-type: none"> • Worksheet
ER 1.2	Job specifications are obtained, and verified with the supervisor, in accordance with workplace practice.	<ul style="list-style-type: none"> • Assessor observation sheet
ER 1.3	Hardware and fastenings are selected in accordance with job specifications.	<ul style="list-style-type: none"> • Assessor observation sheet
Outcome 2	Use hardware and fastenings for a BCATS project. Range: three of – nails, screws, bolts, common hinges, handles, locks, latches, timber connectors, adhesives, wheels/castors.	Assessment evidence and judgement
ER 2.1	The selected hardware and fastenings are used in accordance with job specifications, manufacturer's instructions, and workplace practice.	<ul style="list-style-type: none"> • Assessor observation sheet • Verified photo of the project
Outcome 3	Complete work operations	Assessment evidence and judgement
ER 3.1	All operations are safely completed in accordance with work place practice.	<p>The learner</p> <ul style="list-style-type: none"> • Correctly uses personal protective equipment as they work • Uses machine safety guards and dust extraction facilities and adjusts them appropriately • Uses correct machine settings • Follows safe working practises and the job is safely completed
ER 3.2	Workplace, tools, plant and equipment are cleaned, and tools, plant and equipment are stored in accordance with work place practice.	<p>The learner</p> <ul style="list-style-type: none"> • Cleans the tools, plant and equipment they used as part of the job • Stores tools plant and equipment in accordance with workplace practice • Leaves a clean work area on completion