

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

**Construct and maintain a basic residential fence and gate as a BCATS project**

Unit Standard – 22129

Level 2, Credit 7





## Teaching and assessment tips

**Intent** – The intent of the unit standard is that the learner is able to construct a fence including; preparing an order for quantities, positioning poles, excavating the holes, attaching the cladding and completion of any finishing work. The learner must also construct and install a timber gate including; installation of hinges and latch. A maintenance inspection must be conducted on a fence and gate and any identified damage (**IF** any is identified) is fixed.

### Unit standard Interpretation

It is expected that the learner will construct a **fence** of at least 4.8metres long, **and** that they will construct and install a **gate**.

Fence construction may be timber framing and palings or sheet metal cladding.

Where “concrete” is specified when calculating quantities of materials, it is acceptable that the calculated quantity is for the final volume of mixed concrete (not necessarily the individual cement and aggregate components).

Routine maintenance on a fence does not have to be the same fence that the learner has constructed as part of this unit standard.

The skills required for this unit standard are assessed using the assessor observation sheet, a copy of the learner’s calculated quantities and order form, and evidence of the finished fence and gate.

An order form template may be sourced from the internet or you can design your own or use a facsimile of your school or business order form. The completed order must be attached to the assessor observation sheet.

Evidence to show that the fence and gate have been constructed and 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 an order, including calculations of quantities and
- Completion of the assessor observation sheet
- Completion of a fence at least 4.8 m long (with a verified photo)
- Completion of a gate (with a verified photo)
- Completion of a maintenance inspection and any damage fixed

## Examples of oral assessment questions

1. What treatment level should fencing timber have?

*Posts in contact with the ground should have a treatment level of H4.*

*Rails, palings and capping not in contact with the ground should have a treatment level of H3.1.*

2. Why is it important never to burn treated timber off-cuts in a domestic fire or barbecue?

*This releases chemicals which can be harmful to people and the environment.*

3. When should 100 x 100mm posts be used for a fence?

*For fence heights of 1.2 to 1.8m, and for end posts, corner posts and gate posts.*

4. How should timber be stored once it is delivered?

*Stack it flat and clear of the ground, and keep it covered or in the shade, to prevent it bowing or deteriorating.*



# Assessment Schedule

## US 22129 Construct and maintain a basic residential fence and gate as a BCATS project (Level 2, Credit 7)

Evidence for credit in this unit standard must be gathered for a fence with a minimum length of 4.8 metres (three posts). Verified photo(s) of the completed fence and gate must be attached.

<b>Outcome 1</b>	Calculate quantities and prepare an order for materials for a basic residential fence and gate.	<b>Assessment evidence and judgement</b>
ER 1.1	Quantities of materials are calculated from working drawings and job specifications.	Evidence gathered from student's calculations and the assessor observation sheet showing. <ul style="list-style-type: none"> <li>Quantities of posts, rails, cladding, concrete and fixings are calculated correctly.</li> </ul>
ER 1.2	An order for materials is prepared in accordance with work place practice.	Evidence gathered using order list. <ul style="list-style-type: none"> <li>Order is legible and correct measurement units are used.</li> </ul>
<b>Outcome 2</b>	Construct a basic timber residential fence.	<b>Assessment evidence and judgement</b>
ER 2.1	Post positions are set out, and post holes are excavated in accordance with working drawings and job specifications.	Evidence gathered from fence and gate project and the assessor observation sheet showing. <ul style="list-style-type: none"> <li>Post positions are set out and post holes are excavated correctly.</li> </ul>
ER 2.2	Posts and rails are set up and fixed in accordance with working drawings and job specifications.	Evidence gathered from fence and gate project and the assessor observation sheet showing. <ul style="list-style-type: none"> <li>Posts and rails are set up and fixed correctly.</li> </ul>
ER 2.3	Cladding is fixed and the fence is finished in accordance with working drawings and job specifications. Range: one of – timber palings, sheet metal.	Evidence gathered from fence and gate project and the assessor observation sheet showing. <ul style="list-style-type: none"> <li>Cladding is fixed and the fence is finished correctly.</li> </ul>
<b>Outcome 3</b>	Construct and install a basic timber gate in a residential fence.	<b>Assessment evidence and judgement</b>
ER 3.1	Gateway is measured and gate constructed in accordance with working drawings and job specifications.	Evidence gathered from fence and gate project and the assessor observation sheet showing. <ul style="list-style-type: none"> <li>Gateway is measured and gate constructed correctly.</li> </ul>
ER 3.2	Gateposts are plumbed and placing of hinges marked on gatepost and gate.	Evidence gathered from fence and gate project and the assessor observation sheet showing. <ul style="list-style-type: none"> <li>Gateposts are plumbed and hinge positions are marked correctly.</li> </ul>
ER 3.3	Hinges are installed on gate, and gate is installed in accordance with working drawings and job specifications.	Evidence gathered from fence and gate project and the assessor observation sheet showing. <ul style="list-style-type: none"> <li>Hinges and gate are installed correctly.</li> </ul>
ER 3.4	Installed gate swings clear of the ground throughout its arc.	Evidence gathered from fence and gate project and the assessor observation sheet showing. <ul style="list-style-type: none"> <li>Installed gate swings clear of the ground throughout its arc.</li> </ul>
ER 3.5	Latch hardware is installed and operates according to design and manufacture.	Evidence gathered from fence and gate project and the assessor observation sheet showing. <ul style="list-style-type: none"> <li>Latch hardware is installed correctly.</li> </ul>
<b>Outcome 4</b>	Perform routine maintenance on a basic residential timber fence.	<b>Assessment evidence and judgement</b>
ER 4.1	Fence is checked for damage and wear.	Evidence gathered from fence and gate project and the assessor observation sheet showing. <ul style="list-style-type: none"> <li>Fence is thoroughly checked for damage and wear.</li> </ul>
ER 4.2	Damaged or worn components are replaced in accordance with workplace practice.	Evidence gathered from fence and gate project and the assessor observation sheet showing. <ul style="list-style-type: none"> <li>Any damaged or worn components are replaced correctly.</li> </ul>
<b>Outcome 5</b>	Complete work operations.	<b>Assessment evidence and judgement</b>
ER 5.1	All operations are safely completed in accordance with workplace practice.	Evidence gathered from fence and gate project and the assessor observation sheet showing <ul style="list-style-type: none"> <li>Appropriate PPE selected and used.</li> <li>Tools used correctly and safely.</li> <li>Personal safety and safety of others observed.</li> </ul>
ER 5.2	Workplace, tools, plant and equipment are cleaned, and tools, plant and equipment stored in accordance with workplace practice.	Evidence gathered from fence and gate project and the assessor observation sheet showing <ul style="list-style-type: none"> <li>Work area cleaned and waste disposed of.</li> <li>Tools, plant and equipment cleaned and stored correctly.</li> </ul>