



LET'S BUILD IT!

BRICK QUANTITY

60 BRICKS = 1m²
HALF-BRICK WALL

120 BRICKS = 1m²
1-BRICK WALL



1m²



1m²



560 $\approx$ ☐

120 $\div$ 2 ☐

120 $\times$ 2 ☒

+ 120 $\times$ 2 = 3 ☒

ACTIVITY PACK



City &
Guilds

Lecturer: James Rix

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Intro.

This activity pack supports learners studying **Unit 005: Constructing Half Brick Walling**, specifically Assessment Criterion **1.4 – State the number of bricks required to build a 1m^2 brick wall.** Learners will explore brick quantities for different wall thicknesses and practise calculating brick requirements using simple, scaffolded methods suitable for Entry Level learners.

The qualification handbook states:

“60 bricks = 1m^2 half brick and 120 bricks = 1m^2 1 brick.”

This activity helps learners understand these values and apply them to practical scenarios.

Aim:

To help learners confidently state and calculate the number of bricks required to build 1m^2 brick walls of different thicknesses.

Learning Objectives:

By the end of this activity, learners will be able to:

- Recall the number of bricks required for 1m^2 half-brick and 1-brick walls.
- Apply brick quantity values to simple calculations.
- Identify how wall thickness affects brick quantity.
- Use brick counts to plan small bricklaying tasks.
- Demonstrate understanding through written and practical activities.

Activity Overview.

Learners complete two structured tasks:

Task 1 – Brick Quantity Identification

Learners identify the correct number of bricks required for 1m^2 half-brick and 1-brick walls using information from the qualification handbook.

Task 2 – Brick Count Calculation Challenge (New Task)

Learners calculate brick quantities for different wall sizes (e.g., 0.5m^2 , 2m^2 , 3m^2) using simple multiplication and scaffolded examples.

Both tasks build confidence in brick quantity calculations and prepare learners for practical planning in the workshop.

Why this activity helps!

This activity:

- Reinforces essential knowledge needed for bricklaying planning.
- Builds numeracy skills through simple multiplication.
- Helps learners understand material requirements before building.
- Supports Entry Level learners with clear, simple, scaffolded steps.
- Encourages confidence in reading and applying specification information.
- Links directly to real-world bricklaying tasks and workshop preparation.

Student Instructions.

1. Complete **Task 1** by identifying the correct brick quantities for 1m^2 walls.
2. Move on to **Task 2** and calculate brick quantities for different wall sizes.
3. Show your working clearly.
4. Check your answers with your lecturer.
5. Keep your completed sheet for revision and assessment preparation.

Lecturer Instructions.

- Introduce the brick quantity values from the qualification handbook.
- Demonstrate how to calculate brick quantities using multiplication.
- Support learners through Task 1 and Task 2.
- Provide scaffolded examples for learners who need additional support.
- Check learner calculations and provide corrective feedback.
- Use the activity as formative assessment evidence.
- Recap key learning points at the end of the session.

Scaffolding Options.

- Provide a visual diagram showing 1m^2 half-brick and 1-brick walls.
- Offer a multiplication table for learners who need support.
- Use colour-coded examples for SEND learners.
- Provide partially completed calculations for lower-ability learners.
- Allow learners to work in pairs for confidence.

Differentiation Strategies

For SEND / Entry Level learners:

Use simplified numbers (e.g., only 0.5m^2 and 1m^2).
Provide step-by-step worked examples.
Offer tactile bricks or brick cards to support counting.

For higher-ability learners:

Introduce additional wall sizes (e.g., 4m^2 , 6m^2).
Ask learners to calculate brick quantities including wastage (e.g., +10%).
Encourage learners to explain how brick quantities affect planning and ordering.

Qualification Mapping Table.

Unit	Assessment Criterion	How This Activity Meets the Requirement
005 Constructing Half Brick Walling	1.4 State the number of bricks required to build a 1m ² brick wall	Learners identify and calculate brick quantities using handbook values.
	1.1–1.3 (supporting knowledge)	Activities reinforce PPE, materials, and tools through discussion and extension questions.

Task 1.

Task 1 – Brick Builder

A hands-on, LEGO-style brick-counting challenge using 3D-printed bricks.

Purpose

To help learners understand brick quantities by physically building a small wall using the printed version or 3D-printed bricks, then counting the bricks and measuring the wall length.

How It Works

Learners use your 3D-printed bricks (scaled to match real brick proportions) to build a small wall section — for example:

6 bricks per course × 4 courses = 24 bricks

This gives them practice in:

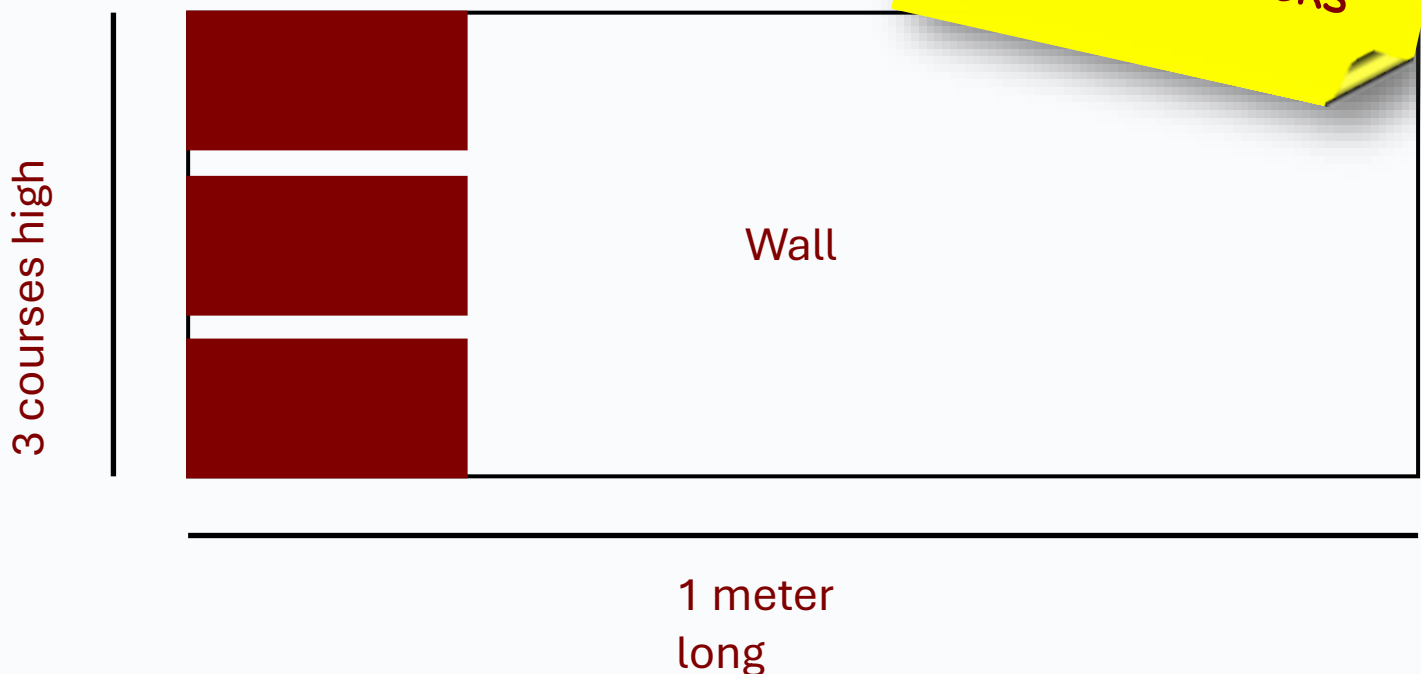
- Counting bricks
- Understanding courses
- Adding repeated numbers
- Measuring wall length
- Seeing how brick quantities relate to wall size

Task 1 - Handout.

Brick Size.



Wall Size.



Remember to add
in the 10mm
mortar gap in
between bricks

Task 1 - Brief.

Student Instructions

1. Collect your 3D-printed bricks.
2. Build a wall that is **6 bricks long and 4 courses high**.
3. Count how many bricks you used in total.
4. Write the number down.
5. Measure the length of your wall using a tape measure.
6. Record the measurement.
7. Answer the reflection questions.

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Participant Info.

Team:

F-BRICK WALL

Individual:



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Task 1: Counting Bricks..

Learners complete this table after building the wall:

Question	Your Answer
How many bricks per course?	_____
How many courses did you build?	_____
Total bricks used (bricks × courses)	_____
Length of your wall (mm/cm)	_____
Was your wall straight? (Yes/No)	_____
What would happen if you added one more course?	_____

Task 2: Quantity Challenge.

1. How many bricks are needed to build a 2m^2 half-brick thick wall?

(Use the rule: 60 bricks per m^2) Space for working:

Answer: _____

2. A wall area measures 3.5m^2 . How many bricks are needed for a half-brick thick wall?

Space for working:

Answer: _____

3. Your practical wall in Assignment 005 is 1790mm long and 450mm high.

Calculate the number of bricks needed for this wall.** (*Hint: convert mm → metres first*) Space for working:

Answer: _____

4. A learner is building a 1m^2 wall but accidentally orders facing bricks instead of common bricks.

How many bricks should they have ordered?** Space for working:

Answer: _____

Thank You.

We would like to take this opportunity to thank you for using this learning resource, we hope you found it useful.

If you have any questions regarding this or any of our learning resources, please contact us on:



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