Unit 205: Set out to form masonry structures

# Delivery guide

Unit information

This unit is about setting out to form masonry structures for brickwork, blockwork, and local materials.

On completion of this unit, learners will:

* understand resource selection
* understand working to a contract specification
* be able to comply with the given contract information to carry out the work safely and efficiently to the required specification

Learners may be introduced to this unit by asking themselves questions such as:

* What are the range of materials and equipment used when setting out masonry structures?
* What are the types of information that I will use?

Learning outcomes

1. Understand resource selection
2. Understand working to a contract specification
3. Comply with the given contract information to carry out the work efficiently to the required specification

Suggested resources

Textbook

Jones, M. (2019) *The City & Guilds Textbook: Bricklaying for the Level 2 Technical Certificate & Level 3 Advanced Technical Diploma (7905)*, *Level 2 & 3 Diploma (6705)* and *Level 2 Apprenticeship (9077)*. London: Hodder Education.

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| **Learning outcomes** | **Criteria** | **Delivery guidance** |
| --- | --- | --- |
| 1. Understand resource selection | * 1. Characteristics of the resources | * Learners to understand the range of resources that are used to set out buildings. * Learners to know of the information sources, e.g. drawings, specifications and schedules. * Learners to know how to use tape measures for linear measurement when setting out. * Learners to know how to position lines at ground level and below ground to establish wall positions and to maintain dimensional accuracy. * Learners to understand how to use the equipment, including ranging rods, site squares, lines, profiles, pegs. * Learners to understand the characteristics of the materials used to set out buildings in brick, block and stone. * Learners to know how to select, move and store resources. |
| * 1. Use of resources | * Learners to understand the methods used to establish levels from given points (benchmarks) and to transfer heights from datums. * Learners to know how to use an optical level to transfer heights using an appropriate instrument. * Learners to know how to identify inaccuracies in measurements and how to check for square by measurement. * Learners to know who to report problems to and to understand the reporting procedure. * Learners to know how to use a tape measure to check a building is square. |
| * 1. Organisational procedures to select resources | * Learners to understand the procedures to select the most appropriate methods to set out masonry structures on-site. * Learners to know how to establish building line, corners square and at angles, by following verbal/written instructions, drawings, specifications, schedules, etc. |
| * 1. Hazards | * Learners to understand the hazards that are present on-site when setting out buildings. * Learners to know how to follow a Risk Assessment Method Statement (RAMS). * Learners to know how to work in a safe manner when working with trenches, working at height and manual handling. * Learners to understand their responsibilities in the workplace in relation to hazards and reporting procedures. |
| 1. Understand working to a contract specification | * 1. Methods of work | * Learners to understand the correct work methods used when setting out. * Learners to know how to use drawings and specifications or how to give verbal instructions. * Learners to know how to identify given level points and datums. * Learners to know the methods used to transfer a level from a given point to establish a Temporary Bench Mark (TBM). |
| * 1. Tools and equipment | * Learners to know: * how to maintain the equipment used for setting out * the methods of maintaining equipment to ensure that it is fit for future use, including oiling tape measures, keeping equipment clean and dry and checking equipment for accuracy. |
| 1. Comply with the given contract information to carry out the work efficiently to the required specification | * 1. Demonstration of work skills to measure, mark out, level, plumb, position, transfer, fix and secure | * Learners to be able to identify the correct information to use when setting out, including drawings, plans, schedules, specifications, etc. * Learners to know how to set out wall positions on the ground and on foundation concrete by transferring positions of lines from fixed profiles. * Learners to know the safe methods of carrying out the work. * Learners to demonstrate the ability to work safely and responsibly. |
| * 1. Use and maintain hand tools and setting out equipment to determine dimensions and positions using line, level, depth, area, height, and angle to given working instructions to establish at least two of the following lines: * straight (180 degrees) * right angles (90 degrees) * openings | * Learners to understand: * how to establish wall positions by measurement * how to position openings accurately including windows, doors, service entries * how to transfer levels from given points to establish temporary datums * how to identify suitable tools and equipment for use in setting out and know how to maintain them, including tape measures, pegs, levels, optical levels, spirit levels, site squares, laser levels. |