

-SQA- SCOTTISH QUALIFICATIONS AUTHORITY

**Hanover House
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NATIONAL CERTIFICATE MODULE DESCRIPTOR

-Module Number-	4120631	-Session- 1991-92
-Superclass-	TG	

-Title-	GENERAL BUILDING OPERATIVES: USE OF HAND AND POWER TOOLS
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-DESCRIPTION-

Purpose	This module is designed to develop the knowledge and skills required to use hand and power tools.
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It is aimed at those following a career as a General Building Operative or in similar positions in the Building and Allied Industries.

Preferred Entry Level	4120551	General Building Operatives: Lifting and Handling Skills
	4120511	General Building Operatives: Construction Materials
	4120591	General Building Operatives: Scaffolding Safety

Outcomes	The student should: 1. identify the tool/tools appropriate to basic tasks required by the building trade; 2. use a range of tools required by the building trade; 3. carry out after-use maintenance on a range of tools required by the building trade.
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Assessment Procedures	Acceptable performance in the module will be satisfactory achievement of all the Performance Criteria specified for each Outcome.
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The following abbreviations are used below:

PC	Performance Criteria
IA	Instrument of Assessment

Note: The Outcomes and PCs are mandatory and cannot be altered. The IA may be altered by arrangement with SQA. (Where a range of performance is indicated, this should be regarded as an extension of the PCs and is therefore mandatory.)

OUTCOME 1 IDENTIFY THE TOOL/TOOLS APPROPRIATE TO BASIC TASKS REQUIRED BY THE BUILDING TRADE

PCs

- (a) The identification is correct in terms of:
- (i) the type of materials being processed;
 - (ii) the size of the product or process;
 - (iii) the nature of the task;
 - (iv) the working environment.

IA Matching Exercise

The student will be set an exercise to assess competence in the identification of the tool/tools appropriate to basic tasks required by the building trade.

The student will be presented with not less than two examples of each of the following:

- (i) a wheel barrow and shovel;
- (ii) a lump hammer and a cold chisel;
- (iii) a spirit level;
- (iv) a measuring tape;
- (v) a hand-held electric drill and assorted bits.

The student will be required to select the appropriate type and size of tool or tools for five tasks (to be outlined verbally). Individual tasks could require the use of tools from more than one of the above groups. Each tool listed above should be covered in at least one of the tasks.

Satisfactory achievement of the Outcome will be based on the student attaining all the Performance Criteria.

OUTCOME 2 USE A RANGE OF TOOLS REQUIRED BY THE BUILDING TRADE

PCs

- (a) The use of the tools is correct in terms of a safety check prior to use, in accordance with the following checklist:

Barrows

Tyres to be checked for full inflation. Axle-bearings to be oiled depending on site conditions.

Hammers

Hammer head to be chip-free and securely fixed.

Cold Chisels

End to be free from burring.

Cutting edge to be sharp and square.

Hand-held Electric Drill

Correct type of drill (110V) to be selected. All leads and insulation to be checked before use.

- (b) The operation of the tool is in accordance with the manufacturer's instructions.
- (c) The performance of the tool is to the required standard.
- (d) The use of the tool is correct in terms of:
 - (i) efficiency;
 - (ii) economical use;
 - (iii) speed.
- (e) The use of the tool is correct in terms of the appropriate protective or specialist clothing being worn as necessary.
- (f) Working practices followed by the student are safe and in accordance with current regulations.

IA Practical Exercise

The student will be set a series of practical exercises to test competence in using a range of tools required by the building trade.

The exercises will consist of five tasks as follows:

Task 1 - Use of a wheelbarrow and shovel

Demonstrate loading barrow with load positioned over axle and transportation of load via barrow run over soft/rough terrain. Barrow run to be constructed from suitable timber (minimum dimensions 200mm x 30mm) suitably supported where necessary.

Task 2 - Use of a lump hammer and a cold chisel

Demonstrate the cutting of a concrete building block or similar pre-cast item. (Eye protection to be worn).

Task 3 - Use of a spirit level

Demonstrate the checking of a level for true by reverse end and reverse face methods.

Task 4 - Use of a measuring tape

Demonstrate linear measurement up to 30 metres and record the same, within a 10mm in 30 metres tolerance.

Task 5 - Use of a hand-held electric drill

Demonstrate the ability to drill pre-cast concrete, masonry and wood.

Satisfactory achievement of the Outcome will be based on the student attaining all the Performance Criteria.

OUTCOME 3**CARRY OUT AFTER-USE MAINTENANCE ON A RANGE OF TOOLS REQUIRED BY THE BUILDING TRADE**

PCs

- (a) The disassembly of the tool (if appropriate) is in accordance with safe working practices and the manufacturer's recommendations.
- (b) The method of cleaning is appropriate to the type of tool.
- (c) The maintenance of the tools is correct in terms of a thorough check and identification of any work required to refurbish the tool/tools.
- (d) The methods of storage are appropriate to the type of tool.

IA Practical Exercise

The student will be set five practical exercises to test competence in after-use maintenance on a range of tools required by the building trade.

The exercises will consist of:

- (i) cleaning and maintaining a wheelbarrow;
- (ii) checking and maintaining cold chisels;
- (iii) checking a spirit level for true;
- (iv) cleaning and maintaining a range of tapes;
- (v) cleaning and maintaining a hand-held power drill.

The maintenance will include identifying where repairing or servicing is required, and placing into storage for future use.

Satisfactory achievement of the Outcome will be based on the student attaining all the Performance Criteria.

**The following sections of the descriptor are offered as guidance.
They are not mandatory.**

CONTENT/CONTEXT

Corresponding to Outcomes 1-3:

Small tools: fork, spade, shovel, pick, sledgehammer, pavier's maul, bricklayer's trowel, pointing trowel, steel float, panel/rip, cross cut saw, wood chisel, nail bar, pinch bar, screwdriver, plane, sack barrow, four wheel truck, contractor's barrow, lump hammer, bolster, cold chisel, hand drill, brace, hand power drill, spirit level, measuring tapes, lines and pins, bass broom.

SUGGESTED LEARNING AND TEACHING APPROACHES

This module may be undertaken under actual or simulated site conditions. Students will be expected to gain experience in handling and using a complete range of hand and power tools found on building sites.

Instruction and demonstration in the use and care of the tools and equipment should be followed by student participation. Tools and equipment should be made available to the student.

The safety element should be stressed at all times.

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