

Diploma in Wall and Floor Tiling at SCQF Level 4 (6810-13)

February 2016 Version 2



Qualification at a glance

Subject area	Construction
City & Guilds number	6810
Age group approved	16-18, 19+
Entry requirements	None
Assessment	Multiple choice, assignment
Support materials	Centre handbook Assessor guidance Task manual
Registration and certification	Consult the Walled Garden/Online Catalogue for last dates

Title and level	City & Guilds number
Diploma in Wall and Floor Tiling at SCQF Level 4	6810-13

Version and date	Change detail	Section
V2 February 2016	Unit 201 amended City & Guilds group statement amended Phone numbers deleted	Units Useful contacts Useful contacts



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1 Introduction

This document tells you what you need to do to deliver the qualification:

Area	Description
Who is the qualification for?	It is for learners who work or want to work as a tiler in the construction sector.
What does the qualification cover?	It allows learners to learn, develop and practise the skills required for employment and/or career progression in tiling. It covers the following skills: <ul style="list-style-type: none">• apply and fix tiling materials to wall and floor installations• handle and store tiling materials and components• mix tiling materials• prepare tiles for fixing to wall and floor installations• set out tiling components.
Is the qualification part of a framework or initiative?	No
What opportunities for progression are there?	it allows learners to progress into employment or to the following City & Guilds qualification: <ul style="list-style-type: none">• Diploma in Wall & Floor Tiling at SCQF Level 5.

Structure

To achieve the **Diploma in Wall and Floor Tiling at SCQF Level 4 (6810-13)**, learners must achieve **40** credits from the mandatory units below.

City & Guilds unit no.	Unit title	Credit value
101	Principles of building construction, information and communication	6
126	Preparing tiles for fixing to wall and floor installations	9
127	Apply and fix tiling materials to wall and floor tiling installations	10
128	Set out tiling components	3
129	Mix tiling materials	3
130	Handle and store tiling materials and accessories	2
201	Health, safety and welfare in construction	7



2 Centre requirements

Approval

The approval process for Construction qualifications is available at our website. Please visit www.cityandguilds.com/construction for further information.

Resource requirements

Centres will have well equipped workshops with a comprehensive range of hand and portable power tools that meet current industry standards. All powered equipment should be well maintained and PAT certified. Facilities for grinding and sharpening hand tools will be available. Centres will have special designated areas within Construction operations workshops (cubicles or project areas) allowing candidates to practice the requirements of the units and carry out the Practical Assignments.

Centre staffing

All staff who assess (tutor/deliver) this qualification must:

- have recent relevant experience in the specific area they will be teaching;
- be technically competent in the area for which they are delivering training and/or have experience of providing training;
- have a CV available demonstrating relevant experience and any qualifications held.

All staff who quality assure this qualification must:

- have a good working knowledge and experience within the construction industry;
- have an established strategy and documentary audit trail of internal quality assurance;
- have a good working knowledge of quality assurance procedures;
- have a CV available demonstrating relevant experience and any qualifications held.

While the Assessor/Verifier (A/V) units/TAQA are valued as qualifications for centre staff, they are not currently a requirement for this SCQF qualification. However, we encourage trainers and assessors to qualify to the current TAQA standard.

Continuing professional development (CPD)

Centres must support their staff to ensure that they have current knowledge of the occupational area, that delivery, mentoring, training, assessment and verification is in line with best practice, and that it takes account of any national or legislative developments.

Learner entry requirements

City & Guilds does not set entry requirements for this qualification. However, centres must ensure that learners have the potential and opportunity to gain the qualification successfully.

Age restrictions

City & Guilds cannot accept any registrations for learners under 16 as this qualification is not approved for under 16s.



3 Delivering the qualification

Initial assessment and induction

An initial assessment of each learner should be made before the start of their programme to identify:

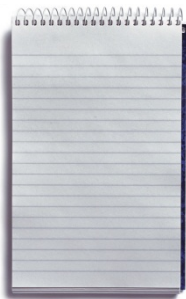
- if the learner has any specific training needs,
- support and guidance they may need when working towards their qualification
- any units they have already completed, or credit they have accumulated which is relevant to the qualification
- the appropriate type and level of qualification.

We recommend that centres provide an induction programme so the learner fully understands the requirements of the qualification, their responsibilities as a learner, and the responsibilities of the centre. This information can be recorded on a learning contract.

Support materials

The following resources are available for this qualification:

Description	How to access
Assessor guidance	www.cityandguilds.com
Task manual	www.cityandguilds.com
Qualification approval form	www.cityandguilds.com/construction
SmartScreen	www.cityandguilds.com



4 Assessment

Unit	Title	Assessment method	Where to obtain assessment materials
101	Principles of building construction, information and communication	City & Guilds e-volve multiple choice test. The test covers all of the knowledge in the unit.	Examinations provided on e-volve.
201	Health, safety and welfare in construction	City & Guilds e-volve multiple choice test. The test covers all of the knowledge in the unit.	Examinations provided on e-volve.
126	Preparing tiles for fixing to wall and floor installations	Multiple choice question paper, covering knowledge outcomes. Practical assignment, covering performance outcomes. Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out	www.cityandguilds.com
127	Apply and fix tiling materials to wall and floor tiling installations	Multiple choice question paper, covering knowledge outcomes. Practical assignment, covering performance outcomes. Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out	www.cityandguilds.com

Unit	Title	Assessment method	Where to obtain assessment materials
128	Set out tiling components	<p>Multiple choice question paper, covering knowledge outcomes.</p> <p>Practical assignment, covering performance outcomes.</p> <p>Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out</p>	www.cityandguilds.com
129	Mix tiling materials	<p>Multiple choice question paper, covering knowledge outcomes.</p> <p>Practical assignment, covering performance outcomes.</p> <p>Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out</p>	www.cityandguilds.com
130	Handle and store tiling materials and accessories	<p>Multiple choice question paper, covering knowledge outcomes.</p> <p>Practical assignment, covering performance outcomes.</p> <p>Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out</p>	www.cityandguilds.com

Test specifications

The way the knowledge is covered by each test is laid out in the tables below:

Test 1: Unit 101 Principles of building construction, information and communication

Duration: 1 hour

Unit	Outcome	No. of questions	%
101	1. Know how to identify information used in the workplace	7	20
	2. Know about environmental consideration in relation to construction	2	5.5
	3. Know about construction of foundations	4	11.5
	4. Know about construction of internal and external walls	8	23
	5. Know about construction of floors	4	11.5
	6. Know about construction of roofs	6	17
	7. Know how to communicate in the workplace	4	11.5
	Total	35	100

Test 2: Unit 201/601 Health, safety and welfare in construction

Duration: 1 hour

Unit	Outcome	No. of questions	%
201/601	1. Know the health and safety regulations, roles and responsibilities	7	17.5
	2. Know accident and emergency reporting procedures and documentation	5	12.5
	3. Know how to identify hazards in the workplace	7	17.5
	4. Know about health and welfare in the workplace	3	7.5
	5. Know about how to handle materials and equipment safely	2	.5
	6. Know about access equipment and working at heights	3	7.5
	7. Know how to work with electrical equipment in the workplace	4	10
	8. Know how to use personal protective equipment (PPE)	5	12.5
	9. Know the cause of fire and fire emergency procedures	4	10
	Total	40	100

Test 3: Unit 126 Preparing tiles for fixing to wall and floor installations

Duration: 40 minutes

Unit	Outcome	No. of questions	%
126	1. Know how to prepare tiles and accessories for fixing	10	50
	3. Know how to prepare and cut tiles prior to fixing	10	50
	Total	20	100

Test 4: Unit 127 Apply and fix tiling materials to wall and floor tiling installations

Duration: 40 minutes

Unit	Outcome	No. of questions	%
127	1. Know how to fix tiles and accessories	11	55
	2. Know how to apply materials to backgrounds to receive tiling	4	20
	4. Know how to fix tiles to background surfaces	2	10
	6. Know how to apply finishing materials to background surfaces	3	15
Total		20	100

Test 5: Unit 128 Set out tiling components

Duration: 30 minutes

Unit	Outcome	No. of questions	%
128	1. Know how to prepare to receive and apply tiling materials	10	67
	3. Know how to set out tiling materials	5	33
Total		15	100

Test 6: Unit 129 Mix tiling materials

Duration: 30 minutes

Unit	Outcome	No. of questions	%
129	1. Know how to prepare and mix materials	8	53
	3. Know how to gauge and mix materials	7	47
Total		15	100

Test 7: Unit 130 Handle and store tiling materials and accessories
Duration: 30 minutes

Unit	Outcome	No. of questions	%
130	1. Know how to handle and store tiling materials and accessories	5	25
	3. Know how to handle tiling materials and accessories manually	2	10
	5. Know how to store tiling materials and accessories	11	55
	7. Know how to check and record incoming materials	2	10
	Total	20	100



5 Units

Structure of units

These units each have the following:

- City & Guilds reference number
- title
- level
- credit value
- unit aim
- learning outcomes which are comprised of a number of assessment criteria

Range explained:

Range gives further scope on what areas within an assessment criteria must be covered. The range in a unit **must** be taught to learners and parts of the range will be assessed.

Glossary of terms used in the units

Abutment	To fit against – eg floor tiles fitting to a base
Additive	Plasticisers, primers, bonding agent sealers
Alignment	Checking for straight, flat or lining up a number of components, structures or surfaces
Applied backgrounds	Fabricated structures covered with cladding material eg timber or metal studding clad with sheet material, plasterboard, plywood, composite board
Abrading	Rubbing down, smoothing off background surfaces, trimming tile edges using carborundum stones, files or disc cutters
Bedding	Application of tile adhesive or mortar to support tiles, forming a bond between background surfaces and tiles
Bonding	Adhesion between background surfaces and applies surfaces finishes
Biscuit	The material of which the basic body of a tile is formed – determines the height, hardness and thickness
Centering	Mid-point measurements from extreme ends- horizontal wall to wall and vertically floor to ceiling height
Cill	Base of window opening
Datum	Common mark or level established in an accessible area for general use during level and measuring activities

DPC	Damp Proof Course-bitum-based, lead, PVC
De-greasing	Cleaning background surfaces or tiles with detergents and water/chemical application
Dust pressed	Refers to tile production methods used whereby the material used for the tile body (biscuit) is finely ground
Epoxide	Special adhesives and grouts two/three pack comprising powder and the resin accelerator
Fixing rule	Piece of timber batten fixed to backgrounds for the start of wall tile application usually for second tiling course from floor level
Gauging	Measuring the exact quantities of materials prior to mixing
Gauge rod/staff	Piece of timber lath marked with tile sizes used in setting out and centring prior to application. Used fir horizontally and vertically to assess cut tiles sizes and internal and external angles, cills, soffits
Grid system	Accurate measurements of equals sizes set up I squared form (eg 1 metre squares) marked accurately on wall or floor areas to establish tile designs and patterns from detailed scale drawings
Glaze	High gloss surface finish to tiles
Grouting tiles	Filling the joints between tiles
Hygrometer	Measures the relative humidity and air temperature. This determines if the conditions are acceptable for tile application
Jambs	Sides of doorway openings
Levelling	Using a spirit level to check and mark levels
Laying	Application of floor tiles
Manual handling	Lifting and moving materials by human effort. (kinetic lifting) safely
Mechanical Key	Forming a strong bond between background surfaces and tiles to be applied. Also applies to plaster or render application. The key id formed by racking out mortar joints, indenting surfaces and applying slurry
Mitres	Edge cut at 45° to form angle when two are bought together
Personal Protective Equipment (PPE)	For example, safety helmet, industrial boots, goggles, ear protectors, respirator/masks
Proportioning	Measuring materials prior to fixing into the current specified ratio eg 6:1 sand/cement – six buckets to one bucket
Plumbing	Establishing a vertical line accurately by using a plumb line and bob or spirit – level and straight level
Plumb bob	Heavy weight used with a lime to establish vertical lines accurately. Made usually in brass/lead

Promiter/damp meter	Determines the amount of moisture present in wall or floor surfaces. Indicates if the surface is suitable or not for tiling
Reveals	Sides to window openings or service access
Sealants	Used for sealing joints when movement occurs- materials are usually acrylic silicon
SBR	Styrene Butadiene Rubber (bonding agent)

Unit 101

Principles of building construction, information and communication

Level:	4
Credit value:	6
Aim:	<p>The aim of this unit is to provide the learner with the knowledge of building methods and construction technology in relation to:</p> <ul style="list-style-type: none">• understanding a range of building materials used within the construction industry and their suitability to the construction of modern buildings• processes for disseminating information• basic concepts of effective communication.

Learning outcome
The learner will: 1. know how to identify information used in the workplace
Assessment criteria
The learner can: 1.1 identify information sources used in construction 1.2 identify the scale to use with drawings in relation to BS1192 1.3 identify symbols and hatchings from drawings in relation to BS1192 1.4 state the purpose of datums used in construction.

Range
Information sources Drawings, schedule, specifications, programme of work.
Drawings Block plan, site plan, detail, section.
Symbols WC, sink, bath, door, window.
Hatchings Brickwork, timber (wrot and unwrot), blockwork, concrete, hardcore, sub soil/earth, insulation, damp proof course (DPC),damp proof membrane (DPM).

Learning outcome
The learner will: 2. know about environmental considerations in relation to construction
Assessment criteria

The learner can:
2.1 state **features** of a building that improve efficiency
2.2 state the importance of **waste management**.

Range

Features
Design features that reduce consumption of water and energy: insulation and water harvesting/conservation.

Waste management
Reduce, reuse, recycle.

Learning outcome

The learner will:
3. know about construction of foundations.

Assessment criteria

The learner can:
3.1 identify **types of foundations**
3.2 identify **materials** used in concrete foundations
3.3 state the **information** required to work out the quantity of materials used in a foundation
3.4 calculate volume of concrete used in single strip foundation.

Range

Types of foundations
Strip, raft, pile, pad.

Materials
Course aggregate, fine aggregate, cement, water, steel reinforcement.

Information
Specification, dimensions.

Learning outcome
The learner will: 4. know about construction of internal and external walls.
Assessment criteria
The learner can: 4.1 identify types of internal and external walls 4.2 identify external walling materials and components 4.3 identify internal walling materials and components 4.4 calculate the area of a wall 4.5 identify materials and mix ratios used in mortar 4.6 identify wall finishes 4.7 state paint systems for new plaster.

Range
Types Solid, cavity, timber frame, stud.
External walling materials and components Brick, block, timber, insulation, Damp proof course (DPC), wall ties.
Internal walling materials and components Stud (timber, metal), low density blockwork, plasterboard, plaster.
Materials Sand, lime, plasticiser, cement.
Wall finishes Plaster, render.
Paint systems Mist -coat/seal, two coats of emulsion.

Learning outcome
The learner will: 5. know about construction of floors.
Assessment criteria
The learner can: 5.1 identify types of floors 5.2 identify components of solid concrete ground floors 5.3 identify components of timber floors.

Range
Types of floors Solid concrete ground, timber (ground, upper).
Components of solid concrete ground floors Hardcore, blinding sand, damp proof membrane (DPM), insulation, oversite concrete, screed.
Components of timber Oversite concrete, sleeper walls, wall plates, DPC, joists, insulation, floor covering.

Learning outcome
The learner will: 6. know about construction of roofs.
Assessment criteria
The learner can: 6.1 identify types of roofs 6.2 identify components of roofs 6.3 state paint systems for timber 6.4 calculate the linear quantity of fascia board 6.5 state the importance of thermal insulation in a roof.

Range
Types of roofs Gable-ended, flat, hipped, lean-to.
Roof components Ridge, batten/lathe, fascia, wall plate, felt, slate/tile, truss rafters, insulation, joists, wall plate straps.
Paint systems for timber Knotting, prime, undercoat, gloss, (water-based and solvent-based).

Learning outcome
The learner will: 7. know how to communicate in the workplace
Assessment criteria
The learner can: 7.1 list job roles within construction 7.2 state information needed when recording a message 7.3 list benefits of clear and effective communication 7.4 list benefits of positive communication with colleagues and others 7.5 identify communication methods used to relay information to colleagues.

Range
Job roles Professional, technician, trade, general operative.
Information Date, time, content, contact name and details.
Benefits (AC 7.3) Preventing errors, safe working, improved productivity.
Benefits (AC 7.4) Improved motivation, avoid conflict, complying with equality and diversity.
Communication methods Verbal, memos, telephone, email, radio, text messages.

Unit 126

Preparing tiles for fixing to wall and floor installations

Level:	4
Credit value:	9
Aim:	The aim of this unit is to provide the learner with the skills and knowledge required to prepare tiles for fixing to a variety of wall and floor installations.

Learning outcome
The learner will: 1. know how to prepare tiles and accessories for fixing.
Assessment criteria
The learner can: 1.1 state potential hazards associated with preparing tiles and accessories for fixing 1.2 state types of information sources relating to preparing tiles 1.3 list types of tiling and accessories 1.4 state personal protective equipment required for preparing tiles and accessories 1.5 list tools and equipment required for preparing tiles and accessories 1.6 state cleaning and maintenance requirements for tools and equipment 1.7 state methods of protecting work and surrounding areas from damage in accordance with instructions.

Range
Hazards Dust, debris, slips, trips and falls, irritants, eye damage, electricity, spillages, abrasive wheels
Information sources Manufacturer's technical information, specific instructions basic drawings and specifications, batch identification numbers
Tiling and accessories Tiling: wall and floor accessories: trims (edge, angle & sealing), movement/expansion joints
Personal protective equipment (PPE) Hard hat, dust masks/respirators, eye protection, ear protection, high visibility vests, gloves, knee pads, safety footwear, appropriate clothing - nothing loose fitting, jewellery, overalls/protective clothing.
Tools and equipment

<p>Tools: hand operated tile cutter, light & heavy duty tile cutters, hammers, tilting trowels (serrating trowel, gauging,/bucket trowel) tile nippers/nibblers/mosaic cutters. Electric cutting equipment, scribes, mitre block, spirit level, chisels, files, trimming tools , hacksaws, dividers. NB: use of retractable knives for unpacking tiles.</p> <p>Equipment: tapes, rules, straight edges, squares, compasses, tile cutters sponges, polishing cloths, buckets.</p> <p>Methods</p> <p>Sheet materials, taping to secure, dust sheets/protective coverings.</p>
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<p>Learning outcome</p> <p>The learner will:</p> <p>2. be able to prepare tiles and accessories for fixing.</p>
<p>Assessment criteria</p> <p>The learner can:</p> <p>2.1 follow a risk assessment for preparing tiling and accessories for fixing</p> <p>2.2 interpret instructions for preparation of tiling and accessories for fixing</p> <p>2.3 complete materials list of materials and accessories in accordance with instructions</p> <p>2.4 select personal protective equipment for preparing tiles and accessories for fixing</p> <p>2.5 select hand and power tools to prepare tiles and accessories for fixing.</p>

<p>Range</p>
<p>Risk assessment</p> <p>Control methods, method of work, manufacturer’s technical information, statutory regulations and official guidance.</p>
<p>Instructions</p> <p>Manufacturer’s specific instructions, batch identification numbers, BS EN 14411 Standards for classification of ceramic tiles and BS EN 12057 for classification of natural stone.</p>
<p>Materials list</p> <p>Type, size, quantity, location, check for irregularities.</p> <p>Materials: tiles, adhesives, grout, sealant, tile trims, spacer pegs, protective sheet materials.</p>
<p>Personal protective equipment (PPE)</p> <p>Hard hat, dust mask /respirators, eye protection, ear protection high visibility vests, , gloves, barrier cream, knee pads, safety footwear, appropriate clothing - nothing loose fitting, jewellery, overalls/protective clothing.</p>
<p>Hand and power tools</p> <p>Hand tools: hand operated tile cutter, light and heavy duty tile cutters, lock boy and hammer, hammers, punches, scribes, tiling and standard pincers, chisels, files, trowels, screwdrivers, trimming tools, mitre block, hacksaws, brushes, shovels.</p> <p>NB: use of retractable knives for unpacking tiles.</p> <p>Equipment: chalk line, serrators, squeegee/grout float, gauging trowel,</p>

levels, battens, pencils, plumb line, carborundum stone, sponges, buckets, tapes, rules, straight edges, squares, calculator, dust sheets
Power tools: disc cutters, grinders, wet saw, mixing paddle and drill.

Learning outcome
The learner will: 3. know how to prepare and cut tiles and accessories prior to fixing.
Assessment criteria
The learner can: 3.1 state methods used for estimating the required amount of tiles and accessories for fixing tiles 3.2 state methods used to cut tiles and accessories for fixing 3.3 state problems that could occur due to under and over estimating of resources for fixing 3.4 state importance of maintaining a clear working area 3.5 follow current environmental and health and safety regulations .

Range
Methods (AC3.1) Basic calculations and dimensions: addition, subtraction, height, length, breadth, area, quantities, percentage wastage, measuring and marking out using centring method, size of tiles and trims, 3:4: 5 method.
Methods (AC3.2) Different hand tools back edging, marking and cutting tiles to fit around different shapes mitre angles to external corners, wet cutting (electric cutters). Different types of tiles: wall and floor. Accessories: trims (edge, angle and sealing).
Problems Under estimating: delays in completing the job, cost, time, potential problems associated with sourcing different batches of tiles Over estimating: surplus materials may not be able to be re used, cost implications.
Importance Aiding efficient and productive working, safety – self and others, cost implications.
Environmental and health and safety regulations Product data sheet, manufacturers' technical information, HSE, risk assessments, COSHH.

Learning outcome

The learner will:

4. be able to cut tiles and accessories prior to fixing.

Assessment criteria

The learner can:

- 4.1 follow a risk assessment for tasks
- 4.2 **calculate** required number of tiles and accessories from instructions
- 4.3 **protect** work and surrounding areas from damage in accordance with organisational requirements
- 4.4 **cut** and **prepare** required quantity of tiles and accessories for a task in accordance with instructions
- 4.5 follow current **environmental and health and safety regulations**.

Range**Calculate**

Area and amount of tiles per metre square using a range of tiles.

Protect

Task specific to environment, against damage from general workplace activities, other occupations and environmental conditions.

Cut

Marking and cutting wall and floor tiles to shape and size, cuts, to be: straight, angled, radius, slots. Through a combination of manual and wet cutting, mitring to internal and external corners.

Prepare

Wall and floor tiles: trims, using relevant hand/manual tools and power tools, using appropriate PPE.

Environmental and health and safety regulations

Disposing and recycle use of materials and waste in designated storage areas, containers/ skips, ensuring work area is left tidy on completion of work.

Unit 127

Apply and fix tiling materials to wall and floor tiling installations

Level:	4
Credit value:	10
Aim:	The aim of this unit is to provide the learner with the skills and knowledge required to apply and fix tiling materials to a variety of wall and floor installations.

Learning outcome
The learner will: 1. know how to prepare tiles and accessories for fixing.
Assessment criteria
The learner can: 1.1 state potential hazards associated with fixing tiles to background surfaces 1.2 state types of information sources relating to fixing of tiles 1.3 identify suitability of backgrounds before application of materials 1.4 state materials used for fixing tiles to backgrounds before application 1.5 state personal protective equipment required for fixing tiles and accessories 1.6 list tools and equipment required for fixing tiles to background surfaces 1.7 state cleaning and maintenance requirements for tools and equipment 1.8 state methods of protecting work and surrounding areas from damage in accordance with instructions.

Range
Hazards Dust, debris, slips, trips and falls, irritants, eye damage, electricity, spillages, abrasive wheels.
Information sources Manufacturer's technical information and specific instructions, basic drawings and specifications, batch identification numbers, relevant British Standards (classifications of ceramic tiles, classification of natural stone).
Backgrounds New and existing areas -importance of compatibility between background and materials cleanliness, dryness, flatness, true and square,

plumb level and soundness in accordance relevant British Standards, a: gypsum based b: cementitious eg backer board.

Materials

Admixes, primers, bonding agents, levelling/ smoothing compounds, tile adhesive, tiles, grout, sealant.

Personal protective equipment (PPE)

Hard hat, dust mask /respirators, eye protection, ear protection high visibility vests, gloves, barrier cream, knel pads, safety footwear, , appropriate clothing - nothing loose fitting, jewellery, overalls/ protective clothing.

Tools and equipment:

Tools: hand operated tile cutter, light and heavy duty tile cutters, hammers, tilting trowels (serrating trowel, gauging/bucket trowel) tile nippers/nibblers/mosaic cutters, sealant gun, lock boy and hammer, hammers, carborundum stone, mixing paddle and drill, rubber mallet, electric cutting equipment, scribes, mitre block, spirit level, chisels, files, trimming tools , hacksaws, screwdrivers, dividers.

NB: use of retractable knives for unpacking tiles.

Equipment: manual hand cutter, tapes, rules, chalk line, straight edges, squares, compasses, tile cutters, sponges, squeegees, grout float, wash boy and sponge float, scrapers, roller and tray, brushes, battens, nails/screws, timber, polishing cloths, buckets, cloths, tapes, rules, straight edges, squares, radius cutters, dividers, calculator, moving and handling aids, protective sheets.

Methods

Sheet materials, taping to secure, dust sheets/protective coverings.

Learning outcome

The learner will:

2. know how to apply materials to backgrounds to receive tiling.

Assessment criteria

The learner can:

2.1 state **methods** used for applying materials to background surfaces

2.2 interpret **instructions** for fixing tiles to background surfaces

2.3 state the **importance** of **maintaining a clear working area**.

Range

Methods

Serrating technique, applying primers by brush, roller, spray or trowel tanking

Instructions

Manufacturer's specific information, organisational information, relevant British Standards for classification of bonding agents and primers, for cement-bonded particle boards.

Importance

Aiding efficient and productive working, safety- self and others, cost

implications.

Learning outcome
The learner will: 3. be able to apply materials to receive tiling.
Assessment criteria
The learner can: 3.1 apply materials to backgrounds from given instructions 3.2 protect work and surrounding areas from damage in accordance with organisational requirements 3.3 follow current environmental and health and safety regulations .

Range
Materials to backgrounds Check backgrounds, new and existing to receive ceramic tiles.
Protect Protect work areas from general work place activities, occupations and environmental conditions ie damp, water, sun.
Environmental and health and safety regulations Disposing and recycle of materials and waste in designated storage areas, containers/ skips ensuring the work area is left tidy on completion of work.

Learning outcome
The learner will: 4. know how to fix tiles to background surfaces.
Assessment criteria
The learner can: 4.1 state methods for positioning and fixing tiles and accessories.

Range
Methods Gauging/pinch /staff rods – making and using gauging rod(s) for the purpose of ‘setting out’, battens, use of spirit levels /straight edges, water and laser levels working from string and chalk lines, bedding/fixing to background surface.

Learning outcome
The learner will: 5. be able to fix tiles to background surfaces.
Assessment criteria
The learner can: 5.1 position and fix tiles and accessories in accordance with instructions 5.2 follow current environmental and health and safety regulations .

Range
Position and fix tiles and accessories Fixing battens to wall, use of spirit level and straight edge, , positioning and fixing of different types and sizes of tiles to prepared backgrounds, backgrounds and minimum areas: including internal and external corners. Materials: various tiles. Tools and equipment. Adhesives: pre mixed, powdered mix. Accessories: trims (edge, angle and sealing) movement joints, tile spacers.
Environmental and health and safety regulations Dispose of waste: segregation for disposal of materials and waste in designated storage areas, containers skips, ensuring the work area is left clean and tidy on completion of work. Use of PPE.

Learning outcome
The learner will: 6. know how to apply finishing materials to background surfaces.
Assessment criteria
The learner can: 6.1 state methods for grouting tiles 6.2 state methods for applying sealants to tiling applications.

Range
Methods Gauging/pinch /staff rods – making and using gauging rod(s) for the purpose of ‘setting out’, battens, use of spirit levels/straight edges, water and laser levels working from string and chalk lines, bedding/fixing to background surface.
Sealants Flexible sealants, liquid sealants – impregnators.

Learning outcome

The learner will:

7. be able to apply finishing materials to tiled surfaces.

Assessment criteria

The learner can:

- 7.1 apply grout to **tiled surfaces**
- 7.2 apply sealants to **tiled surfaces** and backgrounds for completion
- 7.3 follow current **environmental and health and safety regulations**.

Range**Tiled surfaces (AC7.1)**

New and existing ceramic tiled surfaces, use of appropriate grouting tools to achieve required standard and finish.

Tiled surfaces (AC7.2)

New and existing surface sealants - silicone, sealers.

Environmental and health and safety regulations:

Dispose of waste: segregation for disposal of materials and waste in designated storage areas, containers skips, ensuring the work area is left clean and tidy on completion of work. Use of PPE.

Unit 128

Set out tiling components

Level:	4
Credit value:	3
Aim:	The aim of this unit is to provide the learner with the skills and knowledge required to set out tiling components.

Learning outcome
The learner will: 1. know how to prepare to receive and apply tiling materials.
Assessment criteria
The learner can: 1.1 state purposes of information sources required to carry out the work 1.2 identify materials, components, tools and equipment to be used to carry out the work 1.3 state reasons for preparing area and surrounding areas prior to work.

Range
Information sources Basic drawings, scales, symbols, abbreviations, delivery notes, job sheets, specification, resources, risk assessment.
Materials and components Screeds, concrete, plaster, render, wall boards, tiles, adhesives, grout.
Tools and equipment Spirit, water and laser level, tapes, rules, straight edges, squares, string and chalk line, 3:4:5.
Reasons Suitability of backgrounds- flat, dry, sound, clean, suitability of working areas - protecting surrounding area, Health and Safety considerations, other trades.

Learning outcome
The learner will: 2. be able to prepare to receive and apply tiling materials.
Assessment criteria
The learner can: 2.1 follow risk assessment whilst carrying out tasks 2.2 identify type, size, quantity and position of materials in accordance with manufacturer's instructions 2.3 select materials, tools and equipment to be used to carry out work 2.4 prepare area and surrounding areas prior to work.

Range
Materials: tiles, spacers Hand and power tools Hand tools: hand operated tile cutter, light and heavy duty tile cutters, lock boy and hammer, hammers, punches, saws, scribes, tiling and standard pincers, chisels, files, trowels, screwdrivers, trimming tools, mitre block, hacksaws, brushes. Power tools: wet saw, mixing paddle and drill, cordless drill/driver. Equipment chalk line, string line, plumb line, serrators, squeegee/grout float, gauge rod, gauging trowel, levels, battens, pencils, carborundum stone, sponges, buckets, tapes, rules, straight edges, squares, calculator, dust sheets NB: use of retractable knives for unpacking tiles.

Learning outcome
The learner will: 3. know how to set out tiling materials.
Assessment criteria
The learner can: 3.1 state procedures for setting out in accordance with specification and work instructions.

Range
Procedures Setting out by builders square, 3:4:5 method, levelling by spirit level and straight edge, plumbing, methods using plumb bob/level, centring method, identification of datum points/line, checking dimensions using tape measure and drawings, basic mathematics.

Learning outcome

The learner will:

4. be able to set out tiling materials.

Assessment criteria

The learner can:

- 4.1 **set out** accurately in accordance with specification and work instructions
- 4.2 ensure work area is left clean and tidy on completion of work
- 4.3 follow current **environmental and health and safety regulations**.

Range**Set out**

Method: establish 'setting' out points, setting out by builders square, 3:4:5 method, levelling by spirit level and straight edge, plumbing, methods using plumb bob/level, making and using a gauging rod for alignment and size of tile(s) being used, centring method, identification of datum points, reasons for checking dimensions using tape measure and drawings, basic mathematics.

Environmental and health and safety regulations

Hazards, debris, dust and other obstacles, safe disposal and storage of materials in accordance with regulations. Use of PPE.

Unit 129

Mix tiling materials

Level:	4
Credit value:	3
Aim:	The aim of this unit is to provide the learner with the skills and knowledge required to mix tiling materials.

Learning outcome
The learner will: 1. know how to prepare and mix materials.
Assessment criteria
The learner can: 1.1 state purposes of information sources required to carry out the work 1.2 identify materials and tools and equipment to be used to carry out work.

Range
Information sources Basic drawings, scales, symbols, abbreviations, delivery notes, job sheets, specification, resources, risk assessment, manufacturers' information.
Materials Aggregates, cement, concrete, sand, plaster, adhesives, grout.
Tools and equipment Drill and paddle mixers, cement mixers, ancillaries eg wheelbarrow and shovel.

Learning outcome
The learner will: 2. be able to prepare and mix materials.
Assessment criteria
The learner can: 2.1 use information sources when mixing materials 2.2 identify type, size, quantity and position of materials in accordance with manufacturer's instructions 2.3 select materials and equipment used to carry out work 2.4 follow current environmental and health and safety regulations .

Range
Information sources

Basic drawings, scales, symbols, abbreviations, delivery notes, job sheets, specification, resources, risk assessment, manufacturer's information.

Materials

Aggregates, cement, plaster, adhesives, grout, sealant.

Equipment

Drill and paddle mixers, cement mixers, gauging trowel, calculator, dust sheets, ancillaries eg wheelbarrow and shovel.

Environmental and health and safety regulations

Waste Management Act, COSHH, PUWER, Manual Handling, use of PPE.

Learning outcome

The learner will:

- 3. know how to gauge and mix materials.

Assessment criteria

The learner can:

- 3.1 state **procedures** for gauging and mixing **materials** in accordance with specification and instructions
- 3.2 state the importance of **disposing** of **materials** in accordance with regulations.

Range

Procedures

Information sources: manufacturers' technical information, equipment required for mixing, basic calculations, uses and limitations of the materials, methods for reporting defects in materials, maximum time for use of materials, materials by hand mixing, manual handling and lifting techniques.

Gauging: measurements, mix ratios, basic calculations: volume and area

Materials

Concrete, screeds, levelling compounds, plaster, render, adhesives, grout.

Disposing

Skips, hazardous waste, recycling.

Learning outcome

The learner will:

4. be able to gauge and mix materials.

Assessment criteria

The learner can:

- 4.1 locate **working areas** suitable for mixing materials
- 4.2 use **methods** to gauge and mix materials in accordance with specification and work instructions
- 4.3 ensure work area is left clean and tidy on completion of work
- 4.4 dispose of **materials** in accordance with legislation
- 4.5 follow current **environmental and health and safety regulations**.

Range**Working areas**

Hard surface, clean clear of debris and obstacles.

Methods

Correct materials are used for mixing, use of correct mix proportions for the work, materials are fully integrated correctly, mix is to a workable consistency following manufacturer's guidelines.

Materials

Concrete, screeds, levelling compounds, plaster, render, adhesives, grout.

Environmental and health and safety regulations

Hazards, debris, dust and other obstacles, safe disposal and storage of materials in accordance with regulations. Use of PPE.

Unit 130

Handle and store tiling materials and accessories

Level:	4
Credit value:	2
Aim:	The aim of this unit is to provide the learner with the skills and knowledge required to handle and store tiling materials.

Learning outcome
The learner will: 1. know how to handle and store tiling materials and accessories.
Assessment criteria
The learner can: 1.1 state purposes of information sources required to carry out the work 1.2 state defects that can be found in materials and accessories .

Range
Information sources Manufacturer's technical information, manufacturer's COSHH data, health and safety legislation. Job sheet, specification, delivery notes, basic drawings, online information, written and oral instructions, risk assessment.
Defects Damage of materials, shade variation, different codes/batch numbers out of date, size/shape variation.
Materials and accessories Adhesives, grout, trims, spacers, tiles, screeds, concrete, plaster, render.

Learning outcome
The learner will: 2. be able to prepare to handle and store tiling materials and accessories.
Assessment criteria
The learner can: 2.1 follow a risk assessment whilst carrying out work 2.2 select materials and accessories from information sources 2.3 identify defects in materials and accessories .

Range
Materials and accessories Adhesives, grout, trims, spacers, tiles, screeds, concrete, plaster, render, battens.
Information sources Manufacturer's technical information, manufacturer's COSHH data, health and safety legislation. Job sheet, specification, delivery notes, basic drawings.
Defects Damage of materials, shade variation, different codes/batch numbers out of date, size/shape variation.

Learning outcome
The learner will: 3. know how to handle tiling materials and accessories manually.
Assessment criteria
The learner can: 3.1 state manual handling techniques and procedures used when handling materials and accessories.

Range
Manual handling techniques Kinetic lifting, team lifting, Manual Handling Operations Regulations mechanical aids. Manual handling procedures: ensuring the route or area is safe and clear walking with materials loads and accessories, correct use of Personal Protective Equipment (PPE).

Learning outcome
The learner will: 4. be able to handle tiling materials and accessories manually.
Assessment criteria
The learner can: 4.1 demonstrate safe manual handling techniques whilst lifting and moving accessories 4.2 use correct methods to minimise damage to accessories and personnel when handling manually.

Range
Manual handling Techniques: Kinetic lifting, team lifting, Manual Handling Operations Regulations mechanical aids. Procedures: ensuring the route or area is safe and clear walking with materials loads and accessories, correct use of personal protective equipment (PPE).
Accessories Tiles, aggregates, screeds, cement, plaster, render.

Learning outcome
The learner will: 5. know how to store tiling materials and accessories.
Assessment criteria
The learner can: 5.1 state considerations for storing materials and accessories 5.2 state the different method of protection and the effects the elements can have on materials and accessories 5.3 state security requirements for different materials and accessories .

Range
Considerations Climatic change, protected from the elements, expiry date, stock rotation, organised storage eg by size, hazardous materials, security.
Materials and accessories Tiles, aggregates, screeds, cement, plaster, render, adhesives, grout, sheet materials, screws and nails.
Security Site induction, locked storage, security personnel, alarms, CCTV.

Learning outcome
The learner will: 6. be able to store construction materials and accessories.
Assessment criteria
The learner can: 6.1 store materials and accessories in accordance with organisational procedures.

Range
Materials and accessories Tiles, aggregates, screeds, cement, plaster, render, adhesives, grout, sheet materials, screws and nails.

Learning outcome
The learner will: 7. know how to check and record incoming materials.
Assessment criteria
The learner can: 7.1 state requirements when checking and recording incoming materials and accessories .

Range
Requirements Filing and booking in procedures, delivery notes and invoices, reasons for keeping records updated methods of reporting shortages or defects.
Materials and accessories Tiles, aggregates, screeds, cement, plaster, render, adhesives, grout, sheet materials, screws and nails.

Learning outcome
The learner will: 8. be able to check and record incoming materials.
Assessment criteria
The learner can: 8.1 check materials comply with delivery notes.

Range
Materials Tiles, adhesives, grout.

Unit 201

Health, safety and welfare in construction

Level:	5
Credit value:	7
Aim:	The aim of this unit is to provide the learner with the knowledge to carry out safe working practices in construction, in relation to sourcing relevant safety information and using the relevant safety procedures at work.

Learning outcome
The learner will: 1. know the health and safety regulations, roles and responsibilities
Assessment criteria
The learner can: 1.1 identify health and safety legislation relevant to and used in the construction environment 1.2 state employer and employee responsibilities under the Health and Safety at Work Act (HASWA) 1.3 state roles and responsibilities of the Health and Safety Executive (HSE) 1.4 identify organisations providing relevant health and safety information 1.5 state the importance of holding on-site safety inductions and toolbox talks.

Range
Health and safety legislation Health and Safety at Work Act, Reporting Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), Control of Substances Hazardous to Health (COSHH), Construction, Design and Management (CDM) regulations, Provision and Use of Work Equipment Regulations (PUWER), manual handling operations Regulations, Personal Protective Equipment (PPE) at Work Regulations, Work at Height Regulations, Control of Noise at Work Regulations, Control of Vibration at Work Regulations, Electricity at Work Regulations, Lifting operations and Lifting Equipment Regulations (LOLER)
Employer responsibilities Safe working environment, adequate staff training, health and safety information, site inductions, toolbox talks, risk assessment, supervision,

PPE, reporting hazards, accidents and near misses, sections 2 to 9 of Health and Safety at Work Act, CDM reg's, construction phase plans, welfare, display public liability Insurance and health and safety law poster.

Employee responsibilities

Working safely, working in partnership with the employer, reporting hazards, accidents and near misses, following organisational procedures as per Sections 2 to 9 of Health and Safety at Work Act.

Roles and responsibilities:

Enforcement (including fees for intervention), legislation and advice, inspection, investigation eg site investigations.

Organisations

Health and Safety Executive (HSE) website, Institute of Occupational Safety and Health, British Safety Council, 'manufacturer', ROSPA.

Learning outcome

The learner will:

2. know accident and emergency reporting procedures and documentation

Assessment criteria

The learner can:

- 2.1 state legislation used for reporting accidents
- 2.2 state major **types of emergencies** that could occur in the workplace
- 2.3 identify reportable injuries, diseases and dangerous occurrences as per RIDDOR
- 2.4 state main types of **records** used in the event of an accident, emergency and near miss and reasons for reporting them
- 2.5 identify **authorised personnel** involved in dealing with accident and emergency situations
- 2.6 state **actions** to take when discovering an accident.

Range

Types of emergencies

Fires, security incidents, gas leaks.

Records:

Accident book, first aid records, organisational records and documentation.

Authorised personnel

First aiders, supervisors/managers, health and safety executive, emergency services, safety officer.

Actions

Area made safe, call for help, emergency services.

Learning outcome
The learner will: 3. know how to identify hazards in the workplace
Assessment criteria
The learner can: 3.1 state the importance of good housekeeping 3.2 state reasons for risk assessments and method statements 3.3 identify types of hazards in the workplace 3.4 state the importance of the correct storage of combustibles and chemicals on site 3.5 identify different signs and safety notices used in the workplace.

Range
Good housekeeping: Cleanliness, tidiness, use of skips and chutes, segregation of materials, clear access to fire escapes, clear access to fire extinguishers.
Types of hazards: Fires, slips, trips and falls, hazardous substances (relating to inhalation, absorption, exposure, ingestion, cross-contamination), electrical, asbestos, manual handling, plant and vehicle movement, adverse weather.
Signs and safety notices: Prohibition, mandatory, warning, safe condition, supplementary.

Learning outcome
The learner will: 4. know about health and welfare in the workplace
Assessment criteria
The learner can: 4.1 identify requirements for welfare facilities in the workplace as per Construction Design Management (CDM) 4.2 state health effects of noise and precautions that can be taken 4.3 state risks associated with drugs, alcohol and medication which could affect performance in the workplace.

Range
Precautions Reducing noise at source, PPE, isolation, exposure time.
Risks Reduced risk perception, loss of concentration, balance problems, absenteeism and reduced productivity.

Learning outcome
The learner will: 5. know how to handle materials and equipment safely
Assessment criteria
The learner can: 5.1 identify legislation relating to safe handling of materials and equipment 5.2 state procedures for safe lifting and manual handling activities in accordance with guidance and legislation 5.3 state the importance of using lifting aids when handling materials and equipment.

Range
Lifting aids Wheelbarrow, sack barrow, mechanical lifting aids, pallet truck.

Learning outcome
The learner will: 6. know about access equipment and working at heights
Assessment criteria
The learner can: 6.1 identify legislation relating to working at heights 6.2 identify types of access equipment 6.3 state safe methods of use for access equipment 6.4 identify dangers of working at height.

Range
Access equipment: Stepladders, ladders (pole, extension), trestles, hop-ups, proprietary scaffolding, podium, stilts
Safe methods Regular inspection, check for broken, damaged or missing components, responsible use, consideration of adverse weather conditions, good housekeeping
Dangers Falling tools, falling equipment, falling materials, persons falling from height (injuries to themselves and others).

Learning outcome
The learner will: 7. know how to work with electrical equipment in the workplace
Assessment criteria
The learner can: 7.1 state precautions to take to avoid risks to self and others when working with electrical equipment 7.2 state dangers of using electrical equipment 7.3 identify voltages and voltage colour coding that are used in the workplace 7.4 state methods of storing electrical equipment.

Range
Precautions Check leads, check plugs, use of cable hangers, check tools and equipment, current valid PAT certificate
Dangers: Burns, electrocution, fire.
Voltages Battery powered, 110/115 volts, 230/240 volts and 415 volts.
Methods Components present, equipment cleaned, checked for damage, stored in a clean and secure location.

Learning outcome
The learner will: 8. know how to use Personal Protective Equipment (PPE)
Assessment criteria
The learner can: 8.1 state the legislation governing use of Personal Protective Equipment (PPE) 8.2 state types of PPE used in the workplace 8.3 state the importance of PPE 8.4 state why it is important to store, maintain and use PPE correctly 8.5 state the importance of checking and reporting damaged PPE.

Range
PPE: Head protection, eye protection, ear protection, face/dust masks, breathing apparatus, high visibility clothing, safety footwear, gloves, sun protection, barrier cream, water proofs, knee pads, overalls/disposable clothing

Learning outcome

The learner will:

9. know the cause of fire and fire emergency procedures

Assessment criteria

The learner can:

- 9.1 state **elements** essential to creating a fire
- 9.2 identify methods of fire prevention
- 9.3 state actions to be taken on discovering a fire
- 9.4 state **types of fire extinguishers** and their uses.

Range**Elements**

Oxygen, fuel, heat.

Types of fire extinguishers:

Water, foam, CO2, dry powder.



Appendix 1 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the **Centres and Training Providers homepage** on www.cityandguilds.com.

Centre Manual - Supporting Customer Excellence contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve 'approved centre' status, or to offer a particular qualification, as well as updates and good practice exemplars for City & Guilds assessment and policy issues. Specifically, the document includes sections on:

- The centre and qualification approval process
- Assessment, internal quality assurance and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Management systems
- Maintaining records
- Assessment
- Internal quality assurance
- External quality assurance.

Access to Assessment & Qualifications provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The **centre homepage** section of the City & Guilds website also contains useful information on such things as:

- **Walled Garden:** how to register and certificate candidates on line
- **Events:** dates and information on the latest Centre events
- **Online assessment:** how to register for e-assessments.

Useful contacts

International learners

General qualification information

E: intcg@cityandguilds.com

Centres

Exam entries, Certificates,
Registrations/enrolment, Invoices,
Missing or late exam materials,
Nominal roll reports, Results

E: centresupport@cityandguilds.com

Single subject qualifications

Exam entries, Results, Certification,
Missing or late exam materials,
Incorrect exam papers, Forms
request (BB, results entry), Exam
date and time change

E: singlesubjects@cityandguilds.com

International awards

Results, Entries, Enrolments,
Invoices, Missing or late exam
materials, Nominal roll reports

E: intops@cityandguilds.com

Walled Garden

Re-issue of password or username,
Technical problems, Entries,
Results, e-assessment, Navigation,
User/menu option, Problems

E: walledgarden@cityandguilds.com

Employer

Employer solutions, Mapping,
Accreditation, Development Skills,
Consultancy

E: business@cityandguilds.com

Publications

Logbooks, Centre documents,
Forms, Free literature

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City & Guilds
1 Giltspur Street
London EC1A 9DD
www.cityandguilds.com

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