



National Unit Specification: general information

UNIT Wall and Floor Tiling: Estimating and Calculations for Tile Work (SCQF level 6)

CODE F6P2 12

SUMMARY

This Unit is suitable for candidates undertaking a Modern Apprenticeship in Wall and Floor Tiling and will develop the candidate's craft skills and knowledge and understanding in basic tiling calculations, areas, perimeters and volumes. This Unit is also designed to develop the candidate's ability to apply costing methods used in a wall and floor tiling context.

OUTCOMES

- 1 Carry out calculations for tile work.
- 2 Calculate areas, perimeters and volumes.
- 3 Apply costing methods for tile work from a given specification.

RECOMMENDED ENTRY

While entry to this Unit is at the discretion of the centre, candidates undertaking the Professional Development Award in Wall and Floor Tiling at SCQF level 6 must meet the requirements of the Modern Apprentices, which include being employed in the relevant craft industry.

CREDIT VALUE

1 credit at SCQF level 6 (6 SCQF credit points at SCQF level 6*).

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Administrative Information

Superclass: TG

Publication date: May 2009

Source: Scottish Qualifications Authority

Version: 01

© Scottish Qualifications Authority 2009

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

Additional copies of this Unit Specification can be purchased from the Scottish Qualifications Authority. Please contact the Customer Contact Centre, telephone 0845 279 1000.

National Unit Specification: general information (cont)

UNIT Wall and Floor Tiling: Estimating and Calculations for Tile Work
(SCQF level 6)

CORE SKILLS

There is no automatic certification of Core Skills or Core Skill components in this Unit.

Opportunities for developing aspects of the following Core Skills are highlighted in Support Notes of this Unit:

- ◆ Numeracy at SCQF level 4

National Unit Specification: statement of standards

UNIT **Wall and Floor Tiling: Estimating and Calculations for Tile Work (SCQF level 6)**

Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit Specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

OUTCOME 1

Carry out calculations for tile work.

Performance Criteria

- (a) Calculate additions for tile work correctly.
- (b) Calculate subtraction for tile work correctly.
- (c) Calculate multiplication for tile work correctly.
- (d) Calculate division for tile work correctly.
- (e) Calculate percentages for tile work correctly.
- (f) Show workings for all calculations.

OUTCOME 2

Calculate areas, perimeters and volumes.

Performance Criteria

- (a) Calculate areas correctly.
- (b) Calculate perimeters correctly.
- (c) Calculate volumes correctly.
- (d) Show workings for all calculations.

OUTCOME 3

Apply costing methods for tile work from a given specification.

Performance Criteria

- (a) Cost materials and components correctly.
- (b) Add Value Added Tax (VAT) correctly.
- (c) Show workings for all calculations.
- (d) Calculate labour rates and expenses correctly.

National Unit Specification: statement of standards (cont)

UNIT Wall and Floor Tiling: Estimating and Calculations for Tile Work
(SCQF level 6)

EVIDENCE REQUIREMENTS FOR THIS UNIT

Evidence is required to demonstrate that candidates have achieved all Outcomes and Performance Criteria.

Outcome 1 and 2

Written and/or oral evidence is required to show that the candidate has achieved the standards specified in the Performance Criteria in Outcomes 1 and 2. Candidates must calculate using addition, subtraction, multiplication and division.

Candidates must calculate areas, perimeters and volumes for the following shapes:

- ◆ Square
- ◆ Rectangle
- ◆ Circle (Area and Circumference)
- ◆ Triangle

Assessment of these calculations should be carried out using a closed-book question paper. Candidates must show all workings. This must be carried out under controlled supervised conditions.

Outcomes 3

Written and/or oral evidence is required to show that the candidate has achieved the standards specified in the Performance Criteria in Outcome 3. Candidates must cost a project from given specification. The specification must include:

- ◆ Costing tiles, adhesive and grout
- ◆ Deducting trade discount (range 15%–20%)
- ◆ Adding VAT
- ◆ Calculating hourly rates for tradespersons
- ◆ Calculating expenses for tradespersons

Assessment of these calculations should be carried out using a costing assessment. This must be carried out under controlled supervised conditions.

National Unit Specification: statement of standards (cont)

UNIT Wall and Floor Tiling: Estimating and Calculations for Tile Work
(SCQF level 6)

Item	Measurement of Standard
Carry out calculations for Tile Work	
Addition calculations	Calculated correctly
Subtraction calculations are carried out correctly	Calculated correctly
Multiplication calculations	Calculated correctly
Division calculations are carried out correctly	Calculated correctly
Workings	shown for all calculations
Calculate areas, perimeters and volumes	
Areas	Calculated correctly
Perimeters	Calculated correctly
Volumes	Calculated correctly
Workings	shown for all calculations
Apply costing methods for Tile work	
Labour rates for trades persons	Calculated correctly
Expenses for trade persons	Calculated correctly
Materials and components costed correctly	Costed correctly
VAT added correctly	Added correctly
Workings	shown for all calculations

Candidates must work individually in all Outcomes.

Assessment of this Unit should be carried out when the candidate has received sufficient training and is deemed ready to be assessed. Candidates are required to provide evidence for all Outcomes.

These Evidence Requirements will be met by the completion of the Training and Assessment Programme (TAP) *Wall & Floor Tiling*.

National Unit Specification: support notes

UNIT Wall and Floor Tiling: Estimating and Calculations for Tile Work (SCQF level 6)

This part of the Unit Specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

This Unit has been developed as a mandatory Unit in the Professional Development Award (PDA) in Wall and Floor Tiling at SCQF level 6, which is a mandatory component of the Modern Apprenticeship in Wall and Floor Tiling.

This Unit would be offered to candidates from the construction and related services industries. The skills and knowledge and understanding are transferable within different working environments but the Unit is primarily aimed at candidates whose normal place of work would be a site, workshop, or similar environment. It should be delivered as part of a structured programme of training and orientated to the context of the candidates work and area of responsibility.

The successful completion of this Unit will provide candidates with the required underpinning knowledge and skills relating to calculations, shapes and costing methods commonly used in tiling. Costing should directly relate to a tiling project where the candidate has to obtain prices for relevant materials, total and add Value Added Tax (VAT). Candidates will also be required to obtain hourly rates and expenses from the given specification.

The context of this Unit allows for a holistic integrated approach for other Units within the PDA in Wall and Floor Tiling. Therefore there are opportunities to integrate this Unit to aspects of *Wall and Floor Tiling: Project Planning and Preparation* at SCQF level 6.

Health and Safety and Sustainability are integral and key to the Construction Industry and so throughout the Unit emphasis will be placed where appropriate on the application of Health and Safety and Sustainability. Safety working practices should be looked at in accordance with current safety codes of practice and regulations. Sustainability should include reference to legislation affecting the conservation of the environment and its relevance to this trade and to the construction industry in general. Attention should also be drawn to the dangers of not implementing this legislation.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Learning and teaching for this Unit should be a combination of workshop and classroom learning. Candidates should be made aware of methods used to calculate using addition, subtraction, multiplication and division. Candidates will also be required to calculate volumes areas and perimeters. It is recommended that numeracy calculations should involve the materials and components used in a wall and floor tiling context. An example of this could be for the candidate to calculate the amount of tile required for a project or the volume of sand and cement required. Costing methods of tile should be related to a wall and floor tiling context with the candidate required to add VAT to the final total. Candidates should practice measuring and calculating areas and perimeters in a workshop environment. This approach will again enhance the underpinning knowledge for this Unit and relate it to a wall and floor tiling context.

National Unit Specification: support notes

UNIT Wall and Floor Tiling: Estimating and Calculations for Tile Work (SCQF level 6)

Opportunities should be taken throughout delivery of this Unit to meet the requirements of the generic Units of the Training and Assessment Programme including:

- ◆ Conform to Efficient Working Practices
- ◆ Conform to General Workplace Safety
- ◆ Move and Handle Resources
- ◆ Confirm Work Activities and Resources for the Work
- ◆ Develop and Maintain Good Working Relationships
- ◆ Confirm the Occupational Method of Work

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

Numeracy skills could be developed to SCQF level 4 through the use of calculation in Outcomes 1 and 2. *Numeracy* skills can further be developed in Outcome 3 through the interpretation of information and completion of costing a project from a given specification.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Centres are advised to use the Wall and Floor Tiling Training and Assessment Programme (TAP) which has been developed centrally by the SQA. Any other instruments of assessment used must be comparable to the TAP and have been through prior verification.

Sections 6 and 7 of the Wall and Floor Tiling TAP provide detailed assessment material for this Unit. It is expected that candidates will be given as much practice as possible and should be deemed competent prior to being set the assessment tasks contained within the TAP.

Outcomes 1 and 2

A suitable method of assessing underpinning knowledge and understanding of calculations for tile work and calculating areas, perimeters and volumes could be through the use of multiple choice questions. Candidates must show all workings.

Outcomes 3

A suitable method of assessing underpinning knowledge and understanding of costing of a project from given information could be through a costing assessment. Candidates are required to:

- ◆ Cost tiles, adhesive and grout
- ◆ Deduct trade discount (range 15%–20%)
- ◆ Add VAT
- ◆ Calculate hourly rates for tradespersons
- ◆ Calculate expenses for tradespersons

National Unit Specification: support notes (cont)

UNIT Wall and Floor Tiling: Estimating and Calculations for Tile Work
(SCQF level 6)

Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

DISABLED CANDIDATES AND/OR THOSE WITH ADDITIONAL SUPPORT NEEDS

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements