

Unit Support Notes — Employment Skills: Construction and Engineering (National 2)



Valid from August 2015

This edition: July 2015 (version 1.0)

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Please refer to the note of changes at the end of this document for details of changes from previous version (where applicable).

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Introduction

These support notes are not mandatory. They provide advice and guidance on approaches to delivering and assessing the Employment Skills: Construction and Engineering (National 2) Unit. They are intended for teachers and lecturers who are delivering this Unit. They should be read in conjunction with:

- ◆ the *Unit Specification*
- ◆ the *Unit Assessment Support pack*

General guidance on the Unit

Aims

The *Employment Skills: Construction and Engineering* (National 2) Unit is a free-standing Unit and is designed to meet the needs of a broad range of learners who may choose to study it.

The general aim of the Unit is to help learners develop the skills required to work in the construction and engineering sector.

Progression into this Unit

Entry into this Unit is at the discretion of the centre.

This Unit may be suitable for learners who have successfully completed qualifications in independent living skills, personal development or related areas at SCQF level 1.

Prior learning, life and work experiences may provide an appropriate basis for entry into this Unit. This could include relevant skills, knowledge and understanding and appropriate experiences and outcomes.

Skills, knowledge and understanding covered in this Unit

As this Unit will be delivered on a free-standing basis, teachers and lecturers are free to select the skills, knowledge, understanding and contexts which are most appropriate for delivery in their centres.

Content and contexts which are used in the teaching of this Unit are at the discretion of the centre. However, content and contexts should provide evidence that all Outcomes and Assessment Standards in the Unit have been achieved.

Learners who complete this Unit will be able to:

- 1 Find out about different roles within the construction and engineering sector.
- 2 Carry out a work activity related to the sector.
- 3 Respond appropriately to work colleagues and/or supervisors.

Progression from this Unit

This Unit may provide progression to:

- ◆ other Employment Skills Units at National 2
- ◆ other Units, Awards and Courses at National 2
- ◆ other related Units, Awards and Courses at National 3
- ◆ further study, employment and/or training

Further details about these Units can be found on SQA's website.

Learners may progress to other Units at the same level or Units and Courses at higher levels. The nature of this progression will depend on the individual needs of the learner.

The skills, knowledge and understanding developed in this Unit could also support progression in other curriculum areas as well as life and work contexts.

Approaches to learning, teaching and assessment

The purpose of this section is to provide general advice and guidance on approaches to learning, teaching and assessment which can be used for the delivery of this Unit.

Learning and teaching

The skills-based focus of the Unit lends itself to the use of a variety of learning and teaching approaches, reflecting the values and principles of the curriculum. Effective learning and teaching will draw on a variety of approaches to enrich the experience of learners. In particular, a mix of approaches which provide opportunities for personalisation and choice will help to motivate and challenge the learners.

Learning should be relevant to the learner's everyday life, their overall learning programme, and/or work and leisure. Teachers/lecturers could also consider interdisciplinary and cross-curricular approaches to learning and teaching, and explore how extra-curricular activities or the personal interests of learners could be included and recognised.

Many of these approaches could involve group work. Group work approaches can be used within Units where it is helpful to simulate real-life situations, share tasks and promote teamworking skills. However, there must be clear evidence for each learner to show that they have met the required Assessment Standards for the Unit.

Learners should be given the opportunity to use their normal mode of communication and have access to the appropriate resources for support where they would normally be available in real-life situations in which the activity is being carried out.

Examples of learning and teaching approaches and ways of recording evidence are provided in the table on the next page.

Employment Skills: Construction and Engineering (National 2)

The general aim of this Unit is to help learners develop the skills required to work in the construction and engineering sector. The learner will:

Outcomes and Assessment Standards	Guidance and suggested learning and teaching approaches
<p>1 Find out about different roles within the construction and engineering sector by:</p> <p>1.1 Identifying different roles</p> <p>1.2 Identifying the main tasks of given roles</p>	<p>Teachers/lecturers could discuss the range of employers, employment opportunities and different work activities within the construction and engineering sectors with learners. These could include, for example:</p> <ul style="list-style-type: none"> ◆ Construction: brickwork and masonry; carpentry and joinery; plastering; plumbing; painting and decorating; roofing; tiling ◆ Engineering: Auto, Chemical, Civil, Electrical, Environmental, Mechanical, Water <p>Teachers/lecturers could explore a range of work activities and roles within the construction and engineering sectors with learners to provide opportunities for a broader learning experience. Learners could identify different roles within the construction and engineering sectors by matching activities, responding to prompt questions, making posters/presentations/collages about a particular role, carrying out an internet search, and/or work shadowing/visits.</p> <p>Guest speakers could be invited to explain aspects of their work to learners. Learners could also share aspects of their own work experience(s) as part of a group discussion if appropriate.</p> <p>Learners identify different roles within the construction and engineering sectors. Examples could include:</p>

Construction:	Engineering:
<ul style="list-style-type: none"> ◆ bricklayer ◆ electrician ◆ plumber ◆ plasterer ◆ tiler ◆ joiner ◆ roofer ◆ painter/decorator ◆ technician (eg in a furniture store building flatpack furniture for display) 	<ul style="list-style-type: none"> ◆ civil engineer: building bridges ◆ Mechanical engineer: building engines/machinery/car maintenance ◆ aerospace engineer: building planes ◆ electrical engineer: maintaining power supplies ◆ land surveyor: collects information to map shape of the land for engineering/construction projects

Teachers/lecturers should choose a role within the construction and engineering sectors. Learners then identify the main tasks of the given role. Examples could include:

Role	Main tasks:
Joiner — making flat-pack items for display	<ul style="list-style-type: none"> ◆ following instructions to assemble sections of pre-cut furniture correctly ◆ using tools to attach sections properly ◆ placing finished items of furniture on display
Tiler	<ul style="list-style-type: none"> ◆ marking out the area for tiling ◆ cutting tiles to size with hand-cutters ◆ preparing surfaces, eg levelling off ◆ fixing the tiles ◆ applying grout

	<p>Possible learning and teaching approaches which could be used to help learners identify the main tasks of given roles could include:</p> <ul style="list-style-type: none"> ◆ matching and/or sorting images and/or objects ◆ pre-prepared worksheets ◆ capturing and/or downloading images ◆ creating a multimedia product ◆ creating posters and/or drawings ◆ using prompt questions ◆ watching videos ◆ interviewing guest speakers ◆ visiting workplaces ◆ gathering information about given roles from printed materials and/or online
<p>2 Carry out a work activity related to the sector by:</p> <p>2.1 Carrying out tasks allocated by their supervisor</p> <p>2.2 Identifying equipment and/or resources appropriate to the allocated tasks</p>	<p>Teachers/lecturers could help learners identify a work activity most suited to their skills, knowledge and, if appropriate, work experiences to date. This could include using elements of a simple skills analysis to help learners identify what they are good at, what they enjoy and/or find interesting.</p> <p>Teachers/lecturers could also help learners identify an appropriate work activity on the basis of any statutory restrictions and on the feasibility of the work activity being carried out within the allocated time frame. Learners should be allocated a variety of tasks which are simple, varied and practical and which form an integral part of the main processes involved in the workplace.</p> <p>Teachers/lecturers could also discuss appropriate attitudes and behaviours in the workplace with learners. Examples could include:</p>

2.3 Using equipment and/or resources appropriately for the allocated tasks

- ◆ the importance of good time-keeping
- ◆ the need to adapt behaviour for different situations in the workplace
- ◆ the need to accept instructions and/or corrections in the workplace
- ◆ the importance of asking for help when needed

Prior to the work activity, the teacher/lecturer could provide learners with an exemplar for a basic risk assessment where a list of hazards (and how they might be controlled) is created and discussed.

The learner carries out a work activity by carrying out tasks allocated by the person responsible for supervising their work. This could include: site agent, works supervisor, foreman, senior engineer, skilled trades worker. The learner should be encouraged to take a positive attitude towards the quality of his/her work, be resourceful, and show initiative, as appropriate.

The learner identifies equipment and/or resources appropriate to the allocated tasks and uses the equipment and/or resources appropriately when carrying out the allocated tasks. Learners could be asked to choose the appropriate equipment and/or resources from a list of alternatives/selection of images/pictures and/or asked to match equipment and/or resources to their uses.

For a construction-related work activity '**Working as a painter and decorator — Helping to paint/decorate a room**', tasks and equipment/resources could include:

Allocated tasks:	Equipment and resources used:
◆ Helping to prepare the walls prior to painting (eg brushing down, removing loose plaster)	◆ personal protective equipment (PPE), eg overall
◆ Sanding down skirting boards	◆ sandpaper
◆ Mixing the paste/paint(s) ready for application	◆ tins of paint/wallpaper paste

<ul style="list-style-type: none"> ◆ Helping the painter to 'mask off' door/window frames ◆ Applying undercoat to wall(s) ◆ Measuring and cutting wallpaper ◆ Painting walls/hanging wallpaper 	<ul style="list-style-type: none"> ◆ masking tape ◆ paintbrush/roller/paint tray ◆ stepladder ◆ decorating table ◆ wallpaper scissors/measuring tape
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Or, for example, for a construction-related work activity '**Working for a school/college-based enterprise company making bird tables**', this could include:

Allocated tasks	Equipment and resources used
<ul style="list-style-type: none"> ◆ Measuring/cutting wood ◆ Assembling the pieces ◆ Drilling holes for screws ◆ Screwing pieces together ◆ Attaching roofing felt with hammer and nails ◆ Painting/applying varnish/wood preservative 	<ul style="list-style-type: none"> ◆ measuring tape ◆ saw ◆ hand drill ◆ screws/screwdriver ◆ hammer and nails ◆ wood glue ◆ clamp/vice ◆ paintbrush ◆ sandpaper ◆ personal protective equipment (PPE)

It is expected that, when carrying out their allocated tasks, learners will be following safe working practices and complying with health and safety requirements including using equipment and resources appropriately. This could form part of the supervisor's instructions when allocating tasks, for example:

- ◆ confirming the correct sequencing, timing and organisation for the tasks

	<ul style="list-style-type: none"> ◆ providing instructions for using equipment and/or resources safely ◆ providing instructions for working in accordance with health and safety requirements appropriate for the organisation, work activity, working environment and/or setting (eg statutory/sector/industry-specific requirements). The learner should be made aware of the need for a high standard of personal safety, eg the need to wear protective clothing such as overalls, hard hat, ear-defenders, protective footwear, goggles, masks, as appropriate.
<p>3 Respond appropriately to work colleagues and/or supervisors by:</p> <p>3.1 Following advice and/or instructions</p> <p>3.2 Communicating with work colleagues appropriately</p> <p>3.3 Working co-operatively with others</p>	<p>Learners respond appropriately to colleagues in the workplace on a variety of occasions and for different purposes. This could include the use of non-verbal conventions.</p> <p>Responses should be appropriate to the workplace context and activity (eg showing respect for their supervisor’s role and responding more casually to other work colleagues).</p> <p>Learners follow advice and/or instructions. Examples could include:</p> <ul style="list-style-type: none"> ◆ saying ‘yes’ or nodding to confirm the information has been received, understood and accepted (eg, ‘yes, I’ll mix the paint now) ◆ asking appropriate questions to ensure the information has been fully understood (eg ‘what size paint roller should I use?’) ◆ complying with advice/carrying out given instructions (eg ‘it’s easier to work with a paintbrush round door frames’, ‘wash the paint roller after you’ve finished painting) <p>Learners also communicate with work colleagues appropriately, including their supervisors, in the workplace setting appropriately. Examples could include:</p> <ul style="list-style-type: none"> ◆ using first names for work colleagues and title for supervisor (eg Mr/Ms/Mrs) unless instructed otherwise

- ◆ avoiding using nicknames unless the work colleague confirms it is OK to do so
- ◆ using appropriate greetings when arriving and leaving
- ◆ asking questions/asking for help if/when unsure what to do
- ◆ being polite in communications, eg saying 'please' and 'thank-you'
- ◆ using appropriate non-verbal conventions, eg eye contact, body language
- ◆ observing recognised social conventions, eg not raising voice too loudly when speaking or standing too close to others when speaking

Learners also demonstrate working co-operatively with others in the workplace setting. Examples could include:

- ◆ listening to others' ideas and opinions
- ◆ offering own suggestions for consideration
- ◆ negotiating and agreeing elements as appropriate (eg agreeing individual/group tasks, negotiating timings for tea/lunch breaks)
- ◆ sharing equipment
- ◆ helping others

This Unit could be undertaken as part of a learner's real employment opportunity (on a paid, unpaid and/or voluntary basis as appropriate). Alternatively, learners could undertake these activities as part of a simulated workplace and/or an enterprise setting in the school/college.

The Unit could also be linked to activities in the *Employment Skills: Preparing for Employment* Unit.

The Unit could also be linked to activities in the *Self and Work: Completing a Work Placement* Unit and the *Self and Work: Investigating the Workplace* Unit of the National 2 Personal Development Award.

Assessment

There is no external assessment for National 2 Units. All Units are internally assessed against the requirements outlined and described in the *Unit Specification* and the *Unit Assessment Support pack*.

To achieve the Unit, learners must achieve the Unit Outcomes.

Evidence for this Unit could be collected during learning and teaching activities.

Teachers/lecturers could therefore record naturally occurring evidence as a way of meeting the Unit Outcomes. Naturally occurring evidence is evidence which occurs within and as part of the learning and teaching, and can be recorded for assessment purposes in a variety of ways, including:

- ◆ observation of evidence demonstrated during an activity (using an observation checklist, visual recording, photography or equivalent)
- ◆ oral questioning before, during and on completion of an activity (recorded using an audio-visual or audio recording or using detailed written assessor notes as evidence)
- ◆ learning and teaching activities which generate physical evidence for assessment
- ◆ identifying opportunities to record evidence within out-of-centre activities

Alternatively, where assessment is carried out as a discrete activity, this could be as a single event or it may be broken up into smaller, more manageable sections. In this case, care must be taken to avoid duplication of evidence and potential assessment.

Learners will benefit from receiving accurate and regular feedback on their work regarding their learning. This helps to ensure they are actively involved in the assessment process. It is also important that different approaches to assessment are adopted to suit the varying needs of learners.

Authentication

For guidance on authentication of evidence that is gathered outwith the direct supervision of the teacher/lecturer responsible for the learner, eg outside the school or classroom, refer to SQA's *Guide to Assessment*.

It is important that teachers/lecturers track and keep accurate records of their assessments in order to:

- ◆ inform learners of their progress
- ◆ identify where further consolidation is required
- ◆ retain and store appropriately evidence of work in progress and completed work for verification purposes

It is anticipated that learners will need a high degree of teacher/lecturer assistance. More details about the type of support are provided within the Equality and inclusion section.

Developing skills for learning, skills for life and skills for work

The *Unit Specification* lists the skills for learning, skills for life and skills for work that learners should develop in this Unit. These are based on SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work* and should be built into the Unit where there are appropriate opportunities. The level of these skills will be appropriate to the level of the Unit.

Skills for learning, skills for life and skills for work	Examples of learning and teaching approaches
1 Literacy	
<p>1.3 Listening and talking</p> <p>Listening means the ability to understand and interpret ideas, opinions and information presented orally for a purpose and within a context, drawing on non-verbal communication as appropriate. Talking means the ability to communicate orally ideas, opinions and information for a purpose and within a context.</p>	<p>Where appropriate, learners could use their normal mode of communication to:</p> <ul style="list-style-type: none"> ◆ communicate, eg identifying the different roles within this employment sector ◆ respond, eg identifying the main tasks of a given role
4 Employability, enterprise and citizenship	
<p>4.1 Employability</p> <p>Employability is the ability to gain employment by developing the personal qualities, skills, knowledge, understanding, and attitudes required in rapidly changing economic environments. It is the ability to maintain employment by making transitions between jobs and roles, and the ability to obtain new employment if, and when, required.</p>	<p>Where appropriate, learners could demonstrate employability skills by:</p> <ul style="list-style-type: none"> ◆ carrying out tasks allocated by a supervisor ◆ using equipment and/or resources appropriately to carry out the allocated tasks
<p>4.3 Working with others</p> <p>Working with others means knowing and practising what is involved in working co-operatively and sensitively with others; having the ability to recognise need and opportunity; to influence and negotiate with others to take ideas forward; being adaptable and having a determination to succeed; being able to discuss, set and meet roles and expectations in a working environment; and assessing, providing and creating information.</p>	<p>Where appropriate, learners could demonstrate co-operative working by:</p> <ul style="list-style-type: none"> ◆ following instructions and/or advice from work colleagues ◆ communicating with work colleagues appropriately ◆ negotiating individual tasks and/or responsibilities with work colleagues as appropriate

It is important that learners have opportunities to develop these broad general skills as an integral part of their learning experience.

There will be opportunities for the development of additional skills for learning, skills for life and skills for work throughout this Unit. These will vary from centre to centre depending on the approaches being used to deliver the Unit.

Equality and inclusion

The additional support needs of learners should be taken into account when planning learning experiences or when considering any reasonable adjustments that may be required. Assessment methods should offer all learners an equal opportunity to demonstrate their achievement. This should be reflected in the language used, the use of different assessment presentation methods and the use of appropriate illustrative materials that reflect an inclusive view.

Learners undertaking qualifications at SCQF level 2 are likely to require more support with their learning than at other levels. The support provided should be appropriate for the learner, for the subject area and for the activity involved. Examples of support might include:

- ◆ allowing extra time to complete activities
- ◆ practical helpers under direct learner instruction could assist with practical activities (this could also include a reader and/or scribe as appropriate)
- ◆ the use of specialised and adapted equipment
- ◆ the use of ICT, including adaptive technologies such as braille and assistive technologies (such as voice activated software) to support learners with limited capacities to write

It is recognised that centres have their own duties under equality and other legislation and policy initiatives. The guidance given in these *Unit Support Notes* is designed to sit alongside these duties but is specific to the delivery and assessment of the Unit.

Alternative approaches to Unit assessment to take account of the specific needs of learners can be used. However the centre must be satisfied that the integrity of the assessment is maintained and where the alternative approach to assessment will generate the necessary evidence of achievement.

Appendix 1: Reference documents

The following reference documents will provide useful information and background.

- ◆ Assessment Arrangements (for disabled candidates and/or those with additional support needs) — various publications on SQA’s website: <http://www.sqa.org.uk/sqa/14976.html>
- ◆ [*Building the Curriculum 4: Skills for learning, skills for life and skills for work*](#)
- ◆ [*Building the Curriculum 5: A framework for assessment*](#)
- ◆ [*Guide to Assessment \(January 2014\)*](#)
- ◆ Principles and practice papers for curriculum areas
- ◆ [*Research Report 4 — Less is More: Good Practice in Reducing Assessment Time*](#)
- ◆ [*Coursework Authenticity — a Guide for Teachers and Lecturers*](#)
- ◆ [*SCQF Handbook: User Guide \(published 2009\)*](#) and
- ◆ SCQF level descriptors: www.sqa.org.uk/sqa/4595.html
- ◆ [*SQA Skills Framework: Skills for Learning, Skills for Life and Skills for Work*](#)
- ◆ [*Skills for Learning, Skills for Life and Skills for Work: Using the Curriculum Tool*](#)
- ◆ [*SQA Guidelines on e-assessment for Schools*](#)
- ◆ [*SQA Guidelines on Online Assessment for Further Education*](#)
- ◆ [*SQA e-assessment web page*](#)

Administrative information

Published: July 2015 (version 1.0)

History of changes to Unit Support Notes

Unit details	Version	Description of change	Authorised by	Date

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