Higher National Unit Specification

General information for centres

Unit title: Fabricated Lettering and Signs

Unit code: F03J 34

Unit purpose: This Unit is designed to provide candidates with an understanding of the main issues regarding the fabrication of built up lettering and the working environment involved with this type of work. It prepares them for this by building an underpinning knowledge of health and safety issues related to the use of tools and to understand the characteristics of the types of materials used in the production of this type of lettering.

On completion of this unit candidates should be able to:

1 Describe common materials used in the construction of flat cut and built up lettering.
2 Describe tools and equipment.
3 Produce flat cut letters.
4 Fabricate and install letters to a substrate.

Credit points and level: 1 HN Credit at SCQF level 7: (8 SCQF credit points at SCQF level 7*).

**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.*

Recommended prior knowledge and skills: Access is at the discretion of the centre. However it is advisable that candidates should have an appreciation of a signmaking environment either through a craft level signmaking course or through relevant work experience.

Core Skills: There are opportunities to develop the Core Skills of Planning and Reviewing, Problem Solving and Working with Others at SCQF 5 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Assessment: Outcomes 1 and 2 could be jointly assessed using stimulus materials or a case study. Outcomes 3 and 4 should be linked as part of a practical project. Alternatively it could be assessed by individual assessments relating to each outcome.

Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, knowledge and/or skills, and evidence requirements are mandatory.

Outcome 1

Describe common materials used in the construction of flat cut and built up lettering

Knowledge and skills

- Materials and substrates
- Types of adhesives (used for different materials)
- Protective coating systems
- Health & safety issues

Evidence Requirements

The candidate will need to provide evidence to demonstrate their knowledge and skills by showing that they can:

- Identify materials suitable for external or internal use.
- Identify appropriate wood types and coating systems that could be used to protect them in an external situation.
- Identify one situation where expanded polystyrene can be used to create inexpensive 3D lettering.
- Identify three suitable materials that can be used for flat cut letters.
- Describe three adhesive types, stating whether they are single or two pack and to which materials they relate.

Assessment guidelines

The assessment of this Outcome can be combined with Outcome 2. This could be presented to the candidates as a series of short case studies with questions attached to each scenario. The candidates could respond to the case studies and include samples of materials in their answers.

Higher National Unit specification: statement of standards (cont)

Unit title: Fabricated Lettering and Signs

Outcome 2

Describe tools and equipment

Knowledge and skills

- Tools and equipment associated with built-up lettering.
- Health and Safety issues associated with hand and electrical power tools.
- Sign workshop layout

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and skills by showing that they can:

- Name five essential hand tools used in a sign workshop for built up lettering.
- Name five essential power tools used in a sign workshop for built up lettering.
- Describe three relevant health and safety issues. This should include reference to risk assessment, relevant protective clothing and safety consideration to fellow workers.

Assessment guidelines

The assessment of this Outcome should be linked to Outcome 1. The information supplied to the candidate could be a case study. In Outcome 1, candidates had to identify appropriate materials and in this Outcome they should identify appropriate tools and corresponding health and safety considerations which have to be taken into account when using these tools.

Outcome 3

Produce flat cut letters

Knowledge and skills

- Cutting techniques (for various materials)
- Techniques for dressing the edges
- Methods of fixing to substrate
- Health and safety issues

Higher National Unit specification: statement of standards (cont)

Unit title: Fabricated Lettering and Signs

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and skills by showing that they can:

- Cut letters as templates for use with a hot wire cutter
- Cut letters in expanded polystyrene using templates and the hot wire cutter. Letters produced should demonstrate clean cutting with no ragged edges and include right angled vertical cuts without ridges and excessive cobwebs
- Cut letters in wood-based material from a traced pattern. Samples should feature tolerances of + or –2mm and have smooth sanded edges
- Cut letters in acrylic from a traced pattern. Letters should have a tolerance of + or – 2mm and the letters should be flame polished or filed and be sanded and buffed to a high gloss finish

Evidence should be generated through assessment in controlled conditions. Three different types of letters to be produced - expanded polystyrene, wood and acrylic and be a minimum of 150 mm in height. Letters will have fixings attached where necessary and fitted.

To be successful in this outcome all three letter types must satisfy the assessment criteria for each of the individual letters. The results of assessment will be determined by visual inspection.

Assessment guidelines

This assessment could be done jointly with Outcome 4.

Outcome 4

Fabricate and install letters to a substrate

Knowledge and skills

- Sheet cutting techniques
- Router returns to accommodate letter
- Heating, shaping and bending techniques
- Techniques of mitring corners
- Cementing and taping techniques for letters and returns
- Health & safety issues

Higher National Unit specification: statement of standards (cont)

Unit title: Fabricated Lettering and Signs

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and skills by showing that they can:

- Cut, dress edges and router returns of the letter to accommodate the letter
- Shape return round letter shape
- Use single pack acrylic cement and tape to hold letter and return in place
- Use two pack cement to seal all internal corners and make letter rigid
- Apply locators or fixings to letter and fix letter to substrate

The candidate's response can be judged satisfactorily where the evidence shows that the candidate can:

- Cut the lettering to the traced line to a tolerance of + or – 2mm
- Cut returns to the specified width, polish edges and cut channel or router check to accommodate letter to a tolerance of + or – 2mm
- Bend and shape return to suit letter shape without distortion of shape
- Mitre corners to snug fit
- Cement letter and returns in place and provide locators for fixing

Evidence should be generated through assessment in controlled conditions. Candidates will produce a minimum of one built-up letter at a minimum height of 200mm and the returns at a minimum of 50mm in depth.. This letter should have the appropriate fixing method incorporated and installed to a substrate simulating actual site conditions using the prepared pattern.

The candidate should show continued awareness of the health and safety implications associated with the nature of the work and observe at all times the instructional safety signs and information regarding electrical power machinery and its usage. Evidence should also be gathered as to the candidate's safe working practices regarding not only his/hers own safety but others in close proximity.

Assessment guidelines

Outcomes 3 and 4 could be assessed jointly. Candidates can produce the letter as an individual letter for assessment for Outcome 3 and fabricate and fix to substrate for assessment for Outcome 4. It would be beneficial for all candidates to produce a single letter that will contribute to a finished lettered sign.

In the process of erecting the completed sign, candidates should be encouraged to work in teams and understand the need to think and act as a team member.

Administrative Information

Unit code: F03J 34

Unit title: Fabricated Lettering and Signs

Superclass category: JB

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History of Changes:

Version	Description of change	Date

Source: SQA

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of Higher National qualifications.

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

Higher National Unit specification: support notes

Unit title: Fabricated Lettering and Signs

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 is primarily intended to prepare candidates for this specific type of work within a sign shop and to provide them with the underpinning knowledge in regard to the equipment and the safe working conditions needed in this environment. Tools should include Tenon saws, Files, Chisels, Vices, Clamps, Drill etc. Additionally students would be expected to use Routers, Bandsaws, Scroll saws, Vertical drills, Circular sanders, Buffers etc Health and safety input should include risk assessment and the use of electrical equipment and power tools. Personal safety regarding, proper Overalls, Shoes, Gloves, Eye protection, Ear protection etc. Correctly consider the safety considerations of fellow work colleagues

Not all sign shops are prepared to incorporate fabricated lettering as part of their day to day work but many have installed electrical power tools. This is because they are involved in making sign frames and light boxes. With this in mind, all work carried out in this Unit should provide candidates with the necessary knowledge associated with health and safety issues regarding electrical equipment and the safe usage power tools.

When candidates are using acrylic materials they should be introduced to heat bending and shaping techniques. Candidates should learn to bend and shape returns so that there is no distortion of shape or damage to the acrylic. Candidates should also learn how to polish edges and cut channel or router checks to accommodate letters. These skills could also be used to make pamphlet holders and other artefacts.

In the process of working through this Unit the Candidates should be informed of the need to be thinking of team work as this type of work will normally always require more than one person at some stage. This will become more evident in Outcome 4 where the actual fixing of the letters take place. Candidates could also explore the complete working team of a sign shop from the manager, sales/marketing people to the workshop floor.

Although this is a practical Unit, other skills such as colour work and sign layout should be encouraged and integrated to compliment other areas of the course and to express how this contributes to the finished sign.

In Outcomes 3 and 4, the focus is on Health and Safety implications and the types of materials used in fabricated lettering. To build on this content, candidates could be asked to investigate the layout of a typical sign shop which is involved in this type of work. This may include providing plan drawings of a workshop showing the placement of power tools and possibly photographic evidence of these in place on the workshop floor.

Higher National Unit specification: support notes (cont)

Unit title: Fabricated Lettering and Signs

Guidance on the delivery and assessment of this Unit

This Unit is likely to form part of a Group Award designed to provide candidates with a foundational knowledge and skills for a specific occupational area. Those who complete the award should have the necessary skills and underpinning knowledge to work with the electrical equipment and power tools associated with fabricated lettering and to understand the materials and how they can be manipulated.

Depending on the Group Award this Unit may be used as a mandatory unit. It may be in the Candidates interest to arrange a visit to a local sign company that is involved with this type of work although this may be more beneficial towards the end of the Unit.

The assessment for the Unit can be offered as individual assessments for each Outcome. If desired, Outcomes 1 and 2 can be grouped as one assessment using a case study approach. Outcomes 3 and 4 could also be jointly assessed by means of a tutor/client set practical assessment.

Opportunities for developing Core Skills

The Planning and Organising component of the Core Skills of Problem Solving could be developed through deciding which kind of materials, tools and techniques to use.

It is envisaged that although the candidates would produce specific lettering themselves which would satisfy the needs of the Evidence Requirements, the candidates would work together on one overall project which would mean that they had to work co-operatively, share tools, discuss styles and agree the order or completion and specific tasks for each participant of the team. This type of approach would contribute to the skills developed in the Core Skill Working with Others.

Open learning

This Unit is not suitable for distance learning as a large proportion of the content is practical work that involves the use of electrical power tools. This has health and safety implications which cannot be monitored from distance.

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Alternative Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on SQA's website: **www.sqa.org.uk**.

General information for candidates

Unit title: Fabricated Lettering and Signs

In this Unit you will learn how to make individual letters and then build up these letters to make 3D letters or fabricated letters. You will use different materials such as acrylic, expanded polystyrene and wood, and will learn how these materials have to be coated to protect them. You will also lean about different types of adhesives and fixings.

As you work through this Unit you will learn how to use different tools and equipment and you will build up your workshop skills. Your safety and the safety of others is an important aspect of working with tools and equipment and you will learn about risk assessment and health and safety considerations in this Unit.

Once you are familiar with the different types of materials and tools used in a sign you will learn how to cut different types of materials into letter shapes and you will build up your letters and attach them to a background.

When you are working in a workshop you will develop your skills of working with others. You will also develop your problem solving skills in this Unit. It takes some time to make a sign which consists of fabricated letters so in your assessment you will probably be working with others so that you can complete one sign.