

## Higher National Unit specification

### General information for centres

**Unit title:** Leaded Glass Work

**Unit code:** F1W1 34

**Unit purpose:** This Unit is designed to introduce candidates to leaded glass techniques using a variety of materials, tools and equipment. The Unit is suitable for candidates studying art glass work or working in the glass industry.

On completion of the Unit the candidate should be able to:

- 1 Cut glass to cartoon.
- 2 Cut lead came and assemble a leaded glass object.
- 3 Prepare and solder joints.
- 4 Cement and clean object.

**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:** While access to the Unit is at the discretion of the centre, it would be beneficial if candidates had prior knowledge of glasswork. This could be demonstrated by possession of a NQ qualification in Decorative Glasswork.

**Core Skills:** There are opportunities to develop the Core Skills of Working with Others, Problem Solving and Numeracy at SCQF level 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:** This Unit lends itself to holistic assessment. Candidates will be required to undertake a practical project which involves the production of a piece of leaded glass work. They will be observed in a studio/workshop environment using a variety of tools and techniques in the production of leaded glass object. The practical assignment will be supported by written/oral questions.

## **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.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

### **Outcome 1**

Cut glass to cartoon

#### **Knowledge and/or Skills**

- ◆ Glass clearances
- ◆ Glass cutting techniques and tools
- ◆ Cartoons
- ◆ Grozing
- ◆ Health and safety

### **Outcome 2**

Cut lead came and assemble a leaded glass object

#### **Knowledge and/or Skills**

- ◆ Types and sizes of lead came
- ◆ Came cutting tools
- ◆ Sharpening of tools
- ◆ Stretching of comes
- ◆ Came cutting and dressing
- ◆ Assembly techniques
- ◆ Health and safety

## Higher National Unit specification: statement of standards

**Unit title:** Leaded Glass Work

### Outcome 3

Prepare and solder joints

#### Knowledge and/or Skills

- ◆ Soldering iron maintenance techniques
- ◆ Fluxes and their application
- ◆ Solder types and uses
- ◆ Lead came soldering techniques
- ◆ Health and safety requirements

### Outcome 4

Cement and clean object

#### Knowledge and/or Skills

- ◆ Cement composition and benefits
- ◆ Application techniques
- ◆ Cleaning methods
- ◆ Lead came finishes
- ◆ Health and safety

#### Evidence Requirements for the Unit

Candidates will need to provide evidence to demonstrate their Knowledge and Skills by showing that they can apply the techniques, outlined in the Outcomes above, to produce a leaded glass object to meet a given specification. Candidates should choose suitable types and sizes of lead came to meet the given specification.

An observation schedule should record the candidate using:

- ◆ Glass clearances
- ◆ Glass cutting techniques
- ◆ Tools in a safe manner
- ◆ Cartoons in an accurate manner
- ◆ Grozing techniques
- ◆ Correct came cutting tools in a safe manner
- ◆ Cutting came and dressing techniques to match the requirements of the object being produced
- ◆ Assembly techniques appropriate to the finished product
- ◆ Fluxes and applying them in a way which ensures good soldering
- ◆ Solder appropriate to the purpose of the object
- ◆ Lead came soldering techniques which result in sound and secure joints

The object should be completed to a commercially acceptable standard.

## Higher National Unit specification: statement of standards (cont)

### Unit title: Leaded Glass Work

Candidates will also be expected to show:

- ◆ continuing care and maintenance of tools including sharpening of cutting tools and maintenance of soldering iron
- ◆ adherence to health and safety requirements in the workshop
- ◆ appropriate use of protective clothing and equipment
- ◆ use of tools and equipment which match the manufacturers' instructions

A minimum of eight questions should be correctly answered by candidates — **two** questions based on the techniques used at each stage of the production process. Candidates can respond to the questions in writing or orally.

### Assessment Guidelines for the Unit

It is envisaged that candidates would be asked to produce a leaded glass panel. This could be a commission from a client or could be a centre devised practical project. When producing the item, the candidates would be expected to select appropriate tools and materials and would be required to produce a leaded panel which is fit for purpose. Health and safety procedures should be followed throughout.

A centre devised observational checklist should be devised for each part of the activity to record candidate performance in the production of the object.

Eight short answer questions — two questions based on the techniques used in each Outcome — should support the practical assessment.

## Administrative Information

**Unit code:** F1W1 34  
**Unit title:** Leaded Glass Work  
**Superclass category:** JR  
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### History of changes:

Version	Description of change	Date

**Source:** SQA

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## **Higher National Unit specification: support notes**

### **Unit title: Leaded Glass Work**

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 an optional Unit in the HNC/HND Art Glass Production Group Award frameworks. Its purpose is to introduce candidates to leaded glass techniques using a variety of materials, tools and equipment. It could also be delivered as a stand-alone Unit.

The kind of equipment which will be used in this Unit will include different types of soldering irons, ie gas and electric. Candidates should use a variety of equipment during the course of the Unit. They should also use different types and sizes of lead came.

The use of the following tools and equipment should be covered in the Unit:

- ◆ Glass cutting tools (oil glasscutters)
- ◆ Grozing pliers (for nibbling the edges of glass)
- ◆ Using cartoons (paper patterns)
- ◆ Lead cutting tools
- ◆ Soldering irons

The importance of cleanliness and tidiness in the work area should be stressed throughout the Unit as should health and safety requirements and the use of personal protective clothing and equipment.

Candidates should be encouraged not only to follow health and safety requirements in the workplace but to research any specific manufacturers' instructions supplied with equipment. Manufacturers' catalogues and websites could be used as a source of reference for materials and equipment.

### **Guidance on the delivery and assessment of this Unit**

Practical demonstration by the tutor will be followed by the candidate having the opportunity to practise individual techniques and build their skills with small pieces until they are competent to be assessed.

The bulk of the work in this Unit is in Outcomes 1 and 3 and candidates will need to practise their techniques, prior to assessment, until they have achieved a level of competence where they can produce quality leaded glass. This should be done by developing candidate competence through making small panels and objects and developing the skills needed to work with larger objects.

## Higher National Unit specification: support notes (cont)

### Unit title: Leaded Glass Work

It is envisaged that this Unit will be assessed holistically, in a studio/workshop environment, by:

- ◆ A practical exercise — the manufacture of a leaded glass object to meet a given specification. The specification could be given to the candidate or could be a brief from a client. If it is not centre-devised, then the specification should be discussed between tutor and candidate to ensure that it will be suitable for assessment purposes. The finished item should be supported by an observation schedule recording details of the candidates' use of tools and techniques.
- ◆ Eight short answer questions — two based on each Outcome.

### *Opportunities for developing Core Skills*

Candidates can develop their Problem Solving skills by determining the materials, tools and equipment which should be used to meet the specification given. Candidates will need to show evidence of planning and sequencing their activities and continuously assessing their own work and taking corrective action as and when required. Using observation schedules the candidates will be evaluated on what they have done and in particular when things don't work out and there are flaws, how they amend these flaws and minimise wastage.

The Unit also requires candidates to work with others to negotiate the use of equipment and tools in the workshop. They will also have to show consideration for the activities of others and will co-operate with others to follow health and safety requirements in the workshop.

Aspects of Numeracy will be developed as candidates will be required to measure and cut glass and lead accurately and to follow a given specification which may be diagrammatic.

### Open learning

This Unit is not suitable for Open Learning due to the equipment and workshop facilities required. It also requires candidates to be observed and questioned by a qualified practitioner to meet health and safety requirements.

For further information and advice, please refer to the SQA guide *Assessment and Quality Assurance for Open and Distance Learning* [www.sqa.org.uk](http://www.sqa.org.uk).

### 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. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* ([www.sqa.org.uk](http://www.sqa.org.uk)).

## **General information for candidates**

### **Unit title: Leaded Glass Work**

This Unit introduces you to leaded glass techniques using a variety of materials, tools and equipment.

In Outcome 1 you will learn how to cut glass to shapes using cartoons — these are patterns of leaded glass.

In Outcome 2 you will learn how to stretch lead — this is what is used between the pieces of glass which are soldered together to make bigger pieces of work.

Outcome 3 covers the use of soldering irons which are used to melt the solder.

In Outcome 4 you will also learn how to cement a leaded glass panel. This gives it strength and makes it water tight.

Throughout the Unit you will also learn about health and safety in the workplace and how to use different tools and equipment safely in the studio environment. You will practise making different types of leaded panels and objects.

You will be assessed by your tutor who will observe and record some of the things that you are asked to do. For example in Outcome 1 you will be required to cut glass to shape. Other assessments are related to the things you will make and how you conduct yourself throughout the Unit.

You will be given the opportunity to develop Core Skills during the delivery of this Unit. At times you will be required to consult with your colleagues, for example, to work out a rota for use of the equipment, tools etc and this means you will develop your skills of Working with Others. Additionally you will develop your Problem Solving skills by planning, developing and evaluating what you do. Not all processes will work out exactly the way you planned them and you may need to experiment or correct errors as you work. You will also develop your Numeracy skills as you will have to work out the best way of using materials to minimise wastage.