



National Unit Specification: general information

UNIT Harris Tweed: An Introduction to Weaving and Production Techniques (SCQF level 5)

CODE F8XV 11

SUMMARY

This Unit aims to give candidates an understanding of the unique way in which Harris Tweed is produced and some of the key techniques and processes. Candidates will also have the opportunity to design a Harris Tweed pattern and produce a piece of woven tweed.

This Unit forms part of the National Progression Award (NPA) in Harris Tweed but can also be delivered as a free-standing Unit.

OUTCOMES

- 1 Explain the manufacturing processes for Harris Tweed.
- 2 Design a Harris Tweed pattern.
- 3 Produce a piece of woven tweed.

RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates would normally be expected to have attained a course or its component Units at Intermediate 1 (SCQF level 4) or Standard Grade at General level in a relevant subject area such as fashion and textiles, product design, art and design and/or technologies.

‘New start’ candidates and adult returners should have appropriate prior experience.

Administrative Information

Superclass: JK

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CREDIT VALUE

1 credit at SCQF level 5 (6 SCQF credit points at SCQF level 5*).

**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.*

CORE SKILLS

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes of this Unit Specification.

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

National Unit Specification: statement of standards

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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

Explain the manufacturing processes for Harris Tweed.

Performance Criteria

- (a) Explain the manufacturing processes involved in the production of Harris Tweed.
- (b) Identify the properties of Harris Tweed.
- (c) Outline the reasons for, and applications of, different specifications for Harris Tweed.

OUTCOME 2

Design a Harris Tweed pattern.

Performance Criteria

- (a) Investigate the design process for Harris Tweed patterns.
- (b) Create a design for a Harris Tweed pattern which demonstrates an appropriate use of colour.

OUTCOME 3

Produce a piece of woven tweed.

Performance Criteria

- (a) Plan the production of a piece of woven tweed to a given specification.
- (b) Produce a piece of woven tweed using the correct procedures.
- (c) Evaluate the woven tweed against the specification.
- (d) Comply with appropriate Health and Safety requirements.

National Unit Specification: statement of standards (cont)

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EVIDENCE REQUIREMENTS FOR THIS UNIT

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

◆ Outcomes 1 and 2 — Research Portfolio

Candidates will be required to present a Portfolio which contains their research for Outcomes 1 and 2. Candidates may use a range of research methods to prepare the Portfolio.

The Portfolio must demonstrate that the candidates understand the processes and specifications involved in the commercial production of Harris Tweed and the design process for patterns.

The Portfolio must cover the following topics:

- processing of wool — washing, dyeing, spinning, warping
- weaving processes — operation of a loom, mill specifications
- finishing processes
- properties of Harris Tweed
- different specifications for Harris Tweed — widths, weights, patterns, colours
- the design process for Harris Tweed patterns

The Portfolio should be structured and presented in a logical way.

◆ Outcome 2 — Harris Tweed Pattern

Candidates will be required to create a design for a simple Harris Tweed pattern — this could be drawn or created on a weaving card. Candidates must identify a theme and must demonstrate an understanding of the application of colours which is appropriate for the pattern and the chosen theme.

National Unit Specification: statement of standards (cont)

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◆ Outcome 3 — Woven Tweed

Candidates will be required to create a piece of woven tweed to a given specification. It is anticipated that the tweed will be woven using a table top loom. The piece of tweed should have a simple pattern and must contain at least two different colours. It should be a minimum of 30 sq cm. The complete piece of woven tweed should have:

- correct weave structure to specification
- correct colour plan to specification
- generally even tension across fabric
- correct reed denting
- minimal incorrect warp/weft faults
- generally neat selvages

Candidates should carry out their own evaluation of their completed woven against the criteria listed above.

National Unit Specification: support notes

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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 could be studied on its own as a freestanding Unit or it could be studied in conjunction with other Harris Tweed Units as part of the National Progression Award for Harris Tweed.

This Unit will introduce candidates to some of the key techniques involved in the production of Harris Tweed. This should prepare candidates to undertake further study/training in a related area which could then lead to employment opportunities within the sector.

Outcome 1

Harris Tweed is a unique product which is produced, used and marketed in a way that is specific to that particular product. Harris Tweed originated on the Island of Harris but the bulk of the cloth has been produced in Lewis for many years. It is much sought after by prestigious clothing designers and it has been used in recent years in the production of an increasingly diverse range of products.

This Outcome should give candidates a good understanding of all aspects of the production of Harris Tweed from the raw wool (including the various stages of wool production, dyeing, spinning, warping), to the weaving process to the finishing process for a finished piece of Harris Tweed. For the weaving process, candidates should develop an understanding of basic weave design, the use of warp and weft patterns and the different weave structures.

Candidates should also develop an understanding of the properties of Harris Tweed (advantages and disadvantages), the effect of yarn characteristics on woven fabric and reasons for, and applications of, different weights of Harris Tweed.

Outcome 2

Candidates should gain an awareness of the influence of the natural environment of the Outer Hebrides as an inspiration for the distinctive pattern designs and colours in Harris Tweed. The patterns and colours often reflect the colour of the hills, the sea and the rocks which feature so much in the island landscape.

Candidates should investigate the basic principles of how Harris Tweed patterns have been developed, the impact of colours in these patterns, the reasons and uses for different designs/patterns and the role of designers.

Candidates should also understand how the designs are presented in the specifications that mills provide for weavers (instruction tickets) and how weavers create the pattern on their loom.

National Unit Specification: support notes

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Outcome 3

This Outcome will give candidates practical experience in weaving, a key aspect of the Harris Tweed industry. During this process, candidates should develop an understanding of some basic techniques and processes involved in weaving and the operation of looms. Key actions will be to:

- ◆ make a warp on warp frame with correct lease
- ◆ transfer warp to the loom beam correctly with even tension
- ◆ prepare the loom for weaving:
 - correct draft to specification
 - correct denting in the reed
 - even tension across warp
- ◆ weave the fabric with correct weave structure, colour pattern and with even and correct pick setting

By definition Harris Tweed must be woven by Islanders in their own home and therefore woven material produced by candidates will not technically be Harris Tweed but prototype samples.

A fabric straight from the loom is called 'loomstate' and will still contain oils added in the spinning process which need to be washed out of the tweed. Candidates need to understand the impact that the finishing processes at the mill will have on the fabric, ie making it softer, smoother and slightly felted.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Opportunities for integration

An integrated approach should be adopted for the delivery of this Unit, encompassing all the Outcomes.

There are also opportunities to deliver and assess the Unit in an integrated way with other Units within the National Progression Award for Harris Tweed. For example, candidates who are undertaking all 4 Units in the NPA could develop one Portfolio to store and present all their research. There would be a natural progression from the research undertaken within *Harris Tweed: An Introduction to the Industry* on Harris Tweed processes to the research required for Outcome 1. In *Harris Tweed: An Introduction to Product Design and Make* candidates have to make a product using Harris Tweed — it could be possible to use the tweed they have woven themselves to make this product, although this may limit the scope and type of product that could be made, not least as the woven tweed may not be 'finished'.

A cross-curricular approach to the delivery of this Unit could also be used. For example, it may be appropriate within schools to include input from home economics, product design, graphic design, technology and/or Gaelic.

Completion of this Unit and the NPA for Harris Tweed could contribute to the four capacities in Curriculum for Excellence.

National Unit Specification: support notes (cont)

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Learning and teaching approaches

Outcomes 1 and 2

Outcomes 1 and 2 should be achieved through observation of working processes, research and practical investigation. Candidates should be encouraged to take a good deal of responsibility for their own learning.

Candidates should design and set up a Portfolio to record their research. Candidates should have the opportunity to use a range of research methods to carry out their own investigation. Candidates should consider how to structure and present their information to ensure that it can be easily read and understood.

When investigating the different stages of wool production, dyeing, spinning, warping and weaving, local experts should be invited to provide demonstrations and candidates should visit mill and weaving operations, if possible. DVDs and research could also be used to develop and supplement the candidates' understanding. Candidates should have access to examples of the specifications that mills provide for weavers — ideally candidates should be able to read the instruction tickets provided by mill (draft, warp and weft pattern).

Candidates should investigate the design process for Harris Tweed, including how patterns are developed, the differences between different patterns (eg twill, herringbone, tartan), the reasons and uses for different designs/patterns. If possible, candidates should be able to speak to designers or have access to a DVD where a designer explains how he/she approaches the design process.

Candidates should be given the opportunity to design their own pattern. Weaving cards could be used to help candidates understand how different patterns are created. Candidates should then create their own design for a simple Harris Tweed pattern. Candidates should consider different themes (eg traditional themes such as sea or land or contemporary themes) and must choose appropriate colours to realise their design.

It is also important that candidates understand how Harris Tweed is created on a commercial basis, eg how do mills decide what patterns of Tweed will be produced and how does this then impact on what weavers are contracted to create. Candidates should be encouraged to investigate the changing demands for Harris Tweed and how this impacts on production. This research should include considerations on why different weights of Harris Tweed are produced and what influences colour and pattern designs.

Outcome 3

Outcome 3 enables candidates to have hands-on practical experience of the weaving process. Candidates will need to be given time to develop some basic weaving skills before they start work on their piece of woven material. This could be achieved through the production of samples which will enable candidates to make and learn from their mistakes. It may take a little time to produce their piece of woven material and there may be limited access to a loom(s) if equipment is being shared by a class so consideration will need to be given as to how time for this activity can be allocated to all candidates over a period of time.

National Unit Specification: support notes (cont)

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During this process candidates should develop an understanding of some basic techniques and processes involved in weaving and the operation of looms. This could include:

- ◆ introduction to the loom and the parts of the loom
- ◆ the role of warp and weft and how a fabric is woven
- ◆ the role of the draft and the pegplan in creating weave structures
- ◆ the role of colour in the pattern design
- ◆ different yarns and the impact on woven cloth

It is anticipated that candidates will use a table top loom to create their piece of woven fabric. Time should also be allocated to identifying how commercial looms operate and terminology for different parts of a loom and equipment. If possible, candidates should observe a commercial loom in operation – this could be achieved through visits to weavers or by watching a DVD of a weaver working.

Candidates will need to learn how to set up and operate the loom. Candidates will need to be taught how to:

- ◆ make a warp on warp frame with correct lease
- ◆ transfer warp to the loom beam correctly with even tension
- ◆ prepare the loom for weaving — correct draft to specification; correct denting in the reed; even tension across warp
- ◆ weave the fabric with correct weave structure, colour pattern and with even and correct pick setting

Candidates could wash and press their completed piece of woven tweed to have a better understanding of the finishing process. The tweed would need to be washed in warm soapy water without too much agitation (or it will shrink), rinsed and then dried and pressed.

It is important that candidates also understand quality factors affecting the weaving process. Candidates should be aware of typical faults that may occur (missed picks, lines, drifting warps, snarling weft, yarn imperfections, etc) and the effects of various weaving faults on the resultant fabric. Included in this should be an awareness of the cost implications of weaver mistakes as well as quality control in spinning, dyeing and finishing processes at the mills. To assist candidates to develop their knowledge, it may be useful to provide samples of woven material (or photographs) which include faults that candidates can try to identify. Samples of woven material which demonstrate faults could be created by tutors or collected from other sources (eg early attempts at weaving by candidates for this Unit or on weaving training courses).

National Unit Specification: support notes (cont)

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Candidates should also be aware of the need to carry out on-going checks on their own work — initially on their samples then with their final piece of woven tweed. A checklist could be created that can be used during the weaving practice and also for the final assessment. This would specify that the woven tweed must have:

- ◆ correct weave structure to specification
- ◆ correct colour plan to specification
- ◆ generally even tension across fabric
- ◆ correct reed denting
- ◆ minimal incorrect warp/weft faults
- ◆ generally neat selvages

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

During the delivery of this Unit candidates will be involved a range of practical and research based tasks. The approach to this Unit could offer good opportunities for developing aspects of:

- ◆ *Communication*
- ◆ *Problem Solving*
- ◆ *Numeracy*

The following gives some examples of some of the opportunities for developing these Core Skills which the Unit makes available to candidates.

Communication (Research Portfolio): presenting research data in the Portfolio in a structured and logical way; correctly interpreting and presenting data in own words.

Problem Solving (Portfolio, Pattern Design, Woven Tweed): planning personal research: determining relevant sources for information, organising the recording of evidence, interpreting data from a range of sources; planning pattern design task and considering different options for completing the task; planning implementation of weaving task over a period of time; evaluating practical tasks.

Numeracy (Pattern Design, Woven Tweed): calculating pattern design; setting up loom, ensuring weaving is completed in accordance with specification.

National Unit Specification: support notes (cont)

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GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Candidates must demonstrate research skills, data presentation skills and practical skills to achieve this Unit. A range of instruments of assessment could be used including:

- ◆ a Portfolio which will record the results of candidates' investigations into production and design processes for Harris Tweed — the Portfolio could be structured and presented in a number of different ways, using a range of resources and formats — the assessor/tutor is responsible for ensuring that candidates develop an individual portfolio of evidence which matches the Evidence Requirements.
- ◆ a practical task to create a design for a Harris Tweed pattern — this could be drawn or created on a weaving card or using CAD software if available or using another appropriate tool.
- ◆ a practical task to create a piece of woven Harris Tweed material — the type of loom used for this task may vary — a table top loom may be the most appropriate option but other options could be considered.

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