



National Unit specification: general information

Unit title: Forestry: Woodland Skills

Unit code: H099 10

Superclass: SG

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Summary

Candidates will develop an understanding of tree identification according to use, and the conservation value of woodland to wildlife and biodiversity. Candidates will also assist in tree pruning, coppicing and wood processing, and develop an understanding of the importance of simple environmental control measures to woodland health. This is an optional Unit within the National Certificate in Rural Skills at SCQF level 4. It can also be taken as a freestanding Unit.

Outcomes

- 1 Identify trees according to type, growth habits and potential uses.
- 2 Describe the conservation values of different types of forest cover and the benefits to wildlife and biodiversity.
- 3 Assist in pruning and coppicing trees, wood processing, and in the implementation of control measures, using hand tools.

Recommended entry

Entry is at the discretion of the centre.

Credit points and level

1 National Unit credit at SCQF level 4: (6 SCQF credit points at SCQF level 4*)

**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.*

General information (cont)

Unit title: Forestry: Woodland Skills

Core Skills

Achievement of this Unit gives automatic certification of the following Core Skills component:

- ◆ Critical Thinking at SCQF level 4

There are also opportunities to develop aspects of Core Skills which are highlighted in the Support Notes of this Unit specification.

National Unit specification: statement of standards

Unit title: Forestry: Woodland Skills (SCQF level 4)

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. All activities must comply with current Health and Safety legislation.

Outcome 1

Identify trees according to type, growth habits and potential uses.

Performance Criteria

- (a) Identify deciduous and coniferous trees.
- (b) Describe the characteristics of trees in terms of growth habit.
- (c) Describe uses of wood according to different growth habits of trees.

Outcome 2

Describe the conservation values of different types of forest cover and the benefits to wildlife and biodiversity.

Performance Criteria

- (a) Describe the characteristics of a variety of woodland.
- (b) Compare the wildlife and biodiversity within two different woodland areas.

Outcome 3

Assist in pruning and coppicing trees, wood processing and in the implementation of control measures, using hand tools.

Performance Criteria

- (a) Identify tools used for effective tree pruning, coppicing and for wood processing.
- (b) Prepare and maintain tools for safe and effective use under supervision.
- (c) Demonstrate safe and effective tree pruning techniques, under supervision.
- (d) Demonstrate safe and effective coppicing and wood processing techniques, under supervision.
- (e) Demonstrate simple control measures, used in maintaining woodland health, under supervision.

National Unit specification: statement of standards (cont)

Unit title: Forestry: Woodland Skills (SCQF level 4)

Evidence Requirements for this Unit

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

Written and/or oral, performance and product evidence of the candidates' ability to satisfy all Outcomes and Performance Criteria is required.

Before using any tools the assessor must ensure demonstration of their safe and effective use is given to all candidates, and supervision must be maintained at all times.

All relevant operational procedures undertaken in this Unit must adhere to current legislation, regulations, codes of practice and manufacturer's recommendations.

Performance evidence together with written and/or oral evidence is required to demonstrate that all Outcomes and Performance Criteria have been achieved. Evidence must be collected throughout the Unit in appropriate woodland contexts.

Outcome 1

Candidates should be able to distinguish between deciduous and coniferous trees in terms of:

- ◆ leaves and needles
- ◆ seed forms (acorns, nuts, flower seeds, fruits, catkins) and cones, and gain an understanding of the term 'evergreen'.

Evidence must include the identification of a minimum of four deciduous and two coniferous trees; investigation of the growth characteristics including:

- ◆ number of stems
- ◆ length
- ◆ width
- ◆ straightness and health and their implications for wood use.

a description of the appropriate uses of wood including:

- ◆ fire
- ◆ charcoal
- ◆ fence posts and railings
- ◆ basketry
- ◆ tool handles
- ◆ board timber.

National Unit specification: statement of standards (cont)

Unit title: Forestry: Woodland Skills (SCQF level 4)

Outcome 2

Candidates should be able to distinguish between the differing growing conditions in plantation and natural/semi-natural woodland, and gain an understanding of the impacts these have on wildlife and biodiversity.

Evidence must include investigation of a minimum of one plantation and one natural/semi-natural (coppice) woodland to include:

- ◆ the respective characteristics of planting density
- ◆ branch formation
- ◆ light levels
- ◆ drainage
- ◆ erosion
- ◆ soil quality
- ◆ variety of habitat and food resources for wildlife
- ◆ plant biodiversity including a description of a minimum of two contrasting woodlands in terms of biodiversity levels.

Outcome 3

Before using any tools the assessor must ensure demonstration of their safe and effective use is given to all candidates, and supervision must be maintained at all times.

Evidence must include:

- ◆ the identification of secateurs and loppers (bypass and anvil), pruning and bow saws, hatchet, felling axe and wood splitter, billhook and pole pruners.
- ◆ best practice preparation of tools in terms of cleaning, maintenance (oiling) and storage, sharpening and replacing of saw blades.
- ◆ a demonstration by the candidate, under supervision, of safe and effective pruning and coppicing taking into account working distances, pre-assessment of wood to be cut, correct tool handling, correct pruning techniques to remove weight and minimize damage to trees, site safety and management.
- ◆ a demonstration by the candidate, under supervision, of the appropriate storage of harvested timber for a specific use and of processing kindling and firewood.
- ◆ a demonstration by the candidate, under supervision, of measures to improve woodland health including removal of invasive species, thinning and branch reduction to improve light levels.

National Unit specification: support notes

Unit title: Forestry: Woodland Skills

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 is an optional Unit within the National Certificate in Rural Skills at SCQF level 4; it may be taken as a free-standing Unit.

Current safety regulations and safe working practices and procedures should be adhered to at all times.

This Unit is aligned to the following National Occupational Standards (NOS) from Lantra:

- (CU1) Maintain safe and effective working practices
- (CU2) Monitor and maintain health and safety
- (TW3) Carry out site surveys and communicate on your findings
- (TW8) Control unwanted vegetation around trees
- (TW9) Select, mark, and measure trees
- (TW41) Survey and inspect trees
- (GWT2) Use hand tools for green wood trades and coppice safely and effectively
- (GWT3) Identify tree species and timber required for a green wood project
- (GWT4) Select trees for coppicing and cut coppice
- (GWT5) Process coppice materials for coppice products
- (GWT6) Process wood for green wood products
- (GWT9) Produce fuel wood and charcoal
- (GWT13) Maintain woodland health for coppice
- (GWT14) Manage or re-establish coppice woodlands
- (CU22) Construct, maintain and repair boundaries and access points
- (CU23) Construct, maintain and repair paths and related structures
- (CU86) Habitat Management

This Unit has been designed to give candidates a method of identifying trees according to the potential use of different growth habits, and an understanding of the impact different types of woodland have on biodiversity. It combines relevant principles with practical work, enabling the candidates to harvest useful timber for simple products, and take measures to ensure continued woodland health.

National Unit specification: support notes (cont)

Unit title: Forestry: Woodland Skills

Guidance on learning and teaching approaches for this Unit

This Unit combines practical skills and activity with the principles of assessing localised woodland conditions in terms of health, biodiversity and timber potential.

It is recommended that candidates should visit at least one monoculture timber plantation and one mixed natural/semi-natural (coppice) woodland, in order to experience firsthand the contrasting elements of Outcomes 1 and 2. It is suggested that random selection of contrasting woodland areas of a given size, marked out with marker posts and tape (of a given length) for sectional analysis in the form of counting species of plants and trees, insects, birds and evidence of mammals would be an appropriate exercise.

The distinction between deciduous and coniferous trees in terms of leaves and needles, the seasonal loss of foliage as compared to an evergreen state, dormancy, re-growth following pruning/coppicing, number of stems and their potential timber uses should all be discussed, as well as the impact of differing light conditions in monoculture/mixed woodland on drainage, branch and stem growth in deciduous and coniferous trees, and consequently, on the presence of flora and fauna under differing forest cover.

Elementary surveying of flora and fauna in different woodlands can be carried out by cordoning off areas of equal size in each woodland visited, and counting the number of the most evident living flora and fauna examples, or indications thereof, for example, nests, burrows, obvious tracks or trails, leaf litter, dead wood, found within the cordon.

It is recommended that the mixed woodland visited be suitable for candidates to carry out pruning and coppicing activities, in order to create a continuum of experience from Outcomes 1 and 2, to Outcome 3. It is suggested that many of these tasks can be completed in one given woodland area, preferably semi-natural and in need of renovation, and that a continuum of activity be planned in order to take candidates from the point of identifying tools to the point of having visibly improved the given area selected. Photographic evidence is recommended.

The importance of best practice technique for pruning, coppicing and wood processing cuts with all bladed tools must be stressed, in terms of safety, efficiency, and minimising damage and risk of disease to the potential re-growth of timber crops. Water-logging of the woodland floor and vegetative invasion can be addressed at the same time as other operations, in preparation of a working area for coppicing and wood processing, for example.

Candidates will greatly benefit from practically carrying out these operations, and from perceiving an area of woodland 'worked' from the point of their initial assessments to the final result. Any opportunity to visit working coppices, or receive seminars with green wood-workers is to be recommended.

National Unit specification: support notes (cont)

Unit title: Forestry: Woodland Skills

Guidance on approaches to assessment for this Unit

Outcome 1

For this Outcome it is recommended that candidates are tested on their knowledge of how to make a simple distinction between deciduous and coniferous trees, and on their ability to assess growth characteristics of trees that indicate a potential for particular wood products. This could be done by using a questioning method such as restricted response/short answer questions in a written or recorded oral form, and ideally, in proximity to an appropriate woodland area.

Outcome 2

For this Outcome it is recommended that candidates are tested on their ability to discriminate environmental conditions within two distinct types of woodland, ie plantation and mixed natural/semi-natural. This could be done by using a questioning method such as restricted response/short answer questions in a written or recorded oral form. Assessment of a practical exercise in surveying an area of woodland floor will be recorded by means of an observation checklist supplied by the teacher/lecturer, and completed by the candidates.

Outcomes 3

For this Outcome it is recommended that candidates are assessed by means of practical exercises, and candidate attainment will be recorded by means of observation checklists completed by the teacher/lecturer. All aspects involved in the use of all hand tools, ie assessing condition, sharpening, correct handling and technical use, cleaning and correct storage (on and off site), must be covered. Best practice cutting techniques should be referred to in all instances of bladed hand tool use.

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 social software. 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)*.

National Unit specification: support notes (cont)

Unit title: Forestry: Woodland Skills

Opportunities for developing Core Skills

In this Unit the candidates will learn how to identify trees according to their uses. They will learn how to prune; coppice and process wood with hand tools, safely and effectively, and develop an understanding of the importance of control measures in a woodland setting.

Candidates will identify trees and their potential uses and growth habits. They will identify characteristics of plantation, natural and semi-natural woodland. They will also explain the presence of different levels of wildlife and biodiversity in different woodlands.

Candidates will take part in a study of woodland areas to determine their conservation value. They will demonstrate control measures which benefit woodland health. They will comply with health and safety legislation for the safe and effective use of hand tools.

By doing this candidates will develop aspects of the Core Skills in *Problem Solving*, *Communication* and *Working with Others*.

This Unit has the Problem Solving component of Critical Thinking embedded in it, so when the candidate achieves this Unit their Core Skills profile will be updated to show they have achieved Critical Thinking at SCQF level 4.

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

History of changes to Unit

| Version | Description of change | Date |
|---------|---|------------|
| 02 | Core Skills Component Critical Thinking at SCQF level 4 embedded. | 19/01/2012 |
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