National Unit Specification: General Information

UNIT	Tree Identification (Higher)
NUMBER	D904 12

COURSE

SUMMARY

This unit will enable candidates to acquire tree identification skills, underpinned by a knowledge of plant classification and the physical characteristics of trees.

OUTCOMES

1   Describe the component parts of a tree.
2   Explain the principles of plant classification.
3   Identify forest and woodland trees found in the UK.

RECOMMENDED ENTRY

There are no formal entry requirements for this unit.

CREDIT VALUE

1.0 Credit at Higher.

CORE SKILLS

Information on the automatic certification of any core skills in this unit is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

Administrative Information

National unit specification: statement of standards

UNIT   Tree Identification (Higher)

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 the Scottish Qualifications Authority.

OUTCOME 1
Describe the component parts of a tree.

Performance Criteria
a)   The floral characteristics of trees are correctly identified and described.
b)   The characteristics of tree shoots are correctly identified and described.
c)   The stem and wood structure of trees is correctly identified and described.

Evidence Requirements
Written and/or oral evidence of the candidate's ability to satisfy performance criteria (a) to (c).

OUTCOME 2
Explain the principles of plant classification.

Performance Criteria
a)   The principle of a taxonomic structure is correctly explained.
b)   The use of taxonomic characters is correctly explained.
c)   The explanation of the relevance of hybridisation, variety and selection is correct.
d)   The principles underlying plant identification keys are correctly outlined.

Evidence Requirements
Written and/or oral evidence of the candidate's ability to satisfy performance criteria (a) to (d).

OUTCOME 3
Identify forest and woodland trees found in the UK.

Performance Criteria
a)   The identification of common trees, without the use of a botanical key, is accurate.
b)   The identification of less common trees, using a botanical key, is accurate.
c)   The identification of broadleaves from green cuttings is correct.
d)   The identification of conifers from green cuttings is correct.
e)   The identification of broadleaves from twigs and buds is correct.
f)   The identification of trees from standing specimens is correct.

Evidence Requirements
Written and/or oral evidence of the candidate's ability to identify tree specimens as detailed in performance criteria (a) to (f).

National unit specification: support notes

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This part of the unit specification is offered as guidance. None of the sections of the support notes is mandatory.

GUIDANCE ON CONTENT AND CONTEXT
Outcome 1

A general outline of the biological function and processes of the tree component parts and the link to the structure of trees. The general characteristics of tree flowers, buds, shoots, stem and wood structure in terms of name, location and function. Where possible the scientific and adaptive basis for the structure and function should be highlighted or explained.

Outcome 2

The historical development of trees; the place of trees in the plant and animal kingdoms; an outline of plant classifications and groups; the distinction between Angiosperms and Gymnosperms; the basis of adaptation and selection of species and individuals.   The development of classifications; the use of taxonomic characters; examples of identification keys and the basis of their development and operation.

Outcome 3

Candidates are introduced to and given guidance in the use of tree keys; a wide range of tree species are identified, using the more common and important species and developing into less common species.   The use of Latin names should be required knowledge in addition to common names. Make use of different specimen types and tree conditions – twigs, green cuttings, standing specimens, winter and summer conditions.

GUIDANCE ON TEACHING AND LEARNING APPROACHES
Outcome 1

As well as formal lectures , use is made of tree specimens and the opportunity to examine trees and their component parts in the natural environment. Video and microscopic resource materials should be used. This outcome could be integrated into outcomes 2 and 3 to give a clear linkage and relevance to tree identification and plant classification. This outcome could also be linked to any biology or ecology study which is taking place as part of the programme of study.

Outcome 2

Use is made of formal lectures with hand out materials and study exercises. The principle of classification is introduced through non-biological examples and then transferred into the context of plants, existing twig and flower specimens; structured study time is made available to develop tree key skills.

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Outcome 3

Visits to neighbouring woodlands and arboreta are carried out and use is also made of slides of tree specimens. Candidates are introduced to and given guidance in the use of tree keys and encouraged to produce tree collections based on specimens legitimately collected. Use is made of 'spotter' formative tests. The candidates are encouraged to link their identification skills to a wider biological and ecological knowledge and understanding.

GUIDANCE ON APPROACHES TO ASSESSMENT
Centres may use the instruments of assessments which are considered by the assessors to be most appropriate and fully satisfy the outcomes, performance criteria and range statements. Examples of instruments of assessment which could be used are as follows:

Outcomes 1 and 2

An integrated assessment based on an assignment/report. The assignment should include a clear description of tree components, linked to plant classification and identification methods.

Outcome 3

Use of a practical identification test using numbered specimens, a degree of latitude should be built into the arrangement of the specimens to allow the candidate to achieve success without having to identify all correctly eg. identify 9 conifer cuttings from the 10 present. Some specimens should be designated as having to be identified through the use of a key with the steps identified.

SPECIAL NEEDS

This unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special 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 Special Assessment and Certification Arrangements* (SQA, 1998).