



National Unit specification: general information

Unit title: Plant Identification

Unit code: H1JB 11

Superclass: SE

Publication date: May 2012

Source: Scottish Qualifications Authority

Version: 01

Summary

This Unit is designed to meet the needs of candidates following a range of programmes and is particularly suitable for the land-based sector. It is equally appropriate for knowledge and understanding of cultivated plants and native flora. On completion of the Unit candidates will have a general knowledge of plant groups and will be able to identify a range of plants.

Outcomes

- 1 Describe the broad groupings of plants.
- 2 Identify a range of plants using the binomial system.
- 3 Identify a range of plants using a key.

Recommended entry

While entry is at the discretion of the centre, candidates would normally be expected to have attained one of the following, or equivalent:

- ◆ Standard Grade Biology, Chemistry, Geography, Physics or Science at Grade 3 or 4
- ◆ Intermediate 1 Managing Environmental Resources or its component Units

Credit points and level

1 credit(s) 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.*

General information (cont)

Unit title: Plant Identification

Core Skills

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

National Unit specification: statement of standards

Unit title: Plant Identification

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

Describe the broad groupings of plants.

Performance Criteria

- (a) The broad groupings of plants are defined correctly.
- (b) The main groups of woody plants are described accurately.
- (c) The main groups of non-woody flowering plants are described accurately.
- (d) The main groups of lower plants are described accurately.

Outcome 2

Identify a range of plants using the binomial system.

Performance Criteria

- (a) The binomial system of nomenclature is outlined accurately.
- (b) A range of plants is identified correctly using the binomial system of nomenclature.

Outcome 3

Identify a range of plants using a key.

Performance Criteria

- (a) The vegetative morphology of given plants is described accurately.
- (b) The reproductive morphology of given plants is described accurately.
- (c) A range of plants is identified correctly using an appropriate key.

National Unit specification: statement of standards (cont)

Unit title: Plant Identification

Evidence Requirements for this Unit

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

Outcome 1 — Written and/or recorded oral evidence of the candidate's ability to define and describe plant groupings.

Outcome 2 — Written and/or recorded oral evidence of the candidate's ability to understand and use the binomial system of nomenclature is required for Performance Criteria (a). Written and/or recorded oral evidence of the candidate's ability to correctly identify 80% of a selection of 50 plants is required for Performance Criteria (b).

Outcome 3 — Written and/or recorded oral evidence of the candidate's ability to describe the morphology of 5 plants is required for Performance Criteria (a) and (b). Written and/or recorded oral evidence of the candidate's ability to identify correctly 5 plants is required for Performance Criteria (c).

National Unit specification: support notes

Unit title: Plant Identification

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

Content will depend on whether the context is native plants growing in their natural environment or cultivated plants being grown, for example, for agricultural, forestry, horticultural or amenity purposes.

- 1 The broad groupings of plants should be considered with respect to the area of interest and need not relate strictly to accepted taxonomic divisions. The differences between the terms tree and shrub, evergreen and deciduous, monocot and dicot, annual, biennial and perennial, dioecious, monoecious and hermaphrodite should all be introduced when appropriate plant groups are being considered.
- 2 The advantages and disadvantages of common names and scientific names should be explained. Discussion of the binomial system of nomenclature should include genus and species only. If cultivated plants are the main focus, cultivars should be discussed where appropriate.
- 3 Discussion of plant morphology should be restricted to those aspects required for identification purposes. For higher plants, vegetative characters relating to stems, buds and leaves should be considered. Reproductive characters relating to flowers, fruits and seeds should be considered as appropriate. Where discussion of lower plants is relevant to candidate's needs, characters of the plant body and spore-bearing structures should be included. Candidates would benefit from developing an understanding of tendrils, nodes, stipules and internodes in this Outcome. It is important that the keys used to identify unknown plants are relatively simple and meet the needs of the candidates. Sophisticated botanical keys do not need to be used at this stage. Candidates should be able to use the selected keys by applying their knowledge and understanding of plant morphology.

National Unit specification: support notes (cont)

Unit title: Plant Identification

Guidance on learning and teaching approaches for this Unit

Some formal sessions could be used to introduce identification and morphology. Delivery of most of the Unit should, however, be strongly candidate-centred and should be carried out by investigating living plant material *in situ*.

The 50 plants required for identification should be introduced as early as possible in the teaching programme. Detailed examination of living plant material growing *in situ* should be carried out in stages. In order to ensure that the assessment for Outcome 2 Performance Criteria (b) is manageable for the candidate the identification of the 50 plants could be split in to several smaller parts. It is suggested, however, that a minimum of 10 plants is used for each part to help ensure a valid and reliable assessment. After the main points of each plant have been investigated by detailed examination, most of the time should be spent on individual learning by candidates. The identification by key for Outcome 3 should be carried out using live plant material, growing *in situ* wherever possible.

If this Unit is delivered as part of the NC in Horticulture at SCQF Level 5 it is suggested that it is delivered and assessed early in the program as the knowledge and skills developed will underpin much of the learning from the other Units.

Guidance on approaches to assessment for this Unit

Centres may use the instruments of assessment which are considered by teachers/lecturers to be the most appropriate. Outcome 1, Performance Criteria (a) of Outcome 2 and Performance Criteria (a) and (b) of Outcome 3 could be assessed by an appropriate level of attainment in an integrated end of Unit test with questions covering these Performance Criteria. Outcome 2 Performance Criteria (b) could be assessed in stages with not less than 10 plants being used in each identification test. The minimum level of attainment could be achieved on the basis of 3 marks per plant with 2 marks for the genus, 1 mark for the species/cultivar (150 available marks, 120 marks required to pass — 80%). Performance Criteria (c) of Outcome 3 could be assessed by participation in practical identification exercises.

Opportunities for the use of e-assessment

While it may be possible to assess this Unit through e-assessment, candidates would benefit from the opportunity to consider real plant materials *in situ* and as such the Unit does not lend itself.

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: Plant Identification

Opportunities for developing Core Skills

There may be opportunities to develop the Core Skills of *Communication* and *Problem Solving* both at SCQF Level 4 in this Unit. There may be opportunities to develop the Core Skill of *Communication* through the candidates written and or recorded oral evidence for Outcome 1 and the Core Skill of *Problem Solving* in the plant identification exercises in Outcome 2 and 3 especially the use of the Identification Key in Outcome 3.

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

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