



## Higher National Unit specification

### General information for centres

**Unit title:** Horticulture: Plant Recognition and Use

**Unit code:** F21S 34

**Unit purpose:** Horticulture, garden design and landscape sectors of industry expect employees to be able to identify plants correctly and to possess a good knowledge of plants, their cultivation and use. The aims of this Unit are to develop skills in plant recognition, to develop plant knowledge and relate plants to their selection for landscape use and their care and maintenance.

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

- 1 Use botanical terminology to identify plants.
- 2 Identify a range of plants.
- 3 Investigate a group of plants for their actual and potential uses and identify their cultural requirements.

**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:** No prior knowledge or skills are required for this Unit. National Units such as Plant Identification, Plant Identification: Conifers and Winter Subjects, and Tree identification are useful but not essential.

**Core Skills:** There are opportunities to develop the Core Skill of Problem Solving at Higher in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

**Context for delivery:** This Unit is normally delivered as part of a range of Horticulture awards. However it may be offered as a free standing Unit for Continuing Professional Development. 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. The learning experience of students could be enhanced by teaching the Unit in tandem with other Units that involve the knowledge and use of plants. For example, Planting Design, Bedding Plant Technology or Plants for Gardens: Trees, Shrubs & Herbaceous.

**Assessment:** Outcomes 1 & 2 are normally assessed using short answer questions. Outcome 3 is assessed through an assignment.

## **Higher National Unit specification: statement of standards**

**Unit title:** Horticulture: Plant Recognition and Use

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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**

Use botanical terminology to identify plants

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

- ◆ Plant classification
- ◆ Plant anatomical and morphological characters
- ◆ Growth habit

#### **Evidence Requirements**

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can correctly:

- ◆ describe various approaches to the grouping of plants
- ◆ use common botanical terms to describe the anatomical and morphological characteristics of plants
- ◆ describe a range of growth habits exhibited by plants

#### **Assessment Guidelines**

Evidence would normally be generated using closed-book, short answer questions that ask for terms to be defined, and/or by providing illustrations and asking for the appropriate morphological term to describe the character.

Alternatively, evidence may be generated by providing candidates with various plant specimens and asking them to describe particular morphological features using botanical terminology.

If plant specimens are provided then it is possible, but not mandatory, to integrate this assessment with Outcome 2. In this case, the test would include identification of the plant specimen, description of anatomical features using correct botanical terminology, and specification of use and cultural requirements.

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

**Unit title:** Horticulture: Plant Recognition and Use

### **Outcome 2**

Identify a range of plants

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

- ◆ Botanical terminology
- ◆ Vegetative and reproductive morphological features
- ◆ Plant recognition skills

#### **Evidence Requirements**

The candidates will be able to demonstrate their Knowledge and/or Skills by showing that they can correctly:

- ◆ identify a minimum of 50 plants correctly using the binomial system

#### **Assessment Guidelines**

Evidence would normally be generated using a series of practical tests in which the candidates are asked to identify plants.

Candidates should learn a minimum of 75 plants and be asked to identify 50 plants correctly (using sample groups of no less than 10).

Assessments for Outcomes 1 &2 may be integrated by asking candidates to use the correct botanical terminology to describe vegetative and reproductive morphological features of the specimens provided.

### **Outcome 3**

Investigate a group of plants for their actual and potential uses and identify their cultural requirements

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

- ◆ Botanical features
- ◆ Research Skills
- ◆ Uses of plants
- ◆ Cultural requirements of plants such as:
  - ◆ Aspect
  - ◆ Soil type
  - ◆ pH
  - ◆ Drainage requirements
- ◆ Constraints on their use including environment, cultivation and conservation issues

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

**Unit title:** Horticulture: Plant Recognition and Use

### **Evidence Requirements**

Candidates will be able to demonstrate their Knowledge and/or Skills by showing that they can correctly:

- ◆ describe botanical features, nomenclature and classification of plants within a chosen group
- ◆ identify actual uses of plants within a chosen plant group
- ◆ evaluate potential uses of plants within a chosen plant group
- ◆ describe the cultural requirements of plants within a chosen group such as:
  - ◆ aspect
  - ◆ soil type
  - ◆ pH
  - ◆ drainage requirements
- ◆ determine constraints on the uses of plants within a chosen plant group, including environment, cultivation and conservation issues where applicable

### **Assessment Guidelines**

This Outcome may be assessed in the form of an assignment that enables the candidate to research a group of plants of their choosing and present their finding in an appropriate format.

## Administrative Information

**Unit code:** F21S 34

**Unit title:** Horticulture: Plant Recognition and Use

**Superclass category:** SA

**Original date of publication:** March 2007

**Version:** 02

### History of changes:

Version	Description of change	Date
02	Moved cultural requirements from Outcome 2 to Outcome 3.	04/03/14

**Source:** SQA

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## Higher National Unit specification: support notes

### Unit title: Horticulture: Plant Recognition and Use

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

The aims of this Unit are to develop skills in plant recognition, to develop plant knowledge, to make the connection between plants, their selection for landscape use and their care and maintenance. Candidates should be encouraged to develop their plant knowledge and be exposed to a range of plants reflecting the context of the Group Award to which the Unit contributes. Lectures and tutorials can be complemented by practical classes, visits to gardens, glasshouses and nurseries as appropriate: and by the use of computer based learning packages, to develop skills and plant knowledge.

**Outcome 1** introduces common & scientific names and the advantages/disadvantages of each. Features such as habit and plant structure; characteristics of stems and buds; leaf, flower and fruit morphology are also introduced. Other useful methods of grouping and recognising plants such as life span, growth form, ecological adaptation and horticultural use should also be covered.

**Outcome 2** applies knowledge developed in Outcome 1 through a series of lectures and practical classes to develop observational skills in identification, including common characteristics that distinguish families and characters that distinguish particular species. Candidates should also be introduced to the principles of dichotomous keys and their use. Learning experience can be enhanced by encouraging candidates to develop a portfolio of the plants they are to learn and they should see specimens of plants *in situ*. Formative assessments can be used to develop knowledge prior to the summative assessments.

**Outcome 3** uses an assignment to gain in-depth knowledge of a particular group of plants and particular features that differentiate individual species within the group. Actual and potential uses as well as constraints need to be explored. Candidates do have an opportunity to develop research skills and there is room for integration with the Unit Using Software Applications. In choosing a plant group, candidates may select on the basis of botanical classification eg a plant family, or alternatively on the basis of other linking factors such as habitat, growth habit or landscape use. The plant group should be valid in terms of identifiable linked factors. Botanical characteristics of each plant should be described eg habit and form, flower shape and form, leaf shape and attachment, bud shape and form, lignifications, stem and twig markings etc. Where internal physiological processes are crucial in linking factors for the group (eg halophytes) these should also be included. Within the assignment, graphical information such as photographs, sketches and plans will be expected.

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

It is recommended but not mandatory, to deliver this Unit throughout the academic year so candidates are able to see plants at different times of the year, and recognise different characteristics that aid identification. Outcome 1 could be assessed after the delivery of teaching on the Outcome, or alternatively be combined with Outcome 2 which would normally take place towards the end of the Unit. However, in order to address seasonality issues, for example summer bedding identification or spring flowering bulbs, the timing of the assessments are at the discretion of the centre.

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

### **Unit title:** Horticulture: Plant Recognition and Use

Outcome 3 can be delivered in tandem with the other Outcomes as well as other Units such as *Nursery Production* or *Plants for Gardens: Trees Shrubs and Herbaceous or Planting Design*. Candidates can make an oral presentation of their assignment, which needs to be supported by written evidence, or alternatively submit a written report.

#### ***Opportunities for developing Core Skills***

There are opportunities to develop the Core Skill of Problem Solving at Higher in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

### **Open learning**

Although this Unit could be delivered by distance learning, it would require a considerable degree of planning by the centre to ensure the sufficiency and authenticity of candidate evidence. Arrangements would need to be made to ensure that the closed-book assessment for learning Outcome 1 is delivered in a supervised environment, and it is probable that candidates would need to attend the centre for assessment of learning Outcome 2.

### **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](http://www.sqa.org.uk/assessmentarrangements).

## **General information for candidates**

### **Unit title:** Horticulture: Plant Recognition and Use

This Unit aims to provide you with the knowledge and skills required to recognise and identify plants correctly and how to use them in parks, gardens and landscaped areas.

The first topic considers methods of naming and categorising plants, and develops your knowledge of the vegetative and reproductive features of plants. You will also learn basic botanical terminology used in identifying plants.

The second topic applies the knowledge of the first topic to develop skills in plant recognition. Observational skills will be developed through classes in which you examine common features that distinguish families and characters that distinguish particular plants. You will also be introduced to the use of dichotomous keys for plant identification.

The third area of study enables you to develop detailed knowledge of plant group of particular interest to you. You will be expected to research a group of plants defining the botanical features of the group, identifying the actual and potential uses of the group, and evaluating potential constraints to their use including cultural requirements, conservation and legislative issues. You will be able to describe the uses and cultural requirements of plants.