

National Unit Specification: general information

UNIT Growing Plants (Access 3)

NUMBER D025 09

COURSE Biology (Access 3)

SUMMARY

This unit seeks to develop knowledge and understanding, problem solving and practical abilities related to the propagation and growth of plants.

OUTCOMES

1. Handle information related to plant propagation.
2. Carry out practical techniques related to plant propagation.

RECOMMENDED ENTRY

Entry is at the discretion of the centre.

CREDIT VALUE

1 credit at Access 3.

Administrative Information

Superclass: SD

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National Unit Specification: general information (cont)

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CORE SKILLS

This unit gives automatic certification of the following:

Complete core skills for the unit None

Core skills components for the unit Planning and Organising Acc 3

Additional information about core skills is published in the *Catalogue of Core Skills in National Qualifications* (SQA, 2001).

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 the Scottish Qualifications Authority.

OUTCOME 1

Handle information related to plant propagation.

Performance criteria

- (a) Facts are used correctly in relation to plant propagation.
- (b) Relevant information is selected and presented appropriately.
- (c) Conclusions drawn are valid.

Note on range for the outcome

Plant propagation: growing plants from seed, vegetative propagation, plant production.

Evidence requirements

Evidence of an appropriate level of attainment from a closed-book test with items covering all performance criteria for all of the range.

OUTCOME 2

Carry out practical techniques related to plant propagation.

Performance criteria

- (a) The procedures are carried out accurately and safely.
- (b) Relevant measurements and observations are recorded in an appropriate format.

Note on range for the outcome

Techniques: sowing seeds, watering, pricking out, potting on, taking cuttings.

Evidence requirements

A checklist of the individual work of the candidate must be produced for all performance criteria for all of the range. For PC (a) the teacher/lecturer must attest that the candidate has been involved in planning the technique, selecting appropriate resources and carrying out the task.

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 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

Outcome 1

1. Growing plants from seed

- i Seed biology.
- ii Germination.
Conditions for germination.
Dormancy and its natural advantage in delaying germination.
- ii Photosynthesis as the process of food production in sunlight for growth.
- iv Growing plants from seeds.
Methods of seed sowing.
Pelleted seeds.
Pre-germinating (chitting) seed.

2. Vegetative propagation

- i Plant propagation structures.
Methods of making use of plant propagation structures.
- ii Artificial propagation.
Growing points.
Techniques of taking stem and leaf cuttings.
Methods of reducing water loss.
Layering and its advantages.
The advantages and disadvantages of heat during propagation.

3. Plant production

- i Conditions for plant growth.
Loam and loamless composts.
Properties of granular and liquid fertilisers.
Watering.
Heating and ventilation.

National Unit Specification: support notes (cont)

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- ii Plant maintenance.
The needs of mature plants.
Methods of maintaining plants.
Methods of controlling pests and disease.
Protected cultivation under glass, plastic and floating fleece.
- iii Modern production methods including genetic engineering and computer control technology.
- iv Environmental impact.

Further detail is given in the course content section of the Intermediate 1 Biology course specification.

Outcome 2

Suitable techniques for this outcome are:

- sowing seeds
- watering
- pricking out
- potting on
- taking cuttings.

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 Arrangements* (SQA, 2001).