



Environmental Science: Living Environment (National 3)

SCQF: level 3 (6 SCQF credit points)

Unit code: H24P 73

Unit outline

The general aim of this Unit is to develop skills of scientific inquiry, investigation and knowledge and understanding of the living environment. Learners will apply these skills when considering the applications of the living environment on our lives, as well as the implications on society/the environment. This can be done by using a variety of approaches, including investigation and problem solving.

The Unit covers the key areas of sampling and identifying living things, from different habitats, to compare their diversity; factors influencing the distribution of living things; the process of photosynthesis and why plants are vital to sustaining life on Earth; the use of different types of chemicals in agriculture and their alternatives; and the potential impact of chemicals and their alternatives on the world's food production. Learners will apply scientific skills and communicate information related to their findings, which will develop skills of scientific literacy.

Learners who complete this Unit will be able to:

- 1 apply skills of scientific inquiry and draw on knowledge and understanding of the key areas of this Unit to carry out an experiment/practical investigation
- 2 draw on knowledge and understanding of the key areas of this Unit and apply scientific skills

This Unit is a mandatory Unit of the National 3 Environmental Science Course and is also available as a free-standing Unit. The Unit Specification should be read in conjunction with the *Unit Support Notes*, which provide advice and guidance on delivery, assessment approaches and development of skills for learning, skills for life and skills for work. Exemplification of the standards in this Unit is given *in Unit Assessment Support*.

Recommended entry

Entry to this Unit is at the discretion of the centre. However, learners would normally be expected to have attained the skills, knowledge and understanding required by the following or equivalent qualifications and/or experience:

- ◆ National 2 Science in the Environment Course or relevant component Units

In terms of prior learning and experience, relevant experiences and outcomes may also provide an appropriate basis for doing this Unit.

Equality and inclusion

This Unit Specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence. For further information, please refer to the *Unit Support Notes*.

Standards

Outcomes and Assessment Standards

Outcome 1

The learner will:

- 1 Apply skills of scientific inquiry and draw on knowledge and understanding of the key areas of this Unit to carry out an experiment/practical investigation by:**
 - 1.1 Following given procedures safely
 - 1.2 Making and recording observations/measurements correctly
 - 1.3 Presenting results in an appropriate format
 - 1.4 Drawing valid conclusions
 - 1.5 Evaluating experimental procedures

Outcome 2

The learner will:

- 2 Draw on knowledge and understanding of the key areas of this Unit and apply scientific skills by:**
 - 2.1 Making accurate statements
 - 2.2 Solving problems

Evidence Requirements for the Unit

Assessors should use their professional judgement, subject knowledge and experience, and understanding of their learners, to determine the most appropriate ways to generate evidence and the conditions and contexts in which they are used.

The key areas covered in this Unit are sampling and identifying living things from different habitats to compare their diversity; factors influencing the distribution of living things; the process of photosynthesis and why plants are vital to sustaining life on Earth; the use of different types of chemicals in agriculture and their alternatives; and the potential impact of chemicals and their alternatives on the world's food production.

Evidence can be drawn from a variety of sources and presented in a variety of formats. The table below describes the evidence for the Assessment Standards which require exemplification. Evidence may be presented for individual Outcomes or gathered for the Unit as a whole, through combining assessment holistically in a single activity. If the latter approach is used, it must be clear how the evidence covers each Outcome.

| Assessment Standard | Evidence required |
|---|---|
| Presenting results in an appropriate format | One format from: table, graph, chart, key, diagram, flow chart, or other appropriate format |
| Drawing a valid conclusion | Include reference to the aim |
| Evaluating experimental procedures | Suggest an improvement |
| Making accurate statements | At least half of the statements should be correct across the key areas of each Unit. |
| Solving problems | <p>One of each problem-solving skill:</p> <ul style="list-style-type: none"> ◆ make predictions/generalisations ◆ select information ◆ process information, including calculations, as appropriate <p>Making accurate statements and solving problems may be combined into one holistic assessment, with marks allocated to each question. In this case, to achieve Outcome 2, the candidate must achieve at least 50% of the marks available in the assessment.</p> |

Outcome 1: Candidates must achieve at least four out of the five Assessment Standards to achieve a pass.

Exemplification of assessment is provided in the *Unit assessment support pack*. Advice and guidance on possible approaches to assessment is provided in the *Unit Support Notes*.

Transfer of Evidence

Evidence for the achievement of Outcome 1 for this Unit can be used as evidence of the achievement of Outcome 1 in the other Units of this Course.

Where Assessment Standards 2.1 and 2.2 are assessed separately, evidence of achievement of Assessment Standard 2.2 for this Unit can be used as evidence of achievement of Assessment Standard 2.2 in the other Units of this Course. **Note:** this does not apply when Outcome 2 is being assessed holistically.

Development of skills for learning, skills for life and skills for work

It is expected that learners will develop broad, generic skills through this Unit. The skills that learners will be expected to improve on and develop through the Unit are based on SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work* and drawn from the main skills areas listed below. These must be built into the Unit where there are appropriate opportunities.

2 Numeracy

- 2.1 Number processes
- 2.2 Money, time and measurement
- 2.3 Information handling

4 Employability, enterprise and citizenship

- 4.6 Citizenship

5 Thinking skills

- 5.2 Understanding
- 5.3 Applying

Amplification of these is given in SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work*. The level of these skills should be at the same SCQF level of the Unit and be consistent with the SCQF level descriptor. Further information on building in skills for learning, skills for life and skills for work is given in the *Unit Support Notes*.

Administrative information

Published: April 2018 (version 2.0)

Superclass: QA

History of changes to National Unit Specification

| Version | Description of change | Authorised by | Date |
|---------|---|-----------------------------------|------------|
| 1.1 | Standards section: change to wording in Assessment Standard 1.2 to clarify meaning; 'accurately' replaced with 'correctly'; Evidence Requirements section: wording added/changed to clarify Evidence Requirements | Qualification Development Manager | June 2013 |
| 2.0 | Updated due to the removal of Assessment Standards in Outcome 2. Assessment Standard 2.4 reclassified as 2.2. Introduction of marks and clarification of 50% cut-off score. Evidence requirements updated and transfer of evidence updated. | Qualifications Manager | April 2018 |

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