National 3
Unit
Specification

Environmental Science: Earth's Resources (National 3)

SCQF: level 3 (6 SCQF credit points)

Unit code: H24R 73

Unit outline

The general aim of this Unit is to develop skills of scientific inquiry, investigation and knowledge and understanding of the Earth's resources. Learners will apply these skills when considering the applications of the Earth's resources 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 renewable energy sources including benefits and potential problems; formation, characteristics and uses of minerals; formation, characteristics and uses of common rocks; formation, characteristics and uses of soils; and useful substances which can be extracted from natural resources.

Learners will research issues, 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 Describing a given application
2.3 Describing a given environmental science issue in terms of the effect on the environment/society
2.4 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 renewable energy sources including benefits and potential problems; formation, characteristics and uses of minerals, common rocks and soils; and useful substances which can be extracted from natural resources.

Evidence can be drawn from a variety of sources and presented in a variety of formats. 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 this Unit.
Describing a given environmental science issue in terms of the effect on the environment/society	The description should include the environmental science of the issue
Solving problems	One of each: ♦ make generalisation/prediction ♦ select information ♦ process information including calculations as appropriate

Transfer of Evidence
Evidence for the achievement of Outcome 1 and Assessment Standards 2.2, 2.3 and 2.4 for this Unit can be used as evidence of the achievement of Outcome 1 and Assessment Standards 2.2, 2.3 and 2.4 in the other Units of this Course.

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

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: June 2013 (version 1.1)

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

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Note: readers are advised to check SQA's website: www.sqa.org.uk to ensure they are using the most up-to-date version of the Unit Specification.

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