



Access 3 Environmental Science — draft Course rationale and summary

August 2011



This edition: August 2011, draft version 1.0

Published by the Scottish Qualifications Authority
The Optima Building, 58 Robertson Street, Glasgow G2 8DQ
Ironmills Road, Dalkeith, Midlothian EH22 1LE

www.sqa.org.uk

© Scottish Qualifications Authority 2011

Contents

Course rationale	1
Background	1
Relationship between the Course and Curriculum for Excellence values, purposes and principles	2
Purpose and aims of the Course	2
Information about typical learners who might do the Course	3
Course summary	4
Course outline	4
Course structure and conditions of award	4
Assessment	6

Course rationale

Background

All new and revised National Courses reflect Curriculum for Excellence values, purposes and principles. They offer flexibility, provide more time for learning, more focus on skills and applying learning, and scope for personalisation and choice.

In this Course, and its component Units, there will be an emphasis on skills development and the application of those skills. Assessment approaches will be proportionate, fit for purpose and will promote best practice, enabling learners to achieve the highest standards they can.

This Course provides learners with opportunities to continue to acquire and develop the attributes and capabilities of the four capacities as well as skills for learning, skills for life and skills for work.

All Courses provide opportunities for learners to develop breadth, challenge and application, but the focus and balance of the assessment will be appropriate for the subject area.

Relationship between the Course and Curriculum for Excellence values, purposes and principles

Through learning in environmental science, learners develop their interest in and understanding of the world in an engaging and enjoyable way. They engage in a wide range of investigative tasks, which allows them to develop important skills in environmental science, which will be useful across all sectors of society.

Environmental science Courses should encourage resourcefulness, which leads to becoming a confident individual. Successful learners in environmental science think creatively, analyse and solve problems. Environmental science can produce responsible citizens through studying areas such as environment and sustainability.

The Access 3 Environmental Science Course allows learners to understand and investigate the living and non-living world. It develops learners' ability to think analytically and independently and to make reasoned evaluations. The Course provides opportunities for learners to acquire and apply knowledge, and to develop an informed and ethical view of topical issues. Learners will be able to develop their communication and collaborative working skills.

Purpose and aims of the Course

Science is vital to everyday life and allows us to understand and shape the world in which we live and influence its future. Scientists play a key role in meeting society's needs in areas such as medicine, energy, industry, material development, the environment and sustainability. It is important that everyone has an informed view of science.

The Course develops scientific awareness of environmental issues. Environmental science is an inter-disciplinary subject, which studies natural processes and environmental resources and how they are affected by humans. As a result, environmental scientists are at the forefront in tackling issues such as global climate change, pollution, use of land and water resources, and changes in wildlife habitats. Environmental science takes a problem solving approach to attempt to develop solutions that prevent or reverse environmental deterioration and result in sustainability.

The Course is a broad and up-to-date selection of ideas relevant to the central position of environmental science in our society. The Course investigates the Earth's systems and resources, while considering the natural and human impact on sustainability. The Course allows flexibility and personalisation within each Unit by allowing choice in the topics studied. It will also develop learners' investigative and experimental skills in an environmental context.

The aims of the Course are to enable learners to:

- ◆ develop scientific thinking skills in an environmental science context
- ◆ develop understanding of environmental issues
- ◆ apply knowledge and understanding of environmental concepts
- ◆ develop problem solving skills in an environmental science context
- ◆ develop understanding of relevant applications of environmental science in society
- ◆ develop investigative and experimental skills in an environmental science context

The Course provides opportunities for learners to develop scientific literacy, numeracy, and literacy skills. In addition, learners will recognise the impact environmental science makes on their lives, on the lives of others, on the environment, and on society. Through this Course, they can also develop relevant skills for learning, for use in everyday life, and for use in employment.

Information about typical learners who might do the Course

The Course is suitable for learners who have experienced breadth of learning across the Third level sciences and/or Third level people, place and environment experiences and outcomes. The Course may be suitable for those wishing to study environmental science for the first time.

This Course has a skills-based approach to learning. It takes account of the needs of all learners and provides sufficient flexibility to enable learners to achieve in different ways.

On successful completion of this Course, the learner could progress to:

- ◆ Environmental Science (National 4) Course
- ◆ Access 3 or National 4 in another science subject or in Geography
- ◆ Skills for Work Course (SCQF level 3 or 4)
- ◆ National Certificate Group Awards
- ◆ National Progression Awards (SCQF level 3 or 4)
- ◆ employment

Course summary

Course title: Access 3 Environmental Science

SCQF level 3 (18 SCQF credit points)

Course outline

Mandatory Units

Environmental Science: Living Environment (Access 3) (6 SCQF credit points)

Environmental Science: Earth's Resources (Access 3) (6 SCQF credit points)

Environmental Science: Sustainability (Access 3) (6 SCQF credit points)

Course structure and conditions of award

Learners will gain knowledge and understanding of environmental science and develop this through a variety of approaches, including practical activities.

As well as developing specific scientific skills, in areas such as experimentation and investigation, learners will also gain valuable transferable skills, for learning, life and work, such as literacy and numeracy.

Units are statements of standards for assessment and not programmes of learning and teaching. They can be delivered in a variety of ways.

Environmental Science: Living Environment (Access 3)

In this Unit, learners will develop skills and carry out practical and other learning activities related to the living environment. This will be within the main themes of ecosystems, interrelationships, and biodiversity. Practical activities should include fieldwork to sample and identify living things and measure non-living factors in an ecosystem.

Environmental Science: Earth's Resources (Access 3)

In this Unit, learners will develop skills and carry out practical and other learning activities related to the living and non-living environment. The Unit will focus on Earth systems and their interactions. It will also investigate the source, formation/extraction and use of resources, while considering physical, biological, renewable and non-renewable resources.

Environmental Science: Sustainability (Access 3)

In this Unit, learners will develop skills and carry out practical and other learning activities related to natural resources and the impact of human activities on them. This will focus on the main themes of food, water, energy, and waste management.

successful learner, confident individual, responsible citizen, effective contributor

To achieve the Access 3 Environmental Science Course, learners must pass all of the required Units. The required Units are shown in the Course outline section.

Access 3 Courses are not graded.

Draft

Assessment

All Units are internally assessed against the requirements shown in Unit specifications.

They will be assessed pass/fail within centres.

SQA will provide rigorous external quality assurance, including external verification, to ensure assessment judgements are consistent and meet national standards.

Exemplification of possible assessment approaches for Units will be provided in the *National Assessment Resource*.

Draft