



Science in the Environment: Resources, Forces and Energy (Alternative Context) National 2

SCQF: level 2 (6 SCQF credit points)

Unit code: HK42 72

This Unit should only be used where a learner has already achieved the original Unit, which carries the same title but without the words “Alternative Context”. There should be at least one year between the delivery of the original Unit and the delivery of the “Alternative Context” version.

For this Unit, centres can use one of the Unit Assessment Support Packs provided with the original Unit, but adjust it to reflect the alternative context in which the Unit is delivered. The alternative context could relate to the delivery setting, the maturity of the learner or the activities the learner is asked to complete.

Unit outline

The general aim of this Unit is to develop learners’ awareness, through practical activities, of resources and forces and how everyday objects work (eg a kettle, a calculator or a bicycle). Through practical activities, learners will explore the properties and use of resources, such as air, water, oil and wood. Learners will also develop their awareness of forces such as pushing and pulling and identify how a range of everyday objects work and the type of energy they use. By exploring science through practical activities, learners will begin to develop their scientific literacy.

Learners who complete this Unit will be able to:

- 1 Participate in practical activities to explore resources
- 2 Participate in practical activities to explore forces and energy

This Unit is a mandatory Unit of the National 2 Science in the Environment 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, relevant experiences and outcomes may 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 Participate in practical activities to explore resources by:

- 1.1 Observing and recording the properties of resources
- 1.2 Identifying how resources are used in everyday life

Outcome 2

The learner will:

2 Participate in practical activities to explore forces and energy by:

- 2.1 Observing and recording how forces can affect everyday objects or materials
- 2.2 Identifying how everyday objects work and the type of energy they use

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.

Evidence is expected to be generated from practical activities provided by the teacher/lecturer. Evidence can be presented in a variety of formats, such as written, oral, or pictorial, and may be gathered using the learner's usual means of communication.

For Outcome 1, evidence will include:

- ◆ recorded observations of the properties of at least one resource, such as: water, oil, air, wood, or metal. Observations could include, for example: physical properties and/or chemical properties
- ◆ identifying how at least one resource can be used in different ways in everyday life

For Outcome 2, evidence will include:

- ◆ recorded observations of how two simple forces, such as pushing, pulling, squashing, and stretching, can affect everyday objects or materials
- ◆ identifying how a range of objects work, such as calculators, watches, bicycles, household appliances and the form of energy they use. At least one object must be given for each of the following: chemical, electrical, mechanical, wind and radiant

It is expected that learners will receive support throughout the delivery of this Unit.

There are many ways in which the requirements of the Unit can be generated. Evidence may be gathered using different assessments and more than one context for each Outcome, or it may be gathered for the Unit as a whole through one assessment. If the latter approach is used, it must be clear how the evidence covers each Outcome. 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.

1 Literacy

1.3 Listening and talking

2 Numeracy

2.3 Information handling

5 Thinking skills

5.1 Remembering

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 as 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: May 2017 (version 1.0)

Superclass: QA

History of changes to National Unit Specification

Version	Description of change	Authorised by	Date

This specification may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged. Additional copies of this Unit can be downloaded from SQA's website at www.sqa.org.uk.

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.

© Scottish Qualifications Authority 2017