SCQF level 6
Unit Specification

Researching Physics

SCQF: level 6 (3 SCQF credit points)

Unit code: J20D 76

Unit outline

The general aim of this Unit is to develop skills relevant to undertaking research in Physics. Learners will collect and synthesize information from different sources. They will plan and undertake a practical investigation and analyse results.

The Unit offers opportunities for collaborative and independent learning. Learners will develop knowledge and skills associated with collecting, recording and processing information from a number of different sources. Equipped with knowledge of standard laboratory apparatus, they will plan and undertake a practical investigation related to a chosen physics topic.

Learners who complete this Unit will be able to:

1 Apply skills of scientific inquiry and draw on knowledge and understanding to research the underlying physics of a chosen topic
2 Apply skills of scientific inquiry to investigate, through experimentation, the underlying physics of a chosen topic

This Unit is available as a free-standing Unit. 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 one or more of the following or equivalent qualifications and/or experience:

- National 5 Physics Course or relevant Units

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 to research the underlying physics of a chosen topic by:

1.1 Gathering and recording information from two sources relating to the chosen topic

Outcome 2

The learner will:

2 Apply skills of scientific inquiry to investigate, through experimentation, the underlying physics of a chosen topic by:

2.1 Planning/designing the practical investigation, including safety measures
2.2 Carrying out the practical investigation safely, recording detailed observations/measurements correctly

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 can be drawn from a variety of sources and presented in a variety of formats, including participation in group tasks/experiments, written responses to questions, presenting information to other groups, and simple digital presentations.

Evidence may be presented for individual Outcomes or it may be gathered for the Unit as a whole through combining assessment holistically in one single activity. If the latter approach is used, it must be clear how the evidence covers each Outcome.

Outcome 1
Learners will be provided with a candidate guide and a list of possible topics for investigation. Learners will research one of the topics.

Learners must produce:

- a clear statement describing the research topic
- a record of at least two sources of information relating to the research topic. These should be identified in sufficient detail to allow a third party to retrieve the source articles

Outcome 2
The assessor should record that:

- the learner made an effective contribution to planning
- the learner made an effective contribution to carrying out the practical work
- safety concerns were addressed where appropriate
- measurements/observations were recorded appropriately

Exemplification of assessment is provided in Unit assessment support packs.
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

1.2 Writing

2 Numeracy

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

5 Thinking skills

5.3 Applying
5.4 Analysing and evaluating
5.5 Creating

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: July 2019 (version 4.0)

Superclass: RC

History of changes to National Unit Specification

Version	Description of change	Authorised by	Date
2.0	Page 1 - the 'Unit outline' section has been revised to give more information and reflect changes to Outcomes Page 3 – the wording of Outcomes 1 and 2 has changed, while Outcome 3 has been removed Page 3 – Evidence requirements – the text here has been updated to reflect the changes to Outcomes	Qualifications Development Manager	April 2014
3.1	Level changed from Higher to SCQF level 6. Assessment standard thresholds added	Qualifications Manager	September 2018
3.2	Information about assessment standard thresholds, not applicable to this unit, has been removed.	Qualifications Manager	March 2019
4.0	Unit code updated	Qualifications Manager	July 2019