

National Unit Specification: general information

UNIT Physics: Practical Experiment (Access 1)

CODE DV2P 07

SUMMARY

This Unit offers candidates the opportunity to explore a practical application of science, to carry out a practical activity safely, using familiar equipment. This is a free-standing Independent level Access 1 Unit.

OUTCOME

Carry out a scientific activity.

RECOMMENDED ENTRY

Entry to this Unit is at the discretion of the centre.

CREDIT VALUE

1 credit at Access 1 (6 SCQF credit points at SCQF level 1*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Administrative Information

Superclass: RC

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National Unit Specification: general information (cont)

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CORE SKILLS

There are no Core Skills for this Unit.

National Unit Specification: statement of standards

UNIT Physics: Practical Experiment (Access 1)

Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit Specification. All sections of the statement of standards are mandatory and cannot be altered without reference to the Scottish Qualifications Authority.

OUTCOME 1

Carry out a scientific activity

Performance Criteria

- (a) Participate effectively in the planning process.
- (b) Identify the equipment needed to carry out the activity.
- (c) Follow the correct sequence to carry out the activity safely.
- (d) Use the equipment safely to carry out the activity.
- (e) Carry out the activity safely and according to plan.

Evidence Requirements

Performance evidence to show that the candidate can participate effectively in the planning process, identify the equipment needed to carry out the activity, follow the correct sequence and use the equipment to carry out the activity safely and according to plan. Performance evidence of safe and active participation in the planned experiment may be recorded using an observation checklist. The candidate should be allowed to provide evidence by the use of his or her normal mode of communication which may be verbal or non-verbal and may include one or more of the following: speech, writing, word processing, signing, lip reading, Braille, computer assisted communication.

National Unit Specification: support notes

UNIT Physics: Practical Experiment (Access 1)

This part of the Unit Specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

This is a practical Unit which gives candidates the opportunity to carry out a practical task. The content of the Unit introduces candidates to the steps needed to plan, organise and carry out a task safely. The Unit emphasises and promotes a practical approach to learning and encourages candidates to develop the skills needed to carry out a scientific activity.

This Unit has been written as a free-standing Independent level Access 1 Unit. Centres are free to choose any contexts in Physics to undertake this Unit. Centres may also identify other topics and activities within the chosen contexts, depending on the activities being undertaken in an individual centre. Some of the contexts for this Unit could be selected from the following:

- ◆ Energy (Sources and use of energy, Energy changers)
- ◆ Forces (Push and pull, Floating and sinking, Friction)
- ◆ Electricity (Static Electricity, Batteries, Safety)
- ◆ Light, Colour and Sound
- ◆ Magnetism (Magnets and their magnetic fields, Earth's magnetic field and the compass)
- ◆ Earth and Space (Earth, Sun and moon, Planets and stars, Gravity)

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Candidates should have the opportunity to work individually, in pairs or in a small group. However, the Unit may be integrated with other Access 1 level Units.

The learning and teaching approaches used should encourage candidates to be aware of their attainment and help them to transfer the skills into other contexts. It is envisaged that the candidate would be given a high degree of teacher/lecturer support while undertaking the Unit. At this level it is acceptable for the teacher/lecturer to prompt candidates while they are demonstrating certain aspects of completing the task. It is anticipated that the support will be given, for example, by the teacher/lecturer to support candidates undertaking the task.

Particular attention should be paid to safe working practices. Time should also be spent ensuring that the candidate is familiar with any apparatus/equipment he/she has not used before.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

The candidate should be allowed to use his/her normal mode of communication while undertaking the assessment.

National Unit Specification: support notes (cont)

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Teachers/lecturers should provide adequate opportunities for formative assessment to take place, prior to the candidate undertaking the required Unit assessment, which is recorded for assessment purposes. Teachers/lecturers may give candidates advice and support during formative assessment in order to prepare them for the formal Unit assessment. Centres should use assessment that is appropriate to the candidate and to the setting.

Practical activities should be used to gather evidence. Teachers/lecturers can use various means of recording evidence for the assessment, for example observational checklists, written/audio recordings, video/photographic evidence or oral responses recorded by a responsible adult.

Records of all assessment instruments used and evidence produced by each candidate should be retained for moderation purposes. As candidate evidence may be generated by performance evidence for this Unit, records should be kept of each candidate's performance. This evidence could be in the form of checklists completed by a responsible person observing the performance or recording the answers to questions or they may also be in the form of video or audio recordings of candidate performance. All checklists must be signed and dated by the teacher/lecturer who assesses the evidence and authenticates the record as an accurate record of the work of the named candidate.

CANDIDATES WITH ADDITIONAL SUPPORT NEEDS

This Unit Specification is intended to ensure that there are no artificial barriers to learning or assessment. The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative Outcomes for Units. For information on these, please refer to the document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (SQA, 2004).

National Unit Specification: Appendix 1

Observation Checklist for recording candidate's performance

Carry out a scientific activity — (Physics)

Name of candidate: _____

Performance criteria	Comment
(a) Participate effectively in the planning process	
(b) Identify the equipment needed to carry out the activity	
(c) Follow the sequence to carry out the activity	
(d) Use the equipment safely to carry out the activity	
(e) Carry out the activity safely and according to the plan	

The named candidate has successfully completed this Unit.

Teacher/lecturer signature:

Date:

National Unit Specification: Appendix 2

Observation Checklist for recording candidate's performance

Carry out a scientific activity — (Physics)

Name of candidate: Amar Singh

Performance criteria	Comment
(a) Participate effectively in the planning process	Amar took part in the planning
(b) Identify the equipment needed to carry out the activity	Amar identified the equipment correctly
(c) Follow the sequence to carry out the activity	Amar followed a pictorial chart to follow the correct sequence
(d) Use the equipment safely to carry out the activity	All the equipment was used safely by Amar
(e) Carry out the activity safely and according to the plan	Amar carried out the activity safely and according to the plan

The named candidate has successfully completed this Unit.

Teacher/lecturer signature: J Roberts

Date: 10.1.05

Access — Progression Opportunities

Curriculum Descriptors (not certificated)	<p>Curriculum Descriptors provide a framework for describing the learning process for candidates for whom an Access 1 Unit is not appropriate. They use Performance Criteria from Access 1 Units as <i>Learning Targets</i>. Progress within the Curriculum Descriptor framework may be recorded by means of Progress File or by a centre's own systems for recording achievement. Curriculum Descriptors belong to Learning and Teaching Scotland and are not certificated by SQA.</p> <p>Some candidates may progress from Curriculum Descriptors to free-standing Access 1 Units.</p>
Independent Access 1 Units	<p>Independent Access 1 Units are designed principally for candidates who are developing basic skills in a supported learning environment. Candidates are not required to have completed any other Units prior to undertaking these Units. Independent Access 1 Units are not derived from the Outcomes of Access 2 Units. They may provide progression from Curriculum Descriptors for some candidates or be delivered within an integrated programme comprising a mixture of Units and Curriculum Descriptors according to the needs of the candidate. On completion of an independent Access 1, such as:</p> <p>D9ER 07 Sampling Work: An Introduction D9EV 07 Recognising Time D9EW 07 Basic Communication in a Familiar Setting D9EX 07 Using Basic Computer Skills D9EY 07 Personal Profiling: An Introduction D9F0 07 Working with Others on a Group Activity</p> <p>Alternatively, progression may be to Access 1 Units which are derived from Access 2 Outcomes or to Access 2 Units.</p>
Access 1 Units derived from Access 2 Outcomes	<p>These Access 1 Units are based on Outcomes of Access 2 Units. This allows candidates to build up to an Access 2 Unit in a step by step approach as they achieve the appropriate component Outcomes. Access 1 Units derived from Access 2 Outcomes may be a starting point for some candidates or may provide progression from the above independent Access 1 Units.</p>
Access 2 Units	<p>Access 2 Units, enable progression from Access 1 Units although for some candidates, they may be a starting point. Candidates who have achieved an Access 2 unit may progress to other Access 2 Units or to Access 3 Units. They may also progress laterally to a Scottish Group Award at Access 2 (Single, double or triple) or to the more vocational Skillstart Group Award at Access 2.</p>