Route map through assessment

Course: Physics Level: National 5

This document is intended to assist teachers in planning and delivering the overall vision for Curriculum for Excellence.

The vision for the new national qualifications is to create assessment opportunities that follow and support learning and teaching. This follows the principles laid out in *Building the Curriculum 5* and makes assessment a natural part of learning and teaching.

This route map aims to signpost all of the relevant material that is available to support your subject. Your professional judgement is vital and the documents listed below are intended to support you in deciding the most appropriate ways to generate evidence and assess candidates.

Education Scotland has produced a professional focus paper for physics, and this is a good starting point as it provides support to help develop learning and teaching approaches that take forward the purposes and principles of Curriculum for Excellence through Physics National 5.
http://www.educationscotland.gov.uk/resources/ng/p/nqresource_tcm4741320.asp

Physics National 5 course content

The main SQA physics page is found at http://www.sqa.org.uk/sqa/45729.html, with pages specifically related to National 5 at http://www.sqa.org.uk/sqa/47430.html. Staff should also regularly check the updates and announcements section of this page.

The course specification can be found at
http://www.sqa.org.uk/files_ccc/CfE_CourseSpec_N5_Sciences_Physics.pdf.

The Physics National 5 course has three mandatory units: Electricity and Energy, Waves and Radiation and Dynamics and Space.

More detail on course coverage can be found in the course support notes.
http://www.sqa.org.uk/files_ccc/CfE_CourseUnitSupportNotes_N5_Sciences_Physics.pdf

Further mandatory information on course coverage is found on page 8 of the course assessment specification.
http://www.sqa.org.uk/files_ccc/CfE_CourseAssessSpec_N5_Sciences_Physics.pdf

A course comparison from National 3 through National 4 and National 5 is also available.
http://www.sqa.org.uk/sqa/files_ccc/Physics_Course_comparison.pdf

Course assessment

For the Physics National 5 course added value is assessed through the course assessment, which consists of a question paper and an assignment that will allow learners to demonstrate breadth, challenge and/or application. Both these assessments are marked externally. The course will be graded A–D.
http://www.sqa.org.uk/files_ccc/CfE_CourseAssessSpec_N5_Sciences_Physics.pdf

Specimen question paper and marking scheme: http://www.sqa.org.uk/files_ccc/PhysicsSQPN5.pdf.

SQA data sheet: http://www.sqa.org.uk/files_ccc/PhysicsSQPN5DataSheet.pdf.
SQA relationships sheet: http://www.sqa.org.uk/files_ccc/PhysicsSQPN5RelationSheet.pdf.

Unit assessment

Units are mandatory when taken as part of the Physics National 5 course but are also available as free-standing units, allowing learners to gain unit awards on successful completion of the unit assessment. Unit support notes follow on from the course support notes.
http://www.sqa.org.uk/files_ccc/CfE_CourseUnitSupportNotes_N5_Sciences_Physics.pdf

Each individual unit also has a National 5 unit specification which gives details of the outcomes and assessment standards. There are two outcomes per unit: one based on skills of scientific inquiry and one based on knowledge and understanding of the key areas of the unit and applying scientific skills.

Physics: Electricity and Energy
http://www.sqa.org.uk/files_ccc/CfE_Unit_N5_Physics_ElectricityandEnergy.pdf

Physics: Waves and Radiation
http://www.sqa.org.uk/files_ccc/CfE_Unit_N5_Physics_WavesandRadiation.pdf

Physics: Dynamics and Space
http://www.sqa.org.uk/files_ccc/CfE_Unit_N5_Physics_DynamicsandSpace.pdf

Learners must meet all the outcomes and assessment standards, and staff should read the documentation carefully. Evidence should be generated through learning and teaching. Assessment evidence can be drawn from a variety of activities and presented in a variety of formats. All of the evidence does not have to be generated from one activity but can be from several tasks and assessments carried out throughout the course.

Three different ways of gathering evidence have been suggested by SQA. The unit-by-unit approach will be a familiar approach to many schools. A combined approach links knowledge and understanding from two units together. Staff may move towards the portfolio approach as their confidence grows in gathering evidence from everyday learning using key classroom tasks. Unit assessment support is available from the SQA Secure website.

Verification

Internal verification is the process of ensuring standards are applied uniformly and consistently within a school in line with national standards. External verification is the process of ensuring that national standards are maintained consistently across all schools. The verification process is intended to be supportive and not onerous.

An outline of the quality assurance process can be found at http://www.sqa.org.uk/sqa/58448.html.

Prior verification

http://www.sqa.org.uk/files_ccc/Prior%20Verification%20Centre%20Guidance%20FINAL.pdf

Staff who devise their own assessments can send them to SQA for prior verification, free of charge. This is only necessary where significant changes have been made to the unit assessment provided. It gives departments confidence that their proposed assessment is fit for purpose and meets national standards.

Internal verification

http://www.sqa.org.uk/sqa/files_ccc/InternalVerificationGuideforSQAcentres.pdf

As a matter of course staff should be quality assuring their assessments through moderation activities whereby staff share their understanding of standards and expectations to ensure greater consistency in assessment decisions. In single-person departments an arrangement should be made with another school to allow for moderation activities to take place to build confidence in professional judgements.

External verification

In physics schools will submit a sample of learners' evidence for scrutiny by subject-specialist qualification verifiers. SQA intend that every school will be verified over the first few years. Verification will take place in November, February and May. Twelve samples will be requested.
http://www.sqa.org.uk/sqa/files_ccc/Evidence_required_for_verificationevents.pdf

Schools must retain the evidence until 31 July of each academic year.
http://www.sqa.org.uk/sqa/files_ccc/SQA_Evidence_retention_requirements_A3_table.pdf

Key verification messages for Physics are available – see National 5 Physics page on the SQA website under the verification tab: http://www.sqa.org.uk/sqa/47430.html

Recognising positive achievement

This is only applicable to National 5, **not** Higher. A learner who achieves 'No Award' in a National 5 course assessment will be able to gain a National 4 course award as long as he/she has passed all the internally assessed units of the National 5 course and has passed the National 4 Added Value Unit.

http://www.sqa.org.uk/files_ccc/Recognising_Positive_Achievement_N4N5.pdf

Results services

There are no longer any appeals. SQA offers two services:

- Exceptional Circumstances Consideration Service (within ten days of sitting external assessment)
- Post Results Service, which consists of either a clerical check or a marking review.

It is likely that these will be carried out in conjunction with the school SQA co-ordinator.
http://www.sqa.org.uk/sqa/files_ccc/FA6669_SQA_Results_Services_A5_8pp_brochure_web.pdf
http://www.sqa.org.uk/sqa/65427.html

Education Scotland support materials

Advice, resource and course materials for new national qualifications (cut and paste links below into your browser – Glow username and password required):
http://www.educationscotland.gov.uk/nqcoursematerials/subjects/physics/coursematerials.asp
http://www.educationscotland.gov.uk/nqcoursematerials/subjects/physics/learningandteaching.asp
http://www.educationscotland.gov.uk/nqcoursematerials/subjects/physics/edweblinks.asp

Twig on Glow resources (cut and paste link below into your browser – Glow username and password required):
http://cdn-media.twig-world.com/downloads/pdf/NationalQualification-Physics.pdf

NQ Higher Sciences website
http://www.educationscotland.gov.uk/highersciences/index.asp

Other useful websites

A quick guide to finding vital information about Curriculum for Excellence:
http://www.educationscotland.gov.uk/keycfesupport/index.asp

This appears under three headings:

- the latest guidance, updates and plans for embedding Curriculum for Excellence
- information on assessment
- information on the new qualifications.

The BBC has pulled together all its learning content in a new Knowledge and Learning Beta site that includes Class Clips:
www.bbc.co.uk/education

T +44 (0)141 282 5000 **E** enquiries@educationscotland.gov.uk **W** www.educationscotland.gov.uk
Education Scotland, Denholm House, Almondvale Business Park, Almondvale Way, Livingston EH54 6GA