



QUALIFICATIONS SUPPORT TEAM for the HN SCIENCE Portfolio of Awards

Minutes of the 26th Meeting held at 13:00 on Tuesday 17 November 2015 in SQA offices, Glasgow

Present		Not Present	
Carlyn McNab (Chair)	Glasgow Kelvin College	Elaine McCauley	Ayrshire College
Marti Anderson	Ayrshire College	Samantha Bright	Moray College
Miriam Walsh	Dundee and Angus College	Pamela Duke	Dundee and Angus College
Erica Parkinson	Fife College	Jane Manson	Inverness College
Mhairi Hay	Forth Valley College	Kenneth Boyd	North Highland College
Fiona Jackson	Forth Valley College	Ruth Johnston	Perth College
Joan Purdie	Glasgow Clyde College	Joseph Jamieson	Glasgow Clyde College
Steven Donnelly	Glasgow Kelvin College	Robert Boyd	Perth College
Derek Steven	New College Lanarkshire	Leann Tait	North East Scotland College
Jan Lyne	North East Scotland College (<i>attending for Leann Tait</i>)	Amanda McCoubrey	West Lothian College
Doug Fraser	North East Scotland College		
Sandra Spence	West College Scotland		
Jonathan Gillies	SQA		
Kirsty Mitchell	SQA		

1. Welcome and Apologies

Apologies had been received from Elaine McCauley, Pamela Duke, Samantha Bright, Leann Tait, Kenneth Boyd and Ruth Johnston.

2. Minutes and Actions of last meeting held on 2 February 2015

The minutes of the previous meeting were approved.

3. HN Science QST Membership

It was explained that nominees from all centres with an HN science provision had now been invited to become members of the QST. A document outlining the remit of the QST was distributed. The main purpose of the QST was to keep all centre representatives informed of changes with the HN science portfolio, and for all members to contribute to the discussions on behalf of their centre.

4. HN Science Review

Units

Glasgow Clyde College, Glasgow Kelvin College, Fife College and New College Lanarkshire were currently delivering the new HNC/D Group Awards. Feedback was requested regarding any issues encountered with the new Units. It was noted that the new Units had been designed with the understanding that adjustments or changes may be required in future, though it was hoped these would not be significant changes.

Perceived changes between the old and new *Fundamental Chemistry: An Introduction* Units were discussed. [Following the meeting, it was confirmed that there had been no changes to this Unit, only a transfer to a new Unit 'shell', and so requirements for assessment remained as before.]

Clarification was requested as to whether the new *Cell Biology: Theory and Laboratory Skills* Unit was currently being rewritten. It was confirmed that it was not. However, there had been one change made to the Unit specification since it was originally published, which was on page 5, to the second Evidence Requirement under Outcome 2. This was changed from 'explain one way of protein synthesis' to 'explain the synthesis of proteins on either free ribosomes or those attached to the endoplasmic reticulum'. The updated Unit specification was available via the HN Unit search facility on SQA's website.

In the previous HNC/D Group Award frameworks, *Presentation Skills in Science* was a mandatory Unit, in which the Core Skill of Communication had been embedded. This Unit was not part of the new HNC/D Group Awards, which had created a difficulty for learners who needed communication skills in order to progress. There was discussion as to how evidence for this Core Skill could be collated from other Units. Jonathan explained that all Units in the new HNC/D frameworks had undergone a Core Skills audit, and the decision had been that the Core Skill of Communication could be not be embedded.

Steven commented that the feedback he had received both from learners and from lecturers was that they were finding the new HNC/D Group Awards difficult, and that the new assessments were at a higher level of difficulty. The rate of learners not passing the new Units was markedly higher than it had been previously. Jonathan explained that, if this proved to be an issue across the country, the Unit specifications and/or Assessment Support Packs (ASPs) would need to be reviewed.

Doug told the group that, during discussions with two of North East Scotland College's articulating Universities, the possibility of a chemical materials Unit being added to the optional sections of the new Group Awards was raised. Mhairi commented that there was an existing chemical process Unit she had used in the past, and she would try to retrieve some information regarding this Unit. QST members had no objections to a chemical materials Unit being added to the optional section of the relevant frameworks.

The issue of CfE curriculum changes was discussed. In the current year, there were a significant number of learners who had not completed CfE science Highers, and so lacked some underpinning knowledge for the new HNC/D Group Awards. It was hoped that this issue would be resolved in the following year, as all schools were now delivering CfE science Highers.

Members were encouraged to not wait until QST meetings to raise any issues with regard to the new HNC/D Group Awards, but to contact Kirsty at Kirsty.Mitchell@sqa.org.uk. There would also be proactive requests for feedback from centres delivering the new HNC/D Group Awards. Any feedback would be collated and distributed for discussion at the next QST meeting.

Action— Mhairi to retrieve information regarding chemical process Unit.

Action— QST members to contact Kirsty with any issues with regard to the new HNC/D Group Awards.

ASPs

It was noted that some of the ASPs had not been published yet for the new HN Units, in particular *Cell Biology: Theory and Laboratory Skills and Fundamental Chemistry: An Introduction*. It was agreed that draft versions of the ASPs, where available, would be sent to centres requesting these, with the understanding that these were not finalised documents and were subject to change. It was also confirmed that assessments designed for the old *Fundamental Chemistry: An Introduction* Unit could be used to assess the new Unit.

Jonathan provided an overview of the progress of the development of the ASPs, and explained that unfortunately some of these were behind schedule, in large part due to other time commitments of the writers and/or vetters. There was an appreciation that centres might be assessing new HN Units without the guidance of ASPs, and a supportive approach to verification would be taken this year as a result.

The *Fundamental Chemistry: Theory and Laboratory Skills* ASP is divided into four, one section for each Outcome. It was confirmed that centres could re-assess learners on individual Outcomes, and learners would not have to be re-assessed on all Outcomes.

The question was raised as to how long centres were expected to retain assessment materials after the completion of HN Units. It was agreed that Jonathan would check this.

Action— QST members to contact Kirsty should they wish to receive draft versions of the ASPs.

Action— Jonathan to check how long assessment materials need to be retained after Unit completion.

Understanding Standards materials

It was explained that an ASP would not be developed for the *Laboratory Skills for Science Industries* Unit. Instead, there would be Understanding Standards materials, as had already been produced for the *Applied Sciences: Graded Unit 1*. Vetting of these materials was due to finish on Monday 23rd November, and the documents would be published shortly after this. A draft could be made available for any centre with an urgent need to access these. Similar Understanding Standards materials would also be produced for the *Applied Sciences: Graded Unit 2*.

Action— QST members to contact Kirsty should they wish to receive a draft version of the *Laboratory Skills for Science Industries* Understanding Standards materials.

HN Chemistry and HN Physics Databooks

Jonathan reminded the group that databooks for HN Physics and HN Chemistry, for use with the ASPs, were available from the SQA website.

5. Remediation of HN Units

The Understanding Standards materials for the *Laboratory Skills for Science Industries* Unit will contain advice regarding the remediation of laboratory reports, and what would be considered a minor and major error. At a recent standardisation event for External Verifiers, it had been confirmed that for closed book assessments the cut-off score should be applied. If a learner fails a closed book assessment, then no remediation or clarification should take place. However, if learners were being assessed on the very old style NC Units then some element of professional judgement could be applied for minor errors.

6. NC Applied Sciences Scoping Exercise

A scoping exercise had been carried out by Doug Fraser. Doug explained that this was partly due to the changes brought about by the revised HNC/D Group Awards, and also the changes with regard to the new CfE National Qualifications. The scoping exercise had been carried out through electronic surveys and through direct contact with centres, employers and Universities. The major findings from the survey had been that most respondents were happy with the overall structure and the balance of theory and practical skills in the Group Awards.

The survey asked respondents whether they believed the new CfE Units could replace the old Intermediate 1, Intermediate 2 and Higher Units. The answer in the main had been that they could, with some caveats. However, there was some concern that the level of the Unit Assessment Support Packs (UASPs) for the new CfE Higher Units was too low. Some respondents had requested that a Graded Unit

be included in the revised Group Awards, but Doug explained that this was not permitted under SQA's NC design principles.

There had been feedback that the mathematics content of the Group Awards was at too low a level. However, it was unclear whether an increased level of mathematics was needed, or just more mathematics content relevant to science, i.e. numerical application in laboratory tasks. It was pointed out that mathematics was at SCQF level 6 in the revised HNC Applied Sciences Group Award. It was felt that there was an issue with learners struggling with mathematics when they entered HN and degree level, with feedback from Universities that some learners from Colleges were failing degrees due to inadequate mathematics skills. It was pointed out that a different type of mathematics Unit might help to address this, as opposed to a higher level Unit. There was acknowledgement that not all learners undertaking the Group Awards were aiming to enter University, and so it was felt that there was a need for any increased or higher level mathematics provision to be optional, in order not to prevent learners from achieving the Group Awards.

A number of options were discussed. Firstly, bespoke mathematics Units at SCQF levels 4, 5 and 6 could be developed, which would give more flexibility. Alternatively, SCQF level 4 and 5 hierarchical *Numeracy* Units could be added to the level 5 Group Award, with bespoke ASPs being developed for these Units. The consensus was to retain the mathematics provision at SCQF level 4 and 5, as it allowed centres flexibility and was consistent with the new HNC Applied Sciences Group Award.

The question was raised whether there would be automatic credit transfer for the *Mathematics for Science 1* (H8XP 33) Unit if learners had achieved Higher Mathematics. It was noted there was currently a credit transfer arrangement for the *Engineering Mathematics 1* (H7K0 33) Unit if learners had achieved Higher Mathematics, which did not exist for the *Mathematics for Science 1* (H8XP 33) Unit. Jonathan agreed to speak to Martin Brown, the Qualifications Manager for Mathematics, regarding this.

The survey had also asked respondents whether single credit bespoke Units in Biology, Chemistry and Physics at SCQF level 5 should be developed. The consensus was for bespoke Units to be developed as these Units could also form the 'third string' science Unit in the level 6 Group Award and would have the advantage of providing learners with a broad introduction to their third science. The survey had also asked whether the hierarchy of CfE Units (lower level Units not contributing towards a Group Award, where a relevant higher level Unit in the same hierarchy had been achieved) would pose a problem. The response had been that this would not be an issue for the level 5 Group Award, and if bespoke Units at SCQF level 5 were developed, it would not be an issue for the level 6 Group Award either.

There had also been requests from respondents regarding the inclusion of the Skills for Work Laboratory Science Units and the Intermediate 2 and Higher Biotechnology Units in the optional sections of the revised Group Awards. It was agreed that these Units would be added to the revised frameworks. Doug thanked everyone who had given time to respond to the scoping survey.

Jonathan explained that an internal business case would now be submitted to secure funding. Once funding had been secured, a Qualifications Design Team (QDT) would be created to develop the new/revised Units/ASPs and to finalise the new frameworks. Timeframes for the development were dependent on when funds were allocated to the project. A concern was raised about the lapsing dates for old Intermediate 1, Intermediate 2 and Higher Units, as these Units lapsing could result in centres having to deliver the new CfE Units for one year only. Jonathan would look into the lapsing dates for the Units.

Action— Jonathan to speak to Martin Brown, Qualifications Manager for Mathematics.

Action— Jonathan to look into lapsing dates for Intermediate 1, Intermediate 2 and old Higher Units.

7. NPA and PDA Laboratory Science Scoping Exercise

Scoping surveys for the NPA and PDA Laboratory Science Group Awards had gone live the previous day, and the QST members had been forwarded a link to the surveys. It was requested that they pass this on to the correct colleague in their centres, if they were not in a position to comment on these Group Awards themselves.

8. AOB

It was noted that a scoping exercise was currently taking place for the Skills for Work Laboratory Science qualification.

The suggestion was made that the QST should meet more frequently, at least three times a year. Jonathan stated that the next meeting would be held in March or April, which should be ideal timing in terms of continued feedback on delivery of the new HNC/D Group Awards. However, if there were any issues in the meantime, the QST members should not hesitate to get in touch, as discussed earlier.

The College Development Network had held understanding standards events for CfE Biology, Chemistry and Physics. Jonathan reported that these had been useful events for any lecturers delivering the new CfE Units. SQA delivered CPD events for Higher sciences (Course assessment) had also been planned and would also offer useful materials to Colleges, such as practice marking facilities.

A Consultation paper on presenting data in sciences from National 3 to Advanced Higher level had now been made live. Jonathan would forward this paper to the QST members.

Action— Jonathan to send Consultation paper to QST members.

ACTION GRID

	Action	Date completed
1	Mhairi to retrieve information regarding chemical process Unit.	
2	QST members to contact Kirsty with any issues with regard to the new HNC/D Group Awards.	
3	QST members to contact Kirsty should they wish to receive draft versions of the ASPs.	
4	<p>Jonathan to check how long assessment materials need to be retained after Unit completion.</p> <p>Retention of evidence</p> <p>http://www.sqa.org.uk/files_ccc/SQA_Evidence_retention_requirements_A3_table.pdf</p>	01/12/2015
5	QST members to contact Kirsty should they wish to receive a draft version of the <i>Laboratory Skills for Science Industries Understanding Standards</i> materials.	
6	<p>Jonathan to speak to Martin Brown, Qualifications Manager for Mathematics.</p> <p><i>Engineering Mathematics 1</i> (H7K0 33) can be awarded through RPL if a learner has achieved a recent Higher Mathematics at Grade C or above. However, it is recommended that the learner is taught, and assessed on, any knowledge and/or skills that are not covered in the Higher Mathematics Course, in order to ensure that they are not disadvantaged in the future.</p> <p>A similar agreement has now been put in place for <i>Mathematics for Science 1</i> (H8XP 33).</p> <p><i>Mathematics for Science 1</i> (H8XP 33) can be awarded through RPL if a learner has achieved a recent Higher Mathematics at Grade C or above. However, it is recommended that the learner is taught, and assessed on, any knowledge and/or skills that are not covered in the Higher Mathematics Course, in order to ensure that they are not disadvantaged in the future.</p> <p>Any queries relating the Mathematics Units should be directed to Martin Brown – martin.brown@sqa.org.uk</p>	01/12/2015

7	<p>Jonathan to look into lapsing dates for Intermediate 1, Intermediate 2 and old Higher Units.</p> <p>Please see Appendix 1</p>	01/12/2015
8	<p>Action— Jonathan to send Consultation paper to QST members.</p> <p>Presenting Data</p> <p>http://blogs.sqa.org.uk/lifesciences/2015/11/17/consultation-presenting-data-nq-science-subjects/</p> <p>Please note that the deadline for feedback is Tuesday 22nd December 2015.</p>	01/12/2015

Appendix 1

Lapsing Units within old National Qualifications

Subject	Int. 1	Int. 2	Higher	Revised Higher
Biology	No	No	No	Yes (July 2016)
Biotechnology		No	No	
Chemistry	Yes (July 2018)	Yes (July 2018)	No	No
Human Biology			No	Yes (July 2016)
Maths	Yes (July 2016)	Yes (July 2016)	Yes (July 2016)	
Physics	No	No	No	No

The above information applies to all of the Units within the National Qualification