Our ref: AS/NQ/Apr07

4 April 2007

To: Directors of Education
Head Teachers
SQA Co-ordinators
Customer Account Managers
Principal Teachers of Science
Principal Teachers of Physics

For the attention of all staff responsible for the delivery of National Qualifications in Physics

Action by Recipient	
	Response required
✓	Note and pass on
	None — update/information only

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Dear Colleague

National Qualifications update — Physics

This letter provides centres with information on developments in National Qualifications in Physics.

1. Principal Assessor reports

Centres are reminded that the Principal Assessor reports for the 2006 examination diet are available on the NQ Physics subject-specific page of SQA's website (**www.sqa.org.uk**).

The Principal Assessor reports contain important information on candidate performance, statistical information on candidate entries and grade boundaries, and advice to centres for preparing future candidates.

It is recommended that centres download these reports as the information they contain may be used to inform teaching and learning.

2. Senior Moderator reports

Centres are reminded that the Senior Moderator reports for 2006 moderation events are available on the NQ Physics subject-specific page of SQA's website.

The Senior Moderator reports contain important information on issues regarding internal assessment for the following areas:

- Standard Grade Physics
- National Units in Physics

It is recommended that centres download these reports.

3. Marking instructions

The detailed marking instructions for Physics (Standard Grade, Intermediate 1, Intermediate 2, Higher and Advanced Higher) are available on the NQ Physics subject-specific page of SQA's website.

It is recommended that centres download these.

4. Review of NQ Servicing Units

SQA is currently rationalising and modernising the portfolio of NQ Units, known as servicing Units, which are not component Units of NQ National Courses.

A consultation exercise was undertaken by SQA with centres that currently utilise servicing Units in the cognate area 138 (Physics).

As a result of this consultation, some servicing Units with little or no uptake in the past three years will be removed from the NQ catalogue as from August 2008. Other Units will be updated in terms of content and/or assessment over the next two to three years. Further consultation was undertaken with the Scottish Wider Access Programme (SWAP) organisations and with Nurse Training Institutions, to determine the impact of the removal of servicing Units from the portfolio. The outcome of this consultation was that component Units of National Courses can be used to replace the deleted service Units.

A full list of Units to be removed from the catalogue and a proposed timetable of when Units will be updated is given in Appendix 1 of this letter. Please note that the proposed timetable for the updating of the servicing Units is for guidance only.

5. Progression statistics

Appendix 3 of this letter gives statistics showing the progression of candidates in NQ Physics Courses. These tables are included as information for centres. Centres should note that some of the tables are based on small numbers, in particular the Intermediate 1 to Intermediate 2 progression, so caution should be used when attempting to draw conclusions from the data.

6. Professional Development Workshop

A Professional Development Workshop on the standards applied to the marking of the 2006 Advanced Higher Physics question paper and investigation report took place in November 2006 at Napier University in Edinburgh. Fifty delegates from across Scotland attended the event. SQA wishes to thank both the Principal Assessor and Advanced Higher Physics examiner who prepared and delivered a very successful workshop. Plans are already underway for events in 2007 and details will be posted on our website and notified to SQA Co-ordinators in due course.

7. Appeals

Centres are advised that an updated and revised edition of the document *Estimates, Absentees and Assessment Appeals: Guidance on evidence requirements* (October 2006) is available on SQA's website. Links to download the document can be found on all NQ subject-specific pages.

Centres are reminded that, when submitting evidence for appeals, the evidence **must demonstrate candidate attainment across the whole Course**. This applies to all levels of qualifications, including Standard Grade.

For Intermediate 1, Intermediate 2, Higher and Advanced Higher, a high scoring NAB can be submitted as additional evidence for an appeal at grade C, but it is not valid evidence for an appeal at either grade A or grade B.

At Standard Grade, where a centre is submitting an appeal for Credit level from a result of Grade 4 or below, they should consider including evidence at General as well as Credit level. This would allow the examiners to see if a partial upgrade was possible where the evidence does not justify an upgrade to Credit level.

8. Multiple-choice question writing

Each year SQA holds multiple-choice question writing events, where teachers are invited to attend a weekend training event (Saturdays), after which they are asked to produce a set number of questions for possible inclusion in the Physics Item Bank, from which the examination questions are selected.

Participants are paid for attending the training events and writing the questions. I am seeking to extend the pool of writers we use, so if any Physics teacher is interested in becoming involved they should complete the application form in Appendix 3 and return it to me. I would ask that applicants give full details of teaching experience including levels taught and the years in which these were taught. Please avoid generalisations such as 'All levels — 1990 onwards'.

You do not need to have worked for SQA as a marker, examiner, etc, and new or recent recruits to Physics teaching are as welcome to apply as established teachers. I cannot guarantee that everyone who applies will be selected but we will hold your details for events in the future.

9. Online objective testing

2007 sees the first time that the Intermediate 1 Physics examination will include a 20 question multiple-choice section. As part of SQA's modernisation agenda, it has also been included in the online assessment developments. A small number of centres have agreed to take part in the initial trial of this development and candidates from these centres will answer the multiple-choice questions on screen.

I trust that the contents of this letter are helpful to you. Please do not hesitate to contact me if you require further clarification.

Yours sincerely,

Andrew Shield
Qualifications Manager
NQ Directorate

Appendix 1

Table 1: Units to be deleted from the NQ catalogue in 2007 (or before)

Unit number	*Unit title*	*Cognate group*	*Comments*
EA3P 11	Introducing Heat	138	
EB12 13	Circular Motion	138	Lapsed 2005
EB13 13	Waves	138	Lapsed 2005
EB14 13	Electric Fields	138	Lapsed 2005
EB15 13	Mechanical Properties of Matter	138	Lapsed 2005
EB16 12	Optical Instruments	138	Lapsed 2005
EB18 13	Electromagnetism	138	Lapsed 2005
E8SR 12	Radioactive Waste Handling	138	Lapsed 2005
E8SP 12	Reactor Systems and Fuel Cycles	138	Lapsed 2005
E8SN 12	Atomic Energy and Radiation Control	138	Lapsed 2006
EA3Y 12	Electricity	138	Lapsed 2005

Table 2: Units to be deleted from NQ catalogue in 2008

Unit number	*Unit title*	*Cognate group*	*Comments*
EA3R 11	Introducing Electricity	138	
EA3S 11	Introducing Radioactivity	138	
EA3T 11	Introducing Mechanics	138	
EA3V 11	Introducing Waves and Optics	138	
EA3W 12	Radioactivity	138	
EA3X 12	Mechanics	138	
D0RG 12	Optics	138	
EA42 12	Properties of Matter	138	
EB17 12	Temperature Measuring Devices	138	Lapsed 2005

Table 3: Units to be reviewed from April 2007 until March 2010

Unit number	*Unit title*	*Cognate group*	*Comments*
E1D2 11	Physics for Engineering	138	Amend assessment
EB6W 10	Introduction to Physics	138	Review

Table 4: Units to be retained without amendment

Unit number	*Unit title*	*Cognate group*	*Comments*
D936 12	Experimental Procedures: Physics	138	

Appendix 3

Progression Statistics

Standard Grade to Higher

Progression from SG (1:1) to Higher		
Result	Total	%
A	1587	59.4%
B	668	25.0%
C	291	10.9%
D	60	2.2%
Fail	64	2.4%
Total	2670	100.0%

Progression from SG (2:2) to Higher		
Result	Total	%
A	40	3.1%
B	212	16.6%
C	386	30.2%
D	212	16.6%
Fail	427	33.4%
Total	1277	100.0%

Progression from SG (1:2) to Higher		
Result	Total	%
A	146	14.8%
B	336	34.0%
C	292	29.6%
D	94	9.5%
Fail	119	12.1%
Total	987	100.0%

Progression from SG (2:3) to Higher		
Result	Total	%
A	1	1.0%
B	7	7.0%
C	15	15.0%
D	15	15.0%
Fail	62	62.0%
Total	100	100.0%

Progression from SG (2:1) to Higher		
Result	Total	%
A	46	13.3%
B	119	34.4%
C	101	29.2%
D	40	11.6%
Fail	40	11.6%
Total	346	100.0%

Progression from SG (3:2) to Higher		
Result	Total	%
A	0	0.0%
B	7	3.9%
C	35	19.3%
D	25	13.8%
Fail	114	63.0%
Total	181	100.0%

Intermediate 2 to Higher

Progression from Int 2 (A1) to Higher		
Result	Total	%
A	111	88.1%
B	14	11.1%
C	1	0.8%
D	0	0.0%
Fail	0	0.0%
Total	126	100.0%

Progression from Int 2 (B4) to Higher		
Result	Total	%
A	3	2.3%
B	25	19.2%
C	36	27.7%
D	19	14.6%
Fail	47	36.2%
Total	130	100.0%

Progression from Int 2 (A2) to Higher		
Result	Total	%
A	124	43.8%
B	84	29.7%
C	50	17.7%
D	12	4.2%
Fail	13	4.6%
Total	283	100.0%

Progression from Int 2 (C5) to Higher		
Result	Total	%
A	1	1.5%
B	7	10.8%
C	18	27.7%
D	6	9.2%
Fail	33	50.8%
Total	65	100.0%

Progression from Int 2 (B3) to Higher		
Result	Total	%
A	9	11.5%
B	20	25.6%
C	27	34.6%
D	9	11.5%
Fail	13	16.7%
Total	78	100.0%

Progression from Int 2 (C6) to Higher		
Result	Total	%
A	2	3.0%
B	4	6.1%
C	11	16.7%
D	13	19.7%
Fail	36	54.5%
Total	66	100.0%

Higher to Advanced Higher

Progression from Higher (A1) to Adv Higher		
Result	Total	%
A	322	64.8%
B	110	22.1%
C	44	8.9%
D	6	1.2%
Fail	15	3.0%
Total	497	100.0%

Progression from Higher (B4) to Adv Higher		
Result	Total	%
A	0	0.0%
B	30	17.2%
C	50	28.7%
D	26	14.9%
Fail	68	39.1%
Total	174	100.0%

Progression from Higher (A2) to Adv Higher		
Result	Total	%
A	123	26.7%
B	150	32.6%
C	110	23.9%
D	36	7.8%
Fail	41	8.9%
Total	460	100.0%

Progression from Higher (C5) to Adv Higher		
Result	Total	%
A	1	1.4%
B	5	6.9%
C	24	33.3%
D	9	12.5%
Fail	33	45.8%
Total	72	100.0%

Progression from Higher (B3) to Adv Higher		
Result	Total	%
A	15	8.8%
B	51	29.8%
C	48	28.1%
D	13	7.6%
Fail	44	25.7%
Total	171	100.0%

Progression from Higher (C6) to Adv Higher		
Result	Total	%
A	0	0.0%
B	6	13.6%
C	5	11.4%
D	9	20.5%
Fail	24	54.5%
Total	44	100.0%

Intermediate 1 to Intermediate 2

Progression from Int 1 (A1) to Int 2		
Result	Total	%
A	3	15.8%
B	5	26.3%
C	0	0.0%
D	5	26.3%
Fail	6	31.6%
Total	19	100.0%

Progression from Int 1 (B4) to Int 2		
Result	Total	%
A	0	0.0%
B	0	0.0%
C	0	0.0%
D	4	16.0%
Fail	21	84.0%
Total	25	100.0%

Progression from Int 1 (A2) to Int 2		
Result	Total	%
A	1	3.2%
B	3	9.7%
C	0	0.0%
D	5	16.1%
Fail	22	71.0%
Total	31	100.0%

Progression from Int 1 (C5) to Int 2		
Result	Total	%
A	0	0.0%
B	0	0.0%
C	0	0.0%
D	0	0.0%
Fail	20	100.0%
Total	20	100.0%

Progression from Int 1 (B3) to Int 2		
Result	Total	%
A	0	0.0%
B	0	0.0%
C	2	8.3%
D	3	12.5%
Fail	19	79.2%
Total	24	100.0%

Progression from Int 1 (C6) to Int 2		
Result	Total	%
A	0	0.0%
B	0	0.0%
C	0	0.0%
D	0	0.0%
Fail	12	100.0%
Total	12	100.0%

Appendix 3

Multiple-choice Writer Application Form (Physics)

Name			
Address			
Contact e-mail			
Contact telephone no.			
Centre details			
Teaching experience	**Presenting centre(s)**	**Presenting year(s)**	
Intermediate 1			
Intermediate 2			
Higher			
Advanced Higher			
Standard Grade			
O Grade			
CSYS			
Signature		**Date**	

Continued on next page

Please provide details of one referee:

Referee:	
Are you currently an SQA appointee?	**YES / NO** (delete as applicable) **Marker / examiner / verifier / other**
Any other relevant information	