

8 July 2005

To: SQA Co-ordinator
LEA
Directors of Education
Customer Accounts Managers
All Centres

**For the attention of all staff
responsible for the delivery of
National Qualifications in
Technical Education**

| Action by Recipient |
|----------------------------------|
| Response required |
| Note and pass on |
| ✓ None – update/information only |

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Dear Colleague

Technical Education — Update

This is to update you on current developments in Technical Education subjects i.e. Craft and Design, Product Design, Graphic Communication, Practical Craft Skills and Technological Studies.

Graphic Communication

British Standards

Following my previous update letter I have had some queries regarding the guidance given by SQA on British Standards. No SQA publications have been issued regarding British Standards, but a letter referring to relevant parts of British Standards documents was sent to all schools in March 2004.

This letter is reproduced in Appendix 1.

Practical Craft Skills

Changes to Arrangements documents from Session 2005/2006

Engineering Craft Skills at Int 1 and Int2: Fabrication and Welding Units have been renamed as Fabrication and Thermal Joining. The term ‘thermal joining’ is now used to describe the processes of welding or brazing. Brazing can now be taught as an alternative

to welding but spot welding still needs to be covered. New projects are currently being developed to support brazing.

Woodworking Skills at Int 1: 'Stub mortise and tenon (no haunch)' has been added to the list of joints to allow candidates to use this joint as an alternative to cross halving.

These changes were recommended by moderators and it is hoped that they will help existing presenting centres and also encourage more centres to consider presenting these Courses.

The new Arrangements documents (Edition 3) will be published on SQA's website soon.

Technological Studies

An appeals exemplification pack has been developed for Higher Technological Studies. This will be distributed to all currently presenting centres as well as being published on SQA's website.

The data booklets for all levels of Technological Studies Courses are currently being revised for use in Session 2005/2006. More details will be given on this when the revisions are complete.

Product Design

The old *Intermediate 2* and *Higher Craft and Design Units D125, D126, D127 and D128* finish on 31 July 2005. These Units were left open for session 2004/2005 to allow candidates who started the old Craft and Design Courses in session 2003/2004 to complete any outstanding Units and thereby gain a Course award.

From session 2005/2006 candidates will only be able to enter for the new Product Design Units as shown below:

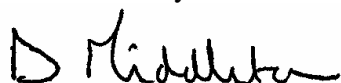
| Higher Product Design | C211 12 |
|--|----------------|
| Units | |
| <u>Mandatory</u> | |
| Product Design: Design Analysis | DF4V 12 |
| Product Design: Developing a Design Proposal | DF4W 12 |
| Product Design: Manufacturing Products | DF4X 12 |

| Intermediate 2 Product Design | C211 11 |
|--|----------------|
| Units | |
| <u>Mandatory</u> | |
| Product Design: Design Analysis | DF4V 11 |
| Product Design: Developing a Design Proposal | DF4W 11 |
| Product Design: Manufacturing Products | DF4X 11 |

National Assessment Bank (NAB) Materials are available for assessing all of these Units at all levels.

I hope that you have found the information in this letter helpful. If you require clarification please do not hesitate to contact me.

Yours sincerely



Derek Middleton
 Qualifications Manager
 Computing and Technical Education

Appendix 1 — Letter sent to schools regarding British Standards in March 2004

March 2004

To SQA Co-ordinator

For the attention of **all** staff responsible
for the delivery of Graphic Communication.

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| Action by Recipient | |
|---------------------|--------------------------------|
| | Response required |
| ✓ | Note and pass on |
| | None – update/information only |

Dear Colleague

NQ Review Graphic Communication – British Standards

The NQ Review of Graphic Communication recommended that further guidance was provided to centres on the use of British Standards for assessment purposes.

In response we have produced a definitive list of British Standards which are required primarily for examination purposes but are also relevant and set the standard required in coursework folios; such as the Thematic Presentation at Higher.

The relevant British Standards documents we have referenced are:

- Construction Drawing Practice **PP 7320:1988**
- Engineering Drawing Practice **PP 8888:2000**.

We would like to stress that this list complements the Intermediate 2, Higher and Advanced Higher Arrangements documents and that there are no changes to these documents whatsoever.

Yours sincerely

Louise Lilly
Qualifications Officer

2004 GRAPHIC COMMUNICATION INTERMEDIATE 2, HIGHER & ADVANCED HIGHER

Table of relevant sections of British Standards: Engineering Drawing Practice PP 88:2000 for NQ Graphic Communication Courses

| ENGINEERING DRAWING PRACTICE BS 8888:2000 | |
|--|---|
| Chapter 3 - Communicating product design | |
| Page | Relevant contents |
| 6 | Sheet orientation, Figure 1, Title blocks. |
| 8 | Line and line work, Table 1, Figure 5a). |
| 9 | Figure 5b), Figure 5c). |
| 10 | Scales and scale bars. |
| Chapter 4 – Projection methods | |
| 15-16 | Third angle projection, Figure 13, Figure 14, Figure 15. |
| 17 | Isometric axonometry, Figure 18, Oblique axonometry. |
| 18-19 | Cavalier axonometry, Figure 19, Cabinet axonometry, Figure 20, Figure 21, Planometric projection, Figure 22a), Figure 23 (3, 4, 5 and 9, 10, 11 only). |
| 20 | Summary. |
| Chapter 5 – Making drawings easier to understand | |
| Please note that only third angle will be examined. | |
| 21 | Types of views, Partial views. |
| 22 | Figure 24, Figure 25, Using partial views to simplify the representation of symmetrical parts, Figure 26, Figure 27. |
| 23 | Saving space by using interrupted views, Figure 28, Representation of repetitive features, Figure 29, Figure 30 (on page 24). |
| 24 | Auxiliary views, Figure 31 (note: shown in first angle projection), Sectional views. |
| 25 | Cutting planes, Figure 32, Figure 33 (note: shown in first angle projection), General points on hatching, Figure 34. |
| 26 | Figure 35, Types of sectional view, Sectional views in more than one plane, Figure 36, Figure 37 (note: shown in first angle projection). |
| 27 | Figure 38 (note: shown in first angle projection), Figure 39, Figure 40, Figure 41 and Figure 42. |
| 28 | Figure 43, (note: shown in first angle projection), Parts and features not normally sectioned, Figure 44. |
| Chapter 6 – Representing standard components | |
| 29 | What is meant by “convention”?, Screw threads and threaded parts, Figure 45 (note: shown in first angle projection). |
| 30 | Figure 46 only. |
| 31 | Dimensioning threaded parts, Figure 48. |
| 34 | Representing bearings, Figure 53, Representing keys, Figure 54. |
| Chapter 7 – Showing sizes on technical drawings | |
| 35 | General principles, Functional dimensioning, Figure 55, Figure 56. |
| 36 | Dimensioning conventions, Projection lines and dimension lines, Figure 57, Arrangement of dimensions. |
| 37 | Figure 59, Figure 60, Figure 61, Figure 62, Figure 63, Figure 64. |
| 38 | Examples of dimensioning methods, Parallel dimensioning, Chain dimensioning, Figure 66, Figure 67, Dimensioning by coordinates only (not Combined dimensioning or Superimposed running dimensioning). |
| 39 | Figure 70, Figure 71 only. |
| 40 | Methods of dimensioning common features, Diameters, Figure 72, Figure 73, Figure 74 & Figure 75. |
| 41 | Radii, Figure 76, Dimensioning holes, Figure 77. |
| 42 | Dimensioning screw threads and threaded parts, Designation of ISO metric screw threads, |

| | |
|-----------------------------|--|
| | Thread system and size (not Thread tolerance class), Figure 79, Figure 80. |
| 43 | Tolerancing, Application of tolerances, Tolerancing of linear dimensions, Tolerancing of individual angular dimensions, Figure 81, Figure 82, Summary. |
| Chapter 9 – Glossary | |
| 16-48 | Assembly drawing, Auxiliary view, Axonometric projections, Centre line, Dimension line, Format, Hatching, Isometric, Leader lines, Oblique drawing, Orthographic projection, Parts drawing, Planometric projection, Sections, Sectional view, Tolerancing, Title block |

Table of relevant sections of British Standards: Construction Drawing Practice PP 7320: 1988 for NQ Graphic Communication Courses

| CONSTRUCTION DRAWING PRACTICE BS 7320:1988 | | |
|---|--|---|
| Page | Section | Relevant contents |
| 2 | 1. Introduction, 3. Title panel and information panel | Figure 2. |
| 9 | 9. Sizes and dimensioning: | General, Projectors and dimension lines, Figure 17, Termination of dimension lines. |
| 12-23 | 14. Symbols | Please note: All symbols will be given in exam. |
| 24-28 | 15. Production drawings for a small project | Figure 26, Figure 27, Figure 28. |