



# **General Certificate of Secondary Education**

## **Applied Science 4861**

**APSC/1      Science in the Workplace**

# **Report on the Examination**

*2007 examination – June series*

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*Dr Michael Cresswell*, Director General.

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## General comments – The portfolio units (1, 3, & 4)

### **Activities**

Most centres undertook a good range of activities that covered the specification, although a small number of submitted tasks were not appropriate. There were some excellent examples of activities set in interesting vocational contexts, which candidates clearly found interesting.

### **Assessment**

In all three units there were instances of centres being over-generous in their marking, especially at the higher end. Assessor annotations, showing where and how marks had been awarded, were generally evident, but some centres still need to address this issue. It is imperative, especially in APSC3 and APSC4, that teacher annotation clearly shows how much guidance a candidate has been given and the level of independence at which he/she is working.

There was some misinterpretation of the requirements of the specification in APSC3 and APSC4.

There was evidence that many centres had carried out thorough internal standardisation, which was very encouraging.

Penalties for incomplete portfolios were correctly applied in most cases, although it was disappointing to see a relatively large proportion of centres submitting incomplete material. Whilst it is not a requirement that every candidate completes every strand of APSC3, to do so allows candidates access to higher marks and is strongly encouraged.

Candidates may submit more than one piece of work for each strand of APSC3. For example, the section on Chemical Analysis Techniques may include a piece on qualitative and a piece on quantitative analysis and marks may be taken from both pieces. However, there was some confusion where part of the marks for a strand were taken from two pieces of work. Each individual mark must come from the same piece of work – eg the mark for Strand A in the above example must come from either the qualitative or the quantitative piece, but not some from each.

### **Presentation of the work to the moderator**

Work was generally well presented. Plastic wallets and cardboard folders were in evidence, but most centres followed the guidance to simply hole punch and hold candidates' work together using treasury tags. The use of paper clips or staples to hold work together is to be discouraged, as work can easily become detached and muddled. Few centres sent in class work or theory work that was not marked or part of a candidate's assessed work.

Most centres sent their Centre Mark Forms and samples promptly (some were even early, which did help with the moderator workload). However, a number were very slow in submitting marks and sending the sample requested, which severely hindered moderation.

Generally, the Centre Declaration Sheets and Candidate Record Forms were completed correctly. Some centres, however, did not complete the 'title of candidate's work' sections, did not fill in all the marks on the grid, or gave marks on the CRF that did not tally with the mark on the CMF or the candidate's work. It is important to complete these forms correctly as they help the moderator navigate the work and find out, quickly, where all the marks are.

### ***Further support***

Teachers are encouraged to make full use of the guidance available from AQA which includes:

- The Teachers' Guide for the specification
- The Student Guide to Assessment
- Coursework Information for Centres 2007/2008 (sent out by the Subject Department at the beginning of each academic year)
- Portfolio Advisers
- Teacher Support Network
- Ask AQA for Teachers

## **Strand A: The Use of Science in the Workplace**

Guidance clearly states that ‘a range’ should be **at least three** organisations. A small number of centres gave full Stage 1 marks or more for a study of only two organisations. In a minority of centres candidates were confused as to whether an organisation was local, national or international – and some centres had allowed candidates to choose almost identical organisations (eg three different pharmacies).

At Stage 2, the qualifications and skills listed did not always relate to the actual jobs within the organisations studied.

The description of location should not just be a map: an actual description is needed (accompanying a map is even better). To attain Stage 3, there should be a full explanation of why the organisation is located where it is. This should be very specific to the organisation and the area, and not simply consist of vague statements such as ‘good transport links’.

The in-depth study required at Stage 3 should be distinguishable from the other two organisations by the amount of detail included.

The amount of material downloaded from the internet could be a problem. Downloaded material can be given credit only if the candidate has used it – preferably by interpreting in their own words. A few centres encouraged candidates to add their own comments and annotations to downloaded pages, where they had also highlighted text – this was very nicely done in some instances. However, much unedited material was marked or annotated by the internal assessor.

## **Strand B: Working Safely in Science**

In general, centres have followed the guidance that there must be thorough coverage of all three aspects of the specification (hazards, fire safety and first aid) in the school or college laboratory to achieve Stage 1. This strand is easier to mark than in the old specification, and there was far less generosity of marking than in previous years. Centres are reminded, however, that risk assessment is now included in the ‘hazards’ section.

A second workplace needs to be studied to achieve marks at Stage 2, and the same areas of the specification as listed for Stage 1 should be covered. Some centres were giving Stage 2 marks where none of the specified hazards had been discussed for the workplace.

Candidates capable of achieving high marks should be given opportunities to undertake some independent work, rather than just completing worksheets and pro-formas (although these can direct less able candidates very well).

As in Strand A, centres must be very careful to ensure that downloaded material, with no evidence that a candidate has used it, should not be credited.

## **Strand C: Research and Communication**

This section was generally assessed well and in line with AQA expectations: candidates who had done very little work achieving 1 mark, those using several sources of information 2 and those who had used many sources and showing good understanding being awarded 3 marks. There were a few instances of candidates doing very little and scoring low marks for Strand A and Strand B but still being given 3 marks for Strand C. This is not acceptable. It should also be noted that, to achieve 3 marks in this strand, candidates must clearly identify their sources of information.

## **Mark Ranges and Award of Grades**

Grade boundaries and cumulative percentage grades are available on the [Results statistics](#) page of the AQA Website.