



**General Certificate of Secondary Education
January 2011**

Applied Science (Double Award) APSC3

Developing Scientific Skills

Unit 3

***Report on the
Examination***

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General Administration

Portfolios were generally well presented, the best being in the order of the candidate record form, tagged in the top left hand corner, all orientated the same way with work separated so that it is easy to navigate the portfolio. There are still some centres sending portfolios that are upside down and back to front which delays the moderation process. Please ensure that Candidate Record Forms are filled out completely and correctly including the candidate numbers.

A number of centres did not adhere to the deadlines for paperwork which slowed down the moderation process.

Assessment

Many centres are including tick sheets at the front of each piece of work and in most cases these are proving to be very helpful to the moderator. Occasionally, the tick sheet, annotation and mark awarded did not match so it is vital that the centre checks carefully before submitting work.

Presentation of work to the moderator

Work was generally well presented however there are still a number of centres using bulky folders or attaching work with elastic bands and paper clips. It is too easy for work to become detached and lost in this case. There were also still a number of centres who included plastic wallets which slow down the moderation process. Please punch and tag the work in the top left hand corner so that all of the work is correctly orientated and in the order set out on the candidate record form. It is also helpful to the moderator if the centre identifies the best marks on the candidate record form.

For this unit some centres were submitting more than one piece of work for each strand but these were not clearly recorded on the candidate record form. Some centres had also submitted investigations for Using Chemical Analysis techniques that involved both qualitative and quantitative experiments. Unless all equipment and chemicals are included in the risk assessment and there is a clear link in the conclusion, both experiments will be treated as separate pieces of work.

Further support

Teachers are encouraged to make full use of the guidance available. A Teachers Guide is available which gives more detailed information on portfolio marking and there is also a document available called "Coursework information for centres". This details general information about entries and notes on each of the units including appropriate tasks, administrative procedures and the role of the portfolio advisor.

These are available on the [AQA Website](#) by choosing support materials. Centres can also access the Ask AQA from the website.

Strand A: Planning and Following Instructions

A nice range of tasks were seen and the best examples saw the vocational setting being given right at the start of the task so that candidates could apply their knowledge all the way through. There is still a lot of over marking in strand A. Many centres were awarding stage 3 marks for risk assessments being completed independently even though they were incomplete. At stage 2 and 3, the risk assessments must be both complete and comprehensive, including all of the main hazards. The risks should be described in detail for example “Bunsen burner – hot, burn you” is not sufficient detail and does not cover all of the risks associated with it. Chemicals should be mentioned specifically and the risks should be correct, for example there have been a number of incidences where chemicals such as sodium hydroxide have been described as “corrosive” even though it would only be “irritant” at the concentrations used.

Strand B: Obtaining Evidence by Experimenting

In strand B some centres had awarded 2B3 and 3B3 for bar charts. Since these do not have a line of best fit these are not credit worthy. Many of the tables seen in this series appeared very similar if not identical suggesting that they had been provided or at the very least a lot of guidance had been given to draw them. Where a table has been provided, 2B3, 3B1 and 3B2 cannot be awarded. To award 2B3 for the table, all headings and units must be included. To award this mark for the graph, in addition to an accurate line of best fit (not dot to dot) the axes must be labelled and units included. 3B2 attracts two marks; one is for teacher annotation and the second is for an explanation from the candidate as to why they repeated their experiment. Often, two marks had been awarded even though there was no candidate comment.

Strand C: Analysing and Considering Evidence

In strand C, to award 2C1 there must be reference to the data collected in the experiment. To award 3C1, the relationships identified should be quantitative and again make reference to the actual data collected in the experiment. 3C2 requires that candidates carry out complex calculations such as rearranging equations. To award these marks, the candidate must show the starting formula for example $V=IR$ for resistance, explain how they rearranged the formula and then preferably give a worked example. Where the formula has been provided and numbers are simply substituted in, only stage 1 and 2 can be credited. All calculations attract two marks, one for accuracy and one for consistency therefore the decimal places should be consistent throughout. To award 3C3, candidates should use scientific reasoning to explain their findings.

Strand D: Evaluating Evidence

Strand D was generally marked accurately at stage 1 and 2 although occasionally centres are awarding 2D2 for improvements that have not been justified. There was some over marking at stage 3 where relatively simple evaluations were being credited. The evaluation at this level needs to be a detailed analysis of the strengths and weaknesses and the improvements suggested must also be detailed and be fully justified.

Strand E: Vocational Application

Some nice examples were seen in strand E although very occasionally some centres have still “tagged on” this strand rather than setting the work in an applied context from the start. Some centres are still awarding credit for applying the technique for example using a microscope rather than the actual investigation carried out. At stage 2 the workplaces must be specifically named and at stage 3, the organisations must be alternative types not more of the same.

Mark Ranges and Award of Grades

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