



**General Certificate of Secondary Education
June 2012**

Additional Applied Science

AASC/2F

Science at Work

Unit 2

***Report on the
Examination***

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Additional Applied Science Foundation Tier AASC/2F

General

The usual mix of sport, nutrition and forensic questions provided a wide variety of interest for the students. Most parts of all questions were attempted. As in previous years the students scored well on the forensic questions. A lack of in depth knowledge held some students back, particularly on the heart and circulation. Mathematical ability was again an area which let a lot of students down.

Question 1 (Low Demand)

- (a) This low demand question on the uses and properties of materials was not well answered. Perhaps students were not familiar with golf clubs being made from wood, but they should have been able to work out that a suitable material for a bike would be metal and they should know about ceramic disc brakes. In (a)(ii) students lost marks by not selecting properties which would make good sports equipment, e.g. aluminium and high thermal conductivity is not relevant here.
- (b) Most students knew a natural material but were unsure of a synthetic one. The most common error was to think that rubber is synthetic.
- (c) Most recognised that leather would be more durable and provide a better grip. Some lost marks for describing two aspects of durability.

Question 2 (Low Demand)

- (a) Many students got full marks for this question.
- (b) Classic answers like less space needed and less man power needed were not often seen. Answers like 'easier to do' or 'can control the pigs' were too vague and did not gain credit. Too many gave a disadvantage for the pig and not for the farmer in (b)(iii). In (b)(iv) many did not understand that they had to describe an investigation and were simply quoting the results you would expect to see. The most common correct marks were for students weighing the pigs and seeing which ones were the biggest. Most were able to give at least one variable that should be controlled but too many were not reading the question carefully enough and giving the answer of 'same space'.
- (c) The majority could work out the percentage of meat used to make loin chops and knew that protein was the main nutrient in meat.

Question 3 (Low Demand)

This forensics question was very well answered with many students getting high marks.

- (a) Well answered.
- (b) Another well answered question. In (b)(iii) some students misunderstood the word '*feature*' and lost marks by giving the names of types of fibres like hair and clothing. In (b)(iv) many tried to answer as in previous questions – e.g. could have been there but did not commit the crime. This question was slightly different and students found it difficult to apply the logic.

Question 4 (Low Demand)

This was the most poorly answered question on the paper.

- (a) Even with the labels provided this was a very poorly answered question with the labels being used in any position. Students did not understand how the blood circulates through the heart and around the body with many thinking the blood would go to the lungs from A.
- (b) Only half the students could get two or more marks for this question.
- (c) Why cells need oxygen was not known. Most gave vague answers like, 'to stay alive' or 'to breathe'.

Question 5 (Standard Demand)

- (a) This was the first of the questions common to the higher tier paper and the first part was well answered with lots of students gaining two marks for obesity and heart disease. A few lost marks for too general comments like heart problems but less than seen in previous series.
- (b) Lots of students getting the mark for mentioning that it's cheap or they use advertisements.
- (c) Lots of students gave three statements all related to exercise and activity levels so only gained 1 mark. A few mentioned gender differences and even fewer mentioned metabolism differences. Many were talking about diabetes or body shape in their answers.
- (d) (i) Lots of students answered well saying the drink contained lots of vitamins. Many did miss out on the mark though for just saying it contained vitamins or for describing what vitamins C & B do.

(ii) More than half of students got this wrong with some quite random calculations given. The rest mainly gave a clear answer with lots showing their working clearly. One or two only got the decimal place in the wrong place giving an answer of 36.

Question 6 (Standard Demand)

- (a) Almost all students made a good attempt at this. Many more students used the term plaster of Paris than seen before. A lot less of cement and flour used. Some students are still talking about putting a shoe in a tray of soil indicating that this is how it was done in class.
- (b) This was poorly answered. Too many vague answers like 'match it to the criminal more easily' or it will be easier to identify the trainer'. Students need to explain why.
- (c) This question proved too difficult for most students. They were not able to work out the mass of water in the soil or the mass of soil. Correct answers using the mass of the dry soil were awarded two marks. Too many were just using random figures from the table.

Mark Ranges and Award of Grades

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

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