



**General Certificate of Secondary Education**

**Design and Technology  
Short Course**

**45751**

**Unit 1: Written Paper**

**Report on the Examination**

*2010 examination - June series*

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## General

This is the first year that this course has been examined. A detailed analysis of the level of candidate responses is available to centres if they refer to the Enhanced Results Analysis (ERA) system that can be achieved via e-AQA. It is recommended that centres look at this as it may prove valuable in terms of identifying issues which could inform future course planning/revision programmes.

## Administration

A small number of candidates completed questions on additional sheets, which in most cases was unnecessary and did not result in additional marks. Some candidates produced their answers in a manner which caused problems for marking, for example:

- Some candidates wrote outside the area permitted on the question paper.
- A small number of candidates used colour in their responses. This was not required by the question as no marks were awarded for colour and as such, wasted candidates' time.
- Some candidates produced their answers in the wrong places, for example, answers for question 2d in the space for question 2b.

The clarity of handwriting by the majority of candidates was good, however the quality of communication both written and graphical varied considerably. Some immature responses were seen, particularly from early entry candidates.

## Question 1

- (a) The majority of candidates scored well on this question. Common errors were confusion between deciduous and coniferous trees. Only the most able candidates were able to match the source bauxite with aluminium.
- (b) The majority of candidates scored well on this question. Many were able to explain the link to regrowing/replacing a source.
- (c) Candidates were often limited by a poorly structured response and few achieved full marks. The majority were able to define the term and/or provide an example. However most omitted to explain with clarity how this helped the environment.
- (d) This question was demanding and consequently provided the most able candidates with an opportunity to produce a well structured response to access all 6 marks. Weaker candidates often repeated an explanation of the same point. The use of bullet points for these candidates when completing their response would help them structure their answer more effectively. Some candidates used the 6R's but did not qualify or explain their responses in sufficient detail for 6 marks, for example, identifying that the bag for life was re-useable, but rarely explaining why it could be re-used.

## Question 2

- (a) On the whole this question was answered well. However some very crude drawings were seen. Creativity was variable, with some candidates making only obvious and superficial changes to the design, (e.g. add colour). Candidates who produced particularly good responses made appropriate changes to the design, annotated these and provided some justification which related back to the target market in the question; e.g. adding numbers to the clock to help younger children tell the time more easily. In comparison to the pencil case and clock, the food responses were generally poor. Candidates did not seem able to make enough significant changes to the design of the pasty with most making only subtle changes to ingredients. Very few considered how the design would be a healthy option, e.g. lowering fat, salt or increasing fibre content. It was clear that some centres had taught candidates SCAMPER as a strategy for designing. Where this was used, candidates seem to score particularly well as the changes made were significant and generally more creative.
- (b) A full range of responses were seen. The best answers were structured and arranged as a flow chart or table, but this was not typically the norm. Most candidates were able to name a specific material for the design, but not all were appropriate for the product. The majority of candidates were able to name some processes for making, with the most able providing sufficient detail/ stages in their plan to access the upper mark range. Some candidates omitted measurements/ dimensions or equipment lists.
- (c) This question was poorly answered by many. Candidates rarely gave a specific software type or application alongside the description of a use of ICT.

## Question 3

- (a) The majority of candidates were able to name a suitable property of PVC for wellington boots with waterproof being far the most common response. Few provided any qualification for the second mark by explaining why this property was useful in the context of a boot.
- (b) The majority of candidates scored well on this question identifying a range of functional requirements which were relevant to boots. In the main, responses were one word answers, with no further explanation provided.
- (c) The majority of candidates scored well on this question. Most were able to describe differences between the wellingtons and identified target market groups for each. It was clear that some candidates did not understand the term *aesthetic* as their responses focussed on functional differences.
- (d) The majority of candidates scored at least two marks for this question by identifying the handles and providing a sensible reason for its inclusion e.g. to pull boots up. Other responses were accepted such as to carry/ hang up. Some candidates were able to see the link between the feature and the target market for the boot and consequently scored full marks.

#### Question 4

The candidates who opted for a food focus throughout this question did less well in all aspects generally. There were a number of candidates who did not read the question thoroughly and consequently there were some muddled responses for parts b and d in this question.

- (a) Candidates responded very well to this question, however some completed more than the two responses asked for in the question. In this instance only the first two responses completed by candidates were marked by examiners.
- (b) The majority of candidates opted for a pewter mould response. For the pewter mould, many candidates failed to show/ explain in enough detail for full marks. The taper or reference to a split mould was typically omitted. Of the responses seen for the chocolate, bookend and hat, few provided a clear drawing of the mould/ former and responses were largely poor.
- (c) Many candidates referred to a generic material type (e.g. wood) and failed to gain a mark. Others misunderstood the question and named the material for the product rather than the material needed for the former/ mould.
- (d) A significant number of candidates did not attempt this question. It was generally answered poorly. Again food responses were typically weak and limited to obvious stages, e.g. melt, pour, and leave to set. Few full and detailed descriptions of the process were seen. Bookend responses showed how the material would be heated on a strip heater so it could be bent into shape. Typically, for all other options within the question, details about how the material would be heated were very rarely described.
- (e) Low level hazards and safety requirements were typically given. Some candidates failed to qualify the response. For example citing a safety rule, but not explaining the hazard or visa versa.

#### Mark Ranges and Award of Grades

Please see the following link:

<http://www.aqa.org.uk/over/stat.html>