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Moderators' Report/ Principal Moderator Feedback

June 2011

GCE Design and Technology: Food Technology (6FT01) Paper 01 Portfolio of Creative Skills.

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Principal Moderator's Report Summer 2011

GCE AS Design & Technology – Portfolio of Creative Skills

Food Technology Unit 6FT01

General Observations

Many centres now have a good understanding of the requirements of the AS course, particularly as a result of acting on advice offered in the Principal Moderator's report from 2010, training meetings and Edexcel's extensive initiative of delivering free online support meetings and traditional inset meetings focusing on developing good practice, which has also been of obvious help to those centres who attended an event or who accessed the website support and exemplar materials.

Centres have made very effective use of the focussed, purposeful and useful E9 feedback to centres about the moderation process of their candidates work. E9 documents can be accessed on-line by centres.

Administration

- Almost all work arrived on time, most CABs and Optems were completed correctly, but there were still several arithmetic errors or incorrect transfers from CAB to Optems.
- Annotation in the CABs varied from excellent to non existent. There were examples of page references in the annotation having little relevance to the numbering on the script. There were some scripts without any page numbers and others had numbered each task separately.
- Some scripts were submitted loose leaf, unbound, paper clipped, or unidentifiable as they were without any name, candidate number or centre number. This is very unhelpful. For each candidate, all three tasks should be submitted as part of a portfolio of creative skills, bound together with logical page numbering and clearly identified to the candidate and centre.
- CABs should not be attached to scripts.
- Where internal moderation was undertaken in centres with marks altered, it was difficult to decide which mark the final mark was awarded by the centre because a number of marks existed for each assessment criterion.
- Centres could choose to submit work on A4 or A3, with many using A4 very effectively. It is beneficial to choose and use just one format (A3 or A4) if possible.
- Photographic evidence must be secured to the CAB.

Product Investigation Task

Feedback from Inset meetings, teachers and moderators is that centres and their candidates find the product investigation helpful, aiding theory work, and offers good teaching and learning opportunities because it is well structured and the assessment criteria are detailed and easy to follow.

Criterion A - Performance analysis

Most candidates achieved good levels of success in this criterion, using the recommended headings listed in the subject specification. Selection of product(s) is fundamental to the success of this task. The choice of product a (product investigation) and B (other product) is important in allowing candidates to compare and contrast both products effectively. Choosing two almost identical food products is inappropriate as specification statements regarding both are likely to be the same when comparing and contrasting under the same headings. It is advisable that candidates try to choose similar products that are focused on different user groups, have different performance and user requirements and are manufactured from different ingredients. Good examples of this were a luxury branded chocolate and pear trifle compared to a supermarket 'value' strawberry trifle; a chilled fish pie with potato topping compared to a frozen fish pie with gratin topping, tinned fruit salad cocktail product compared to a ready prepared/ready to eat chilled fresh fruit salad. Overall, this section was tackled well by the vast majority of candidates and scores were usually at least four out of the available six marks. A photograph of the product disassembly was also useful. Many candidates chose to tabulate this information and this was highly effective, with a concise summary of the main findings presented at the end of this section.

Criterion B

The disassembly of the chosen product allowed candidates an opportunity to understand the component parts and structure of the product. Many candidates worked out the % contribution of each component and justified its inclusion in the product. Good practise was demonstrated by candidate's choosing to tabulate information using the headings: ingredients, advantages, disadvantages, alternative ingredients and environmental issues. This allowed students to be focussed on each ingredient, component and/or material, whilst presenting information in a concise format. Responses were often generic when linked to environmental issues. Comments relating to origin and season, were worthy of credit, but other considerations could be towards the source, farming/growing methods and disposal of the specific ingredients/materials used. Generic information cannot be credited with marks, if there is no obvious application to the chosen product investigation. Alternative ingredients were suggested, but often needed more justification when related to the possible inclusion in the product.

Criterion C

Candidates must identify the method of production for the chosen product, and then state one alternative method of production that could have been used in the manufacture of the product. An evaluation should then follow using advantages and disadvantages of the selection of the manufacturing processes used in the product. Almost all candidates were able to identify two appropriate processes used in the manufacture of the product, but often without justification determined through evaluating the advantages and disadvantages of processes when related to the product. Moderators saw many flow diagrams of batch and/or high volume production and read descriptions of the processes, and awarded low level marks for this information. Marks are gained for the justified selection of the processes identified for use when manufacturing the product. The environmental impact of using the processes identified remains variable. As with the previous assessment section much of the evidence seen was generic and failed to focus on the environmental effects of using the identified manufacturing processes. However, those centres that explored CO_2 emissions, use of energy to power machinery, water consumption, and use of standard components on the production line to reduce production processes and applied them to their chosen product were largely successful in this section.

Section D

Most candidates were able to list quality checks, but often failed to describe how they related directly to the product under investigation. It is far better to choose and describe two/three quality control checks linked to the chosen product than produce a long list of unrelated quality control checks. Reference to standards was often mentioned, but where standards were considered, there was hardly ever any explanation of how they influenced the manufacture of the chosen product. Many candidates were able to present quality assurance systems this year, but too often the responses were generic and not focused on the product.

Product Design Task

The Product Design Task offers plenty of opportunity for creativity and flair, with high level design and development skills and a range of communication techniques supported with good application of knowledge and understanding relating to food, nutrition and product development. The most successful centres embraced design and development work with clear, concise design briefs, and technical, measurable specifications that influenced the choice and design of the practical work. Design intentions and decisions were recorded with clarity and justification, leading onto final products that showed significant differences to the original idea. Good photography aided communication.

Section E

Most candidates presented an initial brainstorm of ideas that were paper based, which were workable, realistic and fully addressed the design criteria. From this, a good range (4-6) of design ideas with detailed annotation, linking to the understanding and working characteristics of ingredients, components, techniques and processes could be presented. This supported the modelling/making work. Functions of ingredients, costing (where appropriate) and scientific understanding of skills and processes allows candidates to justify their selection of techniques, and evaluate decisions. A review of the modelled/manufactured initial ideas must be presented as a selection and rejection process, focussing students on how the products met the design criteria, whilst evaluating the success of the product for the design brief. Content varied enormously, but where candidates could demonstrate a detailed understanding, it allowed candidates to make good design and development decisions.

From this, development intentions could be communicated and explored with clarification and refinement for individual components, skills and/or techniques within a food product. Successful development should show how the final design proposal has been moved on from an original idea through the results of practical development, sensory testing and evaluation. It is not acceptable to simply take an initial idea and make superficial or cosmetic changes to it and then present it as a final developed proposal. Candidates should include as much detailed information on all aspects of their developed design as possible, as this is an opportunity to show knowledge and understanding of food science and nutrition through their design and development activities. Development work must be shown to offer contrast and comparison. For example a development of pastry making would allow the skilful candidate to trial different types of pastries/fats/flours and/or flavours. This might be presented with photographic evidence of each pastry trial, and annotated comments linked to observations and sensory evaluation. Low level development consisted of a one off development with minor ingredients as single practical tasks. The final product in this instance was rarely different from the original idea presented in the initial ideas. Therefore, it was not possible to award high marks for this section.

An effective final design proposal was only possible if developments had been justified with valid conclusions. The final design proposal must be objectively evaluated against the design criteria in order to justify the design decisions taken. There was some good third party testing and feedback evidenced, with an evaluation against the design criteria. Several centres included a detailed manufacturing specification for their final proposal with excellent technical information linked to attributes, tolerances and dimensions.

Section F

Most candidates achieved significant marks in this section and some displayed excellent standards for a wide range of communication techniques. Credit was given for CAD cross section or exploded drawings, digital photographic evidence, scanned images (please identify source of

image where possible), nutritional analysis and costing, where relevant. Candidates are increasingly showing annotation to convey ideas and development of work, with good explanation and detailed technical information. Most candidates made their design ideas and photographic evidence was used to support marks in this section.

Access to the high marks for this section proved problematic for some candidates, where there was insufficient information presented in the final design proposal to allow 3rd party manufacture of the intended product. A manufacturing specification offers a realistic method of presenting this information including ingredients, tolerances, critical dimensions and processes. Thankfully there were no black and white photographs this year and most centres have acknowledged the importance of well presented food practical work as photographic evidence of design and development work. It is clear that candidates are rightly proud of their practical work with some outstanding food photography recording their achievements; this aids the moderation process considerably.

Product Manufacture Task

Virtually all centres chose to do a separate manufacturing task, which resulted in either a range of different practical items being made for this task or a wide range of skills and techniques presented for one complex high level food product. By working on three separate discreet tasks, candidates could present a **wide range** of skills, techniques for different food products, thus producing an effective portfolio of creative skills. This is the best way forward.

Again, a very small group of centres chose to continue the product design task into the manufacturing task and submitted a number of additional practical items that would be suitable for the combined option, as well as the final design proposal from the product design task. This was acceptable only if a range of **different** skills and techniques were shown within the range of food products. Testing needed to be **different** to the sensory testing conducted in section E, if this mode of delivery was being used.

Where centres only used the final design proposal from the previous task (product design task) for the making section (product manufacture task), they were awarding marks twice. This is unacceptable and candidates could not access marks beyond the lowest band of marks. Centres are therefore seriously disadvantaging their students if they continue to follow this course of action. There is some fine exemplar work on the Edexcel website to aid centres with the delivery of this specification.

Some centres produced some outstanding practical work, demonstrating skill, flair and creativity in their making. In other centres, practical work was simplistic with limited making skills or attention to detail.

Section G
There was an improvement in this criterion with most candidates achieving at least four from the six available marks. Production plans were generally very good with accurate consideration of realistic, relevant time scales and deadlines for the scale of production. Thumbnail pictures were often included as part of the production plan, which were effective, clear and supported making marks.

Section H
The majority of centres were in line with the requirements of this section and set manufacturing tasks that allowed candidates to experience a range of ingredients, processes and techniques, to show quality, complexity and technicality, planned to develop skills that candidates could call upon for their Commercial Design work at A2, and some high quality outcomes were seen.

Quality finish and demanding high level skills and techniques continues to need focus for GCE AS level. It is advisable for centres to consider the choice and selection of components for the practical products to allow candidates to demonstrate a wide range of skills and processes. An absolute minimum of three components should be demonstrated at AS level, and hopefully many more for those students wanting to access the top marks. More centres are choosing to present a trio of desserts/canapés. This was great, with a number of candidates offering in excess of six different skills for their trio of food products. Photographic evidence is improving but continues to disadvantage some students with rusty baking trays, dirty kitchen surfaces and scruffy finishing techniques. Presentation of practical work using high level finishing techniques is another opportunity to demonstrate accuracy and precision.

Many centres had followed advice from training and exemplar material, by selecting food products where candidates could demonstrate accuracy and precision when working with a variety of ingredients/components/processes and techniques. These candidates were awarded with high marks where the evidence was apparent in their coursework. Teacher annotation in CABs was generally extremely helpful for moderation purposes, and is very much appreciated by the moderating team.

Section I
Commentary on testing carried out on the completed Product Manufacturing Task exactly reflects statements made last year.

An interesting range of tests were evidenced by some centres. This included a range of different sensory tests, storage life tests, transportation testing, viscosity tests, and tolerance testing against a manufacturing specification and nutritional analysis where relevant to the design brief.

Candidates must describe and justify a range of tests that will be carried out to check the performance or quality of the products. This must not be retrospective. However, responses were disappointing where testing was simplistic or superficial. Many candidates continue to simply evaluate their

work against the design criteria, with subjective comments or a brief summary of work completed for the task.

Relevant, measurable points of the design brief/criteria must be objectively referenced, to achieve the top box marks, and this was often presented successfully in a tabulated format to aid review and evaluation.

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