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Moderators' Report/ Principal Moderator Feedback

Summer 2012

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

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Principle Moderator's Report Summer 2012

GCE AS Design & Technology – Portfolio of Creative Skills

Food Technology Unit 6FT01

General Observations

The work seen this year from the vast majority of centres was again appropriate and met the assessment requirements of the unit. All centres submitted work in three discernable sections, which were divided into product investigation, product development and product manufacture. Moderators commented on the improvements in application of knowledge and understanding of food science, nutrition, preparation and processing technologies and sustainability throughout the portfolio of creative skills. Familiarity of course requirements and good quality support materials have combined to help raise standards in many centres. High quality feedback from the moderators via their E9 reports on student performance last year, and the Principal Moderator's report were also contributing factors to this year's success for many centres. E9 documents can be accessed on-line by centres.

Administration

- Annotation in the CABs was generally very good and aids the moderation process.
- 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.
- 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.
- Several candidates exceeded the suggested page number for the portfolio well beyond the recommendation in the Edexcel guidelines.
- The quality of photographic evidence was variable, ranging from outstanding to very poor. Often photographic evidence for development practical work was also submitted in the CAB, which occasionally caused some confusion about which task it was being presented for. Photographic evidence in the CAB should only be presented for the Product Manufacture Task. Photographic evidence should be used extensively through the portfolio to record work for assessment in each of the three sections.

Product Investigation Task

Criterion A - Performance analysis

Most candidates achieved very 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 the second product is important in allowing students to compare and contrast one against the other effectively, and while the majority of students were successful at this, a significant number selected very similar products that limited their opportunities to make effective comments when comparing and contrasting. The initial product choice for the investigation was very wide ranging, and the moderation team were pleased to see more centres allowing student's choice with the product investigation, which gave far greater diversity within a class. The intended action of each student, individually investigating different products is meant to develop discussion, interest and learning among peers who would experience different products manufactured using diverse ingredients and processes, and this would add relevance and cohesion to their Unit 2 studies. Interesting combinations of products included luxury versus value, special diet (gluten free/vegetarian/diabetic) versus standard product, canned soup versus chilled soup, chilled versus frozen product or an artisan food product

compared to a supermarket equivalent. 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.

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 evaluative summary of the main findings presented at the end of this section.

Criterion B

The disassembly of the chosen product should allow candidates the 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 practice 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. Alternative ingredients were usually suggested, however their justification often failed to focus on the specific function within the product. Sustainability was addressed by most candidates but often at a generalised or superficial level. Candidates sometimes failed to apply their analysis directly to their chosen product. 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.

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 with a description of each process, that was often generic or unrelated to the actual product. Moderators have seen a slight improvement in the justified selection of the processes identified for use when manufacturing the product, but this still needs to be a focus for improvement. 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 CO2 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, and it was pleasing to see some improvement in the descriptions of how these relate to the actual 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 describe a quality assurance system this year, with references to the Marine Stewardship Council (MSC), Farm Assured ingredients (Red Tractor), traceability schemes, Plan A and other specific QA

systems linked to food retail organisations that have had a direct impact on the product under investigation.

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. As in past years, 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

Following the writing of the design brief and specification (design criteria), most candidates presented an initial brainstorm of ideas that were paper based, which were workable, realistic and fully addressed the design criteria, with some pertinent evaluative comments to clarify design intentions. 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 linked back to the design criteria. A review of the modelled/manufactured initial ideas must be presented to aid evaluation and identify development opportunities. Content varied enormously, but where candidates could demonstrate a detailed understanding, it allowed candidates to be more successful with their 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. Moderators commented on the improvements to the development section, where candidates had chosen technical components to trial and develop rather than superficial or cosmetic changes in recent years. Candidates should be encouraged to include technical information on all aspects of their developed design, to show knowledge and understanding of food science and nutrition through their design and development activities. Three good quality developments must be shown to offer contrast and comparison instead of six superficial trials.

An effective final design proposal was only possible if developments had been justified with valid conclusions. Making must be used to test important aspects of the final design proposal. This year, there was some good third party testing and feedback evidenced, with objective evaluations against the design criteria to justify comments. A manufacturing specification was an effective format to present this information with detailed technical information linked to ingredients, processes, attributes, tolerances and dimensions to support third party manufacture in the communication section.

Section F

A wide range of communication techniques were shown and most candidates achieved significant marks in this section, displaying excellent standards for a wide range of communication techniques. Most projects were presented using ICT, and this is of tremendous benefit to candidates. 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 concise 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 either insufficient information presented in the final design proposal to allow 3rd party manufacture of the intended product or if the project was muddled with the disorganisation of content and presentation. Moderators commented on the improving practical application of design and development work, with some excellent photographic evidence to support the candidates work.

Product Manufacture Task

Once again, 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. There was a big variation in the quality of practical work, ranging from outstanding practical work, demonstrating skill, flair and creativity in their making to very simplistic products that lacked the required level of finish.

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 has seen a slight improvement this year, but it is still 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.
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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