

Examiners' Report Summer 2009

GCSE

GCSE Design & Technology: Food Technology (1970/3970)

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Summer 2009

Publications Code UG021217

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**GCSE Design and Technology: Food Technology
Principal Moderator's Report - June 2009
Unit 1970, Coursework**

General Comments

The following report reflects the work submitted by the centres this year. Many of the points have been made previously and there has been much improvement during the life of the qualification. Almost all candidates produced well-organised folders where moderators could easily see the development from identifying a need through to the completion of the final product. In most cases candidates used photographic evidence wisely to demonstrate the products they had made. This again helped the moderators to understand the thought processes of the candidates.

Photographic evidence was generally very good, with all centres supplying a range of photographs that supported the marks awarded. The best form of photographic evidence is when centres provide a range of manufacturing photographs as well as good views of the final product. Photographic evidence is very useful for key features 'select and use' and 'work safely.'

Adherence to the 18-20 page guidance continues to improve. Candidates were more selective with the information they included and pages were well presented to ensure good coverage of the paper. Very few centres allowed candidates to overrun by many pages however some candidates still produced folders in excess of 50 pages which is neither necessary nor needed to gain the highest marks.

Folders are getting more manageable every year and it was pleasing to note that only a few centres continue to submit heavy folders. Centres should note that the spiral bound plastic attachments used to hold folders together often crack and break during delivery. The best form of attaching folders together is treasury tags.

Moderators reported that most centres sent the appropriate sample pieces of coursework, i.e. requested coursework and additional pieces to make up a representative selection from the centre. In some cases the highest and lowest candidates were not sent to the moderator as should be the case. Some centres also sent a random sample over and above the request from the board - this is not necessary.

Some centres are still allowing candidates to produce final products more suitable to KS3 work than KS4 work and marking the finished products too generously. It must be remembered that this course is an assessment of KS4 capability and that tasks suitable to KS3 consequently do not give full access to some of the assessment criteria.

Standardisation within centres appeared to have been completed well this year in most centres.

Some centres continued to overestimate their candidates' performance in one or more assessment criteria, generally criterion 2, 4, 5 and 6, whilst some centres continue to underestimate their candidates' performance in some assessment criteria, criterion 3 in particular.

Administration

Generally, centres followed Edexcel administration procedures with few difficulties. Moderators reported that a minority of problems were encountered in the following:

- addition errors in Candidate Mark Record Booklets (CMRBs)
- errors when transferring marks from CMRBs to OPTEMS
- no identification of page numbers in annotation column in CMRBs or on the candidates folder
- candidate numbers not on/incorrect on CMRBs
- no names / centre numbers / candidates numbers on coursework once CMRBs removed.

Criterion 1

Identify needs, use information sources to develop detailed specifications and criteria.

Needs

Many centres gave candidates a board or school set task. It is essential though for each candidate to analyse and expand on given tasks if set by the centre. High marks cannot be awarded if the task has not been moved on by the candidate. Many candidates did not highlight their target group or they identified such a wide target group it made the access to the highest marks impossible e.g. 'my target group is adults'. A given brief with no candidate input cannot be credited any marks.

Information

This key feature was done well by the majority of candidates. In most cases the candidates researched appropriate areas which related to the task they were investigating. In a few cases candidates had analysed products that are currently available in shops but which bore no relationship to their task. Although product analysis is clearly valuable it is of no value if it does not help to inform the candidate for their particular portfolio. Centres had generally not allowed their candidates to spend a disproportionate amount of time producing repetitive or excessive amounts of information. Information sought, recorded and used well, include product analysis-shop surveys and product disassembly, questionnaires/market research, and selective background information on possible materials, components, means of construction and processing techniques. The research completed must allow the candidates to produce a detailed design specification for their proposed product, which they can justify from the research they have completed.

Specification

This is an area where candidates often fail to reach the highest marks. Candidates must create the specification points themselves to gain high marks. Centre given and / or generic specification points are classed as teacher intervention and cannot be credited to candidates. Less able candidates may, however, need a guide or help to write suitable specification points but this teacher intervention must be acknowledged when awarding a level of achievement.

The Specification must include measurable points and focuses on form, function, target market and budgetary constraints. Each point must be justified to gain the highest marks. It is also essential that the specification contain measurable points, which can be used to test the final product in criteria 6. These could include size of portion, calorie content, fat content, reference to tolerance of size when producing products. Some candidates explained how they were going to achieve their specification points but did not give a reason for including them e.g. "the cost of my product will be between x and y because from my questionnaire/shop survey I have found out that...".

A few centres continue to mark their candidate's performance generously. To gain high level mark candidates must produce a specification that contains descriptions relating to all of the following requirements of the product:

- **form**, e.g. portion size, type of ingredients, environmental issues, scale of production etc;
- **function**, e.g. type of product and it's purpose;
- **user requirements**, e.g. nutritional contribution, shelf life, means of preservation, reheating etc;
- **budgetary (cost) constraints**, e.g. price range, manufacturing and marketing costs.
- each description must contain more information than a simple statement and be justified from the evidence of research.

Criterion 2

Develop ideas from the specification, check, review and modify as necessary to develop a product.

Ideas

Ideas were generally well addressed although there was a tendency for some candidates not to evidence the link between the proposed ideas and the specification points already identified. Such examples of work could only gain the very lowest marks in the low-level band. To gain high level marks candidates need to present a range of realistic initial ideas. These should address form, function, user requirements and budgetary constraints as detailed in the specification.

It is expected that candidates will make several of their initial ideas (model) so they understand the processes involved in the product and are then able to develop aspects of the idea. It was once again evident that the some centres do not understand the difference between ideas and develop. Candidates cooked their dishes and this was credited under develop - this is not a development but an expected part of producing the initial ideas. Some centres still need to ensure that the range of ideas suggested is diverse in respect of incorporating a variety of ingredients and processes and the dishes demonstrate KS4 rigour. A disappointing number of centres allowed candidates to suggest ideas more suited to KS3 than KS4, this can limit the candidate's access to higher level marks later in their coursework.

Develop

Some excellent work was produced for this key feature. Some centres had guided their candidates carefully and enabled them to access the high level band of marks. Development work was seen to follow a logical sequence, which led to a final product. Development work with pasta, pastries, sauces, flours, fats were all seen addressing development of nutritional value, flavour, appearance, cost and portion size.

Unfortunately a number of centres failed to address this criterion at all, candidates merely made an initial idea again and presented it as a final product. Several centres gave high marks when there was no practical evidence, just written statements. Clear aims were given to the developments being undertaken with altered recipes and detailed sensory testing with photographs. Other centres were generous in this area as high level marks were given when candidates just developed the taste and texture. Candidates must develop other areas of the specification for example, sensory modelling, costing, appearance, portion size etc. Some candidates tried to take forward more than one idea - this was difficult to undertake in the time allocation and to achieve high grades. Moderation of this criterion was easier when candidates included an introduction to each test on what they were modifying.

It must be remembered that to access the marks in this section, initial ideas must be **developed** this means 'changed' or 'moved-on' in the light of the evaluation of those initial ideas. Marks are only available for new information marks are not available for simply repeating the initial idea or for suggesting, and not actually carrying out development ideas.

The final requirement of this section is a final design proposal which has moved on significantly from the initial design ideas and is referenced back to the specification and includes all relevant information - e.g. ingredients, portion size; an annotated drawing, costing etc. This final design proposal is then referred to in Make Products where high marks are awarded for the final product matching the design proposal.

Review

The review was generally marked accurately by centres. To satisfy the high level of this key feature, 'Ideas' need to be reviewed as they develop against the previously identified needs and design specification points. All reasoning must be explained when reducing the range of initial ideas down to a more selective group. Thorough testing against other specification points is needed, e.g. nutritional analysis, calculation of cost, review of time needed for preparation, user views on general acceptability of dishes, shelf life concerns etc., to access the higher level mark band. Candidate observation / opinion can be used as evidence and justification, but high marks cannot be awarded solely on the review of this limited evidence.

Care should be taken to guide candidates in their final choice of product to ensure they have the opportunity to demonstrate their competency at KS4, failure to do so will limit their access to marks.

Criterion 3

Use written and graphical techniques including ICT and CAD where appropriate to generate, develop, model and communicate.

Many centres harshly marked this criterion. Candidate's presentation and communication skills have improved a lot in recent years. Moderators adjusted marks accordingly.

Written Communication

Many candidates communicated information clearly and in a logical and well-organised manner, although the use of specialist vocabulary continues to be used infrequently. An area where candidates can easily incorporate technical language is in describing the function of ingredients used in products, or when detailing the manufacturing processes relating to their product especially in an industrial situation.

Other Media

The differentiation in this key feature lies within the skilfulness and accuracy shown by the candidate when presenting information. Candidates displayed suitable means of recording information, such as photographs, cut and paste items, tables, pie charts, bar charts, flow charts, brainstorming bubbles etc., but to gain the top level mark it is important the candidate aims to clearly and accurately communicate necessary information.

ICT

Some excellent ICT was seen from many centres. Less able candidates seem to produce more creditworthy work when they word process it and / or when they use ICT graphics to present results. The use of nutritional analysis computer programmes produced valuable information as well as helping to address this particular key feature. The use of digital images of modelled food products was fairly common this year and the quality of such images has improved considerably.

Criterion 4

Produce and use detailed working schedules, which include a range of industrial applications as well as the concepts of systems and control. Simulate production and assembly lines using appropriate ICT.

Marks allocated in criteria 4, 5 and 6 refer to work directly related to **making the final finished product only** and **not** previous trial ideas and development work.

Systems and Control

This is still an area of confusion for some centres. It is expected to gain the highest marks that candidates will demonstrate an understanding of input, process, output and feedback within a systems diagram. This information must be demonstrated in the form of a flow chart with each of these areas clearly labelled or identified through a 'key'. Within the feedback loop quality control points can be indicated and solutions to problems that have been encountered. The diagram must be fully related

to the production of the candidate's own product. Generic diagrams looking at industrial production are not required.

Schedule

These can be presented in the form of a chart or a flow diagram, but they should relate fully to the making of the final product and should include all relevant information for successfully making the product. The schedule is the planning of practical work not a diary of 'what I did'. The schedule must refer to time in order to access both the medium and higher marks. To gain the high level mark candidates need to produce a time plan relating to production / manufacture of the product that includes consideration of some of the making processes, materials (functions of) and time projections and of where / when quality control will be applied. Where Gantt charts are used they should again only refer to the making of the final product (not the entire project) and they must indicate the time related to each block of work.

Industrial Applications

Clear evidence was provided in the majority of folders. Some centres still include a generic HACCP and so marks cannot be awarded. There is also a lot of additional information, which is not required. Centres are reminded that a detailed HACCP alone can qualify for three marks. Candidates can also be awarded marks for the use of equipment such as temperature probe, bread/pasta maker or pasta machine. Some centres include lots of information on packaging and net diagrams, which must take considerable time for the candidate to produce and is more relevant to Graphics as well as information on how the final product would be produced in industry through high volume production. A common problem in this key feature is that candidates continue to produce very generic HACCP charts and manufacturing production plans rather than carrying out research and applying information to their chosen design idea. No marks can be awarded for a non-specific HACCP chart copied from a book.

Criterion 5

Select and use tools, equipment and processes effectively and safely to make single products and products in quantity. Use CAM appropriately.

This criterion has the highest weighting of marks and it is important that the necessary quantity and quality of evidence to support the marks awarded is provided in the folio. The marks in this criterion are only awarded from the production of the final product. There are no marks awarded for the production of previous initial ideas or development of ideas.

Select and Use

Many candidates produced good evidence of 'select and 'use' To satisfy the high category, candidates were required to provide explicit evidence of their ability to 'select' and 'use skilfully', tools, equipment and processes whilst manufacturing of their product. Products must be appropriate to meet the demands of KS4 to access the medium to higher mark levels. Candidates producing only KS3 products often had their marks adjusted.

Teacher examiners must mark this criterion more realistically. There were many examples this year of candidates gaining 15 or 18 marks for work that were only at

best KS3 skill level - these included pizzas' simple biscuits, fairy cakes, fruit salads, fruit kebabs (uncooked), chilli, spaghetti bolognese etc. Standard components should not be used e.g. flaky pastry, pizza base. Candidates who produce items such as a Victoria sandwich and then roll bought icing **have not** demonstrated high skills.

Evidence for 'select and use' is best presented through photographic evidence. Evidence for 'use skilfully' was presented by many candidates in the form of good quality photographs, which showed evidence of the skill and accuracy. A few centres provided detailed teacher annotations.

In order to satisfy the high category, candidates must include in their design folios the kind of explicit evidence already described, and teacher annotation, where offered, must be both detailed and as a support to that already included by the candidate.

Some centres produced tables indicating equipment and methods chosen for use, together with the reason for choice and then any particular safety points that needed to be borne in mind, ready for addressing the third key feature in this criterion.

Make Products

This area was over-marked in many centres with teacher examiners clearly awarding marks in this criteria which should have been awarded in 'select and use'.

The marks in this criteria are awarded by looking at the final product and looking back at the final design proposal - if the two match fully and are of KS4 skill level then they higher marks can be awarded. Where a candidate fails to have a final design proposal the higher marks cannot be accessed. The assessment criteria state that candidates must "make a high quality product which relates fully to the features of the design proposal" to achieve the highest band of marks.

Work Safely

Safety relates to physical safety and well being of the candidate and those around them **not** the bacterial / food poisoning safety aspects. Some centres continue to over-mark this key feature. To access the high level mark candidates must detail most of the safety precautions, which relate to **both themselves and others** with respect to specific materials or tools or equipment or processes to be used when making their product. Only a low mark can be awarded for teacher observation alone and if this is to be credited the CMRB must be annotated with sufficient detail by the teacher.

Criterion 6

Devise and apply tests to check the quality of candidate's work at critical control points. Ensure that candidate's products are of suitable quality for the intended use. Suggest modifications that would improve candidate's performance.

All three key features in this criterion relate to work associated with the **completed final product only**. Centres are not addressing these criteria correctly. To access the high level mark candidates need to develop and use appropriate testing techniques to check the product against all aspects of the specification. To do this, candidates need to test their final product against the measurable points of the specification. (The importance of a detailed design proposal / product specification evolving from

criterion 2 cannot be emphasised too strongly.) Area for testing can include sizes, tolerances, fat content, calorie intake for a portion/ the whole item. User views (the target market) are an important factor when tests and checks are undertaken. The views of these users are the basis for the evaluation of the final product and must be sought. The product is worthless if it fails to meet the specification laid down for the target market. Some centres once again allocated marks for 'testing and checking' that had been undertaken at the 'ideas' and 'development' stages rather than at the completion of the design process at the end of the portfolio. Marks can **only** be awarded for **testing and checking of the final product**. Testing and checking recorded earlier in the portfolio will have been marked already and cannot be credited again. Centres must ensure they do not double credit work.

Many candidates used taste tests as their sole form of testing and checking.

Evaluate

Evaluations were generally well marked although many candidates continued to evaluate the whole project - which is not required. As with tests and checks some centres had mistakenly credited marks for evaluative comments made in 'Ideas', 'Develop' and 'Review' sections in criterion 2. The assessment criterion states that candidates must evaluate the final product using evidence from the test results and considering user views. The evaluations are written from the evidence gained in tests and checks and the views of the intended users. Subjective statements made by the candidate, which are not backed up with evidence can only be awarded the lowest marks. Evaluations must relate to measurable points of the specification. Evaluative comments must be objective and statements should be supported with evidence from tests and checks.

Modification

The modifications are related to the changes that could be made to the **final product from the evidence gained in the tests and checks and the views gained from the intended user**. The candidate is not required to comment on how they would organise their time while completing the whole project. This key feature demands that candidates use the results from evaluating the final product to suggest and justify modifications to the product. To access the high level mark candidates need to present more than one modification, each arising from a different evaluation point.

Some centres had credited modifications previously marked in the 'Ideas' and 'Develop' sections.

**GCSE Design and Technology: Food Technology
Principal Examiners' Report - June 2009
Unit 1970, Foundation Paper 2F**

General Comments

Candidates generally responded well to the paper this year with very few failing to attempt the questions. Most candidates were entered at the correct tier of entry. Centres still need to be aware of the need to prepare candidates for this exam by ensuring that they have a full understanding of the requirements of different question types: name, state, give, describe and explain. Often, candidates had difficulty in achieving the full marks for questions asking for an explanation, because answers were not supported with relevant examples or reasoning. Additionally, some of the technical questions relating to food products and nutritional understanding were incorrect or vague. Centres must focus on technical understanding, to enable candidates to access the higher marks.

Foundation Tier (Paper 2F)

This paper was well received by candidates, with most able to provide answers in all sections. Marks were scored evenly across all areas of the paper, with effective differentiation across the paper. Most candidates were entered for the correct tier of entry. More centres should make use of scribes or readers as there were many papers that were illegible as candidates were possibly not English speakers or could not read and/or write. Handwriting was variable and many candidates lost marks through carelessness or lack of thought and effort. Short, concise answers tended to fair better than lengthy responses that were too wordy or in deed went beyond the space for answers.

Question 1

Q01a Mean score 6.91 from 10 marks

This question was well answered by the majority of candidates. Most candidates were able to correctly identify the equipment or tool used for food preparation in the home or school kitchen. The equipment that caused the most difficulty to name was the slotted spoon, however, most candidates knew what it was intended to be used for. Candidates are getting better at describing a task for each item.

Q01b(i) Mean score 1.49 from 3 marks

Microwave ovens are clearly well used at centres and most candidates were able to correctly give three ways in which they can be used. However, weaker candidates frequently confused reheating/heating/warming or used the stem of the question (cooking) in their answer.

Q01b(ii) Mean score 1.46 from 3 marks

Safety rules are understood well by candidates, with most receiving full marks for part (ii) this question.

Q01c Mean score 1.53 from 3 marks

Q01d Mean score 2.74 from 4 marks

Batch production (Q01c) and EPOS (Q01d) produced some mixed answers and it was evident where centres had prepared their students effectively by using past papers for recent revision lessons, as these topics were popular, well answered questions.

Question 2

Q02a Mean score 2.16 from 4 marks

The first question was a simple straight forward question about vegetables and yet it was very surprising the number of candidates who gave fruits as answers. The functions of vitamin C were well understood, with most candidates achieving marks for healthy skin and aiding iron absorption.

Q02b Mean score 1.81 from 3 marks

There was generally little or no understanding of salt in the diet, with many candidates repeating the question in their answer for this sub question.

Q02c Mean score 1.53 from 4 marks

The importance of calcium in the diet was answered well, but fortification of foods was answered very poorly, with a small minority of candidates achieving marks for this question.

Q02d Mean score 3.31 from 7 marks

The use of packaging and its effects on the environment was answered very well, with an excellent range of answers. Candidates have been well prepared on environmental issues.

Q02e Mean score 0.47 from 2 marks

Genetic modification answers were variable with stronger candidates considering delayed ripening, increased production and yields, disease resistant crops and improved nutritional content of foods.

Q02f Mean score 0.49 from 2 marks

The answers for antioxidants maintaining product reliability varied enormously with answers varying from 'preventing browning' to detailed answers explaining how this occurs.

Question 3

Q03 Mean score 14.42 from 22 marks

The design question produced some very good responses this year, with a wide range of suitable products including filled sandwiches, pasties, pies and pastries, wraps, pizza, breads and scones. Most candidates managed to illustrate and label two different ideas. The quality of the annotation and labelling varied enormously. Where candidates had read the question carefully and planned their answer methodically, they were rewarded with some good marks. The specification points were used effectively in the design drawings, but the area that caused greatest difficulty was the final point: be easy to produce in the school kitchen. Responses needed to focus on the ease of production; by commenting on the number of processes or simplicity of the production of the food product. The suitability of the product for the school kitchen needed to focus on being quick to make, quality issues and control measures and no need for expensive equipment to produce the product. Candidates must plan their ideas carefully, using the specification as a checklist, to ensure they cover all the points.

Evaluations were variable, with some candidates just repeating the wording on their labels. The best candidates started sections by saying 'This meets the specification because I have used....' There were some good negative evaluations, which explained why the design failed, but offered suggestions for improvement.

Question 4

This is an overlap question between the two tiers. Some foundation tier candidates clearly struggled with parts (a) and (b), but the rest of the question was answered well, with most candidates scoring marks in all sections.

Q04a Mean score 2.70 from 6 marks

Candidates answering the foundation tier paper wrote variable answers for the specification points with some repetitions from the stem question. The best answers come from candidates who write in short sentences. Answers relating to the needs of the user mentioned it being a snack, handheld and eaten on the move, answers for the environment were generally good and focussed on recyclable packaging and biodegradable materials. Quality points were variable, with candidates commenting on free range, shape and size.

Q04b Mean score 0.97 from 4 marks

The properties of chicken caused some problems, with candidates getting muddled between properties and the reasons.

Q04c Mean score 1.21 from 2 marks

This sub-question was well answered.

Q04d Mean score 1.18 from 2 marks

Centres are teaching quality control well and candidates could support their answers with relevant points.

Q04e Mean score 0.68 from 2 marks

CNC equipment caused a few problems for foundation tier candidates. Some candidates gave relevant answers related to consistency and accuracy.

Q04f Mean score 0.63 from 2 marks

As with Q04e, some candidates struggled to identify ways in which the lid was suitable for machine manufacture.

Q04g Mean score 2.55 from 4 marks

Most candidates scored good marks in the final sub section, where they could explain the purposes of chicken pie to provide a quick meal and appeal to a wide age range. This was clearly a food product that they were familiar with and could relate to in their answers.

**GCSE Design and Technology: Food Technology
Principal Examiner's Report - June 2009
Unit 1970, Higher Paper 2H**

General Comments

This paper was generally well received and answered, with very few candidates failing to attempt the questions. Most candidates were entered at the correct tier of entry. Centres still need to be aware of the need to prepare candidates for this exam by ensuring that they have a full understanding of the requirements of different question types: name, state, give, describe and explain. Often, candidates had difficulty in achieving the full marks for questions asking for an explanation, because answers were not supported with relevant examples or reasoning. Additionally, some of the technical questions relating to food products and nutritional understanding were incorrect or vague. Centres must focus on technical understanding, to enable candidates to access the higher marks.

Higher Tier (Paper 2H)

Response to this paper was very positive with the more able candidates showing a range of knowledge and understanding, with the ability to use technical language. As with the foundation tier many candidates failed to score full points on describe/explain questions as they do not link one answer to a supporting point. Instead, they give several unrelated points. This is a demanding type of question, worthy of high marks and provides the basis for differentiation. The design question was very well received and produced a wide range of interesting calcium based products with well drawn designs and effective labelling.

Question 1

This is an overlap question between the two tiers.

Q01a Mean score 3.52 from 6 marks

Candidates answering the higher tier paper generally wrote good answers for the specification points, but, there were some repetitions from the stem question. The best answers come from candidates who write in short sentences. Answers relating to the needs of the user mentioned it being a snack, handheld and eaten on the move, answers for the environment were generally good and focussed on recyclable packaging and biodegradable materials. Quality points were variable, with candidates commenting on free range, shape and size.

Q01b Mean score 1.58 from 4 marks

However, the properties of chicken caused some problems, with candidates getting muddled between properties and reasons.

Q01c Mean score 1.30 from 2 marks

This sub-question was well answered.

Q01d Mean score 1.44 from 2 marks

Centres are teaching quality control well and candidates could support their answers with relevant points.

Q01e Mean score 1.14 from 2 marks

CNC equipment caused a few problems for weaker candidates, but most candidates could mention relevant answers related to consistency and accuracy.

Q01f Mean score 0.85 from 2 marks

As with Q01e, some candidates struggled to identify ways in which the lid was suitable for machine manufacture.

Q01g Mean score 2.81 from 4 marks

Most candidates scored good marks in the final sub section, where they could explain the purposes of chicken pie to provide a quick meal and appeal to a wide age range. This was clearly a food product that they were familiar with and could relate to in their answers.

Question 2

Q02a Mean score 0.96 from 3 marks

Q02b Mean score 1.00 from 2 marks

There were some excellent answers for the first two sub sections, with many candidates achieving full marks. Whisking, creaming, liquidising, rubbing in and blending were common answers and most candidates then went onto the next question and mentioned that standard components could improve quality control by ensuring that they give consistency in size across a batch, reduced manufacturing time or reduced labour costs.

Q02c Mean score 1.41 from 4 marks

The nutritional reasons for using eggs in the lemon filling was generally well answered, and many candidates could describe the effects of heat on eggs, resulting in coagulation of the filling. Some weaker candidates confused the lemon filling and a meringue topping.

Q02d Mean score 1.20 from 2 marks

The importance of accurate weighing and measuring was also well understood by candidates.

Q02e Mean score 2.53 from 4 marks

The celebration cake questions were completed very well, with a good range of answers.

Q02f Mean score 1.75 from 3 marks

The use of CAD/CAM processes was answered satisfactorily, with most candidates achieving at least one mark for consistency.

Q02g Mean score 1.39 from 4 marks

The question relating to the use of ICT to gather information (EPOS) was well answered, with a wide range of knowledgeable answers from candidates of all abilities.

Question 3

Q03 Mean score 14.72 from 22 marks

Popular products were cheesecakes, pasties, pies with white/cheese sauces, pasta dishes, quiches, pizza, ice-cream and yogurt/custard style puddings. This question was very well answered, with a good range of suitable ideas. The best responses had clear and simple sketches which were labelled and easy to read and understand.

Candidates demonstrated a good understanding of ingredients, with clear cross section drawings, detailed annotation and in some cases a tabled checklist ensuring each design was sufficiently different or original, but relevant to the specification. Most of the specification points were accessible for all candidates, however some candidates struggle to apply their understanding of nutrition when asked for another nutrient, by just labelling vitamins or minerals, rather being specific and identifying the correct micro nutrient. The area that caused greatest difficulty was the final point: be easy to batch produce in the school kitchen. Responses needed to focus on the ease of batch production; by commenting on the number of processes or simplicity of the production of the food product. The suitability of the product for the school kitchen needed to focus on being quick to make, quality issues and control measures, the use of standard components to reduce manufacturing time and a reduced need for expensive equipment to produce the product. Mistakes occurred when candidates repeated the same product or very similar for their second idea.

Evaluations were variable, but where candidates offered objective evaluations, with relevant reasoning or justification, full marks could be awarded.

Question 4

Q04a Mean score 1.46 from 2 marks

Q04b Mean score 2.33 from 4 marks

The first parts of this question were very well received by most candidates and gave them opportunities to display good subject knowledge. Functionality of ingredients was understood well, with good explanations and descriptions, supported with relevant examples.

Q04c Mean score 2.12 from 5 marks

The raising agent question was answered well, with many candidates achieving two marks. However, candidates struggled with the question about introducing each raising agent into the product, with many candidates struggling to apply their knowledge of baked products to the question.

Q04d Mean score 0.74 from 2 marks

Q04e Mean score 1.32 from 2 marks

There was good understanding of the moral issues that food producers should consider and the subject of vegetarianism.

Q04f Mean score 1.81 from 5 marks

The final sub section about biotechnology was variable with weaker candidates struggling to write an answer. However there were many candidates who could talk knowledgeably about the affects on the environment, cross contamination of crops and the unknown long term affects of these processes.

Q04g Mean score 0.59 from 2 marks

Finally, the question on modified fats was generally answered well, with candidates displaying a good knowledge of saturated fats and cholesterol and the links to heart disease and health.

This paper performed well and produced effective differentiation between candidates.

GCSE Design and Technology: Food Technology (short course)
Principal Moderator's Report - June 2009
Unit 3970, Coursework

Introduction

The number of entries for the short course remains relatively low therefore making it difficult to provide meaningful comments on the performance of the candidates. However, the comments made on the full course report are also helpful for the short course and should be read in conjunction with any general comments provided below.

General Comments:

Candidates folders were very well presented however several centres once again had not used Edexcel's provided CRMBs for the Short Course and had adapted the Full Course paper work. Centres must ensure that pages are numbered and that the CRMBs are annotated. The Board sends out the correct CRMBs to the school examination officer.

Some centres encouraged their candidates to design their own task, which involved preparation work for the candidates prior to beginning their research. Centres should note that there are no marks awarded for this element in the short course hence the reason the Board suggests a range of tasks.

Once again the Edexcel approved Task Sheets proved to be a success, as they tended to give candidates a better focus and helped them structure their folios. Candidates however must ensure that they keep their research relevant to the task they are studying and not include large amounts of nutritional information gained from books that is not focused on their own task. Candidates must also include a final design proposal in order to access the higher marks in both Criteria 2 - Develop, and Criteria 5 - Make Task where the product that has been produced should fully match the design proposal.

Candidates must also ensure that they produce an outcome, which is of Key Stage 4 skill level. Simple tasks with few skills cannot gain the higher marks.

The detailed comments included in the Full Course report are pertinent to the Short Course too and it is recommended that the Full Course report be read in conjunction with these brief statements.

GCSE Design and Technology: Food Technology (short course)
Principle Examiner's Report - June 2009
Unit 3970, Foundation Paper 2F

General Comments

Candidates generally responded well to the paper this year with very few failing to attempt the questions. Most candidates were entered at the correct tier of entry. Centres still need to be aware of the need to prepare candidates for this exam by ensuring that they have a full understanding of the requirements of different question types: name, state, give, describe and explain. Often, candidates had difficulty in achieving the full marks for questions asking for an explanation, because answers were not supported with relevant examples or reasoning. Additionally, some of the technical questions relating to food products and nutritional understanding were incorrect or vague. Centres must focus on technical understanding, to enable candidates to access the higher marks.

Foundation Tier (Paper 2F)

This paper was well received by candidates, with most able to provide answers in all sections. Marks were scored evenly across all areas of the paper, with effective differentiation across the paper. Most candidates were entered for the correct tier of entry. More centres should make use of scribes or readers as there were many papers that were illegible as candidates were possibly not English speakers or could not read and/or write. Handwriting was variable and many candidates lost marks through carelessness or lack of thought and effort. Short, concise answers tended to fair better than lengthy responses that were too wordy or in deed went beyond the space for answers.

Question 1

Q01a Mean mark 3.76 from 6 marks

This question was well answered by the majority of candidates. Most candidates were able to correctly identify the equipment or tool used for food preparation in the home or school kitchen. The equipment that caused the most difficulty to name was the slotted spoon, however, most candidates knew what it was intended to be used for. Candidates are getting better at describing a task for each item.

Q01b Mean mark 3.37 from 5 marks

Microwave ovens are clearly well used at centres and most candidates were able to correctly give three ways in which they can be used. However, weaker candidates frequently confused reheating/heating/warming or used the stem of the question (cooking) in their answer. Safety rules are understood well by candidates, with most receiving full marks for this question.

Question 2

Q02a Mean score 1.97 from 4 marks

The first question was a simple straight forward question about vegetables and yet it was very surprising the number of candidates who gave fruits as answers. The functions of vitamin C were well understood, with most candidates achieving marks for healthy skin and aiding iron absorption.

Q02b Mean score 0.78 from 3 marks

There was generally little or no understanding of salt in the diet, with many candidates repeating the question in their answer for this sub-question.

Q02c Mean score 1.34 from 4 marks

The importance of calcium in the diet was answered well, but fortification of foods was answered very poorly, with a small minority of candidates achieving marks for this question.

Question 3

This is an overlap question between the two tiers.

Q03a Mean score 2.53 from 6 marks

Candidates answering the foundation tier paper wrote variable answers for the specification points with some repetitions from the stem question. The best answers come from candidates who wrote in short sentences. Answers relating to the needs of the user mentioned it being a snack, handheld and eaten on the move, answers for the environment were generally good and focussed on recyclable packaging and biodegradable materials. Quality points were variable, with candidates commenting on free range, shape and size.

Q03b Mean score 0.81 from 4 marks

The properties of chicken caused some problems, with candidates getting muddled between properties and reasons.

Q03c Mean score 1.25 from 2 marks

This sub-question was well answered.

Q03d Mean score 0.91 from 2 marks

Centres are teaching quality control well and candidates could support their answers with relevant points.

Q03e Mean score 0.72 from 2 marks

CNC equipment caused a few problems for foundation tier candidates, with some candidates mentioning relevant answers related to consistency and accuracy.

Q03f Mean score 0.47 from 2 marks

As with Q03e, some candidates struggled to identify ways in which the lid was suitable for machine manufacture.

Q03g Mean score 2.81 from 4 marks

Most candidates scored good marks in the final sub section, where they could explain the purposes of chicken pie to provide a quick meal and appeal to a wide age range. This was clearly a food product that they were familiar with and could relate to in their answers.

This paper performed well and produced effective differentiation between candidates.

**GCSE Design and Technology: Food Technology (short course)
Principle Examiner's Report - June 2009
Unit 3970, Higher Paper 2H**

General Comments

This paper was generally well received and answered, with very few candidates failing to attempt the questions. Most candidates were entered at the correct tier of entry. Centres still need to be aware of the need to prepare candidates for this exam by ensuring that they have a full understanding of the requirements of different question types: name, state, give, describe and explain. Often, candidates had difficulty in achieving the full marks for questions asking for an explanation, because answers were not supported with relevant examples or reasoning. Additionally, some of the technical questions relating to food products and nutritional understanding were incorrect or vague. Centres must focus on technical understanding, to enable candidates to access the higher marks.

Higher Tier (Paper 2H)

Response to this paper was very positive with the more able candidates showing a range of knowledge and understanding, with the ability to use technical language. As with the foundation tier many candidates failed to score full points on describe/explain questions as they do not link one answer to a supporting point. Instead, they give several unrelated points. This is a demanding type of question, worthy of high marks and provides the basis for differentiation.

Question 1

This is an overlap question between the two tiers.

Q01a Mean score 3.47 from 6 marks

Candidates answering the higher tier paper generally wrote good answers for the specification points, but, there were some repetitions from the stem question. The best answers come from candidates who write in short sentences. Answers relating to the needs of the user mentioned it being a snack, handheld and eaten on the move, answers for the environment were generally good and focussed on recyclable packaging and biodegradable materials. Quality points were variable, with candidates commenting on free range, shape and size.

Q01b Mean score 1.53 from 4 marks

The properties of chicken caused some problems, with candidates getting muddled between properties and reasons.

Q01c Mean score 1.03 from 2 marks

This sub-question was well answered.

Q01d Mean score 1.45 from 2 marks

Centres are teaching quality control well and candidates could support their answers with relevant points.

Q01e Mean score 1.23 from 2 marks

CNC equipment caused a few problems for weaker candidates, but most candidates could mention relevant answers related to consistency and accuracy.

Q01f Mean score 1.02 from 2 marks

As with Q01e, some candidates struggled to identify ways in which the lid was suitable for machine manufacture.

Q01g Mean score 2.67 from 4 marks

Most candidates scored good marks in the final sub section, where they could explain the purposes of chicken pie to provide a quick meal and appeal to a wide age range. This was clearly a food product that they were familiar with and could relate to in their answers.

Question 2

Q02a Mean score 0.69 from 3 marks

Q02b Mean score 1.34 from 2 marks

Excellent answers for the first two sub sections, with many candidates achieving full marks. Whisking, creaming, liquidising, rubbing in and blending were common answers and most candidates then went onto the next question and mentioned that standard components could improve quality control by ensuring that they give consistency in size across a batch, reduced manufacturing time or reduced labour costs.

Q02c Mean score 1.33 from 4 marks

The nutritional reasons for using eggs in the lemon filling were generally good answers, and many candidates could describe the effects of heat on eggs, resulting in coagulation of the filling. Some weaker candidates confused the lemon filling and a meringue topping.

Q02d Mean score 1.13 from 2 marks

The importance of accurate weighing and measuring was also well understood by candidates.

Question 3

Q03a Mean score 1.69 from 2 marks

Q03b Mean score 2.33 from 4 marks

The first parts of this question were very well received by most candidates and gave them opportunities to display good subject knowledge. Functionality of ingredients was understood well, with good explanations and descriptions, supported with relevant examples.

Q03c Mean score 2.02 from 5 marks

The raising agent question was answered well, with many candidates achieving two marks. However, candidates struggled with the question about introducing each raising agent into the product, with many candidates struggling to apply their knowledge of baked products to the question.

This paper performed well and produced effective differentiation between candidates.

**GCSE DESIGN AND TECHNOLOGY: FOOD
(Full Course: 1970)**

Grade Boundaries - June 2009

Overall Grades

The figures given below are the minimum subject marks required for each overall grade in the summer 2009 examinations.

Both foundation and higher options are out of 100 marks.

	A*	A	B	C	D	E	F	G
Foundation				58	48	38	29	20
Higher	82	72	62	53	42	36		

Component Marks

The figures given below are the minimum marks required for each component grade in the summer 2009 examination.

(Coursework 01 out of 102)

(Paper 2F out of 88)

(Paper 2H out of 88)

	A*	A	B	C	D	E	F	G
Coursework	92	80	68	56	45	34	23	12
Foundation				55	47	40	33	26
Higher	62	56	50	44	34	29		

**GCSE DESIGN AND TECHNOLOGY: FOOD
(Short Course: 3970)**

Grade Boundaries - June 2009

Overall Grades

The figures given below are the minimum subject marks required for each overall grade in the summer 2009 examinations.

Both foundation and higher options are out of 100 marks.

	A*	A	B	C	D	E	F	G
Foundation				56	46	36	27	18
Higher	79	70	61	52	41	35		

Component Marks

The figures given below are the minimum marks required for each component grade in the summer 2009 examination.

(Coursework 01 out of 84)

(Paper 2F out of 44)

(Paper 2H out of 44)

	A*	A	B	C	D	E	F	G
Coursework	76	66	56	46	37	28	19	
Foundation				26	22	18	15	12
Higher	30	27	24	21	16	13		

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