

Design & Technology (Food Technology)

General Certificate of Secondary Education **GCSE J302**

General Certificate of Secondary Education (Short Course) **GCSE J042**

Reports on the Units

January 2010

J042/J302/R/10J

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This report on the Examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the specification content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the Examination.

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Design and Technology (Food Technology) (J302)**

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Chief Examiner's Report

This report provides an overview of the work seen in the written examination Units 2 and 4 and the Controlled Assessment Unit 1, for candidates who took the examination during this series. It precedes a more detailed report to centres from each subject area within the Innovator Suite and highlights general issues that have occurred across the suite of specifications.

Note: No centres submitted a controlled assessment portfolio for Unit 3 – Making Quality Products, in any of the specifications within the Innovator Suite this session.

This report has been prepared by the Chief Examiner, Assistant Chief Examiners, Principal Examiners and Principal Moderators and covers all specifications within the Innovator Suite. It should be read in conjunction with the examination papers, the mark schemes, and the marking criteria for assessment given in the specification booklets.

This is the first examination year for the new Innovator Suite.

An important point for teachers to note about the Terminal Rule in relation to this suite of specifications and re-sits:

The terminal rule is a QCDA requirement. Candidates must be entered for at least two units out of the four (full course) at the time that they certificate. i.e. the end of the course.

Please be aware that the QCDA rule states that marks scored for terminal units will be the marks used in the calculation of candidate grades. Therefore, if one of the candidate's terminal units is a re-sit and the mark is poorer than the original mark, the poorer mark will be used to calculate the final grade for that candidate.

Obviously, the terminal unit marks are then added to the highest marks scored in the other units making up the certificate.

Teachers are reminded that it is also a requirement of QCDA that candidates are now credited for their accurate use of spelling, punctuation and grammar across all four units.

WRITTEN EXAMINATION – UNITS 2 AND 4

The overall performance and range of results for Unit 2 varied considerably. Many of the candidates demonstrated a general awareness of the main points and issues linked to sustainable design and the 6Rs.

In **Unit 2 – Section A** of the papers most candidates across the suite attempted to answer some of the questions, some candidates however did give no response answers. Candidates need to be encouraged to have a guess at the multiple choice style of questions.

There was evidence this year that candidates had not been properly prepared for the **Unit 2** examination and in particular;

- Section A, was poorly answered by some of the candidates. It is important to ensure that candidates have an awareness and understanding of trends and innovations in design and manufacture, labelling, packaging and the impact that the design of products is having on the environment, society and the economy.
- Candidates need to be able to identify signs and symbols in particular giving information about materials, products and safety issues in relation to environmental and design issues.
- Candidates must take great care when circling their answers in Section A, that they do not circle more than one answer; completely clear incorrect circles to eradicate confusion in marking.

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It was also noticeable that candidates had not read the instructions correctly and centres would benefit from explaining the correct examination procedures and requirements to the candidates.

Unit 2 – Section B, showed more varied responses and teachers need to ensure that they read the subject specific reports for further detailed feedback on specific issues and individual question performance.

Generally candidates lacked the specific knowledge and understanding required to answer some questions with rigour. Such answers included:

- 'Environmentally friendly' and 'better for the environment' or 'damages the environment'.
- To 'recycle' and 'recycling' is good for the environment.

Many candidates did manage to use subject specific terminology in their answers which is to be commended.

Candidates have struggled to answer specific questions with regard to 'explain' or 'describe' and have a tendency to list their responses rather than giving justified reasons.

The questions marked with an asterisk * provided candidates with the opportunity to give a detailed written answer combining good subject knowledge with an ability to produce a structured response. Few candidates were able to do this well, but most candidates did score two or more marks from the six available for this question.

Hand-writing, at times, was difficult to decipher. Centres are reminded that candidates are assessed on spelling, punctuation and grammar in the extended writing question.

It was disappointing to note that candidates entered for **Unit 4** this session, demonstrated a lack of knowledge and understanding relating to the technical aspects of designing and making and in particular, their knowledge of basic techniques when working with materials. This could have been due to candidates not being equipped with the full knowledge base required for this Unit examination. Care must be exercised here when submitting entries for candidates in Years 9 and 10.

Candidates responded well to the design questions. Most candidates included technical details such as techniques, materials, construction details etc, this is to be encouraged. Candidates should be encouraged to make their sketches large and clear and provide meaningful written notes that **add** to the information given in their sketches.

Centres are to be reminded that questions marked with an asterisk* provide candidates with the opportunity to give detailed written answers combining good subject knowledge with an ability to produce structured, coherent responses. Candidates in general struggled with this type of question format this session.

It is apparent that candidates need to practice examination technique; reading the questions carefully, responding to the instructions given in the questions and having an awareness of the full range of question formats.

CONTROLLED ASSESSMENT – UNIT 1

Most centres have been prompt in the dispatch of documentation to OCR and moderators. It is important that centres forward form CCS160 in particular to moderators.

The majority of centres encourage candidates to organise the portfolio according to the different marking criteria strands. This is to be commended as it enables the candidates to produce work that clearly shows an understanding of the requirements of each criteria strand.

This is particularly important when the Centre submits work via the OCR Repository, where individual files are used to store portfolio work. Centres need to ensure that candidates clearly label each file using the marking criteria section headings; this facilitates a more effective completion of the moderation process.

Portfolios should be clearly labelled with the Candidate and Centre name and number, with the Unit code and title also evident. *Specification – 5.3.5 Presentation of work.*

It is also recommended that the OCR cover sheet is evident, outlining the theme and the starting point chosen by the candidate. The section included on this sheet for annotation and notes provides an opportunity for teachers to briefly identify and justify where and why certain marks were allocated. This is useful for moderators to give guidance and appropriate feedback to teachers on the Centre report.

It is good practice to ensure that candidates acknowledge sources of information used for the development of their portfolio work. This can be completed through either a concluding bibliography at the end of the portfolio or acknowledging sources throughout the criteria sections where appropriate.

There was evidence this session of strong teacher guidance influencing candidate portfolios. Where this was evident it greatly hampered the candidate's ability to show flair and creativity, and therefore achieve the higher marks.

Centres are to be reminded that the '*controlled assessment task must NOT be used as practice material and then as the actual live assessment material. Centres should devise their own practice material using the OCR specimen controlled assessment task as guidance.*' *Specification – Section 5.2.2 Using Controlled Assessment Tasks.*

Centres are to be commended on the amount of work produced for the Unit 1 portfolio, which has been realistic in terms of the amount produced and the time allocated to this unit – 20 hours.

Candidates must select one of the Themes specified by OCR as a starting point for the portfolio. Centres are however, permitted to contextualise the starting point appropriately to reflect centre resources and need.

Teachers are to be reminded that Themes for Unit 1 are based around environmental awareness and sustainable resources/processes. Therefore, it is considered good practice for teachers to encourage candidates to consider Eco-design and sustainability when making decisions and combining skills, with knowledge and understanding in order to design and make a prototype product. This knowledge base also acts as a 'spring board' to active learning for Unit 2.

Candidates must be able to demonstrate evidence (either written or visual) that they have a thorough understanding and ability to solve technical problems as they arise through the designing and making process, for the marks awarded in this criteria strand.

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It was evident through the portfolio that candidates struggled with the critical evaluation section of the marking criteria. Unit 1 requires that the candidate evaluates the processes and subsequent modifications involved, in the designing and making of the final prototype ONLY. Too many references were made to the performance of the prototype against the specification, which meant that candidates' marks were compromised.

It was noticeable that where candidates had scored the high marks, they had used specialist terms appropriately and correctly and had presented their portfolio using a structured format.

A521

General Comments

Candidates should be encouraged to organise their portfolio into separate sections according to the assessment criteria and show appropriate use of ICT. Portfolios should be labelled clearly with both the candidates name and number.

Assessment Criteria

Work which is annotated by the teacher clearly helps the moderation process. There should be photographic evidence of the practical work along with written teacher comments. A separate cover sheet containing reference to the assessment criteria applied is recommended.

The use of writing frames and pre-printed sheets should be used with caution. It is important that high achieving candidates are given the opportunity to show flair and creativity in approaching the assessment criteria.

The portfolio should start with the chosen Theme/Product and a starting point and all the work produced should relate to this chosen theme and starting point. Candidates should also develop a new product that meets an identified aspect of current healthy eating guidelines.

Cultural Understanding

Candidates need to collect and present information on how changes in society have influenced the products available today and how wise food choices can help promote healthy lifestyles. Sources of information should be acknowledged in the portfolio.

Creativity

Through research e.g. questionnaires/interviews/available statistical data, candidates are expected to identify a target group, the qualities required for the design of a creative, innovative food product and an area of current dietary advice that the portfolio will focus on. Results should be presented and analysed. Questions on packaging are not required.

This initial research should allow candidates to arrive at a design brief. The design brief should be clear, concise, include a nutritional focus and a target group and be designed so that the candidate can demonstrate a wide range of practical skills.

Using one method of research, candidates are required to identify and record relevant data to help design a creative innovative product.

Candidates are required to critically evaluate appropriate existing products against their identified needs. 4 products should be evaluated in chart form with a conclusion and for the high achieving candidates, 1 product needs to be evaluated in detail. All sources of information should be acknowledged.

Designing

Candidates are required to use results from research and the design brief to develop a design specification.

A range of possible products should be listed before choosing 4 ideas to trial that allow candidates to demonstrate a wide range of practical skills.

For each product to be trialled candidates should: -

List ingredients

Clearly explain adaptations – products should be creative and innovative

List practical skills

Analyse the recipe according to the chosen nutritional focus

Make each product and provide photographic evidence – marks awarded to the making section of the assessment criteria

Show evidence of testing by three tasters

Evaluate against each point in the specification using results from testers as evidence

Discuss any improvements taking into account testers views.

Candidates are required to choose one of the trialled products for the final prototype (product), record this decision, give reasoned decisions for any changes, final ingredients and equipment. Marks awarded for suggestions regarding nutritional content and applying nutritional data when making reasoned decisions for the final ingredients area awarded to the making section of the assessment criteria.

Making

Nutritional analysis according to the chosen nutritional focus should be evident along with a flowchart for the making of the final prototype (product).

To achieve high marks for practical work candidates need to select and use appropriate ingredients and equipment, work safely, hygienically, skilfully to prepare, shape, form, mix, assemble (wide range of skills) and produce high quality, creative and innovative outcomes.

Evaluation

There should be evidence of testing by 5 tasters. A high level response requires candidates to critically evaluate the final prototype (product) against the design specification and design brief using results of testing to give meaningful conclusions, leading to suggestions for possible improvements. Specialist terms should be used appropriately and correctly, information should be presented in a structured format and there should be accurate use of spelling, punctuation and grammar.

Good Practice within Administration of the Controlled Assessment

- 1 Work should be removed from ring binders, presented so that pages can be turned without having to remove sheets from plastic wallets and securely fastened together e.g. by means of a tag, then clearly labelled with Centre Number, Name and Candidate Number. Mark sheet/annotation sheet should be attached to each piece of work.
- 2 The Controlled Assessment Mark Sheet(s) should be sent to the Moderator with the MS1. Centres need to make sure that this paperwork arrives to the Moderator by the date specified by OCR and portfolios should be sent within 3 days of receipt of the request for the sample.

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- 3 Encourage the candidates to divide their work under headings for the separate Assessment Criteria.
- 4 Where more than 1 teacher is involved in the assessing of candidates work, the centre should carry out effective internal standardisation to ensure a reliable rank order.

A522 Sustainable design

Examiners Report

The overall performance and range of results was disappointing. Many candidates clearly did not have sufficient knowledge to answer the questions, particularly those parts of questions aimed at the higher grades. There were a high number of 'no response' answers again indicating that the in many cases the whole unit (A522) had not been taught.

Many of the candidates demonstrated a general awareness of the main points and issues linked to sustainability however they lacked the specific knowledge and understanding required to answer questions in depth. Candidates tended to either give limited responses or to write at length on points unconnected with the question e.g. question 18d where many wrote about recycling packaging. Basic nutritional knowledge was poor, with few candidates being able to give the function of iron or nutritional reasons for eating chicken.

There was little evidence of candidates underlining key words in the questions to determine what was required in the answer. Candidates need to be made aware of the importance of the wording of each question and they need to understand the difference between terms like 'name', 'explain' and 'discuss'. Many candidates did not score marks on the explain questions because they gave a list of unrelated points instead of developing one of these in the case of a question worth two marks.

The vocabulary of the candidates, themselves, was generally limited. There were only a few cases where specialist terms were used appropriately. Spelling of key words, such as 'recycle' was poor and vague terms were often used that did not convey sufficient understanding to warrant marks.

Vague terms used in answers included:

- Healthy, cheaper both of these terms must be qualified.
- 'Chemicals' – when referring to additives, preservatives, growth hormones etc.
- 'Well produced' and 'naturally produced' when referring to free range products.
- 'Good / bad conditions' when referring to free range products.
- 'Environmentally friendly' and 'better for the environment' or 'damages the environment'.

It is particularly important on the banded mark question that candidates use specialist terms appropriately and correctly.

Comments on Specific Questions

Section A

Question 1

Many candidates answered this correctly, however many thought blue or white were the correct answers.

Question 2

Many candidates answered this correctly. There are some candidates which still refer to sell by date which is incorrect.

Question 3

This question was poorly answered with many candidates not knowing that vitamin C is retained. Many candidates referred to the fat content being reduced. It was clear that candidates had little understanding of cooking methods linked to the retention of vitamin C.

Question 4

The majority of candidates knew that strawberries were in season in July. A number of candidates thought it was March or February.

Question 5

The majority of candidates did not know the function of modified starches. Makes the product last longer was the most common response.

Question 6

The majority of candidates did not know this. Many candidates failed to attempt to answer this.

Question 7

Many candidates made reference to nutritional information or ingredients being listed on the packaging and scored the mark. Some candidates did not read the question carefully and made reference to the packaging being colourful.

Question 8

There were a lot of none responses for this question. It was clear that the functions of nutrients had not been covered by many centres. There were very few correct answers. Many answers were very vague e.g. healthy blood, some candidates put things like 'liver, kidney' clearly not understanding the word 'function'.

Question 9

There were many no responses to this question. Very few candidates knew the term modified atmosphere packaging.

Question 10

Of the correct responses 'symbols' and 'logos' were the most common. A much smaller number said 'write on the packaging. Those who didn't score mainly stated that the manufacturer made the packaging recyclable.

Question 11

The majority of candidates answered this question correctly.

Question 12

Most candidates answered this question correctly.

Question 13

Many candidates did not understand what UHT meant and therefore answered the question incorrectly.

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Question 14

There were a surprisingly high number of incorrect answers for this question.

Question 15

Most candidates knew that they should only reheat foods once.

Section B

Question 16

- (a) Many candidates scored one mark only. Often they repeated the same point e.g. butter and bacon could be sourced from the UK. Candidates need to be specific in their answers many stated 'get from nearer' this needed to be qualified to the UK. Some candidates did not read the question and talked about the packaging.
- (b) Most candidates scored one mark. Using light or low fat mayonnaise was one of the most common correct responses. A few referred to taking fat off bacon and grilling as a method of cooking the bacon. There was clearly a lack of understanding about the different types of fats many stating using low fat butter and to change butter to margarine. Another common misconception of many candidates was to change white bread to wholemeal bread.
- (c) The majority of candidates answered this question correctly.
- (d) The majority of candidates answered this question correctly. Composting was the most common correct answer.
- (e) Many candidates did not recognise this as a food safety question. Very few candidates scored full marks as they failed to justify their statements. Most correct marks were given for reference to correct storage, hygiene and date marks. Candidates need to be more specific when answering questions many said to make sure its cooked properly this needs to be qualified by saying how or giving reference to temperature control. Candidates need to avoid statements like 'going off' which were frequently seen.
- (f) The question asked candidates to name the symbol. Many candidates did not do this and therefore did not score any marks. Very few candidates knew the Keep Britain Tidy symbol. More knew the recycle / recycle now symbol.
- (g) This part of the question was poorly answered not many candidates knew what was meant by a sustainable source. Many candidates confused recycling with sustainable sources.

Question 17

- (a) There were many vague answers from candidates and they often made sweeping statements e.g. it will be free range or organic. This is not always the case candidates need to say may be or more likely to be. . A lot said the food would be fresh or fresher or cheaper without adding 'than shops/supermarket. Statements like fresher or cheaper must be qualified.
- (b) This was generally well answered by candidates with the majority scoring two marks.
- (c) Many candidates did not read the question correctly and did not refer to the nutritional aspect of the question. It was clear that many candidates did not have the nutritional knowledge to answer this question. Candidates who scored marks on this question tended to score one mark and not the full two marks.
- (d) (i) Many candidates repeated answers from 17b and therefore did not score marks. Those who scored marks referred to the cruelty, poor conditions hens are kept in and reference to the improved taste.
- (ii) The majority of candidates answered this correctly making reference to the cost.

- (e) Most candidates scored one mark for this making reference to storing eggs in the fridge. Not many candidates were able to give the reason for this. Many candidates gave two different points and therefore did not score the full amount of marks. When questions ask for an explanation, candidates must write one detailed response, not give two unconnected points.
- (f) Most correct answers were given with reference to being able to trace the product and linking this to being able to identifying a problem with the product. Very few candidates scored full marks. Some candidates confused the product code with the bar code.

Question 18

- (a) The majority of candidates answered this question correctly.
- (b) There was a great variation in responses to this question. A number of candidates did not read the question correctly and put sweet and savoury products in the incorrect column. The other common mistake was stating a chicken dinner, chicken salad and sausage and mash as products. Candidates who gained marks in the first two boxes often failed to gain the marks for the additional ingredients required to make the product as they missed out essential ingredients which were essential for the product to be made e.g. water missing from pastry, egg from bread and butter pudding.
- (c) This was quite well answered with the majority of candidates scoring one mark for reference to the increase in the number of landfill sites. Very few candidates scored the second mark those that did usually made reference to carbon dioxide and methane. There were a lot of very vague answers referring to pollution and global warming which did not score any marks.
- (d) This is a new style of question and it was clear that many candidates had not had practice at answering banded response style questions. There were very few candidates who scored in the highest band this was because their answers did not show a thorough discussion and use of specialist terms. Most candidates gave a list of points or one point expanded e.g. use of leftovers with examples.

Grade Thresholds

General Certificate of Secondary Education
Design and Technology (Food Technology) (J042) (J302)
January 2010 Examination Series

Unit Threshold Marks

Unit		Maximum Mark	a*	a	b	c	d	e	f	g	u
A521	Raw	60	54	48	42	36	30	24	18	12	0
	UMS	120	108	96	84	72	60	48	36	24	0
A522	Raw	60	50	44	38	33	27	21	16	11	0
	UMS	80	72	64	56	48	40	32	24	16	0

Total number of entries for A521 were 68

Total number of entries for A522 were 1118

There were no entries for A523 and A524

Statistics are correct at the time of publication.

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