External Assessment Report 2010

Subject	**Health and Food Technology**
Level	**Higher**

The statistics used in this report are pre-appeal.

This report provides information on the performance of candidates which it is hoped will be useful to teachers/lecturers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding. It would be helpful to read this report in conjunction with the published question papers and marking instructions for the Examination.

Comments on candidate performance

General comments

The number of candidates presented for Health and Food Technology showed a slight increase from the previous three years. There were a number of centres presenting for the first time, and some centres returning. Most candidates embark on the Higher Health and Food Technology Course having studied Standard Grade Home Economics, but almost 30% are direct entries with no previous experience. This is an increase from previous years.

The standard for the Higher Health and Food Technology external assessment was the same as previous years, and the grade boundaries were not altered.

75% of candidates passed the examination, but almost 10% of the candidates were awarded a D. By examining the breakdown of the component marks, it is possible to establish the areas that should be addressed to ensure that future candidates pass the examination. 7% of the candidates were awarded a Band 8 or 9, and should maybe have been presented at Intermediate 2 Health and Food Technology. As the Technological Project briefs are the same for Intermediate 2 and Higher, it is possible to drop candidates down after the prelims if the candidates have not demonstrated sufficient knowledge and/or answering technique in the examination.

The NABs can be used as a revision tool for candidates before the examination.

Although the average marks for both the Technological Project and the question paper are down slightly from last session, the marks are still higher than in previous years. Ways of improving candidate performance can be established by following the guidance later in this document.

Areas where candidates performed well

Technological Project

Step 1.1

Most candidates provided good explanations of the key wording of the brief. Those candidates who provided more detail in their explanations of the key points tended to demonstrate better understanding of the brief, which benefitted them at later stages of the Technological Project.

Step 1.2

Specification points were usually acceptable on the whole. The candidates who developed specification points that clearly linked to the core key points from the wording of the brief tended to produce better solutions in step 2.2, as their work was more focused.

Generally the candidates produced five or six specifications points, which avoided additional work at later stages.

More candidates demonstrated an understanding of measuring/testing each specification point.

Most candidates explained in detail the importance of each specification point by showing knowledge in their explanations.

Step 1.3

The candidates who covered all the core key points and the specification points in the investigations earned the highest marks and provided the most focused list of investigations.

Those candidates who did state the outdoor event were able to link more closely to a specific target group and to the type of food that was already available at the event.

Step 2.1

Candidates who made good use of the candidate guide provided strong investigations which produced valuable data to use when drawing up a solution.

Generally the resources were clearly identified, though on occasion some candidates omitted the name or position of the expert who was used for the research.

Many candidates had established good links with the local community, which helped provide excellent factual data from which valuable conclusions could be drawn.

Strong investigations can collect data linked to a number of specification points.

Step 2.2

Some candidates came up with some original solutions based on good research from the data collected in their investigations.

The solutions were clearly linked to wording of the brief and described in detail (with detailed recipes) with exact ingredients and step-by-step methods.

Step 3.1

Most candidates provided sufficient detail about how to manufacture their chosen solution to allow it to be produced by another person.

Good justifications showed an understanding of the functional properties of the ingredients, nutritional contribution, or aesthetic appeal.

Step 3.2

When candidates prepared tests which covered all of the specifications points, this provided lots of data for evaluation against the specification in step 4.1.

Step 3.3

Candidates who made good use of the candidate guide provided strong valid testing, which produced valuable data to use in the evaluation section, particularly step 4.1.

Step 4.1

Candidates who conducted strong testing against each of the specification points gave themselves data on which to base their evaluations. If the candidates provided the opinion, linked to the fact which can be seen within the content of the Technological Project, and then recognised the consequence in terms of the proposed solution, they earned the marks.

Step 4.2

Candidates are advised to complete their evaluation for each step when they have completed that step (see candidate guide).

Candidates who made obvious links to time, resources, and skills and abilities, which could be backed up by evidence in the Technological Project, and then recognised the consequence, earned the marks.

Areas which candidates found demanding

Step 1.1

There were instances of candidates incorrectly copying the brief. Care should be taken to ensure that the brief is correctly copied from the wording provided on the SQA website.

On some occasions the candidates failed to correctly demonstrate an understanding of the word ‘develop’, which had an impact later in the type of solution that was proposed.

Some candidates did not understand the difference between ‘nutritious’ and ‘healthy’. When explaining ‘nutritious’, some candidates referred to dietary targets, which is incorrect.

Step 1.2

The key words that were quite often missed were ‘develop’, ‘sale’, and ‘event’, and this carried on into step 1.3 investigations. Those candidates who gave long specification points were disadvantaged in a number of areas, as they would not fully explain or evaluate the whole specification point.

However, some candidates failed to earn the marks as they did not use the correct terminology, eg ‘talk to’, ‘get feedback’, ‘get an opinion’, ‘consult’, ‘visit’, ‘gather menus’, etc. Candidates should make reference to the candidate guide and use the correct terminology for measuring or testing techniques.

Some candidates more or less repeated their specification points in the explanation, with no further expansion to actually explain their specification, and so earned no marks in this section.

Step 1.3

Key words which were missed in the specifications and omitted in the investigations were ‘sale’, ‘event’, and ‘outdoor’. This produced less focused investigations.

A number of candidates did not show that they were linking or investigating to collect data in relation to all of their specification points.

Quite a few candidates did not give any detail as to what the outdoor event was. If they had, it might have allowed a greater focus to their work.

Some candidates failed to correctly copy across the aim for each of their three chosen investigations.

Step 2.1

Some candidates provided minimal investigations, which did not allow sufficient data to be collected to allow the creation of interesting solutions which related to their specifications.

Probably the weakest area was conclusions where personal opinions were given and not based on results of investigations or linked to the impact on the possible solution.

Conclusions should show progression to the possible impact on a final solution.

Step 2.2

Some candidates failed to develop or create new food products. This fails to meet the wording of the brief, where the candidates were asked to ‘develop’ a new dish or food product.

Candidates should be reminded that they should use metric measurements.

Step 3.1

Candidates are reminded that they should include the date. Some candidates failed to provide sufficient detail to allow the preparation of the solution, eg lack of detail of preparation of vegetables.

Step 3.2

Testing was still confused in a few cases with technique. Questions or tests did not focus on the specification points, which then of course did not allow an evaluation in the next stage to be based on evidence.

Step 3.3

Some candidates failed to identify the details of the expert they were interviewing.

In some cases the testing failed to assess whether the solution met all the specification points. Candidates should recognise that constructive criticism can be valuable and can help when writing the evaluation.

Step 4.1

Some candidates quoted from the teachers' answers in the tests, instead of evaluating the information. Evaluations which were not backed up by testing, and often included personal opinions and inaccurate interpretation of results, did not earn marks. There was not always evidence of costing to back up evaluation in some projects. Supermarket websites are a valuable resource for costing data.

Remind candidates that there is one additional mark available for additional detail in this section.

Step 4.2

Many candidates gave unsupported, personal comments/statements in their attempt to complete the evaluation. These candidates do not understand how to write an evaluative comment and so did not earn the marks. Many candidates wrote about previous experience in Standard Grade or Intermediate 2 Hospitality practical cookery or previous practising in class. This is not evidence that can be used as the basis of the evaluations. Many candidates spoke of really enjoying the practical cookery part and finishing early, which is not relevant.

This was a really poor area, where the consequence in relation to the technological experience was frequently omitted.

Other comments on Technological Project

The largest percentage of candidates undertook the restaurant brief. For those who opted for the nutritious snack, few candidates carried out an investigation into the types of outdoor events or the range of food outlets at such an event.

Question paper

These comments should be read in conjunction with the examination paper and the marking instructions, which are available on the SQA website. The comments include areas where candidates performed well and areas they found demanding, and so helps provide guidance on improving candidate performance.

Section A

- Question 1: well answered.
- Question 2: a number of candidates did not know this term.
- Question 3: majority got marks but confusion with vitamin A.
- Question 4: majority got marks but confusion with iron inter-relationships.
- Question 5: a number of candidates did not know specific sources of listeria.
- Question 6: majority got marks.
- Question 7: majority got marks.
- Question 8: majority got marks.
- Question 9: well answered but some candidates only gave only one response instead of two.
- Question 10: well answered.

- Question 11: some candidates earned these marks and understood DEFRA, though others confused it with environmental health officers and the Food Safety Act. Some candidates only gave one area of responsibility.
- Question 12: majority of candidates knew what happened at -18ºC, but there was a lack of knowledge over what happens at 75°C.
- Question 13: majority got at least one advantage. However, some answers were too vague and did not link to functional foods — they could have been talking about any food. Answers were sometimes confused with healthy options.
- Question 14: a number of candidates did not attempt this question. Few marks were given as candidates did not really know what 'hydroponics' was; when candidates had learned this area of Course content they achieved the marks. This was sometimes confused with GM foods.

Section B

Question	Facts about performance	Action required
1 (a)	The majority of the candidates used opinion, fact and consequence (OFC) in their answers, and correctly referred the overweight teenager in each response. Energy — well answered, but a number of candidates did not make the link to later life for the development of CHD/hypertension. Protein – well answered, although some tried to put both facts about protein in one response, and opinion was wrong for one of them. Iron – very few got fact, as they made no mention of what iron did in body. Calcium – majority got and mentioned later life for osteoporosis. Vitamin A – a lot did not get marks as they gave more than one function of vitamin A but no consequence. Folic acid – fewer people chose this nutrient to evaluate, so did not get as many marks here. Some candidates had gaps in their knowledge about nutrition, or did not manage to link the answers to the needs of the overweight teenager. Not as well answered as previous years.	Candidates must provide all stages of the answer — an opinion based on the data on the table linked to the person in the wording of the question. They must then demonstrate their knowledge of the function of the nutrient, and then provide a consequence in relation to the impact on this person's health. As this question is testing evaluation skills linked to knowledge, in relation to the nutritional needs of a teenager, the fact that she is overweight should be used in the answer. On occasion some candidates do not have sufficient knowledge about the impact of too much or too little of a nutrient on the person in the question, ie the teenage girl.
1 (b)	A number of candidates provided statements and not explanations for this question. There was a lack of	Take pupils down to school meals and get the person in charge of catering to explain Hungry for Success (HFS) and

	knowledge, and vague answers such as 'food is now healthier' were given. However, good students managed this question well.	the latest guidance for schools regarding what can/cannot be sold in schools.
1 (c)	This question tested the ability of the candidate to evaluate fats. A number of candidates provided correct facts about fat but failed to give an opinion or consequences and so earned no marks. This question is similar to previous years. Poor evaluative skills.	This question can be repeated for other foods — see previous papers.
1 (d)	Candidates usually laid out the answers well by clearly setting out the 'identify' and 'explain' on separate lines, which made it easier for them to access the marks. Majority got at least two out of three factors correct — a few referred to smoking/exercise, which are lifestyle and not dietary factors. Some confusion about the role of salt in the body — this knowledge needs to be addressed.	This question can be repeated for other dietary diseases — see previous papers and Course content.
2 (a)	Well answered by the majority of the candidates who selected this question. A few candidates confused concept generation/concept screening. A few candidates failed to refer to the Chinese dish in each response and so did not gain marks.	Practice linked to various food-focused products in the different styles of this question — see previous papers.
2 (b)	Salty, colour, sweetness, moistness — well answered, with the majority giving good evaluations which referred to and showed knowledge of the needs of the elderly. Candidates demonstrated good evaluative technique in this question.	Practice food-focused products in the different styles of this question which appear frequently. Answers must refer to the product that is used in the question in the answer.
2 (c)	A few candidates linked answers to food labelling, but not nutrition labelling, and so failed to earn the marks. Fact and opinion were often provided, but where consequences were weak or not provided, marks were not gained. A lot of bland statements did not show that candidates knew what information was on a nutrition label. They were	Candidates should use the code given against the mark allocation and the wording of the question to make sure they provide all stages of the evaluation answer (OFC) and link their answers to nutrition labelling.

	confused with ingredient lists and identifying foods to avoid in relation to allergies, etc.	
2 (d)	Where candidates had learned this area of knowledge and laid out their answers, so that they covered all of the headings, they gained good marks. However, this is an area where there were gaps in knowledge.	This question could be repeated for other nutrients — see Course content grids.
2 (e)	Candidates provided statements and not explanations, with no link to how the consumer is protected when purchasing food. A number of the candidates answered about the product or item, and none made mention of food, so no marks were given. Acts were confused with others, such as Sale of Goods, etc.	Candidates must learn the protection offered by each of the Acts as identified in the Course content grids. At least one tends be tested each year. When the question refers to food, food should appear in the answer.
3 (a)	A number of candidates provided statements which showed knowledge but were too vague (with no link to bacteria or how food poisoning occurs) to gain the marks. An explanation was required. A number of candidates provided responses linked to poor hygiene.	Areas linked to hygiene tend to be tested each year, so candidates must have knowledge of this area of the Course content.
3 (b)	Some candidates knew the functional properties of eggs (coagulation, binding and emulsifying) — this is a good area for practical work to take place. A number of candidates thought whisking was a functional property. Some mentioned that eggs trap air but did not correctly identify aeration. About half gave facts about eggs being an HBV protein, so they did not understand the wording of the question.	This is a good area of Course content to be taught through practical food activities.
3 (c)	Not as well carried out as evaluation of star profile. Often consequences were lacking, or facts incorrect or too general and should have been linked to the vegetarian. The vegetarian was often ignored. Evaluations were often linked to dietary targets and not nutrients. Candidates should read carefully the	Candidates should use the code given against the mark allocation and the wording of the question to make sure they provide all stages of the evaluation answer (OFC). Repeat this question with another menu and linked to a different individual.

	wording of the question.	
3 (d)	Candidates often did not answer the question and failed to link to food production and provided facts about myco proteins/fat replacers. There seemed to be a lack of knowledge in this area of Course content. The candidates linked benefits to the consumer, eg less CHD obesity, which was asked in the wording of the question.	Technological developments must be learned, as different developments are tested each year. See Course content grids for full list.
3 (e)	Very few evaluative comments, some facts with little opinion or consequence. Answers were limited to 'TV adverts make you want to buy the food', though the question had the potential to be much wider than this.	See the breath of answers possible by examining the marking instructions. Good topic for a class debate.
4 (a)	The majority of the candidates correctly identified the cause and effect of dental caries; the main problem was that some just identified tooth decay as an effect. KU of diverticulitis was poor, with very few correctly identifying the cause.	Repeat question for other different dietary conditions.
4 (b)	The majority knew facts about breastfeeding but some candidates failed to evaluate. The candidates provided the facts without indicating why this was good/bad, or providing a consequence linked to either the mother or the baby.	Candidates should use the code given against the mark allocation and the wording of the question to make sure they provide all stages of the evaluation answer (OFC).
4 (c)	A lot knew the general dietary targets but often got the facts/figures wrong, in particular salt mmols, and were confused. At Higher level they should know the exact dietary targets. A lot of answers were not evaluative, and often just statements with no opinion.	Repeat this question and focus on food groups.
4 (d)	Available income — well answered. The majority got marks, though some were vague. Environmental issues — not as well done as income, as it is not always shown the candidates know what an environmental issue is. Time available for preparation and cooking — well answered. The	Repeat for other areas that influence consumer choice of food.

	majority got marks. Cultural influences — well answered. The majority got marks.	
4 (e)	A few candidates earned some marks, but a number of candidates did not know about Food Standards Agency. A lot of confusion with the duties of an Environmental Health Officer/Food Safety Act/DEFRA.	Candidates must learn the function/roles of each of the organisations identified in the Course content grids.

Advice to centres for preparation of future candidates

Technological Project

Centres must ensure they use the up-to-date version of the teacher guide and candidate guide for the Technological Project, which can be downloaded from the SQA website. This will be available when the new briefs for the Technological Project are published. Please ensure that the updated pro forma is used for the Technological Project.

Candidates should check that each step has been completed in line with the guidance in the candidate guide to ensure they maximise the marks they earn.

Candidates may find it helpful to indentify a target group for their project, as this may help them to focus on the needs of this particular group and so produce a more in-depth piece of work.

Candidates should take responsibility for checking that each page of the project has been correctly collated and is included in the final work submitted to SQA.

The sections which required evaluation skills caused most problems. This is the area that needs to be addressed to improve candidates' marks. Complete the evaluation of each step of the Technological Project at the time identified in the candidate guide. Candidates should make sure that they write their evaluations based on evidence.

The Technological Project should meet the requirements of the Unit specification so that the NAB pass can be awarded.

If you have presented candidates for three years, you are encouraged to become involved in the marking of the Technological Project so that you have a greater understanding of how candidates gain marks. Markers always state how valuable marking is in helping to raise their candidates' attainment. Information on how to apply to become a Marker can be found on SQA's website in the Appointee Management section.

Although the marking instructions for the projects are available on the SQA website, candidates should be encouraged to come up with their own specification points, investigations and tests. which will then be more clearly focused on the wording of the brief.

Question paper

Candidates who have applied the correct answering technique achieve a higher mark than at centres where there has been less emphasis on answering technique. Those candidates who could answer evaluation questions correctly in the choice questions tended to score higher total marks for their papers.

Candidates should use the mark allocation to establish how many answers they should provide. In some areas too much was written, and in other areas there was not enough written.

Create a well balanced prelim which meets the correct paper specification. This will prepare the pupils well for the written examination. This evidence can also be used to generate evidence for absentee candidates and appeals if necessary.

Encourage candidates to use the SQA website for past papers, update letters, marking instructions, Understanding Standards materials, etc.

Practice all past Section A questions and encourage candidates to create their own Section A questions. Candidates who are well prepared for Section A demonstrate a wide knowledge of the Course content and may therefore perform well in the rest of the paper.

The questions towards the end of Section A are more difficult and require more detail when they have the following wording — 'advantage', 'disadvantage', 'explain', 'benefit', etc.

Practice Section B, Question 1, to ensure that the candidates can answer nutrition evaluation questions. A few candidates have gaps in their knowledge of nutrition.

Although candidates use evaluation skills in Question 1, they often do not apply the same answering technique in the choice questions. The candidates frequently have the knowledge, but as they fail to evaluate they lose valuable marks.

Dietary targets — a number of pupils did not know the whole dietary targets in sufficient detail for Higher. 'Five-a-day' is not acceptable at Higher level. Pupils should know the full target, eg 'increase consumption of fruit and vegetables to 400g per day'.

There is even confusion with the foods or nutrients used in the target, eg 'increase intake of calcium', or 'consume more red meat'. Candidates must learn the actual dietary targets.

Allowing candidates to mark a copy of a candidate question paper illustrates how marks are lost and gained, which is useful in training candidates on answering technique.

Candidates can make use of bullet points to reduce the amount of writing and so save time, but must still ensure that they refer to the wording of the question.

Note that Health and Food Technology can use some questions from previous Lifestyle and Consumer Technology papers as additional sources of questions for homework, etc.

An excellent way to prepare pupils is to ensure they sit a valid prelim with a similar style of questions to the current questions, so it would be advisable to compile questions from the

previous three or four years. Avoid issues linked to ‘en bloc’ by avoiding using a complete question from any previous paper. Mix up questions from previous papers. It would be useful, but not essential, to change the focus of the questions, eg if the question is focused on a Chinese dish, change the question to one on a pasta dish. Note: half marks have not been used for a number of years, and questions using half marks should be changed to one-mark questions in line with the current papers.

Examine the current year’s marking instructions for Higher Health and Food Technology. This is the standard that should be applied when marking previous questions and prelims. When previous marking instructions were written, they were sometimes written as outline instructions, and do not provide as much detail as current instructions.

If you have taught the Higher Course for a minimum of three years, the best way to raise attainment is to apply to mark the question paper. See the Appointee Management section on SQA’s website for details.

Statistical information: update on Courses

Number of resulted entries in 2009	733
Number of resulted entries in 2010	863

Statistical information: performance of candidates

Distribution of Course awards including grade boundaries

Distribution of Course awards	%	Cum. %	Number of candidates	Lowest mark
Maximum mark — 150				
A	16.9%	16.9%	146	105
B	25.3%	42.2%	218	90
C	32.7%	74.9%	282	75
D	10.3%	85.2%	89	67
No award	14.8%	100.0%	128	–

General commentary on grade boundaries

While SQA aims to set examinations and create marking instructions which will allow a competent candidate to score a minimum of 50% of the available marks (the notional C boundary) and a well prepared, very competent candidate to score at least 70% of the available marks (the notional A boundary), it is very challenging to get the standard on target every year, in every subject at every level.

Each year, therefore, SQA holds a grade boundary meeting for each subject at each level where it brings together all the information available (statistical and judgemental). The Principal Assessor and SQA Qualifications Manager meet with the relevant SQA Head of Service and Statistician to discuss the evidence and make decisions. The meetings are chaired by members of the management team at SQA.

The grade boundaries can be adjusted downwards if there is evidence that the exam is more challenging than usual, allowing the pass rate to be unaffected by this circumstance.

The grade boundaries can be adjusted upwards if there is evidence that the exam is less challenging than usual, allowing the pass rate to be unaffected by this circumstance.

Where standards are comparable to previous years, similar grade boundaries are maintained.

An exam paper at a particular level in a subject in one year tends to have a marginally different set of grade boundaries from exam papers in that subject at that level in other years. This is because the particular questions, and the mix of questions are different. This is also the case for exams set in centres. If SQA has already altered a boundary in a particular year in say Higher Chemistry this does not mean that centres should necessarily alter boundaries in their prelim exam in Higher Chemistry. The two are not that closely related as they do not contain identical questions.

SQA's main aim is to be fair to candidates across all subjects and all levels and maintain comparable standards across the years, even as Arrangements evolve and change.