



GCSE EXAMINERS' REPORTS

**FOOD PREPARATION AND NUTRITION.
GCSE**

SUMMER 2023

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FOOD PREPARATION AND NUTRITION

GCSE

Summer 2023

PRINCIPLES OF FOOD PREPARATION AND NUTRITION

General Comments

We saw some excellent attainment this year, with some learners scoring highly on every section, but conversely as detailed in the item level data some learners scored less highly or consistently across the examination paper. All centres must continue to ensure that preparation for the examination is thorough and detailed, and all the subject content for Component 1, Component 2 and the skills within Appendix A should be delivered to learners across the 2 year programme. Candidates should be given opportunities and be encouraged to complete past examination papers, work through OER's and practise exam questions related to the different areas of content as listed in the subject specification to enable them to understand the depth of knowledge required and the differences between basic and developed responses. It is evident from many of the candidates' responses that some questions included on the examination paper had not been read carefully enough to fully understand what the question was asking, and command words used in the stem of questions were not either understood or interpreted correctly. It was also noticeable that some topics or key areas of content listed in the subject specification were not that familiar to candidates.

Centres are also reminded of the opportunity to complete the examination using online assessment. This would be beneficial for some candidates where question responses are difficult to interpret due to the quality of handwriting. Using online assessment could strengthen the quality of responses, across all ability levels.

Section A

Q.1 Visual stimuli question

- (a) Every candidate appeared to have attempted to answer the question and access some marks.
- (b) Putting seeds in pastry and changing to wholemeal or brown flour were the most popular responses. Many candidates suggested adding fruit and vegetables into pastry which was not accepted. Some candidates stated use a higher fibre flour but did not specify a type so therefore this could not be credited.
- (c) Most candidates were able to identify a function of the two named ingredients used when making shortcrust pastry, with some more able candidates accessing the full 4 marks available by providing a developed, descriptive response.
 - (i) The main correct function of fat stated was to add flavour, some candidates were able to recognise that fat gives colour, and some candidates knew that fat coats the flour; to stop the formation of gluten/ensure a short texture/stop water mixing with flour, demonstrating some understanding of the science behind this. Marks were not awarded to responses that stated that "fat binds the pastry dough".

- (ii) The most popular function of flour was to form the structure/base of the pastry, or to add thickness or bulk to the pastry. Few candidates accessed the second mark available due to two different functions of flour being stated instead of the candidate fully describing the first one. Some candidates did not access any marks due to referring to the function of flour as binding the ingredients.
- (d) Many candidates were able to recognise why some recipes require shortcrust pastry cases to be baked blind and preventing a soggy bottom or the filling taking less time to cook than the pastry or, the filling does not require cooking were popular responses. Candidates were not awarded marks for stating; so, the pastry does not rise, as it's the baking beans weighing down the pastry that prevents this.
- (e) Calcium was the most popular mineral correctly stated by many candidates. It was disappointing to see a number of candidates leave the question unanswered or incorrect responses such as water, dairy food, fat, and protein being stated demonstrating a lack of nutritional knowledge.
- (f) Most candidates were able to access at least 1 mark out of the four available, with more able candidates accessing the full amounts of marks available. Many candidates demonstrated a good awareness of the colour changes that occur to eggs when baking the quiche with example responses including the quiche goes golden brown, the egg whites go from clear to white, and the egg yolk goes a duller yellow colour. There was good use and understanding of the terms coagulation and denaturation in many responses and it was pleasing to see knowledge of coagulation temperatures for egg yolks and egg whites being included in responses. The occurring of Maillard reaction was referred to by some candidates but it was not always correctly explained. It was common to see candidates refer to the changes in the eggs as being like making scrambled eggs and omelettes.

Section B

- Q.2
- (a) Most candidates found it difficult to define the term cereals. Incorrect responses included a staple food, or a food eaten for breakfast. Some candidates had stated it was a grain or grass but did not further point out cereals are edible grains, grains used for food or cultivated grasses.
 - (b) Many candidates answered this question correctly with barley, oats and rye being the most popular responses.
 - (c) A good range of nutrients was identified, with protein and fibre being the most popular responses. Candidates must state which vitamin or mineral to be awarded marks.
 - (d) Many candidates answered this question, and some candidates addressed their responses to include reference to both starchy and sugary carbohydrates. A number of candidates demonstrated knowledge of starchy foods giving a feeling of fullness and less desire to snack, slow releasing energy over a sustained period of time, some starchy foods being high in fibre helping to prevent constipation and the nutritional benefits of eating starchy foods such as providing protein, B vitamins and calcium.

Sugary foods were recognised as providing empty calories, no nutritional benefits and once eaten not leaving you full for long therefore encouraging snacking. Candidates demonstrated knowledge of sugary foods providing a quick energy burst which can result in a sugar crash leaving you tired and lethargic. More able candidates were able to link some dietary related issues to sugary foods such as diabetes type 2, tooth decay/dental caries and increased chances of weight gain due to sugar not being burnt off therefore being stored as fat. Some candidates became very confused when answering this question and kept referring to fats in the diet and how sugar contains lots of fat which restricted the number of marks awarded.

In future examinations when candidates are referring to dietary related issues such as diabetes type 2 the full name must be stated, just using diabetes will not gain any credit. Candidates should also be encouraged to give different dietary issues for the two types of carbohydrate foods to gain marks in the top bands and address both types of carbohydrate foods equally.

- (e) This proved to be a challenging question with many candidates tending not to answer the question resulting in the loss of marks. Whereas a few candidates demonstrated outstanding knowledge in this question and achieved full marks. Monosaccharides and disaccharides are listed in the areas of content in the specification, so centres are advised to ensure future candidates are secure in their knowledge regarding the principals of nutrition. Some candidates that had attempted the question referred to monosaccharides as being a simple carbohydrate rather than a simple sugar, which was repeated from the stem of the question, and resulted in no marks being awarded. Other candidates were able to explain that disaccharides had more saccharides than monosaccharides, with some more able candidates further recognising that disaccharides are made up of two monosaccharides and that monosaccharides are easily broke down quickly, but disaccharides take longer to digest. It was pleasing to see some candidates were able to provide named examples of both monosaccharides and disaccharides with some candidates then naming the correct two monosaccharides making up a disaccharide.

Q.3 (a) This question was accessed by candidates of all abilities with at least one mark being gained. The majority of responses referred to sauces adding flavour, aesthetic appeal/ colour and an improved presentation of a food/dish. Some candidates referred to a sauce adding texture but did not state if this was a moist texture or creamy texture so could not be credited with the mark. Candidates must be encouraged to elaborate further when using a describing attribute such as texture.

- (b) Many candidates were unable to gain any marks due to not referring to a blended sauce made using a starch such as cornflour, liquid, but no fat. Candidates incorrectly discussed the blending of ingredients to make a sauce and used mayonnaise, pesto, or tomato sauce as an example.

There were very few candidates aware of what a blended sauce is as well as being able to offer a suitable example.

- (c) Many candidates were able to access 1 mark by recognising the addition of a puree, reduction or evaporation as a method of thickening the sauce. Those candidates who accessed the full 2 marks mainly focussed on reduction/evaporation and were able to explain that the application of heat meant the sauce simmered or boiled, the liquid reduced/evaporated leading to a thicker sauce.
- (d) The majority of candidates attempted this question with some candidates gaining marks in bands two and three. However, it was disappointing to see that many candidates did not really answer the question that was set. Candidates were asked to explain the importance of correctly storing the cooked meat curry which should lead to points being raised on the importance of storing the curry in the fridge, not storing the curry at room temperature and why, reference being made to the danger zone and temperatures, meat being a high risk food, the food being safe to consume and the occurrence of food poisoning and symptoms. Many candidates approached the question by referring to the curry not being in a sealed container and spilling out in the school bag all over their books and pens. References were also made to the curry being kept warm and needing to be reheated to a safe temperature once they got home. Regrettably this meant that marks could not be awarded.

- Q.4
- (a) Most candidates were able to identify at least one reason why vitamin C is needed by the body. Providing a strong immune system, keep skin healthy and helps to absorb iron were common responses. Growth and repair, muscle function, energy and helps with vision were popular incorrect responses suggested by many candidates.
 - (b) Many candidates were not able to be credited with the full two marks for this question due to stating two citrus foods. Vitamin C is a common vitamin and found in many different fruits and vegetables and should be familiar to candidates. It was quite surprising to see candidates demonstration a lack of basic knowledge by suggesting milk, cheese, fish and meat.
 - (c) Many candidates managed to suggest problems caused by a lack of vitamin C in the body with scurvy, tiredness, bleeding gums and anaemia being popular responses.
 - (d) This question appeared to be quite accessible for candidates of all abilities. Many candidates demonstrated knowledge of vitamin C being a water soluble vitamin and that cooking vegetables by boiling meant the vitamin leached out of the vegetables into the cooking water. Some candidates were able to suggest an alternative cooking method or further suggest using the cooking water for a sauce or gravy so that the vitamin was still consumed. Many candidates knew that heat and oxygen destroyed vitamin C, and some suggested when preparing vegetables to cut them bigger to create less surface area to avoid exposure to air.

Candidates knew vitamin C was stored under the skin of fruit and vegetables and it was preferable to eat these raw or peel thinly or do not peel at all. Some candidates did not understand the question or answer it correctly and starting to discuss ways of providing more vitamin C in the diet for example, eat more oranges. It was common to see answers suggest adding extra peel/rind/juice after cooking to replace vitamin C lost during cooking.

- Q.5 (a) This question was accessible for candidates of all abilities and the majority of candidates had attempted to answer it. There were several points to be made regarding how food poverty is affecting the diet and health of some families and generally there was a sound awareness shown by candidates of families diets lacking in nutrients due to not being able to afford fresh food such as fruit and vegetables and families having to buy cheaper processed alternatives such as canned foods which can be high in salt, often leading to families becoming deficient in essential vitamins and minerals. Candidates referred to malnutrition and undernutrition and deficiencies were highlighted with associated diseases named and described. Dietary issues such as obesity, weight gains and dental caries were also referred to when candidates discussed the problems associated with consuming low cost food that is high in fat and sugar. Candidates also referred to adults often missing meals so that children could be fed and families having to choose between eating a meal or heating where they live and the stress and mental health issues this can cause. The candidates who accessed the top mark band were able to consider a range of points that were applicable and explain them in full which demonstrated their knowledge and clear understanding.
- (b) A good suggestion of ways families experiencing food poverty could eat nutritious meals were suggested with go to a food bank, grow your own vegetables, buy from a reduced section being popular responses. Suggestions such as buy in bulk and cook in bulk must be qualified.
- Q.6 (a) This question was generally well attempted and answered. Fat, water, salt and eggs were most popular responses. Some candidates did not access any marks due to not reading the question and stating yeast or an alternative flour as answers.
- (b) It was disappointing to see many candidates struggled with this question and found it difficult to explain why strong plain flour is used in breadmaking. Answers often described the proving process, or the steps involved in bread making. Suitable responses by some candidates demonstrated knowledge of strong plain flour having a higher gluten/protein content and this helped the dough be stretchy/elastic. Candidates sometimes identified the importance of protein/gluten/strong plain flour in providing structure. A common misinterpretation was strong plain flour increased the size of the bread/dough. There were very few responses that scored the full 3 marks as the third point lacked the depth and scientific understanding required. Where candidates were awarded the full 3 marks, answers were detailed and referred to glutenin and gliadin converting to gluten when water was added to the flour.
- (c) (i) The majority of candidates were able to gain one of the two marks available by identifying the dough needs to be left to allow the yeast to work, or to allow the dough to rise. The question used the command word describe and many candidates were not able to gain the second mark due to not identifying descriptive details such as leaving the dough in a cool/warm place, covering the bowl or giving the dough time.

- (ii) This question was well attempted by the majority of candidates. Many responses demonstrated a basic understanding stated proving is needed so the dough rises and has a fluffy texture, or the dough won't rise and will be dense if proving does not occur. The responses that were awarded marks from the top of mark band 2 or mark band 3 were able to further develop their responses referring to yeast multiplication with correct conditions, the producing and trapping of carbon dioxide and fermentation details, demonstrating good scientific knowledge.
- (d) Sensory analysis is a key element of the NEA 2 as well as food preparation and cooking techniques. It was clear from most candidates' responses that they had limited knowledge on sensory analysis or had not read the question correctly. Many candidates focused on the cloth or mat in the picture of the bread or the uneven surface of the loaf or the quality of the food photography and made suggestions to put the bread on a plate, add butter or even slice the bread. Some candidates incorrectly suggested improvements to the making and baking of the loaf such as knead for longer and cook for longer to make it browner in colour. Those candidates who approached the question correctly were able to secure marks by recommending the use of an egg glaze for shine, changing the bread shape from a loaf to a plait and add a topping such as cheese.
- Q.7 (a) This question was generally well attempted and well answered. Store in a fridge, keep well wrapped and stored away from other foods were popular responses. Some candidates did not access any marks due to just advising to put it in a cool or a cold place.
- (b) The majority of candidates answered this question correctly with frying, grilling and baking being the most popular responses. Candidates that suggested two types of frying such as shallow frying and deep fat frying could not gain the two marks available.
- (c) Most candidates were able to gain one mark for identifying protein as one nutritional benefit of including fish in the diet. Many candidates could not access the remaining two marks due to not being specific. Omega 3 was commonly cited by many candidates but was not linked to oily fish. Vitamins A and D were also popular responses but once again no marks were awarded as they had not been linked to oily fish. Some candidates referred to fish being low fat but did not link this to white fish. Many answers had mentioned calcium but had not linked it to canned fish/fish eaten with bones so they could not be awarded the mark.

Q.8 We saw some excellent responses where learners had really elaborated on how food choices had widened in the last few years and referred to factors / examples linked to their age- range and lifestyles. However, It was disappointing to see so many candidates not addressing the question set and instead opting to identify and discuss points that were quite generic for any essay question. Many candidates discussed factors affecting food choices for example, religion, gender, lifestyle and activity, vegetarianism, organic farming, fairtrade and personal preferences, which did allow them to access some available marks but overall, answers did not always focus on how technology and new initiatives have influenced people's choices when planning meals and purchasing food. Many candidates were unable to gain marks due to a lack of clarity within their essay writing, repeating the phrase 'use technology to' but then did not clarify or identify which type of technology they were referring to. Candidates that demonstrated an understanding of the question set identified how technology enables people to order and purchase food online using the internet or even apps on phones and have it delivered. How social media is influencing people by helping them to plan ideas and recipes, often coming from celebrities themselves who promote meals or share meals made and eaten, or even by pop up adverts viewed whilst using social media. The introduction of meal kits and home delivery was mentioned, some candidates who were able to put forward a more developed responses referred to benefits such as all ingredients being provided and no waste of additional foods. Air fryers were mentioned in a number of candidates responses and discussions highlighted how this new technology can reduce energy costs and cooking times. Some candidates identified Takeaway delivery apps and the convenience of having cooked food delivered to your door, extending the discussion in relation the high fat, salt, and sugar content of the foods.

FOOD PREPARATION AND NUTRITION

GCSE

Summer 2023

FOOD PREPARATION AND NUTRITION IN ACTION

General Comments

This year marked the return of NEA 1, the first time it has been submitted for moderation since 2019. NEA 1 is generally considered more challenging to mark; however, we were pleasantly surprised this year as marking was mostly found to be in line with set criteria. This improvement from previous years could be attributed to the online and face-to-face CPD sessions provided over the past year. Overall, the marking of both assessments was mostly accurate, but I will address any specific issues in the following comments.

This year, centres were required to upload work directly onto IAMIS, and the option to send hard copies has been completely removed for future series. Accessing the uploaded work was generally straightforward, although some of it was more challenging. To facilitate the moderation process, it is recommended that NEA 1 and NEA 2 be uploaded as separate documents, with the FP coversheets and NEA 2 practical marksheet included in each document. Additionally, photographic evidence of the candidates' practical outcomes can also be included in each NEA document. Some centres uploaded numerous documents, which made moderating the work extremely difficult and time-consuming. In the future, it is hoped that centre staff will become more familiar with saving work as PDF documents and uploading them as separate NEAs.

With the requirement of submitting work online and not having to rely on postage services, adhering to the 5th May submission deadline should no longer be an issue in the future. The majority of centres were able to meet the deadline this year.

Annotation on the FP coversheets greatly aids the moderation process and is a valuable resource for moderators. I would like to thank the teachers who provided annotation. However, it is worth mentioning that a number of centres did not provide any commentary. While providing annotation is only a recommendation, I strongly encourage centres to provide it, as it helps moderators understand the reasons behind the awarded marks. The FP1 and FP2 coversheets need to be authenticated by both the candidates and the teacher, as per JCQ requirements. Unfortunately, some centres did not have the required signatures, resulting in a delay in the moderation process. To avoid such hindrances, electronic signatures will suffice for both candidates and teachers since the NEAs are now electronic documents.

It was satisfying to observe that marking was generally accurate across centres in England this year. In cases where marking was problematic, the moderator's report will have highlighted the issues to the centres. Conversely, if marking was fair and accurate, the moderator's report would have been briefer compared to previous years.

Comments on individual questions/sections

NEA 1

Section A

The majority of candidates conducted detailed research on the topic. While many candidates provided thorough research, some should consider summarising their findings to stay within the 2000 word limit. After conducting thorough research, candidates should be able to explain why they have chosen their experimental ingredients.

Many candidates chose the Bread flours task. This task was well-researched, with many candidates including in depth research about gluten development.

The level of detail for those candidates who chose the thickening agents in a soup varied. The key for this task was 'thickening agents', but some candidates failed to apply this to their research. Those that did, completed very detailed research into several different thickening agents, including food science.

Well-structured plans were included, but some candidates failed to justify their choice of variables. The research candidates conduct should help support their choice of variables. The majority of the work included predictions of varying levels of detail. Predictions need not be lengthy, but candidates should refer back to their research to justify their hypotheses.

Section B

The level of detail in this section varied among candidates. Some conducted a range of experiments, but there was a lack of photographic evidence with commentary, or the results were not tested using different formats. While some excellent examples of work were seen, there were instances where marks were generously awarded based on insufficient evidence.

For the soup task, experimental work could have involved using different ingredients, such as varying the thickening agent quantity used. Most testing involved using a viscosity chart to observe differences between the soups and thickening agents used. While some evidence of star profiles and peer assessment was present, more is needed to justify awarding marks from the top band in this section.

Regarding the Bread flour task, candidates also explored using different ingredients and experimenting with ingredient ratios. When analysing results, many compared using sensory analysis, for example bread colours using a Munsell Chart, star profiles, a ruler/1cm grid to measure the amount of rise.

For Section B, candidates are expected to include a range of annotated photographs in their work. Unfortunately, there was a lack of diverse photographic evidence in many submissions this year. In the Soup task, photographs could have depicted the different stages of the investigation, the mixture before and after the thickening agent is added, gelatinisation, and viscosity chart observations. Regrettably, many candidates only included photographs of the soup on the viscosity chart. This limited range hindered candidates from discussing results at different stages of the practical session. Similarly, in the Bread flours task, candidates often omitted photos of different stages of the process. While some excellent samples included annotated photographs of different stages and explanations of findings, it is hoped that future candidates will include more photographic evidence. Encouraging candidates to take plenty of photos throughout their practical sessions will enhance their work.

Candidates are expected to use a variety of formats and results to present their findings. Advising candidates to use peer assessment and sensory preference testing will not only diversify their results presentation but also provide more opportunities for analysis.

Section C

This section is often challenging for candidates. While many can describe their practical experiments, justifying marks from higher bands requires drawing conclusions from the data and explaining why the results occurred. These explanations should link back to the candidate's research and specifically address the scientific principles of the task, which is the most challenging aspect. Candidates are also required to evaluate their hypotheses and confirm whether their predictions were correct, providing explanations for their correctness or lack thereof. In some instances, candidates were awarded high marks for this section without discussing the scientific aspects of the task or reviewing their hypotheses.

For the Soup task, candidates could have discussed several scientific principles that may have influenced the outcome. Differences in starch content among different thickening agents may have affected gelatinisation and viscosity. Observing the viscosity at different temperatures during the practical experiment would have affected the outcome and provided an opportunity for discussion.

Regarding the Bread Flour task, candidates had numerous opportunities to discuss the scientific principles behind the cooking process. The flour's gluten content would have affected the elasticity and rise of the bread. The colour of the bread through not only the type of flour (e.g., wholemeal flour) but also through the dextrinization while cooking.

Given the time constraints of this assessment (8 hours as recommended by EDUQAS), Section C may also offer an opportunity for candidates to discuss further experimental work that could have been conducted if time had allowed.

NEA 2

Section A

It was pleasing to see more evidence of primary research in candidates' work this year. Detailed analysis of the café task would have seen greater numbers of candidates referring to task rather than only focussing on the café part. The task clearly asked for some reference to be made to seasonal, healthy nutritious food although this was not the case in many NEA's moderated. Some candidates included valuable pieces of primary research such as café visits, product analysis, questionnaires, and interviews. There was also less reliance on internet research compared to previous years. However, the value of mood boards as a method of research is questionable, particularly if they haven't been analysed to discuss their relevance. While a range of practical trials were observed, candidates must remember to include a picture of each trial dish made. Ideally the top band candidates should be trialling between 4-6 dishes. Evaluations covering nutrition, skills, cooking methods, and sensory qualities were seen in most of the moderated work. However, some candidates still include recipes, methods, and costings of each practical trial dish, which are not creditworthy and should be discouraged. Overall, this section was accurately marked in most of the moderated work.

Justification of dish choices was seen in many candidates' work this year, but often these were overmarked. Candidates should give detailed reasons for selecting the dishes and always refer back to the task.

Orders of work have shown significant improvement in recent years, but there is still room for improvement. Many candidates are still including a mise-en-place section. Although good practice, it is not a requirement of the NEA. The use of 'real time' is essential if the candidates can complete the practical in the 3-hour time limit. The use of colour coding for the different dishes is a good visual aid for candidates. Candidates provided good detail, and dovetailing is more evident, although some candidates still struggle with it. To ensure candidates are confident and proficient in dovetailing, it is recommended to provide practical and written dovetailing activities throughout Year 10 and Year 11 prior to starting NEA 2. Notably, some pieces of work included written points on serving and presenting dishes, along with visual images depicting how the dishes should look. This visual prompt may benefit many candidates, helping them present their dishes more attractively rather than relying solely on written bullet points. The specification states that the 3 dishes (and accompaniments) should be completed in a single 3-hour block of time and not over individual hours.

Section B

This year, there was a comprehensive range of dishes documented in the photographic evidence of candidates' work, and more teachers are using the NEA 2 practical marksheet to assess candidates' practical work. The practical marksheet facilitates fair and accurate marking of the practical session and allows moderators to understand how and why marks were awarded. However, some centres still generously mark the practical work. To award marks from the higher bands in these sections, candidates must demonstrate a range of well-executed high-level skills and excellent presentation using various techniques and garnishes to include accompaniments where suitable. Due to the work being uploaded on IAMIS from now on, candidates should include images of their dishes within the main body of their work for easy reference by moderators.

Section C

It was pleasing to see an improvement in the evaluation section. Many candidates referred to the task when evaluating their work. Sensory evaluation of their practical work should be included in this section – this could be from peers, family, teachers and themselves. This evaluation will inform them of improvements that could be made in the future. Many more candidates were evaluating their dishes against similar/existing ones. Some compared against other's practical work or used a shop/restaurant comparison. However, there are still centres whose candidates include costings and nutritional analyses in the evaluation sections—these are not required and are not creditworthy. The marking of this section was mostly accurate, and the evaluations covered all the necessary criteria.

Summary of key points

Moderators' reports, available on the secure website, have changed this year to be more condensed. Reports will simply state whether the marking was fair and accurate or provide more detail if the marking was generous or harsh, aiming to help centres improve. This Principal Moderators' report hopes to offer more detailed commentary on areas of strength or weakness seen in the samples of work moderated across England.

Please remember that the NEA tasks change annually and differ from those in Wales (WJEC). Additionally, there will be online and face-to-face CPD opportunities in the autumn and new year to support teachers delivering this qualification.



WJEC
245 Western Avenue
Cardiff CF5 2YX
Tel No 029 2026 5000
Fax 029 2057 5994
E-mail: exams@wjec.co.uk
website: www.wjec.co.uk