
Workshop 1 – Health and Food Technology Assignment

Candidate C Evidence

**This section contains
candidate evidence – please store securely**

Insert your chosen assignment brief below.

The café in a sports centre wants to encourage healthier eating. Develop a food product suitable for inclusion in the café menu.

Section 1: Planning (20 marks)

1(a) Exploring the brief (4 marks)

You should:

- ♦ Identify two key issues from the brief (2 marks)
- ♦ Explain why each key issue is important to your brief (2 marks)

Key issue	Why is this issue important to your brief?
1. Suitability for a Café (Sports Centre)	<p>I must take into consideration:</p> <ul style="list-style-type: none"> • The portion amounts for all ages of customers • Preferences of customers attending the café • Meals already available for all adults, teenagers and children • Hot and cold meals
2. Encourages Healthier Eating	<p>I must take into consideration:</p> <ul style="list-style-type: none"> • The energy needed for all ages of customers • Current dietary advice for all ages of customers • The nutritional requirements for all ages of customers

1(b) Research (10 marks)

For each key issue you have identified from the brief, you should now carry out research to find out information about the issue.

You must use a different research technique to find the information about each key issue.

Key issue	Research technique
1. Suitability for Café (Sports Centre)	Interview with head chef at a local sports centre café.
2. Encouraging Healthier Eating	Literacy research

Present the information you have gathered from each investigation. You may use any suitable format. (8 marks)

The information from each investigation should:

- ♦ Identify the research technique you used
- ♦ Be summarised clearly
- ♦ Include the sources of your information

You must insert the information you have gathered from your research below.

Research Information

Interview questions with head chef at Sports centre café
 Source – Head Chef, _____ s Centre, _____

1. Is there specific portions amounts/sizes for:

Response:
Children?

Healthy children's menu by request from members prepared and cooked using natural ingredients in smaller portions suitable for up to age 10.

Teenagers and Adults?

Tasty snacks and lite bites available on main menu with details of calories in each meal. Useful for people training or trying to lose weight.

2. What is the most and least popular meal?

Response:
 Most popular dishes are classic burgers, sandwiches and pasta mainly carb-less chicken burger – 18% carbs, 61% protein and 21% fat. There is no least popular meal.

3. Do you have a set menu?

Response:
 Yes but this is changed regularly to include local produce with consultation from members.

4. Do you have specific meals for age groups?

Response:
 Baby food available, kids menu and main menu including, - tasty snacks/lite bites, hot soups and fresh nutritious salads, naturally delicious, something extra and sweet treats.

5. Do you serve a range of hot and cold meals?

Response:
 Yes to appeal to all of our consumers as many dine in for breakfast or lunch or dinner.

Healthier Eating Literacy Research

Source- Leckie and Leckie, National 4&5 Health & Food Technology, Course Notes, by E Hepburn and L Smith, 2013

- The energy needed for all ages
 - The energy needed for children, teens and adults is all very varied. However males need more energy than females as male burn more due to their muscles and/or bigger frame.
 - Children aged 1-4 they need between 1100-1870 per day for male and females.
 - Children ages 6-11 years require 1600-1900 per day for both males and females.
 - Teenagers require between 1900-2800 of calories per day for both males and females.
 - Adults require between 2000-2500 of calories per day.

Current Dietary Advice

- 5 portions of fruit and vegetables per day.
 - 4-6 slices of bread per day.
 - Double to 17g of breakfast cereals per day.
 - Reduce fat intake to no more than 35%.
 - Reduce salt intake to 6g (100mmol)
 - Increase by 25% of total complex carbohydrates and potato consumption by 25%
 - Maintain white fish consumption.
 - Oily-fish such as tuna, salmon etc to be doubled to 44g per week.
 - Sugar intake to be maintained for adults
 - Sugar intake for children to reduce to less-than 10% of energy
- Nutritional requirements for all ages (RDAs)

Age	Energy (kj)		Protein (g)		Calcium (mg)		Iron (mg)		Vitamin A		Vitamin C	
M= male F= female	M	F	M	F	M	F	M	F	M	F	M	F
7-10 yrs Children	8.2 4	7.28	28.3	28.3	550	550	8.7	8.7	500	500	30	30
11-14 yrs Teenagers	9.2 7	7.92	42.1	42.1	100 0	800	11.3	14.8	600	600	35	35
19-50 yrs Adults	10. 60	8.00	55.5	45.0	700	550	8.7	14.8	700	600	40	40

1(b) continued

From the research you have carried out, you should present at least **three** ideas for your food product.

This should include:

- ♦ A brief description of each idea (1 mark)
- ♦ A brief comment of why you think each idea might be suitable for the brief (1 mark)

You must insert your food product ideas below.

Food Product Ideas

Penne Pasta Carbonara

This dish could include pasta, ham, bacon, milk, cheese, egg yolk, asparagus and garlic.

Pasta contains total complex carbohydrates therefore meeting current dietary advice which would provide energy for activities in the sports centre.

Bacon, milk, cheese, egg yolk and ham contains protein which is needed for repair of body cells and tissues. This would benefit customers attending the sports centre as they may injure themselves during physical activity.

Tuna Sweet Potato Jackets

This dish could include sweet potatoes, tuna, onion, and Greek yoghurt.

Including tuna in my dish will help meet the Scottish Dietary target for oily fish to double to 88g per week.

Greek yoghurt contains calcium which is needed to maintain strong bones as customers are have a higher risk of injuring themselves through physical exercise.

Chicken & Vegetables Stew with Wholemeal Couscous

This dish could include chicken and wholemeal couscous.

Including wholemeal couscous in my will help me meet the Scottish Dietary of total complex carbohydrates to increase to 25% per day.

Including chicken will help meet the current dietary advice for fat to reduce to no more than 35% of food energy as this is a low fat meat.

1(c) The product idea (6 marks)

From the ideas you generated in 1(b), choose **one** food product to develop.

Food product: Penne Pasta Carbonara

Explain why you have chosen this product from the range of ideas you gave (3 marks)

Reason 1

My product will include pasta, which helps to meet the Scottish Dietary Target of total complex carbohydrates which is to increase intake by 25% of non-sugar carbohydrates. Total complex carbohydrates provide energy which is good for the customers that attend the sports centre, as energy is needed before, during and after exercising.

Reason 2

When preparing my product I will not use oil to fry my bacon. This will help to meet the Scottish Dietary Target for fat. This target states that we should reduce our fat intake from 40.7% to no more than 35% of food energy. This meets the need of the brief because it helps the customers of the sports centre maintain a healthy weight for exercising.

Reason 3

I will not add any additional salt to my finished product which help to meet the Scottish Dietary target for salt which is to reduce from 163mmol to 100mmol (6g). This helps to meet the needs of the brief because salt contributes to high blood pressure putting strain on the heart making it harder to exercise.

You should provide a recipe for the food product you are going to development. This recipe should include the ingredients and method. (3 marks)

If you choose an existing recipe, you must make at least one substantial variation to either the ingredients or the method to make the product suit the issues in the brief. You must indicate the variation you have made.

You must insert your recipe information below.

Recipe Information

Penne Pasta Carbonara

Ingredients

- 113g dry cured ham
- 55g penne pasta
- 4 slices bacon
- 8 spears fresh asparagus
- 1.5 cloves garlic pressed or finely minced
- 1 egg yolk
- 25 ml skimmed milk
- 120g parmesan cheese
- 120g romano cheese

Preparation

1. Chop garlic and grate parmesan and romano cheese
2. Wash asparagus. Holding a spear at each end, bend and snap in lower half. Discard the tough, lower half. Cut remaining into bite-sized pieces, and reserve.
3. Separate egg yolk and whisk with milk in a small bowl. Mix in parmesan and romano cheeses.
4. Cut bacon into 1cm pieces and fry using no oil until cooked. Drain cooked bacon on paper towels and let cool.
5. ½ fill a pot with water and bring to the boil. Once the water is boiling, add the pasta. Reduce temperature slightly, stir and cook until al dente. Drain and return pasta to pot.
6. Cut up ham and add asparagus and ham to pot and cook for 3 minutes. Add in minced garlic, stir and cook until garlic releases its aroma, for 2 minutes. Reduce heat to medium and stir in cheese mixture. Stir constantly until cheese is melted and ham & asparagus is coated evenly.
7. Immediately add asparagus & cheese mixture to the pasta & bacon in large pot. Stir until all ingredients are well blended and pasta is evenly coated. Transfer to serving dish.

Section 2: The product (12 marks)

2(a) Information about the product (12 marks)

You should provide information about the food product you will make. Your information should be clearly presented and you may present your information in any suitable format.

You should provide information about two of the following:

- ♦ Labelling
- ♦ Advertising/marketing
- ♦ Packaging
- ♦ Cost
- ♦ Nutritional analysis

For each of these you should:

- ♦ Provide three pieces of information which are relevant to your brief and your product
- ♦ Explain why each is important to the brief and your product

You must insert your information about your product below.

Product Information

Cost

I must take into consideration the budget available to my customers when choosing ingredients for my product. As this is for a sports centre café there will be a set budget available for the development of new dishes.

Cost per Ingredient

Below is the cost of each ingredient in my chosen recipe:

£2.60 Italian cured ham -113g
 £0.50 Penne Pasta – 55g
 £1.25 Bacon – 4 slices
 £1.00 Asparagus – 8 spears
 £0.10 1 egg yolk
 £0.20 Milk – 25ml
 £2.00 Parmesan Cheese – 120g
 £2.40 Romano Cheese – 120g

My product is based on pasta, which is a cost effective ingredient. Pasta can be bought in bulk which is suitable for the sports centre café as many customers may attend.

Cost per portion

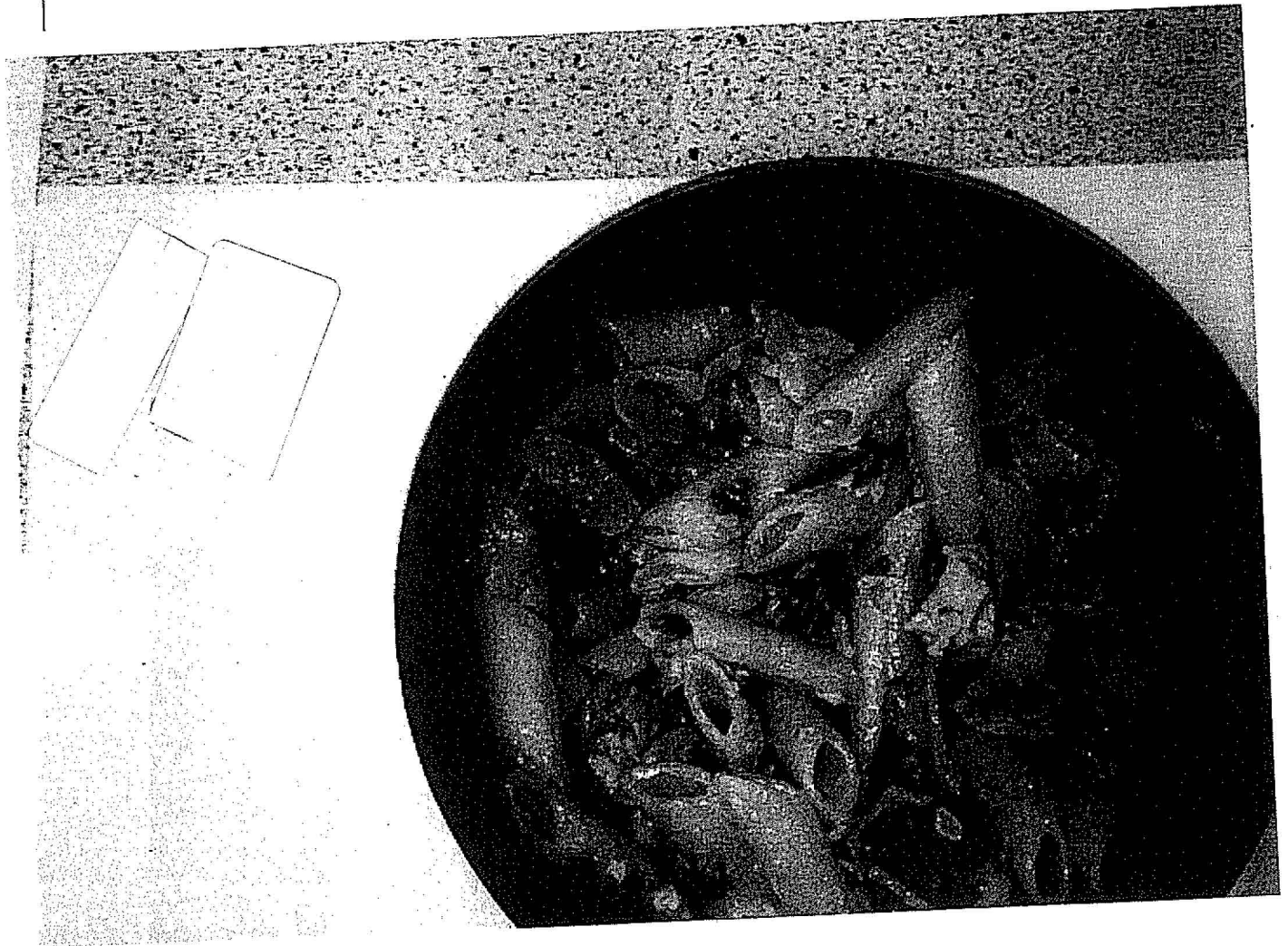
The total cost of my recipe was £10.05 which gives a cost per portion of £5.03. This is a suitable and affordable price for customers attending the sports centre café so they will be more likely to buy my product.

Labelling

I must take into consideration the nutritional information on my food label for my product as it will help the customers of the sports centre cafe who are following a specific diet and provide them with healthy eating advice.

Labelling on my product will also have to include the weight of the product. This would benefit all ages of customers attending the sports centre café as they can choose a portion size suitable to their age.

On my food product label I must also consider including a picture of my product. This would entice customers of all ages to buy my product as it is attractive to the eye.



Section 3: Product testing (10 marks)

You must now make your product so that you can use it as a basis for sensory testing and evaluation.

3(a) Sensory testing (10 marks)

Carry out sensory testing of the food product you have made.

You must:

- ♦ Identify an appropriate sensory test (1 mark)
- ♦ Identify at least three points of information you need to find out about the product from this test (3 marks)
- ♦ Record the results of your testing clearly and appropriately (4 marks)
- ♦ Provide at least two conclusions based on the results of testing (2 marks)

You may include a photograph of your food product, if you wish.

You must insert your sensory testing information below.

Sensory Testing Information

Results of Star Diagram Sensory Test

Key: 1 – Unacceptable
2 – Very Poor
3 – Poor
4 – Satisfactory
5 – Acceptable
6 – Ok
7 – Good
8 – Very Good
9 – Excellent
10 – Exceptional

Information I want to find out = creaminess, flavour, crunchiness, texture, appearance, smell, thickness, smoothness.

	1	2	3	4	5	6	7	8	9	10
Creamy	0	1	0	1	0	0	0	2	1	1
Flavour	0	0	0	0	0	0	0	0	1	5
Crunchy	0	1	1	0	0	1	2	1	0	0
Texture	0	1	0	0	0	0	0	1	2	2
Appearance	0	0	1	0	0	0	1	1	1	2
Smell	0	0	1	0	0	0	1	2	1	1
Thickness	0	0	1	0	0	0	3	2	0	0
Smoothness	0	0	0	0	1	2	0	2	1	0

- My food product has been rated very good to excellent for flavour, creaminess, texture, appearance and smell. This will make customers want to buy my product as its tasty, eye-catching and aromatic.
- However my food product has been rated low between very poor to poor crunchiness and thickness. This will affect the sales of my product to children of who attend the sports centre café as it may be harder to swallow.

Section 4: Evaluation (8 marks)

4(a) Evaluation (8 marks)

Thinking about how suitable the food product was for the brief, evaluate the food product you have made.

To complete your evaluation, you must complete the following:

Evaluate the suitability of your food product for the brief based on the results of your research. (2 marks)

- I feel that my product was suitable for my brief because within my research I found that children, teenagers and adults require a varied amount of energy. Therefore I included pasta into my dish which contains carbohydrates that provides energy for physical activities.
- From my interview with the head chef at a local sports centre café, it was identified that pasta dishes is one of the most popular. Therefore I chose to base my food product on pasta so that it would sell well within the café.
- From my research I found that all ages of customers require protein for growth, repair, and maintenance of body cells and tissues. Therefore I included bacon, ham, egg yolk, milk, and cheese in my food product.

Evaluate the suitability of your food product for the brief based on the sensory testing you have undertaken. (2 marks)

- Although some of my results from sensory testing for my product were rated excellent to exceptional, others were rated very poor. I think that my sensory test could have been improved by using more people as the results were mixed. This would improve validity and reliability of my sensory test results.
- I feel that if I used a rating sensory test this would improve the reliability of my results. This test would allow customers to show how much they like or dislike aspects of my product against rival products. Therefore if I doing this again I would change the method of sensory evolution.

Describe any adaptations or improvements that might be required to improve your food product. If you think that no adaptations or improvements are required, you must give two reasons why this is the case. (2 marks)

- One improvement I can make is to change the cheese from parmesan and romano to edam. This cheese is healthier because it provides 357kcal per 100g compared to Romano cheese that provides 431kcal per 100g. Therefore this meets the brief because it is reducing the amount of fat in making it healthier dish.
- Another adaptation I could make to my dish is to include more vegetables such as mushrooms, peas and peppers. This will help the customers to consume their 5 a day. Therefore increasing the appearance of my dish because of the brighter and appealing colours that would be included, this would also encourage customers of the sports centre café to buy my product.

Make a final conclusion about how well your food product met the issues in the brief overall. (2 marks)

- I feel that my overall product met the issues in my brief because it was a healthy dish providing nutrients such as carbohydrates, protein, calcium and vitamin A & C. Therefore this helps to provide the nutritional requirements for all ages.
- If I was to carry this out again I would complete a questionnaire with customers who attend the sports centre café so I could take into consideration their likes and dislikes. Therefore my product will appeal to a wider range of customers at the sports centre café so they would buy my food product.

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Health and Food Technology National 5 Assignment

Skills, knowledge and understanding	Marks Available	Marks Awarded
1 (a) Exploring the brief	4	
1 (b) Research	10	
1 (c) The product idea	6	
2 (a) Information about the product	12	
3 (a) Sensory testing	10	
4 (a) Evaluation	8	
Total	50	